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# THE BUILDING NEWS

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F.R.L.B.A., Architect.

Stepney Municipal Buildings, Arbour Square Germercial Road East. First premised dec., (£100), by Messrs, W. Frazer Grabuse et l. L. Leathart, Architects. Second premised dec., (£70), Messrs, Ambros Poynter, F.R.L.B.A., Vicin George H. Wenyon, Lucentiate R.L.B.A., Vicin tests, Elevations and plans.

Portsea Island Gas Company's New Chief Offices et Show Rooms, Portsmouth. View and plan Mr. Victor Wilkins, Architect.

The Pasteur Institute of Burma, Rangoon, India Mr. E. J. Pullar, F.R.L.B.A., Architect.

Northyard Antolagasta and La Paz St. (Chili and Bolivia Railway). Mr. Ariso (M. F.R LB A., Architect.

### THE FOUNT OF BEAUTY.

Nature, the fount and origin of all inspiration of all the arts, is a fitting and necessary subject of study by the architect, and not only in architectural detail and enrichment. "Proportion," whatever we may understand by the term, is a matter of eye education, giving power to ori-ginate and design in beautiful ratio and harmonious contrast of dimension. Such education, if based on architecture solely, is gained at second hand. By study of natural beauty we tap a source. Since the architect is, more than ever, as well as a practical planner and constructor, the supervisor of manifold arts and crafts, he surely needs to base his knowledge and appreciation of the beautiful on a sound foundation. In his practical, everyday business he has to advise on every handicraft concerned in beautiful building. Of all such, notable examples doubtless exist; but the whole of them are insignificant when compared with the infinite store of natural beauty. And since the ornamental and decorative in each art and craft have been evolved, originally, from the study and absorption of patents. the study and observation of natural form, it would seem well that, instead of confining ourselves to man-made precedent, we should go to the fountain-head for motive and inspiration.

That from precedent we may, by toil and industry, build up a store of formknowledge, is no doubt true. That this is not the best course preparatory to design seems suggested by the consideration that somewhere at some time or epoch the forms that we now admire in rich and beautiful architecture have been, insensibly at times perchance, deduced from Nature and the natural. We may see clearly enough the result of too confined attention to old architectural form. The study of to old architectural form. The study of the letter of Classical architecture still further bound up ancient method in "orders," and the Gothic revival led to "parallels"; whereas the true designer pitches set orders and exact parallels out of the window, and, for weal or woe, gives us of his own. Every designer worthy of the name brings forth as from a refining furnace, and not as from a warehouse. To be able to do this, he must acquire powers founded on the patient study and analysis of natural beauty, exalting the "taste," giving skill to the hand, and judgment to These nowers cannot be acquired the eve. if we confine our study to building. By so doing we should risk failure and go shadow-grasping, losing the real and substantial by our neglect to go to the fount and origin of beauty.

Take a narticular instance. In one variety of Gothic capital the stalks of the floriations that adorn the bell and curve below the abacus are gracefully disposed-

not strictly, but approximately, as radiants about the axis of the column. Now, if we decide to study the graceful arrangement of the stalks of this order merely from precedent, we shall get a very limited range of example; whereas, by extending our survey into the domain of Nature, we get an infinity of suggestion; for, not to mention trees and flowers, every tuft of grass exhibits pseudo-radiant lines. Again, assume that these particular capitals have in the course of years been perfected to a certain plane of beauty, and that it is desired to make a further advance and produce yet more beautiful examples: in this case no precedent exists. As it seems fairly clear that unless we put something into our brains we cannot take anything out, further progress in the design of these capitals comes. perforce, to a standstill. We need to put in before taking out, not necessarily the same thing, but something milled and re-fined, something that we should never be able to bring forth without first mentally digesting suitable raw material, if we may so call it.

But, since every tuft of grass exemplifies quasi-radiation after the manner of our particularised Gothic capital, by reverting to an earnest and analytical inquiry of Nature, we may increase our knowledge of the principles governing graceful divergence, and in this way become empowered to make the required advance in design. We thus vastly extend the field from which we garner information, in a way impossible otherwise, though we haunt every church and cathedral in search of precedent. And we get information at first hand. In our wonderful world there is an infinity of inspiration in design, of actual suggestion to those willing to seek out causes. Mere inspection and admiration cannot greatly It is everyone's business to wonder and admire; it is the duty of the designer to search out principle. By so doing he learns the art of conventionalising. stricting study to old example seems to lead to copyism, apparently because we accumulate set form instead of gaining insight into principle. We need not a mental stockroom, but converting mental stockroom, but converting machinery whereby the elements of the beautiful may be built up from a sound basis with new grace and interest; not a barn, housing and delivering unthreshed harvestings, but a vigorous and relentless thresher—a mill, with grit-stones and winnow. We do not want a trunk-full of Gothic chapiters, but a headpiece of our own, the seeing eve, true understanding, and an intellect trained to break down the old and construct anew from the primordial and elemental; and it is difficult to see how we are to come at this, except that we seek to learn from Nature.

It may be that we suffer nowadays from the plethora of example; for universal travel, the camera, and profuse illustration have deluged us with precedent from every quarter of the globe. Yet, wanting principle, we remain dumbfounded and ineffective in our endeavours to give interest and novelty to our designs, we are driven in sheer perplexity to building bare brick walls, and pile up gaunt blocks of squared stone and marble, seeking to excuse our poverty of imagination by the plea of "simplicity." That which the designer needs, given trained eye and skill of hand, is not form to copy, but inspiration; and we may as reasonably look for so much as this in rude rock and mountain erag as in polished building stones.

The study of Nature for design purposes must be large and generous. We shall not from the observation of a tulip learn how to proportion a column. It is the whole mental and ocular education and training that counts-the sum of infinitesimals. No one knows exactly what specific studies gave him the power to proportion well. We may learn directly of tulip or narcissus in decorative design; but in proportioning, which in architecture is nearly equivalent to, and synonymous with, the whole act of designing, we draw, insensibly, from a well of acquired information the accumulated treasure of a life's observation and inquiry. Our studies, therefore, cannot be on too broad lines. No doubt, we may often glean suggestion direct. The whole earth teems with elegant form; but such opportunities are special and particular, and on the whole not helpful to that general study of cause and effect which stimulates and rouses the latent faculty of design. There is as little excuse for copying N sture as for copying precedent; indeed, the attempt is vain, since Nature will not be directly copied Even the artist must resort to strategy. From the study of building we learn

construction and variety of constructive method, and if content to copy, also architectural form; while, by the exercise of reason, we may so modify and remodel an old device that a certain degree of novelty is imparted to that which otherwise is mere repetition of the time-old. Skill, however, is here to be understood as necessary- a consideration that lends support to the idea that a more general study than that of architecture solely is necessary to the making of an architect; for it is scarcely possible to conceive of anyone adding novel interest to, while preserving the beauty of, long-existent form, unless hand and eye have been previous trained and a certain grasp of principle

We must either be content to remain copyists or launch out into independent

### NAME OF TEXTURE IN ARCHITETERE \*

considerals which go to 4.17 type sees the aniest of the transfer of the tr 11... into the cases the constructions and the assumes. As to the place of the energy received the surface of the sur Norther should be burnston in any early serious bard the moist go hand It is a natriction and proper So all to well it is produce

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The text of the material has to be because it there is communications before the positional and made, at even thought at the archite who elects to think out As a country with a preference of the his design, with an reference of the historial in which he first section of the material in which he first section of its an ined to discapping the control of the The nextal area he had before commence 1-21-6 -----Highly estate of the outing medicative research to a method beauty because heast year. We the essential fact that the the respects as +1+ +12" 11 7 17 Mass of a printer virts and 4. . . . Free roses and employed has

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the second indings of a building has a second of the transition of the choice for material, especially with respect to extend the charm of Hampton Court, toxic. The charm of Hampton course, with its turns my of brick and stone, set with the standard from almost all where it is and viewed from almost all a coas the agh a screen of green-leafed to s, while he most incongruous if constructed in any other material of a lighter texture. Whitehall constructed in any at mast be with a dull grey back ground and from a near point of view, would lose its dignity, and appear ponderous and out f scale with its surroundings.

lexture of design also plays an import and part in architecture. The disposition t parts and application of ornament make up the texture of a design Projec tron and recess, large or small in elevation, give texture to the design. Some of our beautiful English houses, leveld of their recesses or nicely judged projections, would lose all their charm and become very mediocre. The play of light and shade upon constructional orna ngm and solutions and their orders, pilas-nent, as columns and their orders, pilas-ters, cornices, strings, the framings of voids, are essential to the production of texture in design. The ornamenation of constructional members is equally as essential. The Gothic masters were adepts in this respect. What would some of our cathedral or greater churches ap pear like if all ornament were stripped from their buttresses, strings, parapets zables, pinnacles, and towers? True, the I am lines of construction would be left out the charm and beauty, depth and texture, would be gone. This would be even more apparent in the more flamboyant church s of the French Gothic.

The delicate crocketting and finials lace like parapets, and tabernacle work give grace and texture to these buildings the want of which would leave, in many cases, plain unimpressionable and lifeless of architecture.

The deep undercutting, the play of light and shade along the members, takes away the hard line, each member blending reset in true harmony with the whole.

Internally the same necessity for the bests ince of texture applies. Imagine the fair vaulting of the Henry VII. Chapel, Westminster, stripped of its ornament Lie delicate lines would disappear, and in place a complex geometrical problem ald impress itself, and make us turn coay sick with apprehension as to its safety, or think of the wood roof We eminister Hall bereft of its tracery; its nsine tional members would appear in thor greatness, coarse and un

Wall surfaces if properly treated give A tree's an interior. The depth of feel-th expressed by the interior of West-ster Cycle Ital (although a modern of 1112 is the texture of the wall th pain brickwork with open the pain brickwork with open to by the bright at or near the transport usappearing as the crebytons at or near the usappearing as the eye the vaulted roof, and there lost to box. In agine that interior er in a glaring white and and where would be the and feding of rapose /

the fitexture may be best at to decide by arbitrary see must be dealt with ests. A thorough know

the yeads and reflect the light ledge of materials, stone, brick, wood cements, etc., a continued practice and netual acquaintance with buildings giving t gether with at regard to evidence of texture, the manner in which the varying degrees have been obtained, defined is of the greatest in and, further, a thorough knowledge of the aesthetics in architecture as applied to surface treatment, are essential.

A little more care in this direction by architects would completely transform some of our modern towns and villages. We are not all born to build municipal buildings or great cathedrals, but there is an abundant opportunity available for practice in the use of texture in material in the housing of the working classes. The hard-faced brick monstrosities (sometimes varied to brick and rough-cast) put up for the habitation of our working-men must have a depressing influence upon their lives as they live and look upon them day after day. There is no attempt to produce restfulness, repose, and quiet about these dwellings; they push themselves forward in blatant boastfulness of their superiority over their surroundings. The absence of texture is painfully apparent.

One other point about the careful use of material is that it gives tone or colour to buildings. The English is not a suitable atmosphere in which to practise highly-endoured architecture, but much can be done in breaking monotony and giving tone or tint to a building by a careful and considered application of texture in relation to the material employed.

The bright and deeper reds, purples and silver greys of some of our bricks, the browns and reds of tiles, and purple, green, and rustic slates, or stone tiles, will give excellent tone and texture to any building when properly used in harmony

with surroundings.

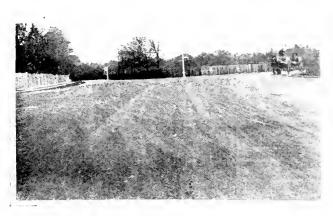
FRANK II. HEAVEN, A.R.I.B.A., P.A.S.I., Aberkenfig. ---

### "CLARMAC" AND "CLARPHALTE."

The heavy demands on our roads by the transition from horse to motor traffic have compelled our local authorities—or some of them-to turn their attention to the absolute necessity of providing roads which can be constructed at little more than the initial constructed at fittle more than but shall yet to more durable and economical. The results so far of the demands of road engineers for a waterproof, resilient, dustless, and mudless roadway, inexpensive to maintain, and capable of resisting the heavy and fast motor traffic, have not been worth much. One has not to travel far in any direction to note the failure of some of the many methods and materials tried, and the controversies in our own columns and those of our contemporaries have been frequent.

There is to-day a consensus of opinion on the part of the leading road engineers and borough engineers and surveyors that bituwith suitable unuons roads compounded aggregates are alone to be relied on if low first cost and economical maintenance are to he secured. Water-bound macadam is hope-lessly out of date, and tar-bound stone roads will soon be as much so. The best of all aggregates, if uniform consolidation—the only real guarantee of a waterproof surface—is desired, and a "fool-proof" road is hoped for, sired, and a "fool-proof" road is hoped for, is suitable blast furnace slag, free from honeycombed material, and bound inseparably together by a really rehable bituminmixture.

From our own experience, and after the From our own experience, and after the inspection of many roads on which it has been laid, we are convinced that no other material yet tried affords such good results as "Clarmac," made and supplied by Clarmac Roads, Limited, of Hallam House, 5, Central Baildings, Tothill Street, Westminster, and of Birmingham, Manchester, and Bristol, with its own slag works at Bilston and Chatterley. The material answers in and Chatterley. The material answers in all respects to the requirements of to-dry, and those who use the roads and those who



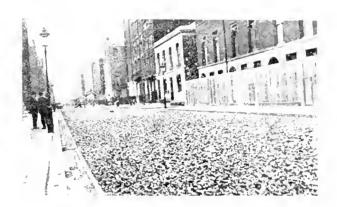
SCOTT'S LANE, BECKENHAM.



SCOTT'S LAND BECKENHAM



DORSET STREET, MARYLEBONE.



DORSET STREET, MARYLLHONE



LORDSWOOD ROAD, BIRMINGHAM.



HEARSALL LANE, COVENTRY.



VALKYRIE AVENUE, WESTCLIFF-ON-STA.



LENNARD ROAD, PENGE.

SOME ROADS AMONGST MANY LAID WITH "CLARMAC."

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is f and be addition of Trinidad Lake of the control of the essential materials. The books are melted on the set of coverel and the master is a liftest by experience d work which ensures the maximum for and obviates the formation as generally unduced when effected by steam rollers carpeting can be applied

carpeting can be applied on a manadam surface, whilst state scessfully and upon old so private the demand so all days to councils for a constant of the demand of the councils for a constant of the demand of the first of matthew or a rate of as being the most of the property extant of the configuration of the configuration

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### II: PAIRING AND PATCHING CONCRETE:

Wer Meth it. The surface of the old consistency theory by roughered, cleaned, and not nod with water, and covered with a chant grant. Then the new concrete is excit to a shappy consistency and applied, being held in place till set by forms, as to mind.

From the reports received, it appears that that y successes and many failures have followed this method. Where it has been sucseful, that result probably has been due to pain-taking care and expense having been employed in the preliminary cleaning and thorough wetting of the old concrete surfaces held reaches new concrete is audied.

is patistaking care and expense having been emplyyed in the preliminary cleaning and thorough wetting of the old concrete surfaces held rethe new concrete is applied.

Moderately Dry Method - The surface of the old concrete is thoroughly roughened, exted, and dien, hed with water, and powdered with sement or painted with cement zrow, after which the new concrete is approximately and therefore the patients of the lodgest and there exhibits a patients of the surface. Generally, such patches are kept moist by sprinkling them with water for exercial days. The same summent applies here as to the wet method. This is a modification of the two preceding methods, and is generally and for other than horizontal surfaces, all the other translational days are likely and the new formula surfaces, all the other translational days are likely and the new formula surfaces, all the other translational days are likely and the new formula surfaces, all the other lates are likely and the new formula surfaces, all the surfaces and the new formula surfaces, all the surfaces are supplied to the surface of the surfaces and the new formula surfaces, all the surfaces are surfaces.

Diwel Method This is a modification of the two preceding methods, and is generally and for other than horizontal surfaces, although it may be applied to the latter. The tew concrete may have any consistency to meet the particular conditions or the ideas of the engineer in charge; but usually a fairly wet concrete is used. This method accordes diching holes and setting dowels to the oldinar holes and setting dowels to the oldinar holes and setting ends to the oldinar holes are connected to these dowels to metal fabric are connected to of the patch.

This method can be made uniformly successful but cannot be applied always. Where any exchange the state of the control of the

the aftermether it is pursue.

We iso Metholi. This method includes the attribute of defective concrete in such a matter at a determinent the surrounding good of the triplate when set, by the shape of the attribute is of the old concrete.

Lord file of the on concrete.

Lord file hip of undercitting concrete so as the areas hielder is too great to make the cottool aight able in ordinary cases; and expect where a considerable depth of new the control of the put in such undercutting and the discussional depth of the successfully, as concrete the control of the successfully as concrete the control of the successfully.

following the surfaces of old concrete preparation that it is a patch of new, or following that it is a rough concrete floor of countrylying the "finish coat". The

surface of the old concrete is brushed as clean as possible with stiff brushes, and then gone over at least twice with a steam jet. An ordinary piece of finch gas pipe makes a very satisfactory jet nozzle. This short length of pipe is connected to a steam hose so that it can be moved about readily. The steam is supplied by the boilers of the mixer or hoisting engines. The steam will clean and heat the concrete surface, leaving it perfectly dry; so it is important to drench the surface thoroughly with water after cleaning with steam. In cold weather it is found advantageous to use hot water. Immediately after the surface is thoroughly cleaned and drenched, the new concrete is applied.

Excellent results have followed the use of this method of cleaning; but it is essential that the surface of the old concrete be thoroughly drenched with water after using the steam jet, otherwise the new concrete will not a there to the old.

Cleaning with Acid.—This method includes the washing of the surface of the old concrete with a solution of hydrochloric (muriatic) acid (one part acid to two parts water, after which the surface must be washed carefully and thoroughly to remove any tree acid.

any free acid.
This is a very commonly applied method of cleaning old concrete surfaces preparatory to placing new concrete against them, and is considered by many the only safe treatment to use, especially in cases where a "finish coat" is to be put on after the concrete base is set

### THE LONDON COUNTY COUNCIL.

At the meeting yesterday (Tuesday) after-noon the Building Act Committee submitted a series of fresh regulations with respect to buildings wholly or part of reinforced con-crete. They reminded the Council that on November 21, 1911, regulations were pre-pared in this matter. These regulations were pared in this matter. These regulations were prepared after consultation with the Royal Institute of British Architects, the Institution of Civil Engineers, the Surveyors' Institution, the Concrete Institute, and other associations and committees interested in the After prolonged negotiations with matter. the Local Government Board a revised draft of the regulations was prepared, and the Council on June 24, 1913, made regulations in accordance with this draft. The amended regulations were submitted to the Board for allowance, and in accordance with the provisions of the Act the four institutions beforementioned were informed of the Council's intention to apply for the allowance of the Board. Further negotiations have taken place with the Board and the institutions, and numerous suggestions for modifications in the regulations have been received. committee think that a large number of these suggestions might be adopted, and they have accordingly prepared and now submit a revised set of regulations. The Local Government Board has stated that in its opinion the regulations as now amended might properly be allowed, and the Royal Institute of British Architects has placed on record its of British Architects has placed on record its opinion of the great value of the regulations to architects not only in London, but throughout the whole of the Empire. The regulations as now amended are less onerons than those made on June 24, 1913, and more in line with the regulations made on November 21, 1911. If as the result of experience gained during the next few years it should be found that alterations are desirable, there should be no difficulty in modifying the regulations. The committee therefore recom-The committee therefore recomregulations. mended:

regulations. The committee therefore recommended:

a) That the resolution of June 24, 1913, making egulations with respect to the construction of build one, wholly or partly of reinforced concrete and with respect to the use and composition of reinforced concrete in such construction, and the further resolution of July 1, 1913, confirming the same, be resembled the That, pursuant to the provisions of section 23 of the London County Council (General Powers) vet, 1909, regulations with respect to the construction of buildings wholly or partly of reinforced concrete and with respect to the use and composition of reinforced concrete in such construction, the made, to That notice be given to the Royal Institution of British Architects, the Surveyors' Institution, the Institution of Civil Engineers, and the Concrete Institute, of the Council's intention to apply to the Local Government Board for allowance of the regulations specified in the foregoing resolu-

tion (b), and that notice be advertised in daily newspapers and technical papers circulating in London. (d) That, on the confirmation of the regulations specified in the foregoing resolution (b) and after the expiration of one calendar month from the after the expiration of one calendar month from the date of the appearance of the advertisements specified in the foregoing resolution (c), the necessary steps be taken to obtain the allowance of the regulations by the Local Government Board, and that the Board be asked to fix a date on which the regulations shall come into force.

The Building Act Committee also reported as to the action taken by them during the past three months, and observe that the total length of new streets sanctioned was one third mile only. 1,226 notifications were received with regard to structures alleged to be in a dangerous state. In accordance with the provisions of Part IX. of the London Building 1894, a survey was made in each case. In 125 cases it was found that the structures were not in a dangerous condition, and consequently no further action was necessary. In 1,101 cases notices were served upon the owners requiring the removal of the owners requiring the removal of the danger. In order to secure compliance with the Council's notices, it was necessary in some cases to obtain orders from magistrates, and in fifty-six cases in which such orders were not complied with the committee arranged for the Council's contractors to take down the dangerous portions of the structures. As a temporary expedient they arranged for forty structures to be shored up or hoarded in by the Council's contractors. Surveys were made of ten structures which were alleged to be in a dilapidated or neglected condition. Proceedings were com-menced for obtaining the demolition or repair of five structures. In two cases they arranged for structures to be demolished in default of compliance by the owners with orders made by magistrates.

It was decided to contribute one-third of the estimated cost, £450, of a proposed widening at the junction of Bermondsey Wall and Flockton Street, by the addition to the public way of part of the site of the Golden Fleece public-house. Bermondsey Wall is a continuation of Rotherhithe Street, various widenings of which have been executed by the Council and the borough council in co operation. By the improvement the width of Bermondsey Wall at the part in question will be increased for a distance of 24 ft. from 12 ft. to 24 ft., and that of Flockton Street for a distance of 60 ft. from a minimum width of 9 ft. to a general width of 11 ft.

The Education Committee reported as to the progress made with the scheme for the reduction of accommodation in classrooms in elementary schools to maxima of forty places in senior departments and forty-eight in infants' departments during the first triennial period ended March 31 last. They drew attention to the fact that the works completed during the year ended March 31 last, and the works in the builder's hands on that date, were undertaken before the issue of the Treasury minute with regard to the restriction of capital expenditure owing to the war. In connection with the scheme, which is to be completed within a period of fifteen years from March 31, 1915, the Council on July 23, 1912, agreed (a) to complete certain new schools, enlargements, and adaptations, and to remodel or rebuild certain old schools within three years from March 31, 1912; (b) to complete the modernising of certain schools within five years from March 31, 1912; (c) to commence the structural work in connection with the modernising of certain schools within five years from March 31, 1912; (d) to reduce the accommodation of 1,000 classrooms to the new maxima within five years from March 31, 1912; and (e) to provide 24,000 school places in each triennial period by means of new schools and the enlargement or improvement of existing schools. connection with the scheme, steps are being taken to deal with the problem of "noisy" Owing to unforeseen circumstances it has been necessary to make certain variations in the three years' programme, and on March 31, 1915, this included the following The erection of twelve new schools, the enlargement of fifteen existing schools, the adaptation as elementary schools of three pupil teachers' centres or secondary schools, and the modernising of twenty-three existing schools. During the three years under review

six schools (3,688 places) have been pleted; three schools (3,304 places) will probably be completed by the end of the summer pleted; three holidays, 1915; one school (996 places) will completed in November, another school (1,480 places) in December, and the remaining school (996 places) early in 1916. In the case of twelve other schools (3,084 places) the work of culargement has been completed; the work will be completed shortly in the case of two others (448 places); and the enlargement of the remaining school (468 places) will probably be completed by the end of the summer holidays, 1915. Two of the adaptations (507 places) have been completed, and the remaining case will probably be comand the remaining case win probably be com-pleted by the end of July, 1915. Of the twenty-three schools specified for completion by March 31, 1915, sixteen have been finished: in two cases the modernising will probably be completed shortly, in one case by the end of the summer holidays, 1915, and in three cases by Christmas, 1915. With regard to the remaining school, one section the work had been completed. twelve schools the modernising of which is to be completed by March 31, 1917, a tender has been accepted in four cases (the Haverstock Hill, Grafton Road, Winchester Street, and Wolverley Street schools); plans have been approved in three cases (the Pritchard's Road, St. Paul's Road, and Burrage Grove schools); in one case (the London Fields school) plans are under consideration; and in the remaining four cases plans are not yet in hand. Of the ten schools the modernsing of which is to be commenced by March 31, 1917, in two cases (the Victoria and Southampton Street schools) a tender has heen accepted; in three cases (the Sumner Road, the Neckinger, and Webb Street schools) plans have been approved; in one case (the Jessop Road school) plans are under consideration; and in the remaining four cases plans are not yet in hand. 995 classin existing schools, previously recog nised for more than forty or forty-eight children, have been replaced by classrooms with accommodation within the new maxima, either by modernising old schools, carrying out minor structural alterations, or writing down the accommodation. There will, there fore, remain only five classrooms to be replaced or written down by March 31, 1917, in order to comply with the agreement with the Board of Education. Of the 24,000 permanent school places (including those in the "minimum" programme) which the Council undertook to provide by March 31, 1915 (the end of the first trienmial period), 14,339 places had been completed at that date, whilst tenders had been accepted for proposals involving a net addition of 10,059 further places. In addition to the places referred to above, the Council had at March 31, 1915, decided on the provision of 66,342 new places, of which 6,690 were in the contractors' hands. In the case of twenty-eight noisy schools, steps have been taken to over-come the difficulties arising from the noise of In the case of sixteen other schools steps will be taken. In fourteen cases it does not seem possible to take any action, or it has not been considered necessary to do so.

Mr. Thomas Ni-bet, the city engineer, ha-been appointed to the dual offices of city engineer and master of works to the Glasgow

Corporation.

The new infectious diseases hespital built by the Rural District Conneil of Easington at Thorpe, near Easington, at a cost of £12,000, has been formally opened. The architect was Mr. Hugh T. D. Hedley, of Sunderland, and the contractors were Messus. Christopher Brown, Limited, of West Hartle pool.

We regret to hear that our old correspondent Mr. Harry Hems, of Exeter, has suffered a great bereavement in the death of his wife after forty-sown years of happy married life. Mrs. Charlotte Presswell Hems, who had been in all-health for the past three years, died at their residence, Fair Park, Exeter, on the 29th ult. aged 73 years. The funeral took place in Exeter Cemetery on Saturday. Mr. Hems, we are sorry to learn, has himself been in indifferent health for some time with sclerosis of the spinal cord, making walking without support impossible and writing a matter of deficulty. We regret to hear that our old correspondent

### R.L.B.A. EXAMINATIONS

THE FISSE. ATTERNATIVE PROBES DESIGNS.

INSTRUCTIONS TO CAST DATES

1. The drawings, which of and protecting 1. The drawings, which is additionally be on uniform sheets of paper in the state than Imperial size, must be not be too Secretary of the Board of Architical Education, Royal Institute of Britis, Architects, 9, Conduit Street, Wilcon in reference to the suggested below the dates specified below.

2. Each set of drawings must be go, by the author, and his full name and addre and the name of the school, if any, . . sh. the drawings have been prepared, must be

attached thereto.

3. All designs, whether done in a school or not, must be accompanied by a declirate n from the student that the design is his own work, and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice

4. Drawings for subjects at are to have shadows projected at an angle in line, monochrome, or colour. Drawings in subjects (b) are to be finished as working drawings. Lettering on all drawings neat be of a clear, scholarly, and unaffected character.

#### Subject AXII

(a) The Entrance Façade to a Tube Raj way Stacton in a Main Thoroughtare.—The total width of the façade available for both approaches and exits to be 40 ft. The upper part is to be let off as offices with separ entrance and staircase.

Drawings.-A plan to in scale, showing the arrangement of booking offices, etc., and an elevation and section of the façade to

½-in, scale.

2-in, scare.

(b)  $\Lambda$  Co-sperative Stores in a small village of 300 inhabitants, to be managed by a resident salesnam. The shop, to be by a resident salesman. The shop, to be built on the south side of the village street, should be portioned off into groceries, provisions, and drapery the latter with a top light. There should be considerable storeroom, accommodation in connection. The salesman to have a living room, kitchen and usual offices, three bedrooms and bathroom.

Brick and tiles, with rough-Materials. cast if desired.

Site. A corner site with chief frontage 54 ft. to main road, and a small lane at the side.

Drawings .- Plans of each floor, one section and two elevations, with one detail, ! inch scale, of portion of front elevation.

### Subject XXIII.

(a) A School Chapel to accommodate 250. (a) A School Chapet to accommended 200, of whom 150 are boys. Gallery at west end for organ and choir. Vestry for elerzy and choir. Entrance porch, or narthex, with way up to gallery. Screen under gallery shutting off entrance from chapel.

Drawings.-Plan and two elevations in scale, cross section and one bay long

withdinal section to bein, scale,

(b) Λ Doctor's House (detached), to be built in stone on a corner site, say, 80 ft by 200 ft., in the main road of a provincial town,

such as Stamford.

Accommodation. - Separate entrance for patients; consulting and waiting rooms near the kitchen part of the house. Front and back stairs. Good drawing room and dminz room, five ordinary bedrooms, with one dressing and two bathrooms, and usual offices: one bedroom for a resident patient: with bathroom adjoining, and small bedroom for murse. A study or morning room is optional. The house is to be set back from the road on both frontages. A small garage without living accommodation is desired

Drawings — giln, plans and two elevations and one section and a small block plan

### SUBJECT XXIV

(a) The accompanying plan shows a large house built in 1810, standing 110 it back from a main road now much used by meter traffic. The owner is greatly inconvenienced by noise and dust, and desires to enclose forecourt in order to shut off these nuisances as far as possible. He has need of a studio for wood and metal work, an organery for

### Currente Calamo.

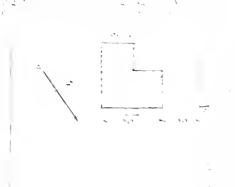
to a second of a lot July coma the semarather \_ to los\_ torward at an and meeting such a questhe the members of the Birt d. Architects on Mon the sub a meeting con'd the most tay anable conare coment proposed by the committee, more particularly as to or private competitions, aptt simp ya verbal alteration. ant both the standing orders a sed, area ise the proposed scuble to the fair and a importations among cotrote in the so and by the Institute sos are not intended prode competitions. proposed substituted or The classe Mane intended opportions other than pri-This was really a mate because it included small compublic money is expend d. or such there should be a to control With pri 112 'r vever desirable it may arressor to be employed, it is not carries or ild be adopted; and that the meeting in vise to go beyond and down However, when the id discussed these alterations at to the turn of the proceedings eviit in favour of the Competitions tter, a count was asked for by the is set the tre opposition, and a querum he ng would to be present, the whole the control of the end. As no more the same as soft are at all likely to a dark with var, perhaps it matters the tre present the intentions of the trace to be thus frustrated. The

ainzel wording was intended to be Members of the Royal In of British Ar hitee's and of its Allied are intended to apply to all to prove and under duals or firms consist from the extraction of the state of the extraction of the or Book. As lifects and shared in these Regulations? sted by the following Region distate not in was a fed private comstatule at pired, we be matter will in up thank when perhe drafted in a some referred to, en

it cannot date in the past session.

committee, the members of which are prepared to give applicants the benefit of their personal experience and advice, with a view to finding some solution to the applicants difficulties. The idea is that of personal service, and the Professional Employment Committee has been fortunate in securing the co-operation of Messes. Henry T. Hare, F.R.I.B.A., Geraid C. Horsley, F.R.L.B.A., and Pani Waterhouse, F.R.L.B.A., who form the advisory committee, and to whom will be referred any applications received by the Professional Employment Committee, of the kind indicated The Professional Employment Committee of the Architects' War Committee loses no opportunity of turning to good account any circumstances which may assist it in providing paid work for architects who are in distress owing to the War. An instance of this occurred when the "Clan Grant" was sunk by the "Emden," and with her Professor Geddes' collection of drawings en route for Madras to illustrate his lectures on cities and town planning. On hearing of the disaster the committee at once set a number of architects at work to replace the drawings lost, from Professor Geddes' original notes, and the news that the work was an hand was cabled to him. It seems from a communication recently received from Professor Goddes, expressing his appreciation of the work accomplished by all concerned. that the cable crossed his letter asking for the help which had been given already in anticipation. In the meantime the Professor had been carrying on as best he could with Indian plans and such European scraps as he could muster. He was not only delighted but surprised at the quantity as well as the quality of the exhibits sent out to Madras, where the first Cities and Town Planning Exhibition was held This exhibition was attended by representatives of most of the sixty live towns and cities of the presidency, which roughly compares in population and extent to the United Kingdom. Their leadang catizens and professional men, engineers, and others attended, and for the latter there were held practical classes in connection with the improvements in progress. Something of the same kind will be done in Bombay and Calcutta, and in this way the cities are being reached, and in some instances more fully than is the case as yet at home. Professor Goddes expresses the hope that the assistance which the committee has rendered to him is but a phase of that wider co-operaestate of a permitted to take part in thou which is so desirable towards the result of a law ordinal with these Regn newal of cities, whether those destroyed by war abroad or those deteriorated in peace constructions of the Competitions at home, and we are sure he will not be disappointed.

> The sixty-eighth annual general meeting of the Builders' Benevolent Institution will be held at Koh-i Noor House, Kingsway, W.C., or Wednesday week, July 21st, when Mr. George Holland, the president, will take the chair. A numerous attendance of all friends is very desirable. Like all other institutions of the kind, the Builders' Benevolent Institution is feeling the pressure of the times very severely and much more so than some, owing to the fact that the industry it serves has been more sorely tried by the war than any other. It is, therefore, most necessary ther a special effort should be made this year to succour the victims of the hard fight we are all making to keep going till the better days dawn which we believe are in store for The state of the s those who have succumbed in the Lard mall a k-ray struggle



The case which we report in our log column elsewhere, in which one of the City magistrates very properly convicted for failure to report to the district surveyor the nature of measures being taken to prevent the consequences of an air raid on an important building, should be heeded by all property owners, and by those employed by them. All will agree that any such work should only be undertaken under the direction of the architect of the building, or in his absence by some other competent architect, and that notice should be given to the district surveyor. There is always risk when additions of any kind are made to a building by those unacquainted with the nature of any of its parts. There is always danger to adjoining owners when those not so acquainted are allowed access to buildings except under due supervision. We have little doubt that the magistrate, in the case referred to, took care to assure himself of the competence of the firm engaged, and think he was justified, on that and other accounts, in imposing a nominal penalty. But in any future cases of default we take it for granted there will be no disposition to minimise precautions which in these days of danger and difficulty are more incumbent on all of us than ever in the interests of public safety.

The proceedings of the Town Hall Committee to be submitted to the Manchester City Conneil to-day contain the correspondence which has passed between a special sub-committee and the city surveyor (Mr T. de Courcy Meade) relating to certain employees in his department who were dismissed by him because there was not work They themselves represented that for them. they had been dismissed because they had declined to enlist as soldiers, and they appealed to the Town Hall Committee, A sub-committee was appointed to investigate. On June 4 the sub-committee sent a letter to the chairmen of various committees stating the circumstances in which the city surveyor had dispensed with the men's services, and asking if suitable work could be found for the men in another department. In reply, the several committees appealed to said they could not find any suitable work. The subcommittee, therefore, recommend that the suggestions contained in their report dated May 12 be approved. The report of May 12 states that the sub-committee had fully considered the matter, and had conferred with the Lord Mayor in the presence of the city surveyor. At the outset the city surveyor admitted that he had made a mistake when he gave two men seven days' notice to leave instead of submitting the matter in the form of a recommendation to the Town Hall Committee. "Your sub-committee." report of May 12 proceeds. "are of opinion that in substance the alternative that was offered to these men was enlistment or dismissal, especially in view of (a) the city surveyor's letter to the staff, (h) his reports to the committee, and (c) to the fact that these men refused to enlist, while all those who enlisted and those who are ineligible for enlistment have been retained in the corporation service. They are further of opinion that there is not sufficient work in the city surveyor's department to justify the retention of the services of the whole of the men who did not enlist, and that the staff should be reduced, and that the services of the three men in question can be dispensed with on this ground." With regard to the staff under the Town Hall installations which illustrate the latest trend Committee, they did not think that any in street lighting.

on first that the office of the most state of the office o Press with regard to the art a wheat we At a meeting of the Line Hall Canton So on June 25 it was moved that the sub-committee's report be approved and that the notice to two of the man be confirmed, and that a month's notice to the Warf man be given terminating his source with the poration. An amendment was in vel that two of the men, with the approval of the city survey c, be reinstited, and this socarried.

A hig deal in London property has just been effected with the sale, for the sum of close on £250,000, of the freehold of the Arundell Estate, in the vicinity of Piccadilly Circus, with frontages to Shartesbury Avenue and Coventry Street, and embaucing an area of 34,500 ft. Included in the property is one of the few surviving relics of the Georgian period to be seen in the streets of the Metropolis—a well-known silversmith's -which displays an inscription informing the passer-by that Lumbert's are "Gold smiths and Silversmiths to their Majestie-(George III. and his Consort) and to her Royal Highness the Duchess of Kent." Mr. R. M. Phillips, of 97, New Bond Street, who has effected the deal, states that the disposal of the estate fore-hadows another improvement in the scheme of alteration which has been going on in the region of Piccadilly Circus. Other property may be involved at a later date, but the plan, so far as it can be explained at present, is to raise on the site a building which will provide "a combination of pleasure and entertainment, with all the comforts of a palatial hotel and restaurant. Arundell Street, which runs through the centre of the block to Panton Square, derives its name from the Lords Arnudell of Wardour, a title perpetuated in another wellknown thoroughfare near by. On the Coventry Street side of the property there is a frontage of 117 ft., while in Shaftesbury Avenue, and close to the Trocadero, the extent is 105 ft.

 $\Lambda$  useful paper on the effective illumination of streets was read on the 30th ult. by Mr. Preston S. Millar at Dear Park, Md U.S.A., to a joint session of the American Institute of Electrical Engineers and the American Illumination Society, which appears in the July Transactions of the first-namel body. The paper mentions the dependence of effectiveness in street lighting upon municipal appropriations and efficient lamps, but dis cusses more particularly those aspects of effectiveness which are dependent upon skilful utilisation of the light to produce the most effective illumination. There are included a classification of streets, a statement of the objects of street lighting and the elements of vision under street-lighting conditions. The paper emphasises three considerations which are sometimes neglected in street lighting dis cussions; namely, the silhonette effect, specular reflection from street pavements. and glare. The remainder of the paper is given over to a presentation of the variables upon which the effectiveness of street illumi nation depends, and upon the influence which each feature of the installation exercises through these several variables. As a part of this discussion illuminating efficiency values for the several modern street illu minants are given. The appendix includes statistics and photographs of some very recent

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Mr. G. F. Per and the second and Bondanzs Court of School for School for the second and a reference of School for the second and the second for the second f

Wendork Taxin Council in a constraint of Mr G H Padlow at present a constraint of the distinct consult of Halescolour who against veyor, at a salary of £200 to a constraint with at extra £200 towards the space of the constraint of the post of the post.

Mr. E. Leonard has held an include the proposal of the Camput volume. The first it Council to borrow \$2.0 of a tree of the forty four houses at Pervilion. The color of plained that the roll had a goal for the series of six areas of land, and the helds where were urgently needed, would be let at 78 24 per work wordships. week, melusive.

Woodwich Borough Council on Wednesday Windwich Borough Council on Wednesday appeared d Mr. L. she Reserveme. M.Fes C. E., to the past of borough originic and selection in succession to the rate M. J. Risa Devocate salary of £870 a year, rising to £22. Mr. Roserveme has been since for 2 and on gineer of South Shields and was presently chief assistant engineer of Britain ham.

chief assistant engineer of Britin, hand.

Mr. H. Saief all Bidweel a first state of the tree Local Government Board, had accepted by Pacethorough yest aday. It is that if the application by the Soke Rapid District Correct for permission to be roow a latter I same, among time to be 20th for some rapid corresponding to be 20th for some rapid corresponding to be 30th for some rapid corresponding to be 30th for some rapid corresponding Without, Wart 1, and Westermeton.

The City Architect's Department. In this are preparing a heating be away the original object of which with the to see that in tenting apparents are instable property. A considerable and undefinition of dimage is different to the blowing up of boders due to fieldy installation, and the by law is stronglided in a kent possible for the city action stronglides for the city at the stronglides. saives in not water seed ins are into a property so us to guard against the dather of expressions

The rural district coincil of Hurslet, which has recently applied to the Local Government Board for approximate for the Local Government for the Tomplenews in a case is the nest rural council to reach the stock of the shear to the Tomplenews in a case is the nest rural council to reach this state in town particular procedure. The governing factor of the scheme has been the provision of a wide new road to form a by-pass to the Leeds to Selby road, avoiding the present marrow, and in places rections, village street. The work of preparation and advising the centerly was continually currented to Messis. Pepler and Alba, who chave carried the scheme through Mr. F. L. Thompson having taken Mr. Pepler's place on the appointment of Mr. P. pler to the Local Government Board staff

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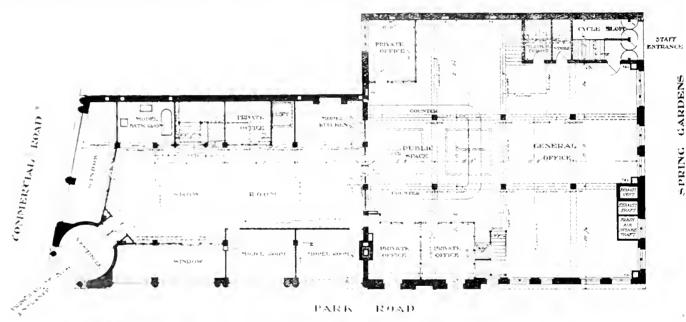
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The property of one 1 to to carried in outrely in referred on error as a with Diu tonis carriers. The year is the those and other special fittings in the Messre, Hills and Hill It is the Nesse Hills of Hill It is a little of L. The elevations which we have the state of the day are now at the Riya' Alason Friedrich Mr. Aradd Mitter. Firll Vol. Havever Square Willis the

MUNICIPAL BUILDINGS FR SQUARE COMMERCIAL FAST PREMIATED DESIGNS A saw gave a review of the competi-First Consider gave a review of the competition of a 2 start from the Construction of Rooms for sterr sers, centrifuges, and on, photography, and washing veriently arranged in connection forateries. Mr. E. J. Pullar, et Rangoon, is the architect, and continuous, is the architect, and contractors for the work were to and Mundy, of Rangoon, we combined and sanatary work and Greed, of Rangoon, were

#### PARLIAMENT HOUSE. OTTAWA, CANADA

ing stoves, general stores and strong rooms that the periodic received and strong rooms for the ventilating and heat ing plant, and also for the high-pressure gas plant. Further there is a large cycle store, approached from the outside by a slope adjoining the staff entrance, where accommodation is provided for the bicycles belonging to the outdoor staff. The ground floor is the outdoor staff. The ground floor is the outdoor staff. The ground floor is the outdoor staff. The main entrance is approached through the main entrance is approached to the main entrance is approached the main entrance is approached to the main entrance is approached to the main entrance is approached the main entrance is approached to divided into showrooms and general offices. The main entrance is approached through a circular porch on the principal corner. Model rooms have been designed to exhibit the various gas appliances. All the screens, enclosures, fittings, and desks are carried out in mahogany, and the scheme of lighting to the general offices will be by the semi-indirect system of lighting. The staff entrance and cycle slepe to basement are situated at the rear of the general office. The main staircase out of the showroom leads The main staircase out of the showroom leads to a large square hall on the first floor. On to a large square hall on the first floor. On this floor is a demonstration hall for lectures, directors' rooms, and rooms for the general manager, secretary, and their staff. The heard room is panelled throughout in mahogany. The back part of the first floor, which is served by a separate staircase situated at the rear of the building, is planned to accommodate the automatic collectors' Our structure shows the competitive decrease, noted by Messes Clyde Young and H. S. Flast for the proposed Departmental of Clarks Bullings at Ottawa. This manager, secretary, and each country of the first floor, which is served by a separate staircase situated at the rear of the building, is planned to a school of the Kenter of the Secretary of the first floor, which is served by a separate staircase situated at the rear of the building, is planned to accommodate the automatic collectors' staff and additional offices and main staff lavatories. The caretaker's quarters are situated as the first floor, which is served by a separate staircase situated at the rear of the building, is planned to accommodate the automatic collectors' staff and additional offices and main staff lavatories.



RTS(A ISLAND AS COMPANYS NEW CHIEF OFFICES AND SHOWROOMS. MR. VICTOR WILKINS, Architect.

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I managing feature of these being the tower to see the of the semicircular curve features of the semicircular curve features. On the S. front of the Departmental buildings, the poincipal features have to increasing the contre with the streets leading are Weiling's Street. Formal garders are last a between the cliff and the trainings on the E, and W also between the logarimental and Courts buildings. A free the ore Reasonice treatment has been the cliff and the streets that the first street is a substitute of the contractor was Mr. D. Brearley, of Deepear. The first state of the buildings, and must be an in the case of the buildings, and must be an in the case of the buildings, and must be an in the case of the buildings, and must be an in the case of the buildings, and must be an in the case of the buildings, and must be an in the case of the buildings of the buildings of the case of the buildings of the buildings of the case of the building

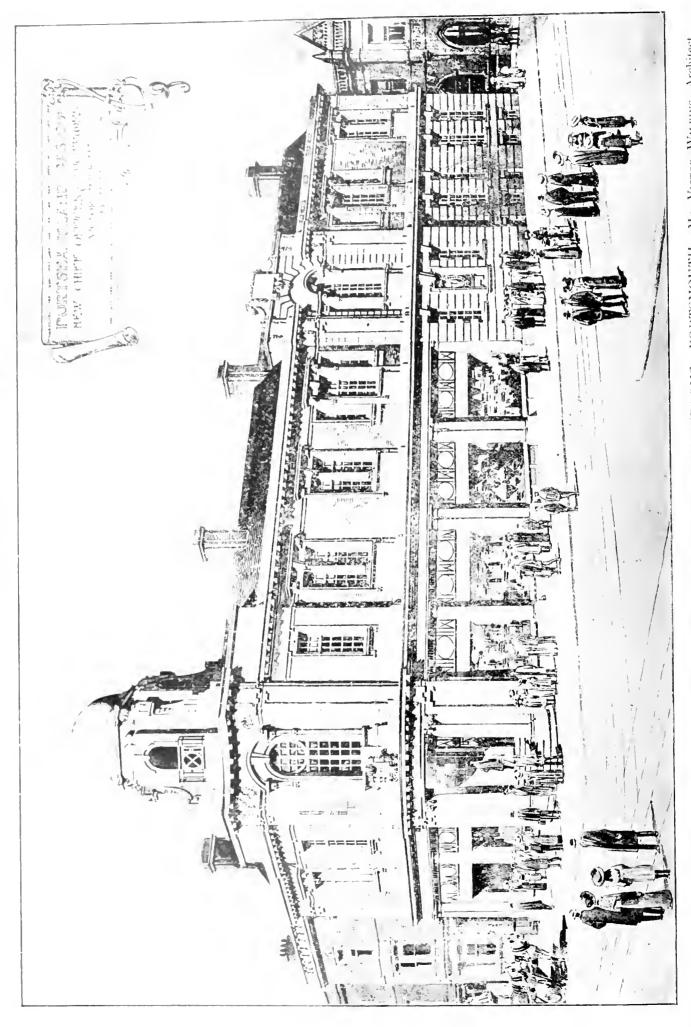
A new Council school at Hidhope Stones, Penastone, built at a cost of £1,673, has been formally opened. The contractor was Mr. D. Brearley, of Deepear.

CHIEF OFFICES AND SHOW ROUNDS. PORTSMOUTH

Let a too maring completion, is a parametric corner position on the forcer offices of the company of the Square at Portsmouth and the Portland stone, and Welsh and I for the roof. The base that the showrooms for gas cook pany have now been completed.

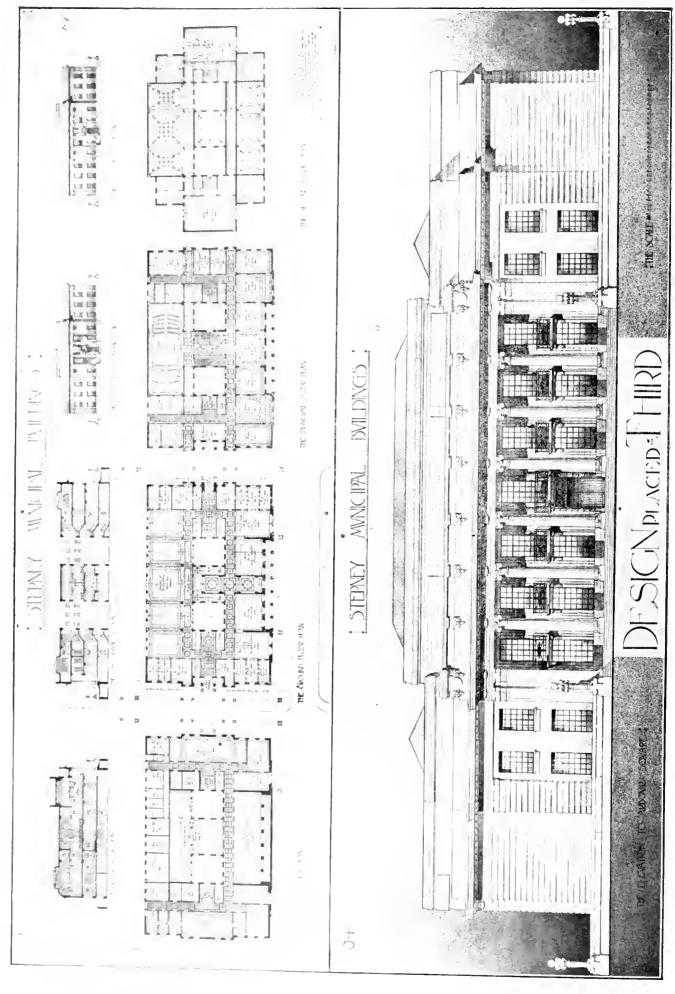
Condending made in the reconstruction of the Bristol Cattle Market, which was rendered necessary in consequence of the acquisition by the Great Western Railway company of part of the site for the purposes of the company of part of the site for the purposes of the company of part of the site for the purposes of the company of part of the site for the purposes of the company of part of the site for the purpose of the acquisition by the Great Western Railway.



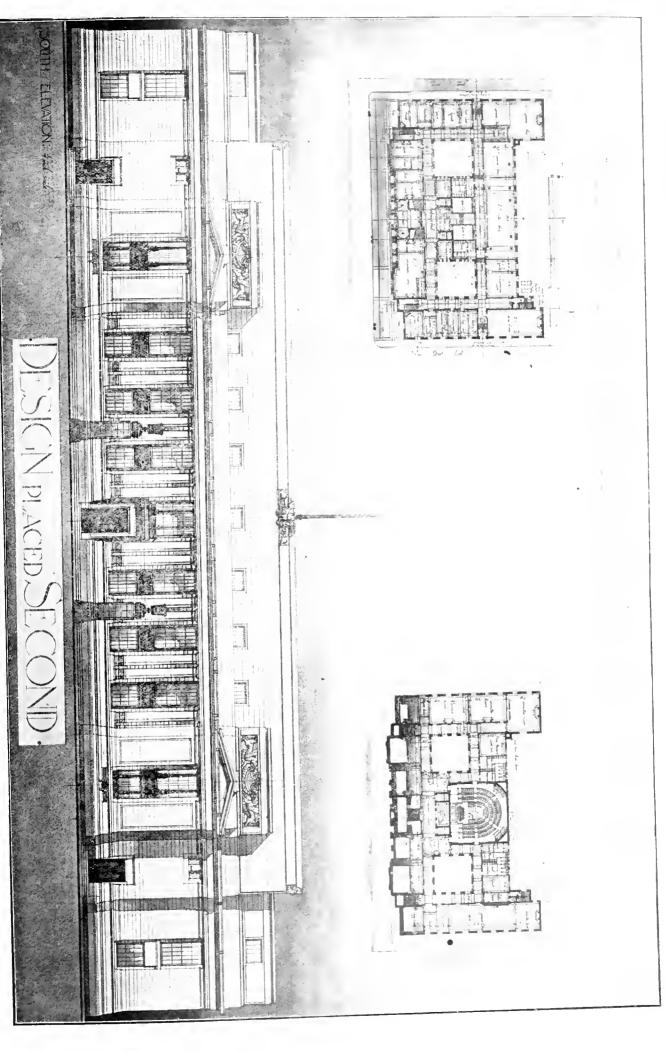


PORTSERA ISLAND GAS COMPANY'S NEW CHIEF, OFFICES AND SHOWROOMS, PORTSMOUTH,-Mr. Victor Wilkins, Architect.

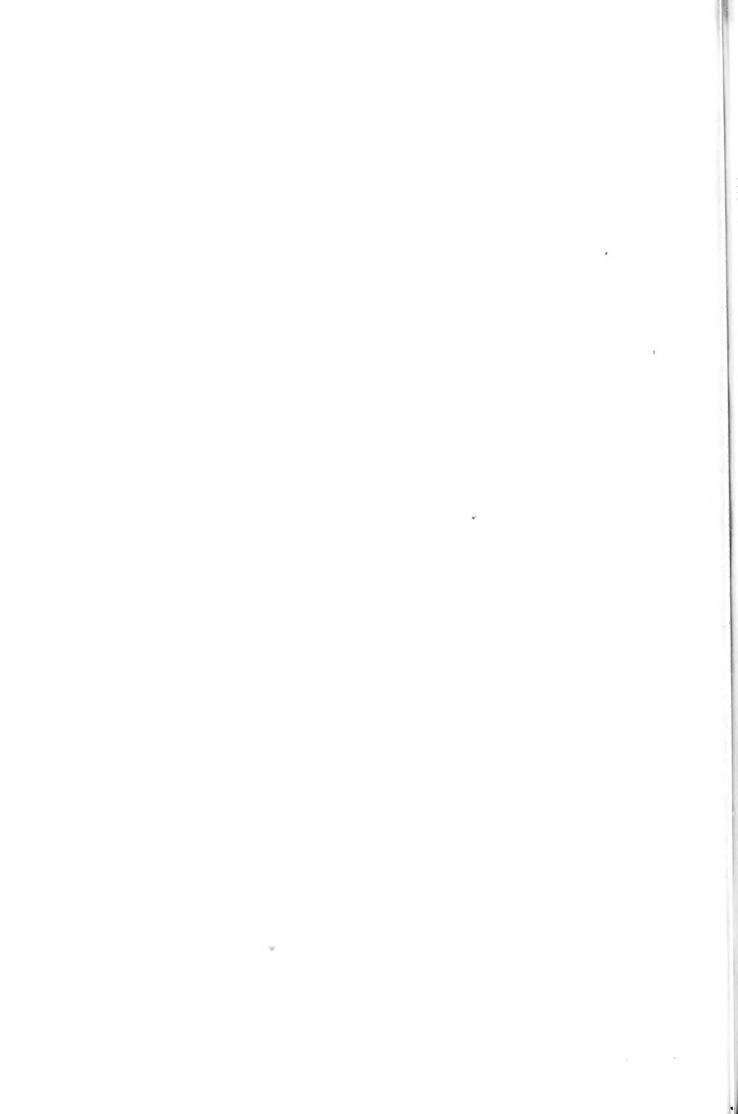


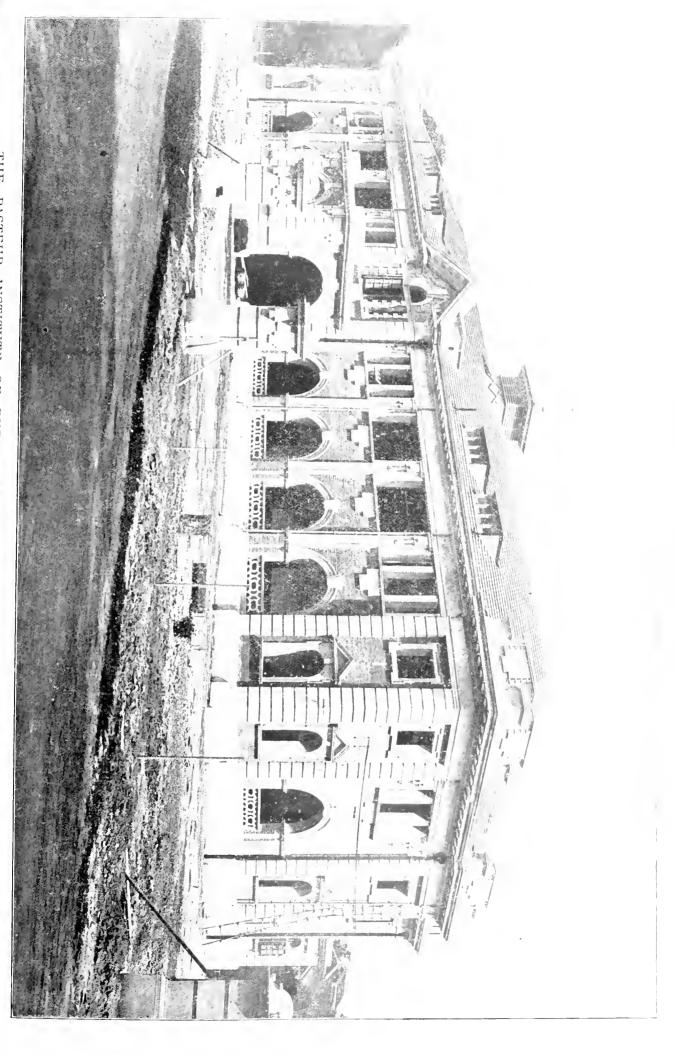


£75 SECOND PREMIATED DESIGN, STEPNEY MUNICIPAL BUILDINGS, ARBOUR SQUARE, E.

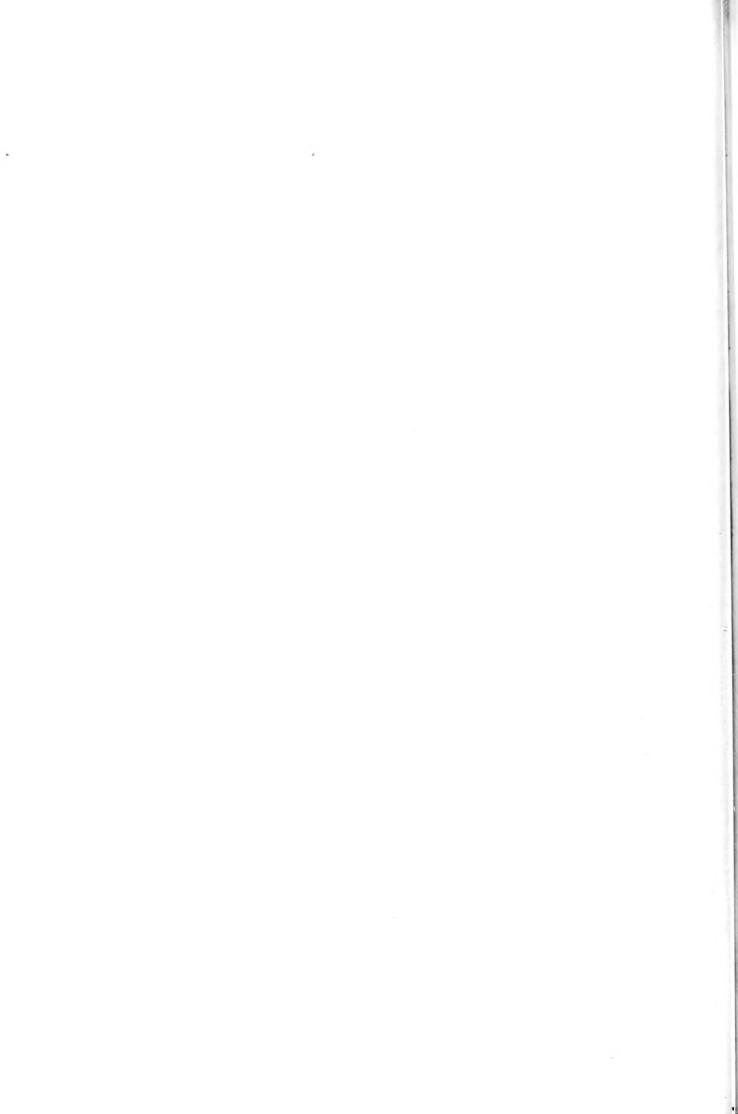


00I J FIRST PREMIATED DESIGN, STEPNEY MUNICIPAL BUILDINGS, ARBOUR SQUARE, E





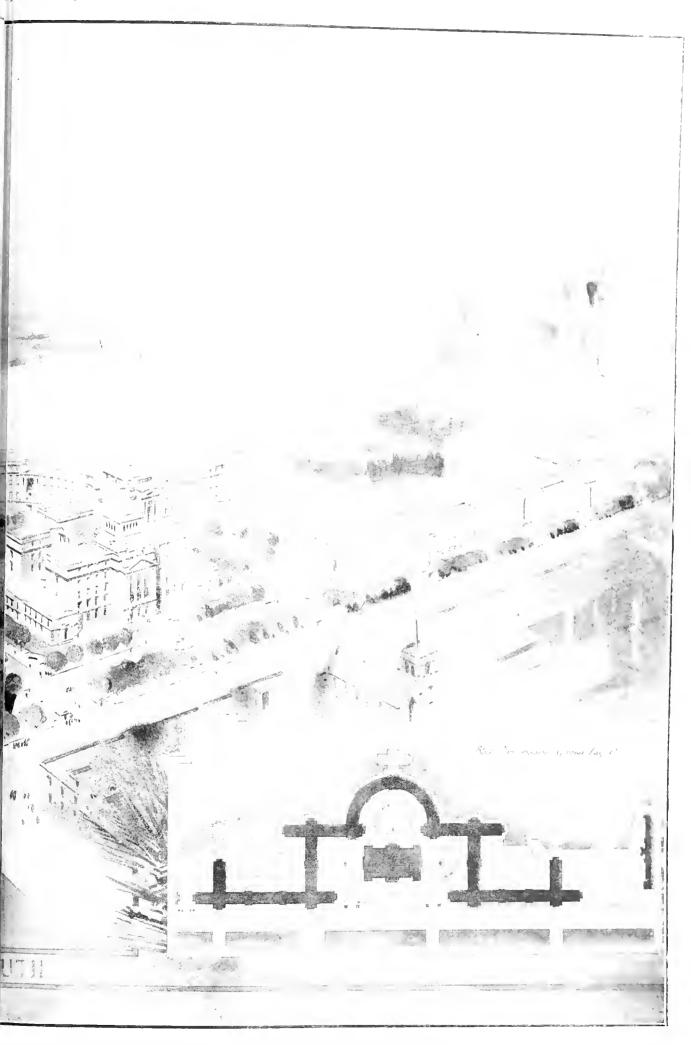
THE PASTEUR INSTITUTE OF BURMA, RANGOON, INDIA.—Mr. E. J. Pullar, F.R.I.B.A., Architect.



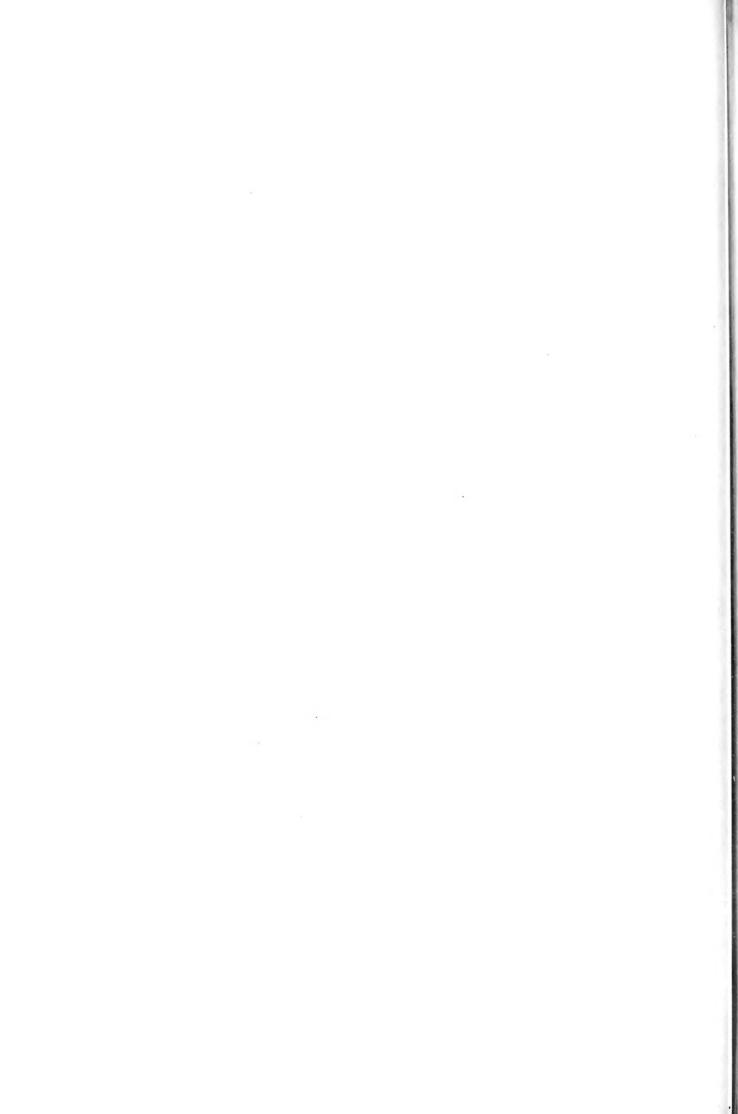




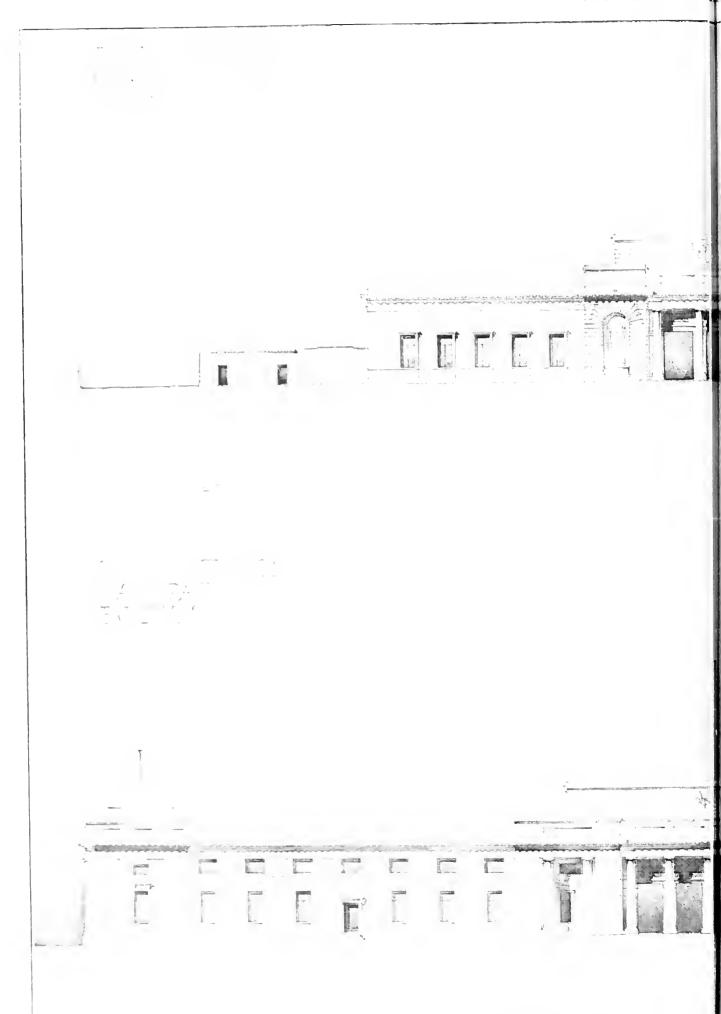
T.A. MAN, FARMAMENT HOUSE, OTTAWA, CANADA, Desi

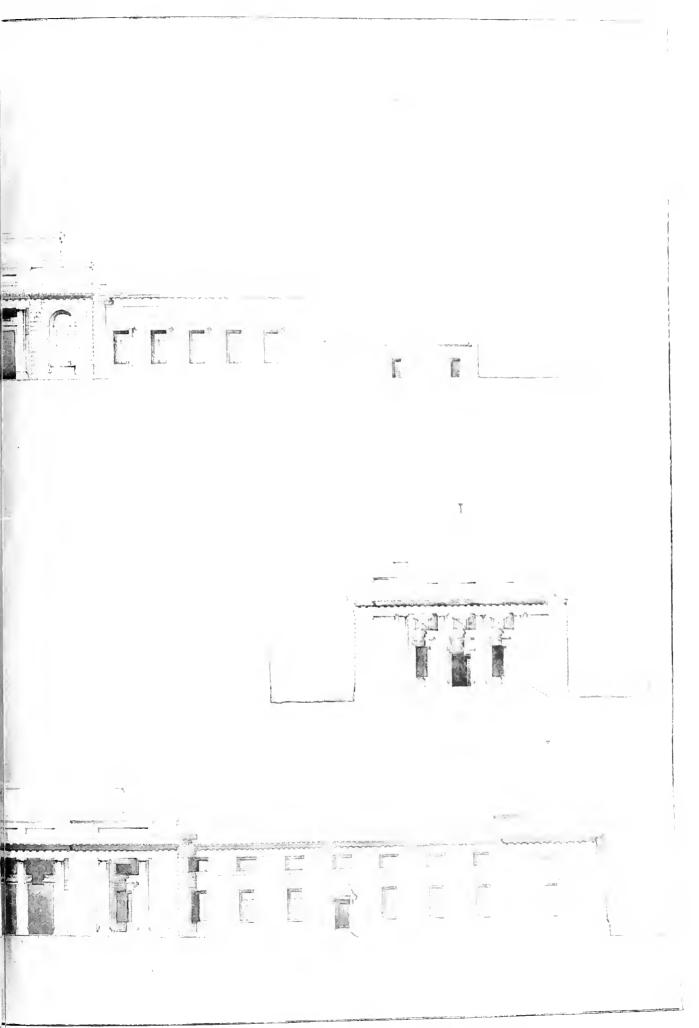


essrs. CLyde Young, F.R.I.B.A., and H. S. Ever, A.R.I.B.A., Architects,

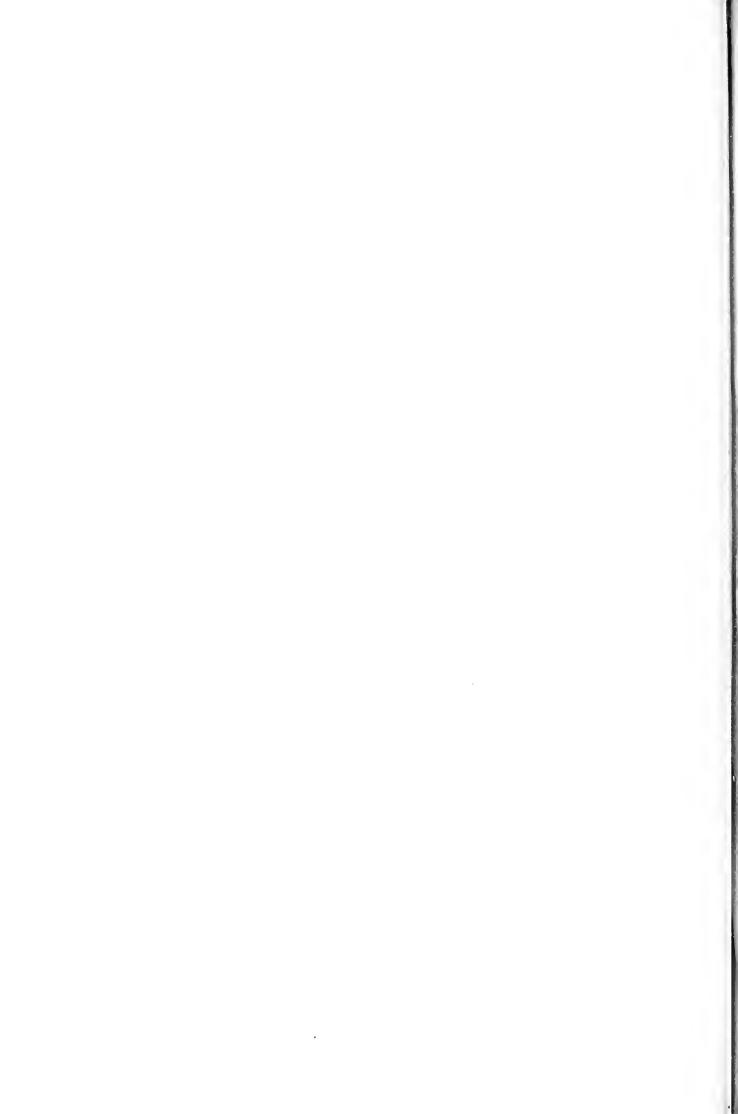








LI AND BOLIVIA RAILWAY COMPANY, - Mr. Arnold Milchell, F.R.I.B.A., Architect.



## Building Intelligence.

BLOOMSBURY.—A new synagogue is in course of erection in Alfred Place, Bedford Square, from plans by Mr. Claude W. Ferrier, of Waterloo Place, Pall Mall. In addition to the main synagogue on the ground floor, there will be a small synagogue in the basement for daily services, rooms for meetings and for the secretary and ministers, and a residence for the caretaker. synagogne, including the ladies' gallery, seats 600 persons. Upholstered tip-up seats are provided, and a full complement of retiring rooms. The construction is of a fire-resisting character throughout and the function of a fire-resisting character throughout, and the front elevation is in Portland stone. The foundation contract is in the hands of Messrs. Ford and Walton, Ltd., of Kilburn. Mr. R. H.
Kellond is the clerk of works.

EDGBASTON.—With Masonic ceremonial
the foundation stone was laid on Saturday of

the new church which the parishioners of St. Augustine's, Edghaston, are erecting to the memory of St. Germain at the junction of Portland and City Roads. The new church has been designed by Mr. E. F. Reynolds, in competition with twenty-one other Birmingham architects, and accommodation will be provided for 700 worshippers. The plan is set out with the customary arrangement of nave and aisles, the church being entered by two western porches and by an additional door at the east end of the north aisle. On the south side of the chancel is the organ chamber, and on the north side the morning chapel. on the east of the chancel is a semi-circular apse, covered with a semi-dome, beneath which the altar will be placed. Behind the apse is an entrance leading to the choir vestry and clergy vestry. The length of the church from the west wall to the end of the apse is 128 ft., and the width across the nave and aisles 56 ft. The columns supporting the arches on each side of the chancel will have Swedish green marble shafts, with white marble caps and bases; and the columns bemarore caps and pases; and the columns between the aisles and nave will be of Shap granite, with Portland stone caps and bases. The roofs will show massive trusses and purlins, and it is intended to decorate these times with patterns in column The colum bers with patterns in colour. The walls and porches will be plastered and left bare until it is possible to add their decoration of fresco painting and model plaster work. It is hoped that the walls of the apse will eventually be panelled with marble, and the semi-dome covered with mosaic. The floor under the seats will be laid with wood blocks, and the aisles and chancel will be of red quarries. grey stone, and green slate, laid in decorative Externally the walls will be of patterns. Externally the walls will be of grey brick, with red-brick angles to the piers. Stone is introduced in the window frames and copings, and in decorative patternwork in the gables, and there will be seven stone panels carved with figures in low relief. The roof will be covered with Italian tiles, and a bell turret will rise above the ridge of the roof The church is to be completed by March next

STAMFORD STREET, S.E .- The King George Hospital, in Stamford Street. S.E. the largest and one of the best equipped of its kind in London, is complete, and was opened for inspection on Wednesday last.

The building, which has been equipped by easy stages, was originally destined for his Majesty's Stationery Office. It is six floors in height, is divided into sixty-five wards, and contains 1,650 beds. The building was erected in height, is adviced into standing was erected contains 1,650 beds. The building was erected from plans by, and under the supervision of, Mr. R. J. Allison, F.R.I.B.A., of H.M. Board of Works. The original contractors for the whole of the work were Messrs. Perry and Co.. Ltd., of Bow, E. The alterations to serve as a hospital have been executed by the Director of Barrack Construction from plans by Mr. Edwin T. Hall, F.R.I.B.A., of Bedford Square. The block has a frontage of 323 ft. to Corporal! has a frontage of 323 ft. to Cornwall Road, and a depth of 189 ft., with an average height above pavement of 79 ft. The construction is of reinforced concrete, the floor slabs being  $3\frac{1}{2}$  ins. thick and calculated for a weight of 2½ cwt. per sq. ft.; the windows are provided with steel sashes. The premises were fully illustrated in our issue of December 6, COMPETITIONS

COMPETITIONS.

TOTTENHAM.—The following award-have been made for the Elementary Schools, Tottenham:—First premium, Mr. A. Jessep Hardwick, F.R.L.B.A., Eagle Chambers, Kingston on-Thames; second premium, Mr. Arnold Mitchell, F.R.L.B.A., Hanover Square, W.; third premium, Messrs, R. H. Spalding, F.R.L.B.A., X. Toller Myers, A.R.L.B.A., and Ernest G. Theal.ston, F.R.L.B.A., King Street, Cheaps de, Mr. Leonard Stokes acted as assessor. Fointeen designs were sent in by the thirtoen invited designs were sent in by the thirteen invited

UNIVERSITY COLLEGE, LONDON.—In connection with the work of the session 1914-15, the following awards have been made the School of Architecture at University

DEPARTMENT OF TOWN PLANNE Lever Prizes in Town Planning, A. G. Wood
H. N. Ursher
L. H. Shattock
Lever Prizes in Architecture
Town Planning—Certificate . . . . . H. N. Fisher **>----**

#### OBITUARY.

We regret to announce the death on Wed nesday last, at his residence, 52, Portsdown Road, Maida Vale, W., of Mr. Henry David Davis was in his seventy-seventh year.

Road, Manda Vale, W., of Mr. Henry Davise partner in the firm of Messrs. Davis and Emanuel, architects, 2, Finsbury Circus, E.C. Mr. Davis was in his seventy-seventh year. was a member of the firm from 1870 until 1898, when he retired. He joined the Royal Institute of British Architects as an Asso-ciate in 1872, became a Fellow seven years later, and was placed on the list of Retired Fellows in 1905. His partner, Mr. Barrow Emanuel, M.A., J.P., died in February, 1904. aged sixty-four. Among the many works carried out by the firm were the important blocks of chambers and offices known as Salisbury House, and Finsbury Pavement, in connection with the rebuilding of the Finsbury Circus Estate of the Bridge House Committee; several synagogues, including those in Upper Berkeley Street, W., Stepney Green, Maida Hill (Spanish and Jewish), and Hampstead; the City of London School. and Hampsteau; the City of Boldon School, Victoria Embankment (gained in competi-tion); Portsmouth Grammar School; Thorn-gate Memorial Hall, Gosport; the concert pavilion on the Clarence Esplanade Pier, Gosport; the Jewish Cemetery, Golder's Green; various blocks of offices in the City, includvarious blocks of onices in the City, inclining those of Messrs. Ashurst, Morris, Crisp, and Co.; premises of the Imperial Continen-Association: extensive alterations to tal Gas East Cliff Lodge, Ramsgate, for the late Joseph Sebag Montefiore, and to Castle Hill, Englefield Green, for the late George E Raphael; the Freemen's Almshouses in Ferndale Road, Brixton, for the City Corporation almshouses in Mile End for the Jewish Charities, offices of the Lewish Board of Chartenses. ties; offices of the Jewish Board of Guardians in Middlesex Street, E.; London Joint Stock Bank, Wood Street, E.C.; the Yarrow Convalescent Home for Children, Broadstairs (illustrated in our issue of August 2, 1895); the laying-out of the Kidderpore Estate at Hampstead; Meistersingers' Clubhouse, St James's Street, S.W.; large blocks of work-men's dwellings for the East End Dwellings Co. at King's Cross, Bethnal Green, White-chapel, and Columbia Market; and many large chapel, and Columbia Market, and maker warehouses in various parts of London. Mr Davis was in indifferent health for some years before his death. He leaves a widow and before his death. one daughter.

one daughter.

Dr. William Robert Ware, Professor Emeritus of Architecture of the Columbia University, whose death we briefly anomiced in our issue of a fortnight since, died June 9 at his home in Milton, Mass, in his eighty-fourth year. He graduated from Harvard in 1852. Until 1881 he applied himself to the nedatory of architecture plied himself to the pedagogy of architecture. at the same time working as an architect in at the same time working as an architect in Boston, Mass. During that period he was Professor of Architecture at the Massachusetts Institute of Technology and the Lawrence Scientific School. In 1831 he went to New York and joined the Faculty of Columbia, being retired as Emeritus Professor twelve years ago. Professor Ware was one of the commission that designed the

huildo P. A He war a Forest Architectural Title Av of Arts and Section 11 (1) of Arts and Section 11 (1) and Homeraty Computer Architecture of British Architecture of British Architecture (1) LL D

1896.

Particulars are jest to lead of Sergeant Gordon Smart, at the lead of Sergeant Gordon Smart, at the lead of Sergeant Gordon Smart, at the lead of Sergeant Gordon on Cooperative The decreased, who was the typical void age, was the second smoot the late Media Smart, R.S.A. He served the control to the of the South African Wor with the Day of Cambridge's Yeomanry, and on the earth of the war last August he immediately gave up his profession as an architect at Burnley. up his profession as an architect at Burth on to join the Yeomanry again. He was men-tioned in despatches by the General of the tioned in despatches by the Ceneral of the Division for conspicuous coolness and be every in an engagement in Flatders, and was promoted to the rank of sergeant. On Saturday, June 19, Sergeant Smart got leave of absence for seventy two hours, and went to Burnham to spend them. He seemed very overstrung, and it was thought that he was suffering also from the effect of German 2as. He is one very ill almost as soon as he wall are related very in almost as seen as he to day and at all aburdant, was removed to the military hos pital there, became unconscious, and died on Wednesday.

Mr. David Adamson, retired builder, luner

leithen, lost his life through a shooting accident on Wednesday last. Mr. Adamson re-tired from business as a builder in Edinburgh a number of years ago, and went to reside in Innerleithen, where he was a generous sup-porter of all schemes which needed help in the town. He took an active part in the affairs of the town, and was a town councillor.

PROFESSIONAL AND TRADE SOCIETIES.

ROVAL ARCHEOLOGICAL INSTITUTE.—The annual meeting of the Institute was held at Barlington House on Welnesday. Sir Henry Howorth, President, occupied the chair, and, in moving the adoption of the report, stated that the Institute had had another year of successful life, and had never been meete president that the place of Mr. Mill Stephenson, and the following were elected members of the council: The Rev. D. H. S. Cranage, the Rev. E. S. Dewick, M. S. Giuseppa, Dr. Phila, Norman, Mr. H. Plowman, and Professor E. S. Prior, F.R.1B. A. Professor G. Bald win Brown read a paper entitled: "Was the Anglo-Saxon an Artist?" He said that there was a sufficient body of valid evidence the profession of a Anglo-Saxon possessed an artist. ARCHÆOLOGICAL INSTI ROVAL the Angle-Saxon possessed an artistic capacity quite on a level with that of his Continental contemporaries, and there was no real foundation for the popular projekt no real foundation for the popular projudicy which regarded him as a rather counsy hourish creature, who had to subsides the needy foreigner to do his artistic work from the conseded that all densities cases were to be given in favour of the foreigner, but there still remained the consequence covering almost the whole AngleSever period, the tumb furniture, including the Kentish inlaid jewels of the pagan epoch the ring of Ethelsmith, and the Durham embroideries of a later time, hat he ment on the origined which had never been in doubt. If the Gospels of Lindisfarne be handed ever to Celtic scribes, it was impossible to with If the toospes of Lambstarne be handed ever to Celtie scribes, it was impossible to with-draw from native Anglian brains and fingers a large share of the responsibility for the Rathwell and Beweastle crosses. These were things that "cannot be spoken against

Mr. Percy Heaten has a gived instructions from the rural district council of Preston. Lanes, to prepare a scheme for a new water main and the erection of a water tower to hold in non willions.

The corporation of Birmingham accepted. with thanks, at their meeting yesterday (Tuesday) the gift from Mr. Alexander M. Chance and the subscribers of an area of 33,611 square yards of land adjoining Workey Park for the extension of that open space.

### Our Office Cable.

MA TRABA MEA A second VA TRIBA MOA more second second second Research From more second secon

every naid to I me a the I M. P. D A Training

this South Western Sectional one to earth the scheme for the der London was held on the lost week at the offices or merr Board, Whitehall, and the char. Properties to the form the form the form the continuation by these to the Basing device of Patrey Budge. order (2) if Patrey Bridge, if Wordsworth Bridge and if Wandsworth Bridge and the following to five approaches, and the control of dge across the river state of stance held with the limit of the ways agreed to. The control of the ways agreed to be passed to the following the control of the process of the control of the process of the control oct and its eastern end with the Chimwel. Read and other that the line of the proposed the about the hard as can largely the about of the planning schemes; is the mode for improving the best between the large problem from the best best by the Bosingstoke Road, in the large page was true extended the formula of the planning of the planning formula by the planning the large page of the planning the large page of the planning the M. Pepler, F.S.L., to riferation, and the 25 min

West Hartepool and partly West Hartepool and partly or district of Hartlepool. Mr. the borough engineer, said d 1,210 acres of land within 4 1422 acres in the rural et al., Stranton, Seaton, and It. Lind generally was suitable proximity to large industrial the development of estates, and there was a great future for the epy to questions by Mr. Jevous,
Durham County Conneil, Mr. d there were 1.216 unoccupied West Hartlepool in 1911, as com 515 in 1901, but in the inter years a great wave of depression the whole country, and West saffered as other places. Mr. I the country council did not want the county council day not want the etive to a town planning scheme model suggest for the Board's conre the event of their approving of shorie, that the rural authority should to one say by way of representation on responsible authority. Mr. Jeffries, for tural district council, submitted that, ing regard to the fact that the rural polation had been stationary for twenty cars there was no need for a town-planning heme Mr. Foster also opposed on behalf ( the Greatham Parish Council. The owners t Tarstall estate desired to be excluded tom the scheme, and Lord Eldon objected is an the scheme, and Lord Enton objected to theme on the ground that the time was cut upe. Mr. Tilly said his clients, Messrs, W. Gray and Co., recently bought ninety acres of the land included in the scheme. Their intention was to build a garden city. to a workmen employed at the proposed new shipyard, and it would be a great hardship at their plans were affected by the scheme.

M. Paul Lambotte, Directeur des Beaux Arts de Belgique, has arranged at the Goupil Gallery an exhibition of paintings, sculpture, Gallery an exhibition of paintings, sculpture, and other works of art (including modern Fleinish lace, leather-work, and embroidery) by Belgian artists. Among the paintings are a landscape triptych, by M. Léon Frideric, and works by Madame Alice Reiner, M. Fernand Khnooff, and M. Alfred Reiner, M. Fernand Khnooff, and M. Alfred Delaunors Two galleries are filled with an exhibition of old Flemish towns toil paintings and original etchings, by M. Julien Celes. The names of these quaint, old-word cities are on every lip, though and cities are on every lip, though some of them have practically ceased to exist. Thus we have "Marson de Pauvres, Nieuport olestroyed," "Valle Cour à Lierre," "Jour de Marche, Malines," showing the cathedral, with its magnificant unfinished tower, and "Matin à Nieuport," M. Celos a an etcher especially achieves success in his pictures of winter, of which the best are "Le Hamein sous la Neige," "Le Petit Marche en Hiver," "Soir d'Hiver au Beginnage de Lierre," and "Le Degel, Bruges," Wisely he has not attempted to realise the havor of the war, which has practically wiped out of evistence many of these Flemish towns and villages. The public will, Flemish towns and villages. The public will, we trust, second M. Lambotte in his efforts to reheve the necessities of his Belgian art brethren.

Writing in "The Nineteenth Century and After" on the effect of six months' war on the timber supplies of England, Mr. E. P. Stebbing asks whether we are making full use of the opportunity which the shortage in timber supplies is affording us, and, further whether whether the state of the control of the supplies is affording us, and, further whether supplies is affording us, and, further whether supplies is affording us, and, further whether w ther, whether we are considering the forestry problem in the new aspect in which the war presents it. Much is being done by the Boards of Agriculture, both English and Scottish, in the direction of drawing the attention of proprietors of woods to the possi tention of proprieties of woods to the possibilities presented by this unique opportunity in clearing out woods of poor development, which have suffered irretrievably from and or show damage; and, secondly, in section, they thurstag promising young woods in all rights the material as pit wood. Some

ings are more expensive, but, provided they can be recovered for further use, they can be made to pay; and by offering an extra inducement by way of pay the men are being persuaded to recover them. Once the initial difficulty of introduction and recovery of these props is surmounted the managers are unlikely to go back to the wood prop, and the market for this article will be proportionately lessened at a juncture when, with tionately lessened at a juncture when, with the advance in British forestry, it is most unportant that it should be maintained.

Further, is it not time that a decision should be arrived at as to the percentage of the available plantable land in the country which should be maintained under woods in the interests of the community as a whole? It is known that there are several million acres of plantable land which could be made to produce a proportion of the materials now imported. Incidentally, the woods would also give rise to flourishing industries, such as pulp mills, furniture and toy factories. The Blue Books of the Forestry Commissions have pointed out that town labour was useless for danting and general forestry work, as the townsman could not handle a spade or stand the hard work and climatic conditions en-tailed by forestry operations. This plea was true at the time. It is a question now, howtrue at the time. It is a question now, however, whether large planting schemes could not be put into force at the conclusion of the war. Numbers of soldiers might be induced to take to forest work, and planting on a large scale could be undertaken. rme at the time.

In the report of the progress of the Ord-nance Survey to March 31, 1915, it is stated that the publication of the 12,500 survey of Ireland was completed on August 31, 1914. This survey was begun in 1887, and thus took This survey was begun in 1887, and thus took twenty-seven years to execute. The area of Ireland is 52,400 square miles, and the average out-turn per annum was 1,200 square miles. The total cost was £1,400,000, and the average cost per annum was £51,850, and per square mile £43. These figures include the cost of all field work and of the levelling, of printing, and publication of both 1/2,500 maps and 6-in, mans, and the delineation of boundaries. and 6-in. maps, and the delineation of boundaries and sites of antiquities. During the year experiments were continued with a view to the production of a new type of 1-in. map.

The editor of Indian Engineering expresses regret that the designs by Messrs. Landseer Lutyens and Herbert Baker for the Government House and the two Secre-tural Buildings at New Delhi Lave been cut down for economical reasons. Our contemdown for economical reasons. Our contemporary urg's that the principal buildings in the new capital ought to be worthy of their purpose. As it is, the editices are to be faced with red and white Agra sandtone, but no one would have complained if the material had been marble. There is no doubt that the effect of the buildings in marble would have been greatly enhanced, but the cheaper material having been chosen, it seems unnecessary to mar the effect by further economics.

The Bill creating the State Board of Architects and providing for regulation and examination of all architects practising their pro-fession in the State of Florida has passed the Senate, and, having been passed by the house formally, has been certified to that body as notice of completion of legislative action on It now goes to the governor for signature. Before passage the Bill was amended so as to make 20 dol. anstead of 25 dol. the license, and further amended so as not to apply to buildings costing less than 5,000 dol.

It has been announced that the Dominion Government will continue the construction of all public works under contract in Canada.

Apart from the war, the total expenditure of the Canadian Dominion will reach 200,000,000 the Canadian Dominion will reach 200,000,000 dollars for the year, while the war expenditure will mean an addition of 100,000,000 dollars. The programme for the current year includes an expenditure upon public works of 25,000,000 dol., and on capital account and works of harbour commissioners of over three The little that the material as pit wood. Some the office of the postum at once. The Lock of the control of the postum at once. The works of harbour commissioners of over three volumes of the war to be postumentally as without parallel. Iron to minimise unemployment in Canada by maintaining its programme of public works, including the LRC, terminals at Halifax, the

Welland Canal, the Quebec Bridge, Northern Territories and Hudson Bay Rail-Northern territories and Hudson Day Rall-road, and terminal elevators and harbours at Halifax, St. John, Quebec, Montreal, Toronto, Hamilton, Port Arthur and Fort William, Vancouver, and Victoria.

"Masonry," by Professor Malverd A. Howe condon: Chapman and Hall, Limited, (London: Chapman and Hall, Limited, 6s. 6d.), is an American work dealing conos. od.), is an American work deaning con-cisely with natural building stones, artificial materials, stone masonry, brick and hollow-tile work, concrete, and railway work. It is mainly meant for help in courses of instruction of those where little time is given to the subject. In regard to quarrying by machinery, American quarry owners seem considerably ahead of us, and some of them who do not know it might read the volume with advan-

The strength of sand-lime brick, states the Canadian Engineer, depends upon a firm bonding of the sand grains through the agency of lime. A mixture of sand and lime is pressed into bricks, which are then subjected to the action of steam under pressure for several hours. A chemical union takes place between the lime and the quartz of the sand, forming hydrated calcium silicate. The sand used should not be too coarse. That passing through a twenty-mesh screen and composed of grains ranging in size down to minute particles is desirable. In other words, the sand grains should be so graded in size as to leave very little interstitial space. The strongest bricks are made from sharp sand which is free from inert minerals. saler sand which is the from their inheritances such as clay, iron oxide, mica, etc. The clay and iron oxide are particularly objectionable, since they are liable to mask the grains of quartz and thus prevent the union of the line and quartz. Ten per cent of clay substance should be set as the extreme limit. Feldspar is less objectionable, but it large proportions is undesirable, as it reduces the strength of the brick.

#### CHIPS.

The urban district council of Llanfrechfa have appointed Mr. M. R. Jones, of Abergele, as surveyor and inspector,

Mr. Thomas Nisbet has been appointed to the joint offices of master of works and city engineer by the Glasgow Corporation.

The Local Government Board have given their sanction to an application by the urban district council of Surbiton for permission to borrow £4,875 for sewerage works.

Alderman Owen Ridley, of C.well House, Craven Road, Reading, formerly head of Ridley and Sons, timber merchants, and twice Mayor of Reading, died on April 28, aged 77, Ieaving £60,496.

The city council of Sheffield have made application to the Local Government Board for sanction to prepare a town-planning scheme for Hillshorough, Malin Bridge, Stannington, and Crookes.

The Tolhurst Memorial Roman Church at Northfleet has been formally opened. The new building forms a striking feature on the hill, and has been erected from the designs of Mr. G. Gilbert Scott by Mr. J. B. Lingham. The contract amount, including the tower, was £6,436, but the actual cost reached £8,000.

At the last meeting of the Stepney Borough Council the Finance and Parliamentary Committee presented lengthy reports on the application by contractors for increases in their respective contract rates. In connection therewith they presented an estimate of £7,384. A long discussion ended in the reports being adopted.

and additions Extensive renovations Extensive renovations and additions to Newlyn East Church of England School have been carried on during the past few months at an outlay of about £1,000. The roof of the old school has been remade, and five new Boyle ventilators and five fresh windows put in. The architect was Mr. C. King, F.R.L.B.A., Plymouth.

The opening to traffic of the Leuk-Leukerbad The opening to traine of the Lauk-Laukerbad line, the latest of the Swiss mountain railways to be constructed, took place on Monday. The construction of this new electric line, just over 6½ miles long, was begun in 1912. It is mainly a tourist line, leading from Leuk, a station on the main Simplon line, to the winter resort of Leukerbad (Loèche-les-Bains). It has cost £120,000 to construct.

#### LEGAL INTELLIGENCE.

AIR RAID PRECAUTIONS PROSECT TION UNDER THE BUILDING ACT At the Guid all, on July 1. Mr. Wo ner Wheeler, of the firm of Wheeler and 8 ms, engineers, et Victoria Guidens, Notting Hill Gate appeared to answer two summenses under the Lembon Building Act, 194, for having tailed to serve a building notice on the district survivor before beginning centain work on the roof of tre North British. Assurance Company, and for having cut into certain chunny shafts and flacs for a purpose other than that sanctioned by Section 64. The defondant admitted that no notice was given, but said he was of opinion that as the work was in connection with precautions against hostile air raids no notice would be required. Mr. John T. dd, the distinct surveyor, said it was an extremely difficult matter for him to deal with. The work of protecting Cry buildings and fin menal houses must be given the utinest consideration by protecting Cry binblings and financial horses must be given the intimost consideration by every person. This was not the only case he had to deal with, but he had refrained from his daty in prosecuting in other cases in the public interests and on the principle that no more breach of the Building Act should prevent anyone in the City from doing what was reasonable to safeguard their property against our rolds. He was not request to afrome the law roisonable to safeguard their property against air raids. He was not going to enforce the law in respect of any mere technical contravention of the Act, but he felt that it would be only good cricket on the other side if they would give him every opportunity to see what was going on "Sir John Buddeley said that under the circumstances by would only impose a nominal penalty of 5s, and costs.

CONTRACTOR v. CHURCH BUILDING CONTRACTOR v. CHURCH BUILDING COMMITTEE—In the King's Bench Division, on June 29, before Mr. Justice Atkin, men ion was made of the action of Mr. A. J. C. dhorne, limbder and contractor, of Bristol and Swindon (suing through his trustee in bankrupcy) against the Rev. J. W. Jones and the Building ising through his trustee in bankrupecy) against the Rev. J. W. Jones and the Building Committee of the Annianford Church to be cover £2,540, the balance due in respect of the crection of the new church at Annianford. Mon. Plaintiff alleged that the defendants, through their architect. Mr. W. D. Jenkinshad acted wrongfully in determining the contract. The defendants set up a counterselaim for damages, and said they were entitled to determine the contract owing to delay on plaintiff's part. This was denied—His Lordship held his roserved judgment, given on June 8 (and published in our issue of the 16th ult.), that the contract was wrongfully terminated, and also gave judgment in plaintiff's favon on the counterselaim.—Mr. Morten, K.C., for the plaintiff, now said the parties had been unable to agree as to the amount due to plaintiff. After hearing counsel's arguments, his Lordship said the best thing would be for the parties to appoint a quantity surveyor. Unless they are all the best thing would be provided in the pagest. to appoint a quantity surveyor. Unless they agreed within seven days to give him a name he should ask the President of the Surveyors Institution to name a gentleman, and he this

lordship) should nominate him.

GROVER A. HOPKINS A. CLOSING ORDER AND LIABILITY FOR RENT - Be fore his Homour Judge Stully at the Watford County Court, last week, the adjourned hearing took place of a case in which H. Grover, Upton Road, Watford, sued James Hopkins for two quarters' rent of a house in Cassio Road. It was stated that the premises had been closed by an order of the local authority owing to their condition. At the first hearing Mr. S. J. Ellis, for the plantiff, admitted that it was a hard case, but Mr. Grover, who held the premises under a lease, was in a similar position. There was no agreement on the part of the landlord to repair. His Homour now said that he wanted further information as to the ground on which this house was condemned. lordship) should nominate him. the ground on which this house was condemned

the ground on which this house was condemined. Mr. Ellis said that the damp course was defective through neglect. Plaintiff explained that the stuff used in the damp course was rot as it should have been. The stuff allowed to be used would not last more than a certain number of years.—Mr. Ellis. The damp course was made with material which was all yeal by the urban district council when the house was the urban district council when the house was hard. This material was not now all well as the council had some orner approved material. He also said that the will also with earth. Mr. Matthew Arneld, on belyiff of defendant, said that he would be considered in a Viscology was made by the previous ferces. His Homour made by the previous ferces. His Homour made by the previous ferces. His Homour made by the previous ferces. Place off sudding that was a very material course. Place off sudding that he would be conditioned from the sums a very material course. Place off sudding that he would be conditioned from the sums a very material course. Place off sudding that he would be conditioned from the sums and the last of the loss of Cassia Road, he was the lesses of the house in Cassia Road, and he said leaf to a solid relation of the house of the house of the house of the loss of the loss of the house of the house of the loss of the house of the loss of the council Mr. Street surviver in the council of the house of the house of the council Mr. Street surviver is had the world of the loss of the house of the loss of the council Mr. Street surviver is had the world of the loss of the los

tural detects it we whole course of the power to make street a Jump and a rese Urban District Conse,l this nouse. Dr. Kri was with him and the because of the dat it dampness was due to be course. His Honour squarter's rent due on course. His Honour seed they quarter's real dage on Jun 25 before the costing order, they as regarded, the real for the September 29, he fold these whad not been above to find bearings on the plant 10 to order was made under the Housing Act of 1903, Total A. Housing Ve of 1909, To come local authority to come or injurious to health one-habitation. The closing come on the ground that the noise % to the perishing of the felt din to the perishing of the felt dain that had been a matter for who was a sponsible no don't the playe been different. He could the closing order in detence at under the agreement. The florid's business to effect of the house habitable. It is wormade for giving any near tenant either helps and the order of the order of the only notice the complete that a first order helps and the order that a closing order had been duranteed or operative. The tenant was soft appeared to had only to soo impossible that the tenant should hable to pay root so ongless to incredible that the tenant she for let hable to pay refit so only as the was in force. There was no for as the Act which hore upon the too to the third back on first principes. It them that the closing order let effect of an existion of the terminas a fact, that the closing order is through the dampness of the lets due to the failure of the dampness of the lets purely for which the terminal was a first proposally. For was he terminally for the failure of the dampness of the lets of the purely for which the terminal was a first possibility for was he terminally for the failure of the dampness of the lets of the failure of the dampness of the lets of the failure of the dampness of the lets of the lets of the failure of the dampness of the lets of the let responsible, nor was he reseat stipulations of the agreet of statute which doclared 10.0 suppriations on the agriculture which doctared order the remark thirst house. There wis that them so long as the conlord's right to the world to put in the rent for the quarter of the granted to move I shad

decres a half-seart entrantal countries and Mr. Dyer forance in of the caumie. The first this award mount to coses who does carse and the proceedings

BUILDER BYTES A MILLIER

Remark March Hospita Brook My P. Morro marks so the pay to the late that the marks so the pay to the late that the mark to the was the aspect of the solution of the spatial of the solution of the white the way to the theory was even do not been passed and the that the control of the mark that control of the solution of the solution

"SWELLED BRICKS" Aport of interest the heidiling trade arese in a case the hearing of whose was each ded on July 1 in the Liverpool County Court, before his Hotour Judge Shard The case was one in which the languist inc. Ravertead Santary Pipe and Brick Compacy, of St. Helens is right to receiver from Messes David Roberts. Son. and Co., Limited, of Liverpool, the cost of a quantity of bricks wind had been supplied to the latter in Fobriary last under the term of 'swelled tracks." The defendants had entered not a contract with the planning for the devery by the latter of a quantity of "swelled tracks," and in prisuance of this contract the identifies of a latter of a quantity of "swelled tracks," at dulp prisuance of this contract the identifies of a large set of the contract the plannists of a supplied to the defendants bricks of varying total essess which had been hurned in their kins. These bricks, upon delivery, and hear reject of the plant of the contract of the plant of the contract of the plant of the standard size. The case for the plant of the west and under the term "swelled triess" they were entitled to receive only saint briess of the standard size. The case for the plant of the was that under the term "swelled triess" they were entitled to deliver bricks which had been a area in tacer kilns. On the tree that cover the was intended by the infendants that one a true in their kilns. On the brick track was that unless otherwise specified an order for "scelled broks," means the or innary can be a far a large who swe may be dependent. A far supply of the contention they aliced a dependence of the security of the scenterior of the definitions. "SWELLED BRICKS"

THE SCREEN IN NEWCASTIE CATHE. DRAL. A construction of was held in the Cathe Ira. Vester, Newcastle, on Saturday, to construct the manual of the completion of the construction of the construction of the construction of the prosecution of the large force of the two manual of the prosecution of the THE SCREEN IN NEWCASTIE CATHE

it is eject. Witness held there was no danger is these days and knowing the people of New caste, he did not think it was likely to hope it. Mr W. H. Wood, architect, submitted a characteristic heater a characteristic and architectural advantage and architecturally essential to this group. Mr. Dickin see, astainer the legal aspect of the matter, queted Lord Penzance's judgment in reference to the Exeter rerodos, and said it and available to decide whether the proposed extraction was likely to be a subject of supersections reverence or not. He stated that a craim characteristics, heater that the cancellor to decide whether the proposed extraction was likely to be a subject of supersections reverence or not. He stated that a craim channels have been recently sancteristic for St. Luke's and St. Gabriel's Caches, both in Newcastle-on-Tyne. The Caccellor replied that this was a different ratter, as the cathedral should be a sort of a cameus the Chancellor stated he would take a the time to think the question over. He hadden to be all the men. this opect. Witness held there was no danger a tanears time to think the question over. He blensh to be able to find that he did not con-siter the law too strong for them.

#### TRADE NOTES.

Under the direction of Mr. F. H. Overmann, F.M.S.A., Boyle's latest patent "Air Pump" ventilator has been applied to Styal Church.

The Bolton new schools have flat roofs over the verandahs, and we learn that the education architect is constructing these flat roofs with waterproofed cement concrete. We understand that Pudloed cement roofs are being increas ngly specified.

tint Pudlocd coment roofs are being increasingly specified.

The stares of Haywards, Limmed (a private enertate all held by the directors and a few nembers of their families; the widow of a comer director. Mr. D. McInnes; and two or three members of the staff, all British, whilst the company gives employment to some soft British workpeople and staff in London, Manchester, and Scotland, and a considerable propertion have gone to the war.

The business of Pritchetts and Gold, Limited, manufacturers of storage batteries, has been amalgamated with that of the Electrical Power Storage Co., Limited, the title of the amalgamated company being Pritchett and Gold and Electrical Power Storage Co., Limited, In order to provide the necessary accommodation for the increased staff, larger offices have been taken at 82, Victoria Street, London, S.W. The telephone No., "Victoria 3181," and telegraphic address, "Acidulated, Sowest, London," remain as heretofore.

The Great Central Rulvay Company have

The Great Central Railway Company have The Great Central Railway Company have just issued their new Guide to Health and Holiday Resorts. Within an attractive cover is included a description of the various resorts, and interesting information is given regarding climatic advantages, bathing facilities, sports and entertainments, also a list of hotels, boarding houses, and country lodgings, schools, etc. The book has been entirely re-written, and anyone contemplating a short or long holiday, either at the seaside or in the country, should obtain a copy, which will be sent free on application to the G.C. Publicity Dept., 216, Marylebene Road, London, N.W.

The oldestablished husiness of Messis.

The oldestablished business of Messrs Burt and Potts, Limited, of York Street, West Bart and Potts, Limited, of York Street, West minster, wholesale rionimongers and manufacturers, will in future be carried on by Mr. William Potts, Mr. A. J. Hewlett, Mr. F. J. Oslorie, and Mr. A. J. Collins, under the style of Burt and Potts, Collins and Co. at 47, York Street, Westminster, and the Lamleth Ironworks, Ethelied Street, S.E. Mr. Potts is a grandson of one of the founders of the firm, and has been responsible for the manufacturing part of the business for a number of years. Mr. Collins is well known as buyer and manager of the ironimongery department years. Mr. Collins is well known as buyer and manager of the frontnengery department, whils Mr. Hewlett and Mr. Osborne have both heen distrumental in building up the reputation the firm have gained for their iron and guinnetal casement and window work.

The Scatheologic R ii District Council codes did to possess an acte of land at attention the creeking of workmen's dwell is even to the housing shortage there.

It's (wing to the housing shortage there. It's So the Sheds Corporation Bill has best form in the Commute of the House of the mass as an anopposed measure. It asks is the powers to be granted to the corporate an regard to their trainway under that I the extend their Mill Dami quay, to the second set of the works, to acquire lands, to a ske better provisions in regard to the election of the second s

### Correspondence,

#### HAYWARDS, LIMITED.

To the Editor of The Building News.

SIR,—We beg to inform you that, with the consent of the Board of Trade, the name of this company has been altered to "Haywards, Limited, by which title it should be known and addressed in future. Our Mr. Wm. Eckstem and bis family are English of several generations back, and he has served many years in the Public Works Department of India; but it has been suggested by several of our principal chents that, owing to the present state of public feeling in connection with the war, the retention of his name in the firm may mislead some of our correspondents and cause them to imagine there is some German interest in the business. As a matter of fact, the firm is entirely a British one, founded in 1783, registered as a joint stock company in 1896, and it has no connection, directly or indirectly, with any German or Austrian interests.

All the business of the company will be conducted as heretofore, and various contracts for Government work are being carried out, but inquiries and orders will be attended to with all care and promptitude.-Yours faith-

Haywards, Limited, Geo. F. Pittar, Director.

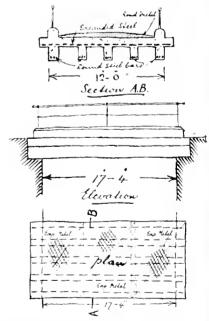
187 to 201, Union Street, Borough, London, S.E.

Not one of the countless clients of Haywards. Limited, is, we know well, in the least likely to have fancied there was anything German about the firm or Mr. William Eckstein, who is one of the most typical Britons living. May the change herald increased prosperity, and add, if possible, new customers among those who might not have known it.—ED. B.N.]

### -Intercommunication.

QUESTIONS.

[13142.]-CONURETE BRIDGE.-Sketch of reinforced concrete bridge to carry 15-ton roller. Inquirer will be obliged if some reader would show a



good simple formula for calculating thickness of slab, and depth and breadth of ribs; also diameter of steel bars, etc.—Bombard.

Mr. John White Alexander, till recently president of the United States National Academy, and himself a skilled artist, died on June 1, aged 58 years. His great regret, expressed but a short while before his death, was that he had not been successful in securing during his term as president a site and permanent home for the National Academy.

#### PRICES. LATEST

N.B.-All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

#### TIMBER.

Owing to stoppage of supplies all prices have advanced considerably.

- 1	D	$\mathbf{a}$	`

INUM								
	Per ton.				Per ton.			
Rolled Steel Joists, English	£9	12	6	to	£9	17	6	
Wronght-Iron Girder Plates						0		
Steel Girder Plates					9	17	6	
Bar Iron, good Staffs	6	5	0	1.9	8	10	0	
Do., Lowmoor, Flat, Round, or			_		_	_	_	
Square	22	0	0	5.5	0	.0	0	
Do., Welsh	5	15	0	9.0	5	17	0	
Boiler Plates, Iron-		_	_		_			
South Staffs	8	0	0	2.9	- 8	15	0	
South Staffs Best Snedshill	9	0	0	53	9	10	0	
Angles, 10s , Tees 20s, pe	rı	n e	XU	ra.				
Builders' Hoop Iron, for bonding	3, 4	EIZ	5s.	, to	£Ι	2 15	)5.	
Ditto galvanised, £	19 t	0 £.	13.1	LUS.	De:	rto	11.	
Galvanised Corrugated Sheet Iron								
No.	18 t	o 20	). :	Nο.	$^{22}$	to 2	14.	

Galvanised Collagated Sheet Hon—
No. 18 to 20. No. 22 to 24
6ft, to 8ft. long, inclusive Per ton. I'er ton
gange£13 0 0£13 10 (
Best ditto 13 10 0 14 0 0
Per ton. Per ton
Cast-Iron Columns £6 17 6 to £8 10 (
Cost Iron Stanchions
Rolled-Iron Fencing Wire         8 5 0 , 8 10 0           Rolled-Steel Fencing Wire         7 5 0 , 7 10 0
Rolled-Steel Fencing Wire 7 5 0 ,, 7 10 (
Galvanised 8 lb 0 ,, b 5 0
Cast-Iron Sash Weights 6 0 0 ,, 6 5 (
Cat Floor Brads 10 15 0 ,, -
Corrngated Iron, 24 gange 16 0 0 ,, -
Galvanised Wire Strand, 7 ply,
14 B, W,G 14 5 0 ,,
B.B. Drawn Telegraph Wire, Galvanised-

B.B. Drawn Telegraph Wire, Galvanised-										
0 to 8	9	10	11	12						
£10 10s.	£10 15s.	£11 0s.	£11 5s.	£11 15s.	per ton.					
Cast-Tron	Socket Pi	pes —								

Cast-Iron Socket Pipes -							
3 ia. di meter	. £6	15	0	to	£7	2	€
4 in. to 6 in	. 6	10	0		6	12	6
7 in. to 24 in. (all sizes)							
[Coated with composition, 58	. 0d.	p	er	to	n e	extr	8.
Turned and bored joints, 5s. per	ton	exti	a.	]			
Iron-		P	er	toa	l.		

Cold Blast, Lillieshall	80s.	0d.	to	127s.	6d.
Het Bast, ditto	87s.	0d.	11	97s,	od.
Wrought-Iron Tobes and Fittings				off	
Standard Lists f.o.b. (plus 23 1	er ce	nt.)	_		
Gas-Tubes				67	e.
Water-Tubes					
Steam-Tubes				60	٠,
Galvanised Gas-Tubes					7.1
Galvanised Water-Tubes				511	+ +
Galvanised Steam-Tubes				45	11

#### OTHER METALS.

	Per tor	ı.	Per ton	١.
Lead Water Pipe, Town*	£32 10	0 to	_	
" Country	*33 10	0 ,,	_	
Lead Barrel Pipe, Town	*33 10	0 ,,	_	
Country	*34 10	0 ,,		
Lead Pipe, Tinned inside, Town	*34 10	0 ,,		
,, ,, Country	*35 10	0 ,,	_	
Lead Pipe, tinned inside and				
outsideTown	*37 <b>0</b>	0,,	_	
" " ,, Country	*38 0	0,,	_	
Composition Gas-Pipe, Town	*35 10	0 ,,	_	
Country	*36 10	Ο,,		
Lead Soil-pipe (up to 43in.) Town	*34 0	Ο,,	_	
,, ,, ,, Country	*35 0	ο,,	-	
[Over 4\forall in. £1 per to	n extra	.]		
Lead, Common Brands	17 17		£18 12	6
Lead Shot, in 28lb. bags	24 15	0,,	_	
Copper sheets, sheathing & rods	102 U	Ο,,	103 0	0
Copper, British Cake and Ingot	90 10	0 ,,		0
Tin, English logots	162 0	0,,		0
Do., Bars	163 0	Ο,,	164 0	0
Pig Lead, in lowt. Pigs, Town	23 0	Ο,,	24 0	0
3heet Lead, Town	*32 0	0 ,,	_	
" " Country	*33 0	0,,		
Jenaine White Lead	37 10	0.,	_	
Refined Red Lead	31 0	0 .,	_	
3beet Zinc	115 0	Ο,,	-	
Old Lead, against account	22 0	0 ,,	-	
Pinper owt.	9 10	0,,	_	
Out nails (per cwt. basis, ordinary		_		
brand)	0 14	0	_	

\* For 5 cwt. lots and upwards.

#### SLATES.

Blue Portmadoc Blue Bangor First quality	20 × 10 16 ,, 8 20 ,, 10 20 ,, 12 20 ,, 10	12 12 6 6 12 6 13 2 6 13 17 6 13 0 0 13 15 0	per 1,000 of 1,200 at r. stn.
Permanent Green	20 ,, 10 20 ,, 12 18 ,, 10 16 ,, 3	18 7 6 13 5 0 10 5 0 11 12 6 9 12 6	\$1 11 21 21 21 21 21 21 21 21 21 21 21 21

#### BRICKS.

(AH)	Differen	net

(All prices net								
First Hard Ste Second Hard :	orks£	1 1' 1 1	5 0	per 1		aside, na		
Mild Stocks		1		11	+ 1	71	21	
Picked Stor					delis	a red		
Facings Flettons		2 1 1		17	inity,	-triti	011.	
Pressed Wire	Luts	1 1		9.4	9.1	9.7		
Red Wire Cut	8	î î		**	17	11		
Best Farehan		3 1:	2 0	1.	11			
Best R d Ruabon Fai	Pressed	- /					- 1	
Best Blue		5 (	) ()		>+	9.5		
Staffordshir		3 1	. 0					
Ditto Bullness	·	4 (				**		
Best Stour brid								
bricks 23 n. Best B		4 (	0 0	3.4				
erington		1 10	1 6	+	Net, deli	verei	. 111	
Facing Brie		1 10	0	**	- Follon - in Lon		LIL -	
						1 e	r	
31" Aceringto	n Best I	Red	12	astic	Pacing	1,00		
Bricks	112							
3½" ditto -eco Ditto Oid:	na best r	100 S.I. Anados	10 H	ll∛ii ≩minili		2 2	5	
Ditto Plas						1 17	8	
Sewer Arch	Brick, m	st.	111111	e tha	n 3½ m	1		
thickest par						2 0	0	
31" Chimney I	3ricks fit f	cit (	mts	de wo	ık,	2 6		
3½" ditto difto 3g" Bended, (	unrough a	unu D.,	thro	ugh Lombo	· · · · ·	2 0	0	
cons: 210 a	nd 2" rad	111~	Rail	Incres	.: Stock			
gons; 2½ a Patterns			., .		, 14011	3 7	€.	
Accrington Ai	r Bucks, 9	)" .	2 ec	HTSE C	ho p, estab	0 0	6	
Pitto	ditto S	)" -	1 00	mse		0 0	3	
Accrington Ca	mber Are	lies						
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6 ,,	4 ]."	1 *		+ 5	14	0 2	6	
3 ,,	9" 9"	1.5		1.5	14	0 2		
5 ,, 6 ,, 4 ,, 5	9	11		1.5	49	0 2		
6 ;;	9"	41		7 1	11	0 4		
Net fre	e on rail, o		in c			4		

#### GLAZED BRICKS.

HARD GLAZES (PER 1,000).

Wh	ite, I	vorv.	. an	d			Be	st.					
	alt G								her		Sec	con	đ
	st.												
Stretche	ers												
£12	7 6	£10	17	6	£13	17	6	£17	17	6	£12	7	€
Header:													
	7 6								7	6	11	17	6
Quoins,	Buil:	nose,	ao.	d 4	lin,	Fla	ts-						
15 1	7 6	14	17	6	17	17	6	21	7	6	15	17	6
Double	Stret	cher	s-										
	7 6			6	20	17	6	21	7	6	17	17	6
Donb!e													
	7 6							21	7	6	14	17	6
One side													
	7 6							26	7	6	18	17	-6
Two sid	es ar	id on	ее	nd,	SHU	RIE	-			_			
	7 6				22	17	6	26	17	6	19	17	Ę
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17	7 6	15	7	6	. 21	17	6	24	17	-6	_17	.1	E
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5.е						ea	eh	bd.	. ea	CH.	511,	ea	(1)
Rounde	d Int	erna	I Ai	ng1e	19-		,	c a		- 1-	.1.1		- 1-
43	aah	7.7	12.73	n En	50	00.	c n	50	63	cn –	901	. <i>⊢</i> B.	(°1)

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Exclusive of charge for sacks.

#### STONE

		2	.1
Red Mansfield, in blocks per foot	CHEC TO	2	ž
Darley Dale, ditto		2	
Red Corsehill, duto	0	2	ő
Cleseburn Red Freestone, ditto		í	
Ancaster ditto	-	i	
Greenshill, ditto		1	
Beer, ditto "	U	Ţ	0
Chilmark, ditto (in truck at		,	101
Nine Elms)	0	1	0 10ÿ
Hard York, ditto	U	2	v
Do. do. 6 in. sawn both sides, landings, random size per foot	sup. 0	2	8
Do. do. 3 in. slab sawn two			_
sides, random sizes	0	1	ú
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All 7,O.R. London.			

Bath Stone, delivered a . relief		à	
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waggons, Paddington Incp. p. Ditto, ditto Nine Lines Doc.			1 1
Beer Stone, delivered in ra-			1 ,
at Scaton Sta ion			
Duto, delivered at Nine Line			
Station		ñ	1 1
Portland Stone, in random closes	r tage in the		
De ivered on read warse its	Birat		
at Paddington by t. W.	To the territory	12	
Nine Fluis Der d. er	Part		
Punireo Wharf	6 24-	3. 3	

#### 11035

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Plain red recting tres		- p-r 1 0	
Hip and Vailey tiles	- 2	Fperds.	
	1 ,	0 10 1, 20	
Ornamental tiles		6	
Hiprard Valley files	1	Clerds	
Routon red, brown, or him to a		0 [ . 1 . 4 .	
ditto (Fdwards)	7	6 p r 1,70	
Ornamental ditto		D	
Hip the	.1	O per die.	
Valley tiles	- 7		
Selected "Perfects" to fing	J	0 .,	
tiles Phunab's Pedor's	45	0 1 0	
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Harvardan	9.5		19
Hip cities	ij	Appendez.	++
Valley tiles "Rosemary " leand pour trees .	, 0	*	14
Occurred to and postin these,	10	1 1 CT 12 CO	3.7
Ormanicutal files .	. 0	0	7.4
Hip tiles	- 1	Oljer Jez,	
Valley files	- 5	7	
Staffordshire Hanley Reds or			
brindled tiles	42	6 ger 1,000	
	45		
H petiles a control control	-4		0
Valley files	3	6	
" Hartshill" brand plain tile .			
sand-faced	45	0 rer 1,000	
Pressed	12	ti	
Ornamental ditto,	47	6 ,,	
Hipetiles			
Valley tiles			
		- 11	

#### OHS

Rapeserd, English pale, per tun	£28	15	0:0	£29	5	
Ditto, brown		15				
Cottonseed, refined "	29		0			
Albania barrana la	39		0		0	
				- 1		
Seal pale ,	21		0 .,	21	10	
Cocoanut, Cochin	46	0	0 ,,	46	10	
Ditto, Cevlon	42	10	0	43	0	
Ditto, Mauritius	12	10	0 .,	43	0	
Palm, Lagos	32	5	0 .,	33	5	
Ditto, Nut Kernel	35	0	0 ,,	35	10	
Oleine	17		0 ,,	19	5	
Sperm	30	0	0 .,	31	0	
Lubricating, U.S.,, per gal		7			8	
Petroleum, refined	0	0	6:	0	0	
Tar, Stockholmper barr	-1 Ī	6		1	10	
Ditto, Archangel ,		19		1	0	
Lonseed Oil per gal			8 ,,		_	
Baltic Oil			11			
Turpentine ,,	Ö		3 ,,			
Putty (Genuine Linseed		-	0 11			
Oil) per cwt.	. 0	9	0			
Pure Linsced Oil	. 0	-	0 11			
	0	0	0			
"Stority" Brand	U	9	0 ,,			

#### GLASS (IN CRATES)

English Sheet Glass:				
Fourths	41d	5 <u>1</u> d	5%1	7d.
Thirds	4gd	5 (d	6}d	8-I
Fluted Sheet				
Hartley's English Re	olled }	171,	ra in.	$\frac{1}{4}$ (1)
Plate		4d	340	4 [-1,
		W hi	te. T	inted.
Figured Rolled and Rep	oussine	5d		61-1

VARNISHES, Etc.	Pe	er galli	П
Fine Pale Oak Varmsh			
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The Rochford Rural District Council have granted an honorarium of £25 to Mr. A. t. Madge, their inspector, for his services of architect in connection with the Great State bridge housing scheme.

The new arcade and municipal buildings at Aberavon, built at a cost of £15,000, have been formally opened. The work has been carried out by Mr. Morgan Cox, contractor, of Aberavon, from the designs of Mr. James Roderick, borough engineer.

An Indiana Masonie home is about to be creeted at Franklin, Indiana, under the direction of the Indiana Grand Lodge of Masonry, at a cost of about \$200,000. Plans for the home have been completed by Mr. Herbert Foltz, a local architect.

MEETINGS FOR THE ENSUING WEEK

#### TO ARMS

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Mildmay Avenue, ISLINGTON, N. EXFERTS in HIGH-CLASS JOINERY.

ALTERATIONS & DECORATIONS.

### Olivers' Seasoned

Hardwoods,

WM. OLIVER A SONS, Ltd., 120 Bunbill Row, London, E.C.

#### TENDERS.

Correspondents would in all cases oblige by given the addresses of the parties tendering actainy hat, of the accepted tender; it adds to the value of the information.

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to the Hackney S. Upton House Industrial, heating, Palowkar and Sons .
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Liton For litting the two boilers at the baths with a patent smoke-consuming and coal-saving apparatus, for the corporation —

Johnson Economiser and Smoke Consumer, Ltd (accepted) . 672-10 0

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PENGING. For election of a new Constitutional club TENGAM. For erection of a new Consecutional cutof t Twyn-y-field, Pengam, Mon., for the Twyn-y-field onstitutional Club Co., Ltd. Mr. D. J. Thomas,

Pank and Son, Norwich, heating

STANMORE For the construction, supplying, and having a boder at their pumping station at Burrow Bi dge, I, inde from Albelney Station, for the Stanmore District Drainage Board, Mr. W. Lunn, M.F.C.E., 65, Weinbelon Road, Br dgwiter, engine rewills, W., and L., Ltd., Bradgwater (necepted).

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# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

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#### OUR ILLUSTIATIONS

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urch of St. Augustine, Gillingham, Kent - Interp looking east. Mr. Temple Moore, FRIBA Architect.

.. 38 Lest of Tenders Open ... x. Tunstall Court, Siblingbourne, Kent. Elevations and .. 51 Trade Notes ... xn. plan. Mr. Walter H. Buerley, F.S.A. Architect

#### THE L.C.C. REGULATIONS FOR REINFORCED CONCRETE.

The London County Council Regulations for Reinforced Concrete Construction ...

The London County Council .. ..

Protection of Unfinished Concrete ... Correspondence .. .. .. .. .. Professional and Trade Societies ...

On July 6, 1915, the London County Council. under the authority conferred on them by Section 23 of the L.C.C. (General Powers) Act, 1909, formally made draft regulations with respect to the construction of buildings wholly or partly of reinforced concrete. The preparation, consideration and discussion of these regula tions appears to have progressed steadily and continuously from August, 1909, when the L.C.C. (General Powers) Act came into operation, up to July, 1915.

It is generally known that whereas the Council are required by law only to give notice to certain Technical Institutions of their intention to apply to the Local Government Board for allowance of the regulations, the Council have nevertheless consulted the Technical Institutions at all

stages of progress.

The intermediate drafts that have been available appear to show that at some stages the criticism has been in the direction of greater stringency and at other times in the direction of greater elasticity in the use of the material. It is a remarkable fact that the net result of all the criticism has justified a reversion towards the standard of stability of the draft first submitted to the Technical Institutions.

For ordinary heams and pillars, and for concrete mixed in ordinary proportions, the final standard of stability coincides with the Council's initial standard; but in the case of slender pillars and richer mixtures of concrete the amendments would appear to be in the direction

of somewhat greater caution.

Considering the extent to which the regulations have been discussed in the technical Press and at the committee meetings of the Technical Institutions, and the efforts which have been made to make a consistent and harmonious whole out of suggestions, which must, by the necessities of the case, often have been mutually contradictory, we are of opinion that the Council are to be congratulated on having made regulations which appear to meet the requirements of both the designer and those who are required to supervise the design or the actual execution of the work.

The standard of stability would appear to be in accord with the best general practice, and no impossible ideal has been set up in the requirements as to the ulti-

mate strength of the concrete.

We note that the formulæ are given in more than one form, and useful approximations to the results demanded are

methods of design. Take, for example, within the reach of all. We give them the bending moments on beams. The designer is free to follow any one of three courses :--

- (1) To arrive at the maximum bending moment by a simple rule which does not discriminate between the ratio of the dead to the superimposed load.
- (2) To arrive at the maximum bending moment by a simple equation which does take into account the ratio of the dead load to the superimposed load.
- (3) Notwithstanding anything contained in the previous rules, beams may be designed for the exact positive and negative moments which will occur at every cross section, whether all the spans be loaded or alternate or any of the spans be unloaded.

This affords sufficient latitude for every

practical purpose.

The question of a variable modular ratio is one to which we specially invite our readers' attention. It is obvious that the richer the concrete the stronger it is and the nearer its elastic modulus approaches the elastic modulus of the steel. There-fore, the ratio of the two moduli must vary with variations in the strength or proportions of the concrete. It is sometimes urged that a variable modular ratio brings complexity into the calculations, and the regulation may be criticised on these grounds. On the other hand we have seen some of our contemporaries object to a fixed modular ratio. However, seeing that the variable modular ratio is introduced in such a manner that mc is constant, it follows that variations in the proportions of concrete will not have that effect on the position of the neutral axis which might be expected in the first instance. The modular ratio is varied in such a manner that the calculations will be simplified rather than made more com-

It should be realised that designers need not use the long orthodox rules for the resistance moment of beams if they will calculate, once and for all, the values of Q for their favourite mixture of concrete (vide Regulations 87 and 88). If this is done, the calculation of the resistance moments of reinforced concrete beams is scarcely more complex than for a simple building shall be used for conducting electionless beams.

timber beam. We are glad to see this question at last so crystallised that this construction can be utilised in London, and a well-considered set of regulations given as a guide. The more one considers the quesgnide. The more one considers the question, their initiation and the subsequent sifting they have undergone, the more sifting they have undergone and patience to give encouragement to scientific of those who have brought these rules form part of the regulations.

fully, and are certain that their careful consideration will facilitate the use of this system of construction as it should be employed in London, under the direction of competent designers, assisted by regulations which bear the visible impress of technical skill unhampered by tendencies to create difficulties which are sometimes characteristic of the official mind.

## ---THE LONDON COUNTY COUNCIL REGULATIONS FOR REINFORCED CONGRETE CONSTRUCTION.\*

#### PART I.

GENERAL - REINFORCED CONCRETE DEFINED.

1. The term "reinforced concrete" as occurring in these regulations shall mean concrete which is reinforced by metal so combined therewith that the metal will (a) be sufficient to take up all the tensile stresses; (b) assist in the resistance to shear; (c) assist in the resistance to compression where neces

2. These regulations shall apply only to the construction of buildings of reinforced concrete in which the loads and stresses are transmitted through each story to the foundations by a skeleton framework of reinforced concrete or partly by a skeleton framework of reinforced concrete and partly by a party wall or party walls.

#### Skeleton Framework.

3. The skeleton framework of reinforced concrete of a building; together with the party wall or party walls (if any) upon which such framework bears shall be capable of safely and independently sustaining the whole dead load and the super mposed load bear ing upon such framework and party wall or walls, calculated in accordance with the data hereinafter contained

FLOORS, STAIRS, ROOFS, EIC

4. All floors, stairs, landings, and other portions of a building carried by a reinforcial concrete framework shall be constructed throughout of incombustible materials, and be carried upon supports of incombustible materials; nevertheless, all internal stairs and landings may be constructed of fireresisting materials, and nothing in this regulation shall prevent the use of wood framing, boarding and battens in the construction of

ELECTRICAL CURRENTS.

### NOTICE'S AND PLANS.

In the case of the erection of a new building of reinforced concrete or the making of any addition or alteration or the making of any addition or alteration or the carrying out of other work under the provisions of these regulations, the like notice shall be served upon the district surveyor as is re-

ga red to to served by Part XIII Lond to Bounding Act, 1894, and such notice shall be accompanied or in the case of a new be and suparmed. shall, the accompanied. In the case of a new building by plans and sections of sufficient detail to show the construction thereof, to gether with a copy of the calculations of the loads an istresses, to be provided for and purgetter with a copy of the calculations of the coads an istresses to be provided for and particulars of the materials to be used; and should such places sections, calculations or particulars as rightally furnished be not in sufficient licial, the person depositing the same should furnish the district surveyor with such further plans, sections, calculations or particulars as may be reasonably necessary for the afreship purpose, and the classes or the af resale purpose, and 7 of an alteration or addition or other work as aforesaid by such plats, se tions, tions and particulars as may be reasonably nes : 88373

#### PART H

DATA TO BE USED FOR THE PURPOSES OF THESE REGULATIONS.

Fi + and B of Lad.

#### DEAD LOAD DEFINED

The lead lead of a building still consist of the actual weight of walls, floors, stairs, landings, resids and all other permanent con-struction comprised in such landding

#### SUPERIMPOSED LOAD DEFINED.

8. The superimposed road in respect of x bunding shall consist of all loads other than the dead load.

#### LOADS.

9. In calculating the loads on foundations. llars, piers, wans, framework, beams and other constructions carrying loads in build tags, the super.mp sed load shall be estimated as equivalent to the dead load set forth in the regulations following, and numbered 10 to 24. both inclusive.

#### FLOOR LOADS.

10. For a floor the estimate shall be made in accordance with the table immediately following:-

For a floor intended to be used	dea	juivalen diload ir
for the purpose of—	pn	unds per
Transport in 17 may not been upfared as a second		are foot
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#### LOADS ON STAIRS AND LANDINGS.

11 For stairs and landings the superim peed and small be estimated as equivalent a notificate i dend land of at least 120 for a torogram feed but each step shall that of safety supporting a concentrated as at a 1, post of not less than 300 lb.

#### Late on Room

Let's on Roots la Forage and a grader area than twenty terress with the herizontal, the superimposed all which shall for this purpose be deemed to not be with herizontal, the superimposed to not be with pless are and weight of show at the shall be estimated at 25 No. per First feet of slepant surface of runal to such elotic surface of which elot of such roof.

13. For all other roofs the superimposed load shall be estimated at 56 No. per square for measured of the superimposed.

#### GREATER LOADS.

14 H the superimposed load on any floor, an ing, stars or roof is to exceed that hereinbefore specified for such floor, landing, stairs or roof, such greater load shall be provided for with an equivalent margin of safety.

#### LOADS NOT OTHERWISE SPECIFIED

15 In the case of any floor or roof intended to be used for a purpose for which a super imposed load is not specified in these regulations, the superimposed load to be carried on such floor or roof shall be provided for with an equivalent margin of safety.

#### ROLLING LOADS.

16. In cases where a rolling load actuated by mechanical power is to be provided for such rolling load shall be taken as equivalent to a static load 50 per cent, in excess of the The positive and negaactual rolling load. tive bending moment at every cross section due to every position of the rolling load shall be properly provided for.

#### PARTITIONS.

17. Partitions and other structures super-imposed on floors and roofs may be included in the super, mposed load, provided the weight of the partition or other structure per square base does not exceed the permissible load per square foot of floor or roof area. Partitions and other structures of greater weight shall be specially provided for.

#### Angle of Dispersion.

13. For calculating the resistance moment the angle of dispersion of a point load through hard filling and concrete shall not be taken at more than forty-five degrees from the vertical.

#### LOADS.

19 For the purpose of calculating the total load to be carried on foundations, pillars and walls in buildings of more than two stories in height, the superimposed loads for the roof and for the floor of the topmost story shall be calculated in full, but for the floors of the lower stories a reduction of the super imposed loads shall be allowed as follows :-

For the floor of the story next below the topmost story a reduction of 5 per cent. of the superimposed load on the floor of that story, as calculated in pursuance of the forezoing regulations, shall be allowed; for the floor of the next story 10 per cent, of the superimposed load on the floor of that story similarly calculated; and so on by increments of 5 per cent, per story till the reduction amounts to 50 per cent. It shall be It shall be taken at 50 per cent. per story for all floors below.

20. No such reduction as aforesaid shall be allowed in the case of a building of the warehouse class

#### Wind Pressure.

21. All buildings shall be so designed as to resist safely a horizontal pressure equivalent to a static pressure of not less than 20 pounds per square foot of the whole projected surface normal to the direction of every wind.

(For pressure on panels of external walls

see regulation 130.

All structures or attachments whatsoever in connection with a building, including towers or other parts which extend above the roof, flat, or gutter adjoining thereto, shall be so designed as to resist safely a horizontal pressure equivalent to a static pressure of not less than 40 lb, per square foot of the whole projected surface normal to the direction of every wind.

#### Working Load.

23 The working load shall include the superimposed load ,and the dead load inclusive the weight of the beams, slabs, pillars, or other members, and any plastering, tiles, mosaic. granitic or other similar finishing materials.

#### Weight.

24 For the purposes of calculation, the average weight of reinforced concrete, to gether with any finishing materials as aforementioned, shall be taken at not less than 144 lb. per cubic foot measured over finished surfaces.

#### Ratio of Span to Depth of a Beam.

25 For the purpose of determining the ratio of span to depth of a beam, the effective depth of the beam shall be taken.

26. The effective depth shall be measured from the compressed edge of the construc-tional concrete to the common centre of gravity of the tensile reinforcement.

The ratio of the span of a beam to its effective depth shall not exceed the lesser of

the two following ratios :-

20 tersile stress in regulation 43 actual maximum tensile stress OΓ

#### 20 · compressive stress in regulation actual maximum compressive stress

28. The length of a cantilever shall not exceed five times the effective depth at the bearing.

Bonding Moments.-Effective Span.

29 For the purpose of ascertaining the bending moments on a beam or on a slab, the effective span and the whole load on the effective span shall be taken into account in the calculations.

30. In the case of non-continuous beams or slabs, the effective span shall be taken as the distance between the main vertical sides of the piers, pillars, or walls, plus the effective depth of the beam or slab at the supports, or the span between the centres of the necessary bearing surfaces, whichever may be the lesser.
31. In the case of continuous beams or slabs

the effective span shall be taken as the clear span plus the effective depth of the beam or slab, or the length between the centres of the supports, whichever may be the lesser.

#### FIXED ENDS DEFINED.

32. A beam or slab shall be deemed to have secured to other parts of the construction having such rigidity as will maintain the neutral planes of the beam at the ends in their original positions and directions under all variations in the incidence and intensity

#### MAXIMUM MOMENTS.

53 The bending moments to be provided for at every cross-section of a beam or of a slab shall be the maximum positive and negative moments at such cross-section. Such maximum bending moments shall be calculated in a manner consistent with regulations 34, 35, 36, 37, and in accordance with regulations 38 and 39.

34 -- BEAMS WITH ENDS FREE OR FIXED. Notation for bending moments.

B = bending moment.

b = breadth,
 l = length of effective span.

W = total weight or working load.

Supports. Load. provided for. Concentrated at Cantilever . B = -Wl at fixed end.

oncentrated at Cantheren shows a Cantheren shows a contract of the end of cantheren shows a contract of the ends of the ends

oncentrated at Both ends wt centre of beam freely sup-B = 4-at centre. Concentrated at Both

Concentrates centre of beam freely supported V informly distributed freely supported V in V i Both ends fixed

Concentrated at Both centre fixed B =  $-\frac{Wl}{8}$  at ends.

Uniformly distributed fixed B =  $-\frac{Wl}{8}$  at ends.  $B = -\frac{Wl}{8}$  at ends.

Uniformly distri Both ends Bat centre shall not be buted tixed taken at less than taken at less than the numerical value of B at the ends.

Uniformly distri One endfixed buted One endfixed buted One endfixed one end B =  $\frac{Wl}{8}$  at fixed end. Freely supported One endfixed buted One endfixed freely supported Freely supported from the free end.

#### CONTINUOUS BEAMS.

Notation for Bending Moment.

35 B = bending moment.

35.—B bending moment.

= length of effective span measured between the centres of supports. (See regulation 31).

W = total weight or working load. (Superimposed and dead loads.) regulation 23).

 $W_d = \text{total deadweight per span}$ .

Ws = total superimposed weight or load per span (uniformly distributed).

The total bending moment (B) to be provided for at every cross section shall be the algebraic sum of the bending moments due to the superimposed and dead loads respec-

Maximum bending moments due to variet one in the incidence of distributed loads over approximately equal spans.

Near Middle of End Span.	At Support Next to End Support.
Ws l Wd l	W. I W. I
10 12	9 10
or approximately W l	or approximately
+	
10	10
At the Middle of Interior Spans.	At Other Interior Supports,
Ws l Wal.	Ws 1 Wal
+ -12 + -24	9 12
or approximately W l	or approximately Wt
+	- 10

36. Notwithstanding anything in regula-tion 35, beams may be designed for the exact positive and negative bending moments which will occur at every cross-section whether all the spans be loaded or alternate or any of the spans he unloaded.

#### BENDING MOMENTS ON SLABS.

37. (a).—Bending moments on slabs supported by, fixed at, or continuous over four edges, shall be calculated as for beams.

(b) When reinforced with mesh reinforce-

ment or reinforced in two directions at right angles to each other, the load assumed to be carried in each direction may be appor-tioned as follows:—

Proportion of load assumed to be carried in the direction of the breadth of the slab-

$$= \frac{1}{1 + \left(\frac{b}{l}\right)^4} \times \text{ total load on slab.}$$

Proportion of load assumed to be carried in the direction of the length of the slab-

$$= \frac{1}{1 + \left(\frac{l}{b}\right)^4} \times \text{ total load on slab.}$$

Provided that when the length of a slab exceeds twice its breadth the whole load shall be assumed to be carried in the direction of the breadth of such slab.

#### Moments over Supports.

38. The maximum area of steel required to take the negative hending moment at any support shall be carried without reduction across the centre of that support. (Also see regulation 35.)

#### VARIATIONS OF LOADING.

39. To allow for variations in the incidence of the loading on contiguous spans of continuous beams or slabs, the bending moments to be provided for at every cross-section shall be the maximum positive and negative moments at such cross-section, whether all the spans be loaded or alternate or any of the spans be unloaded.

CONDITIONS OF LOADING NOT OTHERWISE Specified

For every condition of loading not specified in these regulations, the bending moment for beams or slabs shall be calculated so as to give an equivalent margin of safety.

REINFORCEMENT AT POINTS OF CONTRA-FLEXT'RE,

41. Reinforcement shall be carried beyond the points of contraflexure under any condi-

tion of loading, by a length at least equal to half the effective depth of the beam.

#### Working Stores.

42 (a). Also see regulations 145, 148, 156, 157, 158, 159, 162. Except as further provided for in pillars, the permissible working stresses in concrete shall not exceed the fol

	=	Proportion by Volume,	by Volume.	
	Cement Sand Material.	Cement Sand. Material.	Cement Sand, Material, Cement Sand Material, Cement Sand, Material, Material	Cement Sand. Course
Stress	1 2 3	1.2 2 4	1.5 2 4	2 2 4
Constells	9 1	, v	+ 1	8 1
	Pounds per square inch.	Pounds per square inch.	Pounds per square noth.	Pounds per square meh.
nprossive stress. (See Regulation 100) frying compressive stress in beauts	09 009 009	650 650 65	700 700 70	750 750 75
dhesion between conerch and steel blood at hoth ends onds dhesion between concrete and steel	100	007	100	100
FESS.		hil	Ē	123

Pricet compros Shearing stress cinp or adhesa cinp or adhesa cinp or adhesa mrs otheras hars otheras Tensile stress... (b) The values of the permissible com pressive stress in pounds per square inch for intermediate proportions may be estimated from the following equation—

where V equals the volume of the sand plus that of the coarse material, per volume of cement, each measured separately and inchiding the voids proper to each material. If V is less than 3, the stresses in the las

column shall not be exceeded.

(c) The values of the shearing stress small not exceed one-tenth of the direct compressive stress for any given value of V.

#### STRESS IN STEEL.

43. The permissible working stress in the steel shall not exceed the following:

Stresses in mild steel com-plying with the British Standard Specification. Pounds per square meh.

Compressive stress .....

m times the stress in the concrete immediately surrounding the steel the value of m being obtained in accordance tained in accordance with Regulation 54). See also Regulations 61 and

16.000

l: 11 44 President to due to econtrol in a many an

### ( OMBINED NIO

45. The term 'contoured cused in these regrations dis-sultant of all the signs of a Callees.

46. Neither the steel in the he subjected to combined stres-ceed the permissible war and stre-

47. All connectors in a beta forced concrete members short to enough and arranged so that the stress we come upon them show he within the allowed by these regulations.

### Hooks AND ANCHORS

48. (a) All tensile and shear to notice a shall be hooked or other tise etter to a chored at each end

(h) Hooks at the ends of hars shire to (b) Hooks at the ends of bars ship to a ⊃ form, and shall have an inner moter of at least four times the diameter of the bar; or when the book his over a non-reinforcing bar, the diameter of the co-may be equal to the diameter of such bar. The length of the straight part beyond the end of the curve shall be at least four time-the diameter of the bent bar.

(c) When the bars are an hored it each end by means other than a hook complying with paragraph (b) of this regulation, the anchorage shall be bent up to a right angle from the centre line of the bar. The width across such anchorage shall be at least throtimes the normal diameter of the anchored bar. (Also see regulation 139)

#### Grip Lougth.

49. The grip length or adhesion length of a har embedded in concrete shall be measured along the bar from the beginning of the curve of the hook or the nearer end of the other form of anchorage.

other form of anchorage.

50. The grip or adhesion length shall be sufficient to keep the stresses within the limits set out in regulation 42, except for web reinforcement complying with regions 43 (b) and 67.

51. For the purpose of ascertaining the necessary grip or adhesion length in the case of a bar having mechanical bor it to purpose of a bar having mechanical bor it to prejudent of the har may be measured by the stressery of the har may be measured by the stressery of the har may be measured.

perimeter of the bar may be measured bur the transverse projections, provided

(a) That the transverse project as an not further apart (centre to centre than twice the normal diameter of the bar:

(b) That the height of such project one above the normal surface of the bar sibe at least 1 10th of the dameter of the bar.

#### Modular Ratios

MODITAR RYDOS

52. The term "modular ration of the state modulars of state to the elastic modulus of the concrete state modulus for steel of the elastic modulus for steel of the sion or compression shall be taken at 75 yr million pounds per square in his second tation 80 (c) 1.

54. The modular ratio for steel of the crete shall be taken is follows second of \$83 and \$141.

83 and 114)

9.000 : For beams ....

For pillars with the minimum of heeping or binding ..... 11 c 9,000 or r.

For pillars with more than the minimum 9,000 of hooping or handmg..... 9 000 crm

Where c - permissible compressive working stress given in regulation 42 and i ncreased stress given by regulation 115

#### PART III Beams.

55. The term "beam shall include any beam, girder, lintel, bressummer, or cantilever, or any other similar member carrying transverse loads.

#### Dignains of Bars.

ist grameter or thickness of the Lagradia a bars in beams shall not be less than one marter of an inch

All other reinforcements in beams shall be at least one eight i of an inch in diameter

#### SIA E BEIWIEN BARS.

58. There share be a distance of at least the orange recentary and one half inch ver-tion, y between the bars in brains except at Justs of at Joints where the bars are in direct costa t and tripsverse to one another

direct coda t and tripsverse to one another, 52. The distance between the lars of the tension remice ement in a beam shall not be greater than six means.

#### Whileso

60 Willie used in beams for the pair p - of h ding bars in position shell not be regarded as remion ement.

### Compression Reinterement

61. In cases where the compressive resist anecost the concrete is taken into account the stress in the compressive remiorcement may be taken at an amount not exceeding me times the stress in the concrete at the same distance from the neutral axis on condition

a. The compressive reinforcement is anchored by bars extending at least through a depth equal to the arm of the

res stance moment.

b) The anchors are spaced not further apart pointre to centrel than a distance equal to the arm of the resistance noment, and not further apart (centre to centre) than 16 times the least diameter of the anchored bar (Also see regulations 39 and 90.)

62. In cases where the compressive resistance of the concrete is not taken into account the stress in the compressive reinforcement may be taken at 15,000 pointly per square

in homeometrion that—

a Sath ion, steel is provided to take up the whole of the compression. (b) The compressive reinforcement is anchored laterally and vertically by anchors not further apart (centre to centre) than 6 inches and not further

apart centre to entire) than 8 times the fameter of the anchored bar. or howed over both the compressive and

the tensile remiorcement.

#### HOOPED CORE.

 $\ell \in \mathbb{N}_H \longrightarrow \infty$ where the concrete in compress, in is begind at the ends of a beam, the stress within the hooped core, for the distance of one quoter the span of the beam at each end, may be taken at the same value as for a core in a pillar similarly hooped. In this case the compressive stress in the con-rete outside the hooping shall not be taken into account in estimating the compressive resistance.

#### Shear or Web Reintoreement

64. The vertical shear taken by the concrete easy will be calculated on the compressed area of the web or on the web area for a depth equal to the arm of the resistat e moment of the beam. The intensity of the shearing stress shall not be greater

the shearing sites shall not be greater than the values given in regulation 42. +5. Where the vertical shear is taken by the concrete only, in accordance with regu-tation 64, the ends of 50 per cent, of the bars

to 6.44, the ends of 50 per cent, of the bars to tensive reinforcement shall be intied a ross the neutral plane of the beam, it said be arried through a depth equal to a ros of the resistance moment, or the finite factors and be carried through the critical through the critical factors. See regulations

66. It the decrine stress at any cross section of a tell in the on rete alone, is in the confidence of the return The control of the first of the straining stress, the tensile to instance of the control of which the compressive stresses is the web but in no case will the rule  $\frac{1}{h_1}$  a exceed three

times the shearing stress given in regulation 12 a. shere

beam or the breadth of a rectangular beam:

effective depth of the beam; total vertical shearing force at any cross section.

(A<sup>1</sup>so see regulation 84)

67. Shear or web reinforcement shall-

(a) Be spaced according to the distributton and intensity of the shearing stresses, but the distance from centre t) centre of the shear or web members at any part of the beam shall not exceed a length equal to the arm of the resistance

(b) At least extend from the centre of the tensile reinforcement to the centre pressure in the concrete under com-

(1) Be passed under or round the tensile reinforcement or be otherwise

se ured thereto.

(d) Be booked at both ends, in the same manner as for tensile reinforcement, or equally effectively anchored.

68. Tensile reinforcement which is inclined across the neutral plane of a beam. and which is carried through a depth equal o the arm of the resistance moment may be tiken as shear or web reinforcement.

69 The shear or web reinforcement may be regarded as anchors under the regulations 61 and 62, provided it complies therewith.

(To be continued.) >000

#### THE LONDON COUNTY COUNCIL.

At their meeting yesterday (Tuesday) afternoon, the London County Council formally confirmed, as required by Section 23 (3) of their General Powers Act, 1909, the regula tions with respect to the construction of buildings wholly or partly of reinforced concrete and with respect to the use and composition of reinforced concrete in such construction, made at their meeting last week, referred to in our last issue, pp. 4, 5, and also above, in this number. The Building Acts Committee reported that they had had under consideration the question of the position of Mr. J. D. Mathews, district surveyor for the district of Stoke Newington, who was appointed by the Metropolitan Board of Works in 1874. In November, 1914, the committee interviewed Mr. Mathews, who was then seventy-rix years of age, and formed the opinion that his retirement should not be long delayed. In order that he might have an opportunity of making any necessary arrangeents, the committee suggested that he should submit his resignation to take effect as from November 50, 1915. Mr. Mathews had not, however, adopted that suggestion, and the committee now felt, therefore, that they had no alternative but to recommend the Council to dispense with his services as from the date mentioned. They recommended "That the services of Mr. J. Douglass Mathews, district surveyor for the district of Stoke Newington, be dispensed with as from November 1915." They had also had much They had also had under consideration the question of the position of Mr. F Wallen, district surveyor for the district of St. Paneras, South. Mr. Wallen was appointed by the Metropolitan Board of Works in 1878, and is now eighty-four years of age. The committee interviewed Mr. Wallen in November, 1914, and were satisfied that it was desirable in the public interest that he should be relieved of his duties. In order that he might have an opportunity of making any necessary arrangements with a view to retirement, they suggested that he should appoint a qualified deputy forthwith and should submit his resignation to take effect from November 30, 1915. Mr. Wallen had appointed a deputy, and the committee agreed to the appointment on the understanding that it will continue for so long as Mr. Wallen remains district surveyor, but not after remains district remains district surveyor, but not after November 30, 1915. Mr. Wallen had not, nowever, submitted his resignation, and they felt, therefore, that it was incumbent upon them to recommend the Council to dispense with his services as from the date mentioned They recommended "That the services of Mr. Frederick Wallen, district surveyor for

mean breadth of the rib of a tee the district of St. Pancras, South, be dis-

pensed with as from November 30, 1915."

Owing to the demands of the military authorities, the contractors have not been able to complete the Council's last order for motor appliances for the Fire Brigade. The Fire Brigade Committee submitted an estimate of £25,665 for the purchase of ten motor fireengines, seventeen motor fire-escapes, and a motor-lorry, pointing out that it has become increasingly apparent that the efficiency of the Fire Brigade must be maintained at a high standard during the period of war. Fire Brigade Committee added that in view of the conditions arising out of the war they had decided that no building work at firestations involving capital expenditure, except works already in progress, shall be proceeded with until further order. This decision in with until further order. volves the postponement of the extension of the Euston station, of the building of a new station in substitution for the Tooley Street station, and of the enlargement and improvement of the Kennington station. They had also given instructions that the usual painting work at fire stations is not to be carried out during the current financial year, that only repairs which cannot be delerred are to be executed, and that certain proposed works of a minor character at fire-stations are not to be put in hand at present.

No proposals are to be submitted to the Council for the construction of new tramways, and the Highways Committee recommendation mended that application be made to Parliament for an extension of the time allowed for the construction of the junction lines from Farringdon Road into Clerkenwell Road, from Battersea Park Road into Battersea Bridge Road, from Southeroft Road into Mitcham Road, the transways in Bridge Road, Hammersmith, and the junction line from the Broadway, Hammersmith, into Bridge Road.

The Improvements Committee reported negotiations with the Hammersmith Borough Council with regard to (i.) the proposed formation of a new road between Old Oak Road and Old Oak Common Lane; (ii.) the continuation of such road by the addition to the public way of land partly outside the county belonging to the Goldsmiths' Company; and (iii.) the widening of Old Oak Common Lane south of Ducane Road. The total cost of the works involved in the execution of (i.) and (ii.) is estimated by the borough council at £1.365, and the cost of the works necessitated by the third improvement is estimated at £550, making a total of £1,915. The Ecclesiastical Commissioners are prepared to give up the land required for (i.) and (iii.) and to contribute £400 towards the cost in the case of (i.). On this basis the cost of the improvement may be estimated at £1,515. The borough council states that the work is one of urgent public necessity, and the Ecclesiastical Commissioners are very anxious that the work should be completed before next winter. The committee recommended the Council to contribute £1,000 towards the cost of the improvements which will thus be effected forthwith on the basis of no payment being made by the Council until after the conclusion of the war, with interest at the rate of  $4\frac{1}{2}$  per cent, from the date of completion of the improvement.

Mr. Courtenay Clifton held a Local Government Board inquiry at Hadleigh, West Suffolk, on Monday, into an application by the Cosford Rural District Council for sanction to borrow £1,200 for a housing scheme.

The directors of the Ulster Publichouse Trust Co. have opened a large new hall at the Templetown Arms. Templepatrick, to be called "St. Patrick's Barn." All the old features of an Ulster barn, including an external staircase, have been preserved and every modern accommodation added. The builders were Messrs. Kirkpatrick Bros., of Muckamore. more.

Mr. W. O. Meade-King, an inspector from the Local Government Board, held an inquiry at the Town Hall, Wednesbury, last week, respecting an application by the town council for sanction to the borrowing of £1,350 on account of the extensions of the municipal offices and public baths and the erection of new education offices. The application was unopposed. unopposed.

### TIMBER IN BRITISH NORTH BORNEO.

The Government of British North Borneo is taking steps for a general survey of the timber possibilities of the country, and, for the purpose of estimating the amount available and classifying it into the various kinds suitable for export, Mr. D. M. Matthews, an American forestry expert, formerly in the Forestry Service of the Philippines, has been employed. According to a report by the United States Consul at Sandakan, Mr. Matthews began his duties in December, 1914, and is now proceeding with the work of classification.

North Borneo is covered with forests. On account of the dense vegetable growths of all kinds in the tropics, the word "forest" is seldom used; instead, the word "jungle" is commonly applied. In "jungle" is commonly applied. In British North Borneo the entire coastline is an unbroken jungle of nipa palms and mangrove trees, but the higher ground is covered with many kinds of forest trees, particularly rare hardwoods, which it is the intention to convert into timber for export. These hardwoods are of many kinds, and can be used for many purposes.

A peculiar feature of several best-known woods is the dual formation—a soft outside of a few inches covering a heart of hardwood. usually black. Several trees have sand-coloured and reddish woods—very similar to the so-called California redwood.

The most valuable of all Borneo timber is billian, or ironwood. This is an extremely hard timber, sand-coloured when newly cut, but it darkens with age. It is so heavy that it sinks in water, and for that reason cannot be rafted down the rivers. About 2 in. of the outside of the tree is soft and worthless, but the inside can be used for almost any practical purpose where a strong, solid, and durable wood is required. It is particularly in request for building purposes in the tropics because it is ant-proof.

Another valuable hardwood is russak or selangan batu. This is a dark sand colour and has many of the properties of billian wood, though it is not so heavy nor does it take so high a polish. Billian is more like reddish-brown ebony, if the description may Billian is more like be allowed. Russak is used for general building purposes, but is preferred for posts and piles for wharves, beams for houses, and all kinds of heavy framework. It is an adall kinds of heavy framework. It is an admirable wood for interior finish in halls and churches, for wainscoting and panel woodwork. The supply is practically unlimited.

The next common timber is sirayah, or redwood, a comparatively soft wood, very similar to California redwood. Sirayah puteh is a whitewood closely resembling American yellow pine. Sirayah proper is so easily worked that it is in very common use. For hardwood sirayah is in great demand.

A very valuable timber is known by the local name of urat mata. It is a dark-red

colour, grained, not dissimilar to American mahogany, and much desired for shipbuilding, masts, and planks. It is very durable, and impervious to ants and other insects. The Malays prefer this wood for the bottoms of

their boats.

Greeting is a wood closely resembing Indian ebony, though the black inside is sometimes relieved by streaks of brown or red. It may be used for all fancy and decorative purposes, including furniture, though rative purposes, meaning rational free it is almost as heavy as billian. Greeting is a good imitation of English black oak, and might even take the place of walnut. In a might even take the place of walnut. In a new country it is the first wood to disappear.

Another wood similar in texture and grain to greeting is rungas, a dark-red wood with a black stain. The heart is a beautiful dark red. Two or three inches of the outside are soft and worthless, but the inside has all the qualities of the most desirable hardwood. is durable, impregnable to insects or the elements, and takes a high polish. It is not so heavy as billian or urat mata, as it floats. This wood is not found in forests, but grows It is found all over as isolated trees. Borneo.

cis

Other timbers valuable to the export trade are camphor wood, mirabow, and chindana. These woods all have a more or less agree-

able scent, and are fine grained and durable They are in great demand in Hong Kong for the inside finish of wardrobes, chests, bureaus and all wooden furniture intended to contain clothing. These woods are also adapted for fine building purposes and furriture. In the tropies they are used for stairways, doors, window-frames, and finishing work generally.

The cost of procuring timber is not great. The system in vogue near Sandakan is to fell the timber, using Clanese coolies, and raft it down rivers to the bay, where it is loaded into lighters, which go alongside the big steamers and discharge.

It is claimed that the supply of nearly all kinds of timber in British North Borneo with last hundreds of years. At present two com-panies only are engaged in the export timber trade. The entire supply goes to Hong Kong. -----

#### PROTECTION OF UNFINISHED CONCRETE.

The use of concrete during the winter months has always been attended with more months has always been accended with more or less danger, and opinions are divided as to the advisability of placing concrete in freezing weather. Mr. Leonard C. Wason, president of the Aberthaw Construction Compresident pany, of Boston, Mass., in a paper read before the Boston Society of Civil Engineers, gives a number of interesting items which he has found during his experience in that line. It seems to be generally considered that concrete laid in winter months will be exactly as good as that laid in summer-and possibly more so-if the necessary precautions to pro-

The aggregates must be free from frost when mixed. A live steam pipe should be shoved into the sand pile, the escaping steam heating it and removing all frost. The same may be done with the stone; but a canvas should be thrown over the top of the pile to retain the heat, which more readily escapes. When a considerable amount of heating is provided for in advance, steam pipes are laid on the ground, and stone as received is dumped upon them. Then there is a canvas thrown over to prevent storms getting into the pile, and to retain the heat. The frost is thus easily and economically removed.

Salt is frequently used in the water to lower its freezing point. It is seldom worth while to heat the water itself. Little care need be used to prevent mass concrete from freezing. as the frost will usually only strike to a depth of about one inch. Buildings are inclosed with tarpaulin tied on to an outside staging. and the inclosed space is heated with salamanders burning coke. Sometimes it is possible to use steam.

Frost is removed from work by the use of salt and steam; and if the concrete surface is left rough, it is common to sprinkle the top surface with salt to prevent freezing. winter it is very common to put the finish on as a separate operation, after the building on as a separate operation, are the duming is enclosed, and not as an integral part of the construction, on account of the danger of freezing. After it is put on, it must be kept from freezing for the first 48 hours.

The expense of protection against the weather is not very great, and good results can be so surely guaranteed that it is not usual to discontinue work on account of cold

Occasionally it is necessary to make some provision for the protection of the men Shelter or wind shields are built in front of the benches where carpenters are making up forms, as well as around the men at the concrete mixer, whose work does not necessarily keep them warm. Where excavation is going on in the open, it is expedient to have a building with a good fire, in which the men can warm themselves when necessary, and on a few jobs it has proved to be wise to provide hot coffee free in these shelters.

The corporation of Dudley have decided to purchase tifty-five acres of land at Burnt Tree purchase tifty-five acres of land at Burnt Tree from Lord Dudley, at a cost of £14,000, for the purpose of a housing scheme. The matter has been before the town for twenty years. It is proposed to provide fresh dwellings, so as to give opportunity for closing the existing overcrowded and insanitary two-room and three-room tenements in the borough.

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### Correspondence.

PULPETS ETC IN I LISH CHURCHES

To the Lilitor of The Lite. 

The pulpit in that ed to the of some into oak), and was designed and proceed in the fully half a century as many the the Mr Edward Ashworth, are noted, of Exeter

Edward Ashworth, an interest of Exercise The unfortunate mistake scenes to have been copied from "Pulpits" in "English Church Futhitine" page 139 s by J. Charles Cox, LL.D., F.S.A., and Alfred Harvey, M.B., published in 1997, wherein St. S.d. well's, Exeter, is also errone and reclaided amongst the West-country charless containing. ing pre-Reformation pulpits Yours.

Exeter. St. Showell's

#### SOUTHWARK CATHEDRAL.

Sir. Your note in this week's as no on the work to the alter screen which was de heated on Monday is in some respects not quite accurate, and a few further part chairs may be of interest. The line alter screen sected be of interest. The fine altar screen erected in 1520 by Bishop Fox was early at the eighteenth century almost wholly covered by a wooden altar-piece. This was remeyed early in the last century, when the campaes and other projecting features of the screen were found to have been cut back flat, pro-sumably to allow for the woodwork.

The whole screen was very carefully restored by Wallis in 1833. His methods were, however, rather more drastic than we could wish nowadays, and there is not very much of the original stonework of the canopies, shafts, etc., now remaining. It seems clear that the three niches immediately over the that the three memes immediately discretized altar, in the bottom stage, were added by Wallis. The recent work to the screen has been to reconstruct this centre part on lines which such evidence as there was suggested, assisted by the treatment of the corresponding space in such similar screens as those at Win chester and St. Albans,

A large recess was formed above the altar for the retabulum panel, and is now filled with a rich dossal and frame, while alse we are a rich dossil and frame, while aleave are a row of small niches containing figures of the Apostles. The corbel, carrying the subject in the central niche above, was also redesigned to suit this new work. The two steps to the altar were pushed back, so that the altar now stands agains the storework of the screen. This work was carried out by Messrs, Farmer and Brindley. The two new figures of Henry I, and Edward VII. fill the Messrs, Farmer and Brindley. The two nev figures of Henry I, and Edward VII. 32 the outer niches of the hottom stage, and are the work of Messrs, T. and E. Nicholls, who also carved the other figures in the screen

C. M. OLDRID SOUTE 2, Dean's Yard, Westmassier, NW July 10, 1915

Plans have been prepared by the berough surveyor of A'dersher, Mr. F. C. Lee, for an additional block at the isolation hospital.

The Castlebar Asylum Committee have The Castlebar Asylum Committee have slopted plans by Mr. R. M. Butler, F. R. I. B.A., Kildaro Street, Dublin, for adding new pavilions, tubercular sanatorium, and bakery to the institution, at an estimated outlay of OVET £27,000.

Private Edwin Frederick Warth died at Private Edwin Frederick Warth died at Alexandria on June 25 from wounds received at the Dardanelles. Born in India in 1883, he was the youngest son of Dr. H. Warth, formerly of the Indian Geological Survey, and now residing at Arneliffe, Forest Read, Moseley. After filling important posts in Manchester and Liverpool he went to Las Palmas in the spring of last year to take up an appointment on the waterworks survey, but gave up this post in September and returned appointment on the waterworks survey, but gave up this post in September and returned home to join the Forces. He applied for a commission; but, impatient at delay, enlisted as a private, his commission as lieutenant being received after he was wounded.

### Currente Calamo.

Lord Midleton's zeal for economy in the Civil Service, which the House of Lords endorsed so readily last week, may or may not be according to knowledge as regards Labour Exchanges, of which we have never had much opinion, and which at present must be soft jobs for all engaged in the task of finding employment for out of works But with regard to the expenditure on public buildings he probably forgets that it is nearly always the truest economy. We can call to mind no Government or municipal building erected of late years which has been undertaken until the necessity for it was so patent and the proof so evident that it would be cheaper to build than to house the staffs in separate and not infrequently distant quar ters, the rents for which far exceeded the interest on the sum spent on the new struc ture, to say nothing of the delay caused in work and injury to the health of the workers. It is, for instance, at the present time a task involving some research to hunt out the various departments of the London County Council, who, except the principal officers, are located in more than fifty different offices. The makeshifts of the Post Office. again, are as unfavourable to despatch as could well be imagined, and from other branches of the Civil Service the same cry comes almost every day. One might as well denounce the outlay on the various camps absolutely needful for our new armies as cavil at building of offices for the various azencies created during the past few years which have transferred to the State and the municipalities work of all kinds that has grown a hundredfold.

There was an equal division in the House of Lords last Friday, not only on the particular merits of the income tax appeal, but also on the application of previous decisions of the House. The question was whether the Egyptian Hotels, Limited, whose office is saturated in London, were liable to pay income tax, under Case 1, of Schedule D, upon the whole of their profits, or under Case V., upon a sum not less than the full amount of the actual sum remitted to Great Britain. The company said their Egyptian business was managed by an Egyptian board of directors. independent of the board in London, and of every general meeting of the company not held in Egypt. The Crown contended that the company was resident in the United Kin rdom, that the head seat and directing power were situated in England, and that the il musts control of the company, which resided in its general meetings, was at all times exercised in Great Britain. Mr. Justice Horridge agreed with the Crown, but this decision was reversed by the Court of Appeal. Equal division in the House of Lords resulted. Folbeying the practice of the House in such cirrustances, the decision of the Court of Appel was allowed to stand. Lords Lore birr and Parms r thought the appeal ought to be allowed, and considered that the prin cyles to be applied had already been settled ir Colombian to Brown and the Sin Paulo Braz hat Railway Commany v. Carter Lord Parmour, with whom Lord Dereburn con carried, adopted Izerl Watson - reading of the effect of the Comboin decision, that every interest in the profits of trade belonging to a person who was within the meaning of the Act resident in the United Kingdom must be charged under the first case of Schedule D against twenty-five. If that had ended the if the trade was carried on either wholly or in part within Great Britain or Ireland, and would have been perfectly clear. But a

was chargeable under the fifth case if the trade was exclusively carried on in any of his Majesty's dominions outside the United King In the present case Lord Parmoon though; there was evidence that the directors of the respondents had not only the power to deal with all general financial arrangements t the company, but also exercised the power Lord Parker, with whom Lord Sumner concurred, and whose opinion prevailed, said the important point in the Colquboun case was not whether the partner had power to interfere with the trade or business, but whether he had so in fact interfered during the period for which the Crown alleged that he was assessable under Case 1. In the present case, Lord Parker said, there was an absence of any act done or directed by any person resident here in participation or furtherance of the business operations in Egypt from which the profits and gains in question arose.

The dismissal by the City Surveyor of Manchester, Mr. T. de Courcy Meade, W.Inst C.E., of three members of his staff, referred to on this page last week, was again the subject of proweek, was again the subject of pro-longed discussion by the City Council last Wednesday. The report which the Town Hall Committee presented was summarised in our last issue. It showed that the majority of the committee refused to take the view of their Special Committee of investigation that the dismissal of these men could be justified on the ground that there was no work for them to do in the City Surveyor's department; and as the sub-committee failed to find work for them in any other department it was resolved by a majority of the committee that two of the men, "with the approval of the City Surveyor, be reinstated." The statement made by Mr. Derwent Simpson, the chairman of the committee, in presenting the report last Wednesday, indicated that those who voted for this resolution regarded the dismissal of these men as a form of industrial conscription, or compulsory enlistment The whole question of the action and re sponsibility of the City Surveyor in the matter was raised by an amendment to delete the words ' with the approval of the City Surveyor," moved by Mr. Swales. If, said Mr. Swales, the City Surveyor had really been desirous, as he said he was, of cutting down the expenses of his department, he might have begun by suggesting a reduction of his own salary, which now stood at £1,400 per year. He said it was obvious that the City Surveyor had made a great blunder He had now told the committee that he could find work for these two men, and it was with that fact in mind that the committee inserted the words under discussion. The chief object of those who supported the amendment in the Council was obviously to express their disapproval of what they considered to be an attempt of an official to use his power in order to force employees of the Corporation to culist. A second point of criticism was that the Town Hall Committee in view of the City Surveyor's threat of resignation, were afraid to "say anything to him." Sir Thomas Shann and Alderman Wilson took what they described as a more charitable view of Mr. Meade's conduct, and, while admitting that he had taken too great a responsibility upon himself, contended that he had acted solely in the interests of economy. The amendment to leave out the words " with the approval of the City Survevor " was carried by a vote of thirty-five

second resolution was carried referring the question back for further consideration. Mr. Cook, who moved the amendment, did so on the simple ground that he objected to "two able-hodied pensioners on the ratepayers' fund," which, he said, would be the position if these men were reinstated. The whole subject will therefore come up again at the Council meeting to-day.

Up to this date only two churches are known in England to have more than a complete set of external crosses upon their walls. One of these is the church of Ottery St. Mary, in South Devon, where a thirteenth cross is found, possibly in honour of St. Paul: the other church is at Canington, near Bridgnorth, where there are no less than seventeen crosses on the outside, probably the result of two consecrations. Crosthwaite Church to-day is the only church known to exist with the twelve crosses as symbols of the Twelve Apostles upon the outside walls, and, according to a correspondent of the Manchester Guardian. we owe the discovery of this unique fact to Mr. F. C. Eeles, of Edinburgh, who has discovered during the past month that, in addition to the six consecration crosses that were known to exist on the exterior of the south wall, there are six other crosses hidden beneath the rough-cast on the jambs of the windows on the north wall. The whole set of crosses probably dates from 1554, in which year there were inserted Maryan windows in the fourteenth-century walls. The use of consecration crosses on sacred buildings has a long history. In the Pontifical of Egbert, Archbishop of York, A.D. 732-766, the hishop is directed to make crosses with his thumb dipped in chrism on the walls of the church. For consecration crosses according to the Roman use twelve red crosses were painted on the four internal walls of the church at equal distances, with twelve hranches of iron to hold twelve large candles. By the English use it was required that, in addition to the twelve internal crosses, there should be twelve crosses painted on the outside walls as well. Towards the end of the fifteenth century the crosses are ordered to be within circles. and in the early part of the sixteenth century orders were given to the bishop not only to anoint the crosses with chrism but to cense them as well. Whilst the crosses on the south walls at Crosthwaite are of a normal height from the ground, 7 ft. 6 in.. they vary in height on the north wall, the sculptor having apparently chosen a more important or harder stone in the window jambs. It was prohably Dr. Aldrich, of Carlisle, who would be the consecrating bishop at that time, who used the English use for the consecration of the church notwithstanding the fact that Queen Mary was on the throne, Mr. Eeles has also discovered beneath the plaster in the interior of the church seven other consecration crosses, some of them enclosed with a black line and two of them picked out with black paint. One consecration cross was previously known to exist, so that there are eight now in the interior. The other four were probably wiped out of existence when the splays of the windows were redressed in 1844.

Careful scientific investigations are being carried out in Queensland in accordance with the Rights in Water Act. The State has been divided into two divisions one lying north of the Central Railway, and the other to the south. Each division is under the control of an assistant hydraulic engineer,

who has a district engineer stationed at Win ton and Charleville respectively. Under the district engineer in the southern division are three hydraulic surveyors with working staffs, two bore-drain surveyors, two bore inspectors. and three overseers. In the northern division are two hydraulic surveyors, two levellers, two bore-drain surveyors with field staffs, and two bore inspectors. Amongst other things, these officers are obtaining altitudes and particulars about existing bores, the proper seatings of castings, the proper construction of new bores, and making the necessary inquiries respecting trust areas. The problem respecting the diminution of flow is also being carefully investigated, and in one district the rate of fall has been observed to be as much as 7 ft. per annum; 124 bores that have been specially observed show that during the last fifteen years there has been a decrease of 40 per cent, in the aggregate flow. The Act was passed in 1910, and the following year was occupied very largely in preparing for work. In 1912 the first Interstate Artesian Water Conference was held in Sydney, and since that time Queensland has been working steadily with the object in view. Five water trust areas have been constituted, and bores have been sunk by the Government, while twenty-two trust areas have been constituted, and work is being pushed on with the necessary bores and bore-drains. In connection with the five completed areas 156 miles of bore-drains have been provided, watering about 385,000 acres. at a cost of less than a penny an acre. The twenty-two areas on which work is in progress will water approximately 2,250,000 acres.

When Mark Twam in his early days was editor of a Missouri paper, a superstitious subscriber wrote him saying that he had found a spider in his paper, and asking him whether that was a sign of good or bad luck. The humorist wrote him this answer and printed it :-

"Old Subscriber: Finding a spider in your paper was neither good luck nor bad luck for you. The spider was merely looking over our paper to see which merchant is not advertising, so that he can go to that store, spin his web across the door, and lead a life of undisturbed peace ever afterwards."

The death is announced at Fernleigh, Crawley Down, of Mr. William Orrin, who was for many years a surveyor to the East Grinstead Rural District Council.

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The partnership hitherto subsisting between A. J. Wileman and F. B. Gange, builders and contractors, at Nottingham Road, Loughborough, Leicester, under the style of Wileman and Gange, has been dissolved.

Approval has been given by the Local Government Board to the preparation of a town planning scheme for the Beulah Hill district of Croydon. The Board suggested at the same time that authority should be sought to prepare similar schemes for other unbuilt areas in the

The City Council of Nottingham have reconsidered their determination to abandon the provision of public baths in three districts, and have decided to proceed with the Basford scheme, land in Noel Street having been purchased at a considerable cost as a site for the new establishment, while a street widening will also be effected.

At the last meeting of the town council of Loughborough, Leicestershire, the waterworks engineer reported the failure of registered waterworks plumbers to obtain cards from the waterworks department before proceeding with waterworks department before proceeding with work connected with the water services. One man had carried out ten jobs without first obtaining cards for the work. It was resolved, after some discussion and a division, that the plumber in question be prohibited from carrying out any work for a period of two months.

### PROFESSIONAL AND TRADE

SOCIETIES.
EDINBURGH ARCHITECTURAL
SSOCIATION AT STIRLING.—The STIRLING. -ASSOCIATION annual excursion of the Edinburgh Architec tural Association took place on Saturday week to Stirling and Keir House, Bridge of Allan. The party first visited Stirling Castle by permission of H.M. Office of Works and the military authorities. Dr. Thomas Ross acted as leader, and Mr. W. S. Menzies clerk of works. Queen Anne's Gateway and King James IV.'s Gateway were described in passing. The Palace was first visited, and Dr Ross stated that the grotesque statues and figures were probably the work of French masons brought over by King James V. Stirling parish churches were next visited by permission of the Town Council. In the afternoon, the mansion and gardens of Keir were visited by permission of Colonel Stirling of Keir. Mr. Balfour Paul, architect, and Mr. James Rodger, factor, conducted the party over the new chapel, the library, dining and reception rooms. WAR TROPINES FOR MUSEUMS.-

The annual conference of the Museums Association was opened on Wednesday at the Victoria and Albert Museum, South Kensington. Sir Cecil H. Smith, Director of the Museum, welcomed the members. The president, Mr. E. R. Dibdin, curator of the Walker Art Gallery, Liverpool, said he thought the present dangers to the national treasure-houses were understood, and guarded against as far as possible, by those who had national collections, both public and private, in their charge. Dr. F. A. Bather, of the Natural History Museum, South Kensington, gave an address on "Museums and the War." Mr. W. Ruskin Butterfield, of Hastings, in a paper on "Museums and the National Cause," said that the War Office must have accumulated a large amount of material and appliances captured from the enemy or found on the battlefields. If the War Office and the Admiralty were willing to co-operate with museums it would not be difficult to arrange for the exhibition of it. Mr. E. Howarth, Sheffield, said that he had desired to set up a collection of munitions and shells, but the War Office had refused their sanction. Mr J H. Charlton Deas, Sunderland, said that they had been unable to secure any relics of the bombardment of West Hartlepool for the museum. There were plenty of fragments of shells, and there had been a great demand for them, so that when the supply ran short local tradesmen had to manufacture them. museum had not even got the shell that came through the library roof, for a workman who was working there appropriated it. posal to utilise museums for exhibits of munitions and war history subjects was supported by many other speakers, including the curator of Warrington Museum. seum. Thursday on Mr. course of a discussion on Thursdo "Museums in Relation to Education, A. Green, Professor of Education at Sheffield University, said that for the student the museum should be an encyclopædia and hook of reference. The labels on the speci-mens were rarely skilfully done, and to the The labels on the speciuninstructed they carried no message. In his opinion the authorities responsible for the museums did not spend enough money on printing, and he advocated the distribut on printing, and no advocated the discrept of among teachers of a little book dealing with the educational side of the museum. A well-organised museum should be the most population. ar and useful institution in a town. H. Bolton, of Br stol, remarked that at one time the museum was nothing more than a time the nuseum was nothing more than a curiosity shop, but it had now moved for ward and had taken its stand nearer the University College than the elementary school. Mr Woolnough, Ipswich, complained school. Mr Woomongn, tpswich, companied that Mr. Carnegie had crippled museums by stipulating that the whole penny under the Libraries Act should go to the library.

NORTHERN SANITARY INSPECTORS'
ASSOCIATION — Nearly forty surveyors and inspectors connected with the

and inspectors connected with the various public authorities, and members of the North of England Centre of the Sanitary Inspectors' Association, paid a visit to Shotley Brilze on Saturday week and inspectors and inspected the new sewerage disposal works which are being constructed by the

Bentie Iside Lync 10 to 1 Benfie Iside I and II to wood Farm. The proof of Mr Wallin, a cheerence Mr roll and Wallin, a cheerence Mr roll and Wallin, a cheerence Mr Albert I Blacabill, to let on the reachest and Mr Albert I Works, which extends to the roll and the White I albert I are which 23 here are to the roll and the roll a

OBITUARY.

Hendrik Willem Meshag, the Dutch makine painter and manifecent give of other painters, died at his hease. Staan van Meerdervoost, The Hague, on Fr Laan van Meerdervoost, The Hagne, ercht day night, aged 84 years. His moseum if modern Dutch art, presented to the Dutch nation in 1903, is the resort of all cultivated visitors to The Hagne. Yet, arheigh all his life a lover of painting, Mesdag was 55 before his left his father's backing business to make it a profession. His wife was also 55 before she took the brush in hand, yet lived to achieve a reputation with it almost as great as his. Both were both in Groungen, the hirthplace of Josef Israels, he in 1851, she three years later, and they he in 1851, she three years later, and they married in 1856. Two of his seascapes are hung at the Luxembourg—"The Snowing Sun," acquired in 1888, and "Before the Storm," in 1890, and in the Rijks Museum at Amsterdam is his "Shore at Schevenin

Second Lieutenant Hugh Frederic Davies, 1-5th Regiment (T.F.), whose death was reported on Friday, aged 25, the youngest son of Mr. John Davies, of Chester, was an assistant architect in the service of the Liverpool Corporation. On the outbreak of war he enlisted as a private, and on October war ne enusted as a private, and on October 24 was given his commission. He was men tioned in Sir John French's dispatches of June 22 last. He was a relative of the late Major Hale, V.C., C.B., and was killed in action in Flanders on July 5.

Mr. Douglas Thomas, jun., of the firm of Messrs, Parker, Thomas and R.ce, architects, Boston, Mass., was killed in an automobile accident while in Ba'timore, on June 10. Mr. Thomas was only forty-buryears old. He graduated in 1895 from Johns Delinia, University and later studied both Hopkins University, and later studied at the Massachusetts Institute of

nology and in Europe.

we regret to learn that Mr. Joseph Mason, managing director of the Stiety Tread Synd, cate, of 15, Barbican, E.C., passed away on Friday evening last. He was the original patentee of the Mason's Patent Syar Treads. one original contents of the Mason's Patent Star Trads, so well known and used all over the world. He had governed the syndicate in the capacity of managing director in capacity of managing director since its in ception in 1893, and the directors and staff feel that they have suffered an irreporable loss. His death has caused great series among both his personal and business ir cods. among both his personal and business free ds. The end was very sudden and quite unexpected. Although Mr. Mas in had been away from business is new November last the upha severe illness, he recovered sufficiently take up his residence of the sensible convalescent; up to the day between his sudden death. In our walls the day between his sudden death. death he was in communication with the firm, and his last letter stated how well he was feeling. The funeral takes place to day (Wednesday) at the Section Cemetery, Prittlewell.

The foundation stone of a Congregational school church at Scaland, Chester has been formally laid. Mr. F. Gilbert Smith, of Pres. tatyn, is the architect

The Erith Urban District Council are considering a report prepared by the electrical engineer for extensions to the electricity under-The scheme will involve an expenditaking. The sc ture of £20,000.

The road between Newhaven and Seaford, which is narrow, with bad corners at six points and in a poor state of repair is to be replaced by the military authorities with a replaced by the military authorities who new highway, as far as two sections are corned, while the existing thoroughfare be widened to 22 ft, in the third see between Bishopstone and Scaford, third section.

### Our Illustrations.

NEW HEAD OFFICES FOR THE BRITISH DOMINIONS GENERAL INSURANCE CO., LTD., I AVENUE, E.C. ROYAL EXCHANGE

This building is now in course of crection and covers a site lately occupied by Xos. 2. Royal Exchange Avenue, and 19, 20, and 21 Finch Lane, E.C. The inset view, from a drawing by the architect, is of the frontage to Royal Exchange Avenue. The plan given shows the ground floor, comprising entrance vestibule, lobby and staircase hall, with marble-lined walls and modelled plaster friezes, domed ceilings, etc. A passage similarly treated leads to an entrance from Finch Lane. In the staircase well is an electric passenger lift, with wrought-iron enclosure and stair railing, with cast decorative panels. The underwriting room will be panelled in figured Italian walnut with waxed finish, and will have a plaster modelled ceiling, frieze

Chatham, in the diocese of Rochester. complete church will seat 750 people. erection of the first portion, including the chancel, chapel, vestries and three bays of the nave, has lately been commenced, and is arranged to accommodate 500 worshippers. The shape of the site necessitated a long narrow plan. The nave is 98 ft. in length. with a tower at the west end and one aisle only on the north side. The chancel is 57 ft. long, also with an arcade on the north side only, opening into a large choir aisle which is arranged as a chapel. The church is to be arranged as a chapel. arranged as a chapel. The church is to be built of brick, plastered inside and faced on the outside with Kentish rag. Weldon stone is used for the external stone dressings. The roofs will be covered with Westmoreland slates. Mr. Temple Moore, F.R.I.B.A., of Well Walk, Hampstead, is the architect. TUNSTALL COURT, SITTINGBOURNE,

KENT.

This house, of which we give elevations and plans, is an attempt to combine some of the symmetry and stateliness of an Early

AVENUE EXCHANGE ROYAL STAIRCASE VESTIBULE LIFT HALL LOBBY UNDERWRITING ROOM PASSAGE UPPER PASSAG 3 PUBLIC OVER OFFICE C

#### **FLOOR** GROUND

HEAD OFFICE FOR THE BRITISH DOMINIONS GENERAL INSURANCE COMPANY, LIMITED, ROYAL EXCHANGE AVENUE, E.C.

Mr. A. H. MOORE, A.R.I.B.A., Architect.

peated over the office adjoining. The upper floors, which extend over the public passage, contain additional office accommodation, and on the second floor is the board room, panelled in oak with modelled plaster frieze and ceiling. The top floor contains the lavatories and resident caretaker's apartments. basement contains additional office accommodation and strong rooms, and the sub-basement the heating chamber, coal and storage. vacuum cleaning ontfit is installed through out the building. Owing to rights of light by opposite owners, the building will be faced externally with Doulton's white "Carrara" "('arrara externally with Doubton's white "Carrara" ware. The roofs will be covered with green Westir repart slates with asphalte-covered flats. The structure is of steel framing with ferro contrete flows, roof and staircases. The architect s Mr Arthur H Moore, A.R. I B.A., of 11. Dowgate H.H. Cannon Street, E.C., and the graph contractors are Messre. Pat and the general contractors are Messrs. Pat-

This ceiling, etc., will be re- Georgian house with modern comforts and be office adjoining. The upper convenience, and every possible facility for convenience, and every possible facility for economising labour. The living rooms all face so that they obtain the maximum of sunshine and variety of views. The "wet department," viz., the sinks, lavatories, baths, w.c.'s, are all together on the north side of the house, so as to simplify the drainage, etc. The outer walls are 20 ins. thick, including a 2-in. cavity. The outer facing is of 2-in. thick red hand-made Tudor bricks of broken colour, and the roofs are covered with red hand-made sandfaced tiles. The entrance doorway is of Portland stone. The interior is treated with character in a simple and quiet manner. The house has been built from the designs of Mr. Walter H. Brierley, architect. York. Mr. W. L. Grant, architect, Sitting hourne, acted as local representative. The builders are Messrs. West Brothers, of Rochester

ST. AUGUSTINE'S CHURCH,
GILLINGHAM.

This perspective is now at the Royal Academy Exhibition. It shows the interior of a new Parish Church of St. Augustine, to be built on the hill at Gillingham alove

A church of St. Patrick is in course of erection at Newport, Ireland, from plans by Mr. R. M. Butler, F.R.I.B.A., of Kildare Street, Dublin. The church is Irish Romanesque in style, and measures 150 ft. by 80 ft. It is being built of local red sandstone. The contractors are Messra. John Sisk and Son, of Cork.

#### COMPETITIONS.

A MODEL STREET INTERSECTION.-Out of a total of 200 competitors for prizes offered by the New York Municipal Art Society for the best architectural solution of the intersection of an avenue and a street—the society having in mind the congestion of traffic at Fifth Avenue and Forty-second Street, N.Y., as an example—Mr. John Floyd Yewell. of 120, Regia Street, Peekskill, N.Y., won the first prize of \$300. Messrs. James Ambrose Thompson and Ernest Lewis, of 101, Park Avenue, New York, won the second prize of \$200, and Mr. Calvin Kiessling, with Mr. Herbert E. Davis, of 175, Fifth Avenue, the third prize of \$100.

DUTCH EAST INDIÂN RUBBER FAC TORY.—H.M. Consul-General at Rotterdam (Mr. E. G. B. Maxse, C.M.G.) reports that the Council of the International Association for Rubber Cultivation in the Netherlands East Indies is organising an international competition for (1) a plan for a complete rubber estate factory principally for the making of "crepe, factory principally for the making of "smoked sheet". Both plans are to be drawn up in Both plans are to be drawn up in sheet. such a way that at first the capacity of the factory will amount to 100,000 kilogs. of dry rubber per annum, which by three extensions can be increased to 250,000 kilogs. The projects should be accompanied by a detailed description of the factory and of the way in which the competitor considers the product should be treated, and also of the necessary machinery. Projects may be made in English and should be sent in before March 1, 1916, either to the office of the Association, 13, Kneuterdyk, The Hague, or to the office of the "Algemeene Vereeniging van Rubber-planters ter Oostkust van Sumatra" at Medan (Deli). For the best project a prize of 1,500 florins is offered, and a prize of 500 florins will be given for the second best project. Prizes will be awarded before June 1, 1916, by a committee appointed by the Association, who reserve the right to make no award of the prizes if in their opinion the designs sent in are unsuitable. The conditions can be seen at the Board of Trade Office, 73, Basinghall Street, E.C.

LEICESTER .- Twenty-three designs have been submitted for the new Wyggeston Grammar school, Leicester, in competition. drawings are in the hands of the assessor for adjudication, but it is uncertain when the offiadjudication, but it is incertain when the omicial notification of the award will be made known. Premiums of £100, £75, and £50 are offered for the three best designs, and the assessor appointed is Mr. George Widdows, F. R. L. B. A.

LOUTH, IRELAND,-The award of the assessor, Mr. William A. Scott, F.R.I.A.I., A.R.H.A., A.R.I.B.A., in the Louth County offices' competition, has not yet been settled. Nineteen sets of designs have been received, and the plans will be on yiew in the Council Chamber, Court House, Dundalk, after the umpire's choice is made. The result may be expected shortly.

The hospital of St. John, Crumlin Road, elfast, is being enlarged under the direc-on of Mr. W. J. Moore, Royal Avenue, Belfast, is be Bolfast.

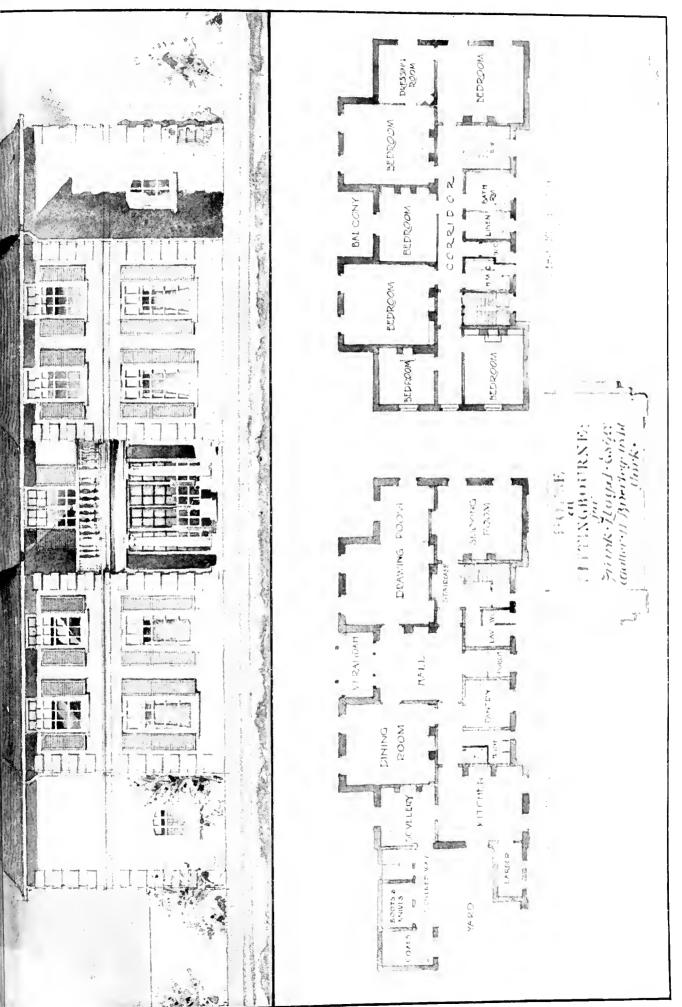
The urban district council of Audley, Staffs, have approved the plans of Messrs. Whitehead and Eales, engineers, for the sewerage of the Chapel Street area, at an estimated cost of £1,300.

M. Henri Gaudier Brzeska, a sculptor of great promise and ability, who was killed at Neuville St. Vaast after two promotions for his gallantry, was a French citizen, but most of his sculp-ture was done and exhibited in London. Several examples of it were to be seen at the recent Exhibition of Vorticist Art at the Doré Gallery.

Wednesbury Town Council have received an intimation that the Local Government Board do not think they would be justified at present in sanctioning the application by the corporation for power to borrow £5,340 for the erection of twenty-four artisan dwelling-houses. They regret that the carrying out of nonses. They regret that the carrying out of the schemo must be postponed. The decision places the corporation in a somewhat awkward position, as not only has the land been acquired, but a number of the houses have actually been erected.

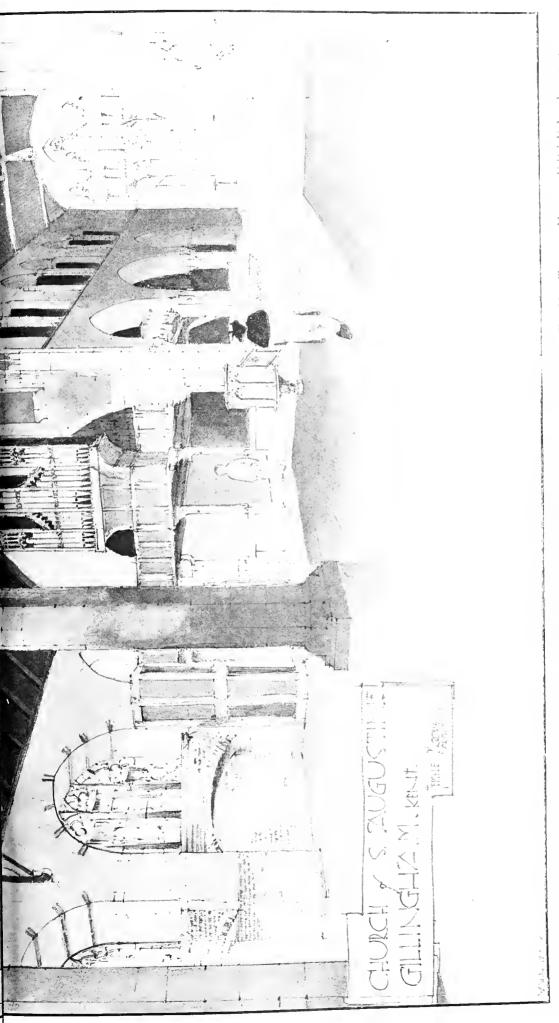


THE BUILDING NEWS, JULY 14, 1915.



TUNSTALL COURT, SITTINGBOURNE, KENT, Mr. Walter H. Breiger, E.S.A., Architect.

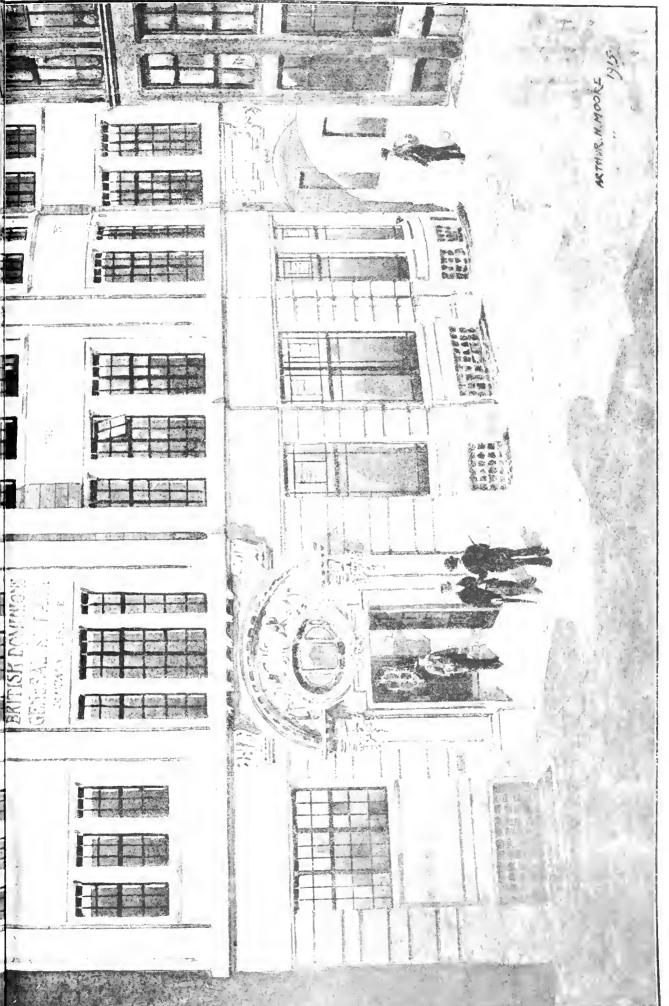




INTERIOR, LOOMING EAST, Mr. Terrie Mears, URLIEAL Are re-CHURCH OF ST. AUGUSTINE, GILLINGHAM, WENT.

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## Building Intelligence.

GLASGOW.—The North British Railway Company have entered upon a scheme of improvements at Queen Street Station, Glasgow, which will involve an expenditure of about £40,000. A new parcels department is being erected, with a public entrance in North Hanover Street, for outward parcels, and an exit is also being provided for delivery vans for inward parcels. The inward parcels will be raised by elevators from the various platforms to an overhead roadway, along which they will be conveyed to the vans. After the parcels departments are transferred to the new offices the present offices at the corner of West George Street and Queen Street will be rebuilt, and a new entrance provided to The offices of the goods manager the station. and the engineer, at present situated in this building, will be removed to what was for-merly the Royal Hotel, on the north side of George Square.

WESTMINSTER CATHEDRAL. -- The chapel of St. George and the English Martyrs Westminster Cathedral is to be dedicated to the everlasting memory of officers who fall in the war. The decoration of the chapel will be carried out in marble and mosaic in the style followed in the adjoining chapel of Holy Sonls, and simple memorial tablets will record the names of the officers who are killed the dates of their death. Work is also to be started at the cathedral on the great tympanum of the entrance, the only important feature outside the building which now re-

### mains to be finished.

#### CAUSES OF METAL BRIDGE CORROSION.

Discussing, before the Engineers' Society of Western Pennsylvania, the protection of metal structures, Frederic H. Fay, of Fay, Spofford. and Thorndike, consulting engineers, Boston, pointed out that the corrosion of metal bridges is due principally to one or more of four causes. These are exposure to locomofour causes. tive gases; exposure to sea water; exposure to surface water leaking through bridge floors; overstress of the metal, by which corrosion has been hastened.

The condition of frequent wetting by salt water, followed by exposure to the atmosphere, is a severe test. The Neponset bridge. built in 1877, was a small two-leaf trunnion bascule draw span with wrought-iron girders. The counter-weighted ends of the girders were immersed in salt water whenever the bridge was open at high tide. These girders were painted frequently, usually with red lead, and they continued in service thirty-two years, until the bridge was rebuilt.

Laboratory experiments have shown that steel stressed beyond its elastic limit will rust more rapidly than steel which is not overstressed. This seems to be borne out by experience in certain cases of highway bridges carrying constantly increasing street railway loads. When heavy cars have been put in service over these structures the outstanding legs of the flange or seat angles immediately under the stringers have been found to rust very rapidly-much faster than the metal at each side of the stringer.

The foundation-stone of a new Wesleyan church has been formally laid at Wincanton. Mr. A. Brocklehurst, of Manchester, is the architect, and Messrs. Bird and Pippard, of The outlay will are the contractors.

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The urban district council of Stone, The urban district council of Stone, Stans, have this week decided not to purchase the gas and electricity undertaking offered to them by a local supply company for £38,100 and to withdraw from all negotiations, and from all further steps towards the promotion of a Bill for the acquisition of the works.

At a meeting of the Northern District Committee of Ayrshire County Council at Kilwinning on Thursday, it was intimated that Mr. Roderick M'Donald had been appointed road surveyor for the whole district. The property of the whole district is the surveyor for the whole district. appointment was carried at a special meeting by 14 votes to 12. The amendment favoured two surveyors, as formerly.

#### LEGAL INTELLIGENCE.

CROWN'S POWER OF REQUISITION OF LAND.—No Right to Compensation. On the 7th inst., in the King's Bench Division, the 7th inst., in the King's Bench Division, Mr. Justice Avory give judgment on a petition of right presented by an aerodrome company raising the important question whether the Crown could commandeer premises and land for military jurposes without granting any compensation.—The aerodrome company by their petition contended that they were entitled to receive compensation for their avia their petition contended that they were entitled to receive compensation for their aviation ground and premises having been taken over for military purposes. They did not dispute the right of the military authorities to acquire the property compulsoridy. The Crown submitted that the aerodrome had been acquired under military necessity, and that the petitioners were not entitled to compensation. It was said that the Crown chained no right It was said that the Crown claimed no right When the case was before the Court during the previous week it was not reported, as for military reasons it was thought inadvisable to mention the locality. The judge now intiniated that there was no objection to the decision being reported.—Mr. Justice Avory said cision being reported.—Mr. Justice Avory end he had come to the conclusion that his Majesty, by virtue of his war prerogative through his representatives was, in existing circumstances, entitled to take possession of the land and premises without making compensation. the land and premises without making compensation. In addition the regulations under the Defence of the Realm Act conferred on competent naval and military authorities during the continuance of the war alsolute and unconditional power to take possession of land and buildings, and do any other act interfering with private property for the public safety or the security of the Realm. That enactment repealed any right to compensation if it existed at any time under the earlier Acts. The pet-tioners had failed to establish any right in law, and there would be judgment for the Crown The petitioners were, however, entitled under the conclusions of the Royal Commission of Inquiry of March 31 to apply for compensation in respect of direct or sabstantial loss sustained by their through interference with their property and business. There were reasons in property and business. There were reasons in the correspondence which induced him to make no order as to costs.—Leave to appeal was refused.

DUNDEE ARCHITECT'S LIBEL ACTION.

—R.N. for Pursaer, in Cansa—J. H. Langlands v. J. Leng and Co., Ltd.—In the Second Division of the Scottish Court of Session, the Lord sion of the Scottish Court of Session, the Lord Justice-Clerk and Lords Johnston and Guthrie on Saturday disposed of a reclaiming note for James Hendry Langlands, architect, Cummont, Kingenne, near Dundee, in his action against John Leng and Co., Ltd., proprietors of the Dundee Advertiser, for £3,000 damages in respect of alleged slander. The pursuer, who is the architect under the Dundee School Board, complained of statements which americal in complained of statements which appeared in the Dunder Advertiser in connection with proceedings which took place at a meeting of Dundee School Board when the extension of of Dundee School Board when the extension of Harris Academy was under consideration. The defendants defined slander, and repudiated the detendants defined stander, and repudiated the interpretation put by the pursuer on their comments. Lord Anderson in the Outer House dismissed the action as irrelevant, with expenses. The Division allowed the pursuer to amend his record, and after this had been done, recalled the Lord Ordunary's interlecturer, and approved record, and after this had been done, recalled the Lord Ordinary's interlocutor, and approved of an issue for the trial of the action. Ne expenses were found due to or by either party. The Lord Justice-Clerk said that the Court were of opinion that there must be an issue, and that the terms of it should be as follows:—It being admitted that on or about the 7th day of October, 1914 the defenders printed and published in their newspaper, the Dunder Advertiser, an account of a meeting of the School Board of Dundee headed "School Board Plight," in terms of Schedule I, hereto annexed, and a relative article headed "Dundee School Board and its Architect," in terms of Schedule II, hereto annexed, and a relative article headed "Dundee School Board and its Architect," in terms of Schedule II, hereto annexed—whether said ac School Board and Is Archived whether said ac Schedule II, hereto annexed—whether said ac count and article, or part thereof, are of and count and article, pursuer, and falsely and count and article, or part thereof, are of and concerning the pursuer, and falsely and calumniously represent that the pursuer had in his position of architect to the said Board acted corruptly for his personal benefit, or make similar false and calumnious representations of and concerning the pursuer, to his loss, injury, and damage. Schedule I, contains the account of the meeting, and Schedule II, the article referred to. Counsel for the Pursuer—Mr. Watt. K.C. and Mr. Paton. Agents—Maxwell Gill, and Pringle, W.S. Counsel for the Defenders—Mr. Sundeman, K.C. and Mr. Lippe. Agents—Alex, Morison and Co., W.S.

GLASGOW BUILDING CONTRACT

Wednesday, and Thursday in a Lord Chancellor and Lord. Atking a Prinard Wienbury heard the appear the stish County Investment Company St. A Street, Glasgow, from a pudding of the Lord Division of the Court of Session affiness by the Lord Ordinary short Have a raction by the respondent, Elphine are Foundational Division of the Court of Session affiness higher. Divon Street, Glassow, to the paraction by the respondent, Elphine are Foundational of £653 as balance alleged the parameter of work in company of the parameter of contract for work in company of the the erection of four tenements in Government of Road, North Kelvinside, The appearance of the key was discrete in various respects, and the contract in various respects, and the contract in the appearance of the contract, and, if we while the was entitled, notwith-standing, to decree for the balance of the contract prine. Considerable discussion took place as to the difference between the laws of Seatland and England in regard to breaches of contract in such circumstances. Their Lordships announced at the close of legal arguments on Thursday that judgment would be reserved.

THE MEASUREMENT OF TIMBER CARGOES His Honour Judge Seated gave judgment on Wednesday in the action recognition.

CARGOES His Honour Judge 8 and gave judgment on Wednesday in the action strought at the Liverpool County Court, the naturn of at the Liverpool County Court, the neuring of which lasted three days, in which the low, for the steamer Erik, a Copenhagen urin claimed £194 from the Ship Cana Portland Cement Manufacturing Company, Ltd., of Ellesmere Port, balance of freight on a cargo of staves carried from Archangel to Ellesmere Port. His Honour found that the method of measuring the cargo adopted by the defendants was more accurate and reliable than defendants was more accurate and reliable thin that of the Customs Fund, who measured for the plaintiffs, and that the ship carried 260 standards as against the 419 set up by the plaintiffs.—Indigment was given for the de-

plaintiffs.—Indigment was given for the defendants, with costs.

THE VALUE: OF LINCOLNSHIRE LAND, Mr. John D. Wallis, E.S.I. an Official Referee under the Finance Act, 13c9-10, has given his decision in the appeal of "Austen" r. Commissioners of Infraid Revenue," which he heard at Lincoln on June 3, relative to the valuation of land at Swineshead, near Boston, for the purpose of estate duty. The appellant was Mr. Edward L. Tennant Austen, and the question for decision was the market value of a total area of 1,102 acres as at the death of the Rev. J. M. Austen on May 24, 1909. For the appellant it was stated that the land was sold for £35,500 on November 1, 1915, and the value of £40,970 placed on it by the Land Valuation was therefore excessive, being apparently influenced by the price of £41,15 real sol at the subsequent resule. Evidence was called on behalf of the appellant to show that there had been a considerable appreciation in the value of land in Lincolnshire since the Small Holdings Act came into operation, and the resule figure had been reached by virtue of the land being split up. Mr. Gerald Live, F.S.L. of 8, Oxford Street, Nottingham, superintending valuer of the Eastern Division, said the basis of his valuation was what a person in the open market would pay, nor what an ing valuer of the Eastern Division, said the basis of his valuation was what a person in the open market would pay, not what an expert would advise him to give. If Mr. Austen had had local advice in 1900 there was no reason why he should not have denied £47,000 then, and witness would be a calmet that £47,000 was the top price to deep he get. The Referee has fixed the value of £40,970, the appellant to the calmeter curred by the Commiss ners

Mr. D. Bell, surveyor to the Windesham Prban District Conneil, has had his salary in creased by £45 per annum.

Mr. Donald Reid, burgh survey r and san tary inspector of Wick has been a pointed burgh surveyor of Inverkenthuiz

The town-planning scheme of the terri-conneil of Dunfermine, which his later in proparation for three years, as now ready for presentation.

The town council of Middleton Level is solved at the last meeting that the diafr scheme for the town-planning of Alkringtor Estate, as now amended, be approved, and fe warded to the Local Government Board and to Messis Papiler and Allon for their information. Pepler and Allen for their information.

The corporation of Satton Coldfield formally of the meeting, and Schedule II, the article referred to, Counsel for the Pursuer—Mr. Watt, K.C. and Mr. Paton. Agents—Maxwell Gill, and Pringle, W.S. Counsel for the Defenders—Mr. Sondeman, K.C. and Mr. Lippe. Agents—Alex, Morison and Co., W.S.

GLASGOW BUILDING CONTRACT APPEAL.—In the House of Lords on Tuesday,

### Our Office Cable.

Tre annar, exhibition of drawings at the School of Architecture, Liverpool University, was opened on Wednesday last at Liberty Buildings in that city. The display is, as was to be expected, smaller in number than usual. but the standard of draughtmanship is high The principal exhibits are the competitive drawings for the travelling scholarship effected by the British School of Architecture at Rome and for the Sir William Lever proze. The School of Rome subject was a design for a "Palace of Justice," and that sent in by Gord in Hemm, of Heaton Chapel, near Stockport, arrests attention on account of its Stockport, arrests attention on account of its striking ground plan. As the scholarship has striking ground plan. As the scholarship has been suspended owing to the war, the designs in this section, which are all of high merit, will be put into another competition. Mr. Hemm's cubicle contains also a number of cathedral and abbey sketches, and a measured drawing of the Free Trade Hall at Mandagara. For the Lagrangian of the subject Manchester. For the Lever prize (the subject being a railway terminal hotel and station). Lime Street, Liverpool, was selected as an ideal site, and the drawings suggest a North-Western station extension on lines harmonious western station extension on times narmonious with St. George's Hall. Vincont Hall's design has been placed first, and that of A.B. B. Jopling second. A series of designs are shown for a national memorial to Lord. are shown for a national memorian to be a Roberts, by H. Gregory and others. The work of F. O. Lawrence and R. G. Dixon has special interest because they are the first two students to be admitted to the degree of "B. Arch." (Bachelor of Architecture), which supers des the former B.A., with honours in architecture. A young Belgian student Hemil Hofman, who has just diverted his attention from Gothic to Classic design, shows zond progress in his new line. Among his measured work is the Lyceum, Bold Street, Liverpool. He has joined in the general competition for a pump room with dome, a subject which, together with that of premises for a fine art dealer, has evoked much mentorious work. Other subjects for designs set in the school are those for a country residence, a golf club-house, and a cricket

A series of a dozen original pen-and-ink sketches by Mr. Arthur Comfort of various features of the Mid Fifteenth-Century parish teatures of the Mid Fitteenth-Century parish church of Halifax has been purchased by the Education. Committee of that horough for the permanent collection of local views in the Bank Field Museum, Halifax. There is a crude engraving of the south side of the church, says Dr. T. W. Hanson in the Halifax Chronicle, in Watson's History and a much later and wretchedly drawn steel engraving of the same view by Adamthwaite. About 1820. John Horner drew on stone an exterior and interior view, which drawings were usued hand-coloured. Shortly afterwards an unknown artist executed a lithowards an unknown artist executed a lithograph of the south exterior. In 1839 40, Wm. Moor published four views of various parts of the interior. Somewhat earlier was the drawing on copper by Thos. Taylor, which was reassued in 1876 in connection with Lev-Yorkshire Architectural and Topographical Secety. Albert Gilbert's painting, 1837, is is-th pear and incorrect. Two years ago F. O. Ellis, who has now enlisted, is-und a sketch in which the tower looms in the distance.

year the National Art Collections This year the National Art Collections Find has not been able to put forward any great effort, but it has steadily continued its valuable activities. The beautiful ironwork 20 Me for the tomb of Margaret Countess of Richmond and Derby, in the south able of Henry the Seventh's Charel, which was removed by Wyatt June 1822, has alterations in 1822, has three, which was removed by the large larg

other gifts which the Fund has presented to

An interesting discovery has been made during the rebuilding of Wargrave Church, which was set on fire by suffragettes in 1914 In rest ring the tower it was found that the present civing of red brick is a covering or asing of the original Norman tower, which is a very fine example of Norman masonry, and, in the opinion of experts, one of the best discovered up to the present time.

Illere is no record of the date of the casing of the tower, or by whom the work was done, but the treatment suggests that it was in the reign of either Henry VII, or Henry There has also been discovered a number of interesting vaults under the chancel, of which no mention is made in the church records.

The Cathedral of Arras, wilfully destroyed by fire by the Germans on Wednesday last, was built on the site of the church of the Abbey of St. Vaast, or Vedast, in the second half of the eighteenth century, and was a heavy structure of no architectural merit. The reconstruction was begun in 1755 and was brought to a stop by the Revolution of 1789. The works, resumed in 1810, were completed in June, 1855. It was a pseudo-classical crucaform editice with a nave of half-a-dozen bays, a choir of three bays, both with aisles, and semi-circular apse, out of which six chapels open, and transepts also each of three bays. The nave, choir and transepts, which had barrel vaults, were separated from their aisles by colonnades of Corinthian columns, and at the west end was a gallery housing a large organ. In the west aisle of the north transept was a mag which various coloured marbles were emthe north transept was a large baptistery, in ployed with fairly good effect. Till the be-ginning of the war the cathedral contained gining of the war the cathedral contained several good paintings and monuments and two Early Flemish triptyches, all formerly in the Abbey of St. Vaast. A small view of the interior of the cathedral nave, looking East, appeared in our issue of January 13, 1911, p. 61. The old Gothic cathedral, one of the finest in the north of France, was a much larger edifice, wantonly destroyed in the eighteenth century on the allegation being made that it was in an unstable condition.

How to find sufficient housing accommodation for war workers is becoming an increasingly difficult problem in Sheffield. Numerous letters have been received by the corporation authorities from both workers and employers asking that the problem should be taken thoroughly in hand. Seventy per cent. of the applicants for houses on the corporation's model dwellings estate at High Wincobank Estate certify themselves as being armament workers. The town clerk has been in-structed to bring these facts to the notice of the Local Government Board and the Minister of Munitions, together with statistics as to the overcrowding of existing houses, with an intimation that, in the opinion of the Estates Committee, an overwhelming case has been made out for the erection by the corporation at the earliest possible date of an even larger number of working-class dwellings than is comprised in a scheme now before the Local Government Board; and that as the existing shortage has been intensified by the importation of a large number of workers on munitions of war, and the demolition of houses in connection with extensions of works, it is desirable that the requisite consent of the Government departments to the necessary loan be given at once. The town clerk has also been instructed to inform the Local Government Board that unless steps can be taken to remedy the shortage the corporation will find it difficult to carry out to the full extent the duties imposed upon them with regard to the closing and demolition of in-

ment made to the local authority by manufacturers, and the extent to which trade liquors interfere with the purification of sewage, are among the points whereupon Mr. Brown, whose address is the Town Hall, Southall, Middlesex, seeks information, v.l. ch, when tabulated and edited, will evidently be of great value to municipal engineers generally.

The Executive Council of the United Operative Plumbers Association of Great Britain and Ireland, at a special meeting held at Newcastle-on-Tyne, expressed approvat of the action of the Plumbers' Company in appealing to the registered plumbers of United Kingdom to place their services, so far as practicable, at the disposal of the Government for the execution of work connected with the supply of munitions of war, or other purposes for which their work might be required by the State, for the duration of the war. The Executive Council joined the Company in the appeal, and decided to extend it to all members of the association.

The following awards have been made in the Faculty of Engineering at University College. Gower Street, W.C.:—Archibald P. Head Medal and Prize, B. C. Drummond; Studentship in Heating and Ventilating Engineering, G. F. Mitchell; Engineering Diplomas, P. W. Baker (Mechanical), E. E. Barnard (Civil and Municipal), J. R. D. Bushell (Civil and Municipal), P. L. Capper (Civil and Municipal), P. L. Capper (Civil and Municipal), B. C. Drummond (Mechanical—with distinction), H. N. Charles (Mechanical), T. C. Chua (Civil and Municipal), B. C. Drummond (Mechanical—with distinction), H. Foad (Civil and Municipal), G. K. Pillai (Civil and Municipal), and S. L. Wong (Civil and Municipal). The following awards have been made in Municipal).

"Plain and Reinforced Concrete Arches" (London: Chapman and Hall, Ltd.) is an American translation, by Professor D. B. Steinman, of Idaho University, of a German work by Professor J. Melan, which is probably well known to many readers, but of which, so far as we know, no English render-ing has before appeared. The principle of the Melan arch is fully explained, and all data has been converted from metric to English

Part IV. of Volume VII. of "The Trans-Part IV. of Volume VII. of "The Transactions of St. Paul's Ecclesiological Society" has just been published (by Harrison and Sons, 45, Pall Mall), price 5s. Two City churches in the neighbourhood of London Bridge, both rebuilt by Wren, those of St. Magnus the Martyr and St. Mary-at-Hill, are described by Mr. Philip Narman II D. described by Mr. Philip Norman, LL.D., V.P.S.A: Mr. H. P. K. Skipton contributes an interesting paper on "The Pilgrims' Way and the 'Pilgrim's Progress,'" in which he seeks to show that the scenery of the worldfamous allegory was derived, not from the low hills of Bedfordshire, but from the bolder landscapes of Surrey. Guildford as the City of Destruction, St. Martha's Hill as the Hill of Difficulty, the iron furnaces of the Weald as the Valley of Humiliation, Dorking as Vanity Fair, and the Leith Hill range as the Delectable Mountains—these are among the identifications supported by the theory that the immortal tinker and dreamer preached in the villages about Guildford before his second imprisonment. Mr. Geoffrey Webb descants on "The Relation of Painted Glass to Other Colour Decoration in Churches"; the Rev. E. S. Dewick, M.A., F.I.A., writes an illustrated article on a Premonstratensian abbot's service book of the beginning of the

During the months of April, May, and June the Road Board indicated additional June the Road Board indicated additional advances to highway authorities, amounting in the aggregate to £109,903, of which £107,007 was by way of grant and £2,896 by way of loan. The advances made and indicated up to June 50, less indications cancelled, amount to £6,132,279. Of this total £4,685,755 is by way of grant and £1,446,526 by way of loan. The formal grants completed, with the approval of the Treasury, during the last quarter, amounting to £125,847, were applied as follows: Road crust improvements, £125,045; road widenings and improvement of curves and corners, £419; reconstruction and improvement of bridges, £1,533; new roads and bridges, £1,050.

The annual report for 1914 of the Medical Officer of Health to the Borough of St. Marylebone, Dr. Charles Porter, barrister-at-law, has just been published. The population of the borough continues to diminish, owing to migration, demolition of houses, and the erection of business premises in their stead, and is now estimated at 112.892, against 117,844 revealed by the census of 1911. The birth-rate remains at 18.7, exactly as in 1913, and the death rate is also unaltered, being 14.9 per thousand. Efforts are being made by the borough council and a local health society for the prevention of infantile mortality. House to house inspections were carried out systematically, and as a result of friendly discussions a large number of reforms were effected by the owners. In six demolition orders were obtained. In six cases appeals against closing orders were heard by the Local Government Board. One of these, relating to flats in Dorset Buildings. Street Mews, was dismissed; in the other a decision had not been given when the year The number of overcrowded rooms and of underground dwellings were considerably fewer than in previous years, results of the active work done in the past. The report, of 96 foolscap pages, testifies to the efficient work done in the Sanitary Department of the borough by Dr. Porter and his colleagues.

Dissatisfaction has been expressed recently in Australia with the progress of the important railway under construction from Kal-goorlie, in Western Australia, to Port Augusta, in South Australia, which is designed ultimately to form part of a great east-to-west transcontinental line. The Commonwealth Minister for Home Affairs has now issued a report on the work, supplied by the engineer-in-chief. The construction of the line, which will be over 1,000 miles in length, has been proceeding from both ends. From the West Australian end the rails have been laid for 238 miles, the route has been permanently located for 260 miles, and a preliminary survey has been carried right up to the South Australian border. From the South Australian end rails have been laid for 245 miles, and the route has been permanently located for 428 miles. In each State telegraph lines have been erected for about miles. Some idea of the magnitude of the work may be gathered from the fact that at the end of April last the expenditure on the line amounted to well over three millions sterling. In South Australia the construction of the earthworks is involving exceptional difficulties, and a certain amount of delay has been occasioned by the decision to ballast the line throughout its entire Rock-crushing machinery for this purpose has now been erected in both States. Rails are being laid at the rate of a mile a day, and it is estimated that the line will be completed towards the end of next year.

#### ---MEETINGS FOR THE ENSUING WEEK.

Wednesday (To-day).—Camera Club. Opening of Exhibition of Sketches by Members, (Closes on August 21.) 17, John Street, Adelphi, W.C. 11 a.m. to

Royal Sanitary Institute. Provincial
Sessional Meeting at Veovil. Discussions on "Water Supplies to Rural
and Small Urban Areas," to be
opened by Dr. W. G. Savage, and
on "Prevention of Minor Infectious
Diseases," to be opened by Dr. A. E.
Remmett Weaver. 11.15 a.m.
Wednesday (July 21).—Builders' Benevolent Institution. Thirty-eighth Annual Meeting.
Koh-i-noor Honse, Kingsway, W.C.
4 p.m.

A military hospital is to be erected at Huddersfield to accommodate 500 wounded soldiers. The cost, about £15,000, will be defrayed by voluntary subscriptions. The town council agreed on Friday to give the site, which will be on their estate at Royds Wood.

The Essex County Council have adopted Plans for additions to the sanatorium at Black Notley, raidway between Witham and Braintree, at an estimated cost of £4,486 9s. 11d. Tenders will be invited for the work as soon as the Local Government Board have approved the scheme.

#### CHIPS.

Mr. T. Richards, deputy surveyor, has been appointed surveyor to the Caerphilly Urban District Council.

At the last meeting of the Dublin Port and Docks Board it was stated that the corporation were about to spend £24,000 on repairing the north and south quays

The Grange-over-Sands Urban District Council at their last meeting increased the salary of their surveyor (Mr. T. Hundlestone, C.E.) from £250 to £275 per annum.

At the last meeting of Moffat Town Council, Mr. P. Grant M'Gregor, Bishophriggs, Glas gow, was unanimously appointed burgh sur veyor and samtary inspector.

The old State Hall at Albany, New York State, is about to be remodelled to serve as a Court of Appeals, from plans by Mr. Pilcher, of Capitol Buildings, Albany, the State architect.

Mr. H. B. T. Wakelam, son of Mr. H. T. Mr. H. B. T. Wakelam, son of Mr. H. F. Wakelam, county surveyor of Middlesex and president of the Institute of Municipal and County Engineers, is gazetted as Second Lieutenant in the Royal Regiment of Artillery, R.H., and R.F.A.

The death is announced of Mr. Francis Wiswally, J.P., A.M.I.C.E., of Runcorn, a member of the urban district council and manager of the Manchester Ship Canal Company at Runcorn (Bridgewater Department). He was seventy two years of age.

The new county council schools at Newbiggin the new county council schools at Newbiggin have been opened. They provide accommodation for 738 scholars. The accepted tender was for £11,551. Mr. Martin Martinson was the architect, and the contractor, Mr. Stanley Miller, of Newcastle-on-Tyne.

The Doncaster Corporation Bill has received the Royal assent. The measure provides for municipal buildings at a cost of £30,000; an isolation hospital at £35,000; street improvements at £50,000; and the extension of the gasworks and mains at £65,000.

Mr. Thos. P. Collinge, borough engineer and surveyor of Mansfield, has been the reci-pient of a solid silver teapet from the officials on the occasion of his leaving to take up his new appointment as borough surveyor and waterworks engineer to the corporation of Rotherham.

The Streets and Plans Committee of Middlesbrough Corporation have approved generally the alternative scheme of the borough engineer, Mr. S. E. Burgess, for laying out the Saltwells Estate, and have appointed a committee to confer with the landowners on the subject.

The following officers in the Archivects' Department, London County Council, have recently been killed in action: Lance, Corpl. A. E. W. Chappell, Queen's 24th London Regiment, T.F.: Lance-Corpl. J. Carey, a piper in the London Scottish; and F. H. Stanton, 12th Battalion, London Regiment, the Rangers.

The Merthyr Corporation Housing Committee have decided to invite tenders for erecting 100 houses at Gellifaelog, so that the cost may be considered when formal application is made to the Local Government Board for sanction to a loan. The estimate of the borough architect (Mr. Thackeray) is £220 per house and a total cost of £40,000.

The new schools presented to the parish of St. Anne, Stanley, Liverpool, by Mr. Thomas Fenwick Harrison, were formally opened by Fenwick Harrison, were formally opened by the donor in the presence of a very large gathering on Saturday. The buildings accom-modate 900 children, divided into three depart-ments of 300 each—boys, girls, and infants. The class-rooms each hold fifty children. A roof playground is provided. The architects were Messrs. G. Bradbury and Sons, of Cook Stroot, University Street, Liverpool.

The estimates on maintenance account for the current year of the London Education Committee were reduced at the last meeting by a the current year of the London Education Committee were reduced at the last meeting by a further sum of £90,000, bringing the total reduction on last year's estimate to £400,000. The largest item in this further reduction was £65,000 for the painting and cleaning of schools, and there was also a reduction in the amount for window cleaning by contract. During a discussion on the proposed reductions, Mr. Warburg ridiculed the idea that educational efficiency was being affected if painting was deferred. As for window-cleaning, the contractors had difficulty in finding the men, and it was patriotic to help to prevent the drain on the men of the nation. The reduction was merely in the number of cleanings. The committee's proposals were adopted.

The London County Counce German Bill was read a third time in the Hos Commons on Thursday.

New works estimated to act out had an are to be erected in Derby Road Hard-Messrs A and R Morley become nor

The urban district coincil of Good secured the sanction of the Local Governors Board to a loan of £5.74 for warned over 31.59

The Road Board have said to be a case of £3,407 towards the Devon County Councils proposed new road schemes the total case mated cost of which is £7,939.

A new social club has been formally opened at Rhymney Mr W. R. Jackson of Rhynney, was the architect, and Messrs. H. Davies and Co., of Bargoed, were the contractors. The cost was £1.400

The Northamptonshire County Council on Thursday, rejected, by thirty votes to thirteen-the recommendation of the education commit-tee to ruise a form of £7.5c. for the crection of a boot and shoe institute.

Mr. A. O. Harpur, surveyor to the Caephilly Urban District Conneil, has resigned by appointment on account of failing health, and Mr. T. H. Richards, deputy surveyor, has been appointed his success or

At Southampton yesterday Tuesday! Mr. A. W. Brightmore held a Local Government Board inquiry as to an application from the Corporation for sanction to borrow £14,600 for a water tower to be built near the Conmon.

for the weights and measures New offices department of the Cardiff Corporation erected in Womanby Street were opened last week. The building has been erected at a cost of 1,970 from the designs of the city engineer. Mr. W. Harpur.

Chelmsford Town Council has received Chemistord Town Council has received the sanction of the Local Government Board to the horrowing of £1.500 for pumping plant at Admirals Park waterworks, and £341 excess expenditure in connection with wood blockpaying in three streets.

On Sunday last the Roman Catholic Arch-bishop of Liverpool solemniy open dithe new Church of St. Paul, West Derby. This church has been built and completely furmished out of a sum of £10,000 bequeathed by the late M: William Leeming for that purpose. The arch-tecture is Gothic, from the designs of Messis Pugin and Pingin, and the building is of red sandstone. The altars are of alabaster, with marble panels, and the spacious nave and aislys will afford ample accommodation for the Catholic psipulation of the neighbourhood. On Sunday last the Roman Cathole Arch

The final accounts in connection with the erection of the Usher Hall, which was a gift to the city of Edinburgh, have been submitted to the city of Edinburgh, have been submitted to a corporation committee. The cost of the site, building, and furnishims amounts the £144,984. The estimated money in hand from capital and interest is £154,486. Thus there is an excess of expendature of about £10,490. The Usher Hall is built from plans by Mr. Howard H. Thomson, of Leicester, selected is competition, and illustrated in our issues of July 29, 1910; August 4, 1911, and March 191914.

A Local Government Board inquiry will be held at the City Hall, Dublin, to day (Wednesday) into the application of the corporation for sanction to loans of (1) £39,350, 2-£22,075, and (3) £6,000, for the purpose of erecting working-class dwellings in 1 Crabbellane and (2) Boyne Street, and 5' for widening and improving Lower Liffey Street Another inquiry will be held in the same building on Friday next into the application of the corporation for sanction to a loan of £12,940 for the purpose of creating working class dwellings on the Mi Cuffrey estate and St. James's Walk, Reaie

Mr. Cuthbert Redham Morris, of Gwyer House, North Curry, near Tauntor, whose death occurred there on Thesday night in last week, is believed to have been the oldest auctioneer in the West of England, for he commend business on his own manual tay has memoral business on his own arount no less than sixty three years ago in 1752, when he was barely twenty-one years of age. In course was barely twenty-one years of age. In course of time he took into partnership his two sons Messrs, C W and R. S Morris, and his son-in-law, Mr. J. G. Peard, who remained connected with the firm. Deceased was president of the Western Committees' Tenant Right Valuers' Association in 1903, while for thirteen years he was a member of the Somerset Drainage Commission.

#### TO ARMS!

#### 4th Battalion "Architects" Central London Regiment Volunteers.

Ref. 6 or getty noded to the Rig. 6.
Territorials de Vointeess Intending rotinis should apply to Battalion Headquarters, where they will be a fyised as to the branch of the Service for which they are best suited.

which they are "est suited.

ORDERS FOR THE WITK BY LITETENANTS COLONIL A W WARDIN

AS MINITION CAMP

All non-crossed Munition Sections, a to Softmonsive near help themselves ready to proceed to Camp this weekend. Members a finally required in commention with this work wall be notified by their Section Commanders.

nection with this work will be notified by their Section Commanders.

ATTENDANCE AT CAMP

The general trainings (tab Corps, including Bradian Bridding), 8 hisdoof Arms, etc., etc., will be continued in Camp. Full attendances are, therefore, esocitial.

Members, other than those detailed for Munition, West, who desire to sleep in Camp for week ends, show a rectified per solution the first post on Thursday morning of each week. These men should report themselves to the O dealy Otheor on arrival in Camp.

Hours of Parade for men not sleeping in Camp Saturday is pin, and Sunday 1015 a m., at Camp, in c. the case.

A town names are still repurred of members able to sleep in Camp during the week, not necessarily for the whide period. Applicants should state for what period they are available.

501 POSTAL ADDRESS AT CAMP

4th Batth of LRV Camp, Snumer Gardens Boad, East Melessy.

502 SUMMER CAMP July 21 to August 16.

Ominificant work, the Summer Camp will be held at Thames Deton instead of Walmer, as netwoodly amented to the Gorps with continued Residency training of the Gorps with continued it is hoped that all members will attend this cannot for at least on week, and rames should be soft at one to the Admitian's Other. The cost will not even do be per week.

155 BATTAHON COMPETITIONS.

The teams for the econopetricine will be selected in Camp.

564 SOCIAL Mill FING.

The teams for the e-competitions will be selected in Camp.

3.4 SOCIAL MLG FING

Mendors are reminded of the Social Mosting this evening. We me slav, at the Gallery of the RTRA. No. 9. Conduit Street, W., when Miss Lena Ashwell has kindly consented to address the Corps and relate some of her experiences with the troops in France. Members of the Corps shall attend in uniterim.

uniform.

785 COMMITTEE MELLING
The Mediag of the first and Multary Committees,
summoned for We be day, 14 h just, at Head
entrers, 745 p.m. has been postponed to Wedne-lay, 21st just

lay, 21st inst.

2. ATTENDANCE, AT DRILLS AND PARAIDS. In accordance with the resolution passed at the recent General Meeting, all members must attend at least one match every wick and alternative saturdays or Surdays at Lame for general training.

3.57 - DRILLS AND PARADES.

All drills and parades will be held as usual.

5.5 - RECRUTES

A number of refuts are required to replace these entry poined the log dar and Textorial Atmission who have established commissions. Application health be addressed to the Adjutants Office.

nouri be addressed to the Adjutants Office Size RECRETT DRILLS

A. Coy, Dear Vird, 545 to 745 and 645 to 845, Wednesdays and Fridays.

B. Coy: Dulwich Calege Mondays Size In Thursdays 6 to 8 pm.

Coy. Now being formed Drill ground and minature range, Central Electric Supply Company's to nearing Station, Lodge Road, St. John's Wood, N.W.

D Test Mercers' 8 hood. Theolays and Thursdays, e. 45 fem.

Access (HOOL OF ARMS). As usual at MP bank School, Erasmus Street, We marster, or The Slay, Cities from

All TRANSPORT SECTION

Names are required of a few members to be specially stained in Transport Work. Application should be able to the Adjutant. Other parts

should be used to the Verticut College CORRESPONDENCE.

Encounced forms at new members and all correspondences, had referring to recuting for the Arma of to linear secondarial must be addressed to the Adjutant, by tendent Street, W.

Corresponds to regarding recoming for the Arma on payment of size uption and a count should be addressed to the Paymenter at Battalion Head courses.

BATTALION HEADQUARTERS. BATTALION DIAMON ARTHUR. S.W. BY Order, L. R. Of THERE, Administration

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It is represented in the man for the widening of the Buckgezate in Glasgow involves the re-riousit of the Bridgezate United Free Church, and this forces of which is a stone projet of the cost and

#### LATEST PRICES.

N.B.-All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

#### \_\_\_\_ TIMBER.

Owing to stoppage of supplies all prices have advanced considerably,

#### TRON.

Per ton.

		1.6	51 (t)	on.		T.G	r to	111
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6ft. to 8ft. long, ine gange Best ditto  Cast-fron Columns Cast-fron Stanchions Rolled-fron Fenering Wir Rolled-Steel Fenering Wir Ga Cast-fron Sash Weights Cut Floor Brads Corrugated fron, 24 gauge Galvanised Wire Strand	No. I lusive £! 1	18 to Per 3 ( 3 le 19 £6 8 7 8 6 10	0 (0 0 (0 17 17 5	n. 6	to	Pe 13 14 Pe £8 8 7	r to 10 0 r to 10 10 10	n C 0
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Iron— Cold Blast, Lillieshall Het B ast. ditto		80: 87:	s. 0	d.	ton to	127	s. 6	d.
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#### OTHER METALS.

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	,, ,, ,, Country	*35 10	0 ,,	_	
	Lead Pipe, tinned inside and				
	ontside	*37 0	0 .,	_	
	Composition Gas-Pipe, Town	*38 0	0 ,,	_	
ı	Composition Gas-Pipe, Town	*35 10	0 ,,	_	
	Country	*36 10	0 .,	-	
	Lead Soil-pipe (up to 4\din.) Town	*34 0	0 ,,		
ĺ	., ., Country Over 43 in. £1 per to	35 0	0 ,,	-	
ľ	Over 45 in. £1 per to	n extra		010.10	
	Lead, Common Brands	17 17		£'8 12	6
	Lead Shot, in 28lb, bags	24 15	0	107 0	^
	Copper sheets, sheathing & rods	102 0	0 ,,	103 0	0
	Copper, British Cake and Ingot	90 10		91 10	0
	Tin, English Ingots	162 0		163 0 164 0	0
	Pig Lead, in lewt. Pigs, Town	163 0 23 0	0	24 0	0
	Sheet Lead, Town	-32 0		2+ 0	U
	Country	*33 0	0 ,,		
	Genuine White Lead	*37 10	0 ;;	_	
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	Sheet Zinc	115 0	0		
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#### BRICKS

(All prices net.)

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Picked Stocks for				delive	
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GLAZI	ED B	RIC	KS.		
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BARD GLAZES (PER 1,000).

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#### MOULDED BRICKS.

Stretchers and Headers—	
8d each 8d. each 8d. each 8d. each	8d, each
Internal and External Angles—	
12 each 12 each 12 each 12 each	1/2 each
Sill Bullnose, Stretchers, and Headers—	
5d. each 4d. each 6d each 6d. each	5d, each
Majolica or Soft Glazed Stretchers and	Per 1,000
Headers	£22 17 6
" Quoins and Bullnose	27 17 6
Compass bricks, circular and arch bricks of single radius £6 per 1,000 over above list	Not
Compass bricks, circular and arch bricks of single radius £6 per 1,000 over above list for their respective kinds and colours	Not exceed ing 9 in
Compass bricks, circular and arch bricks of single radius £6 per 1,000 over above list for their respective kinds and colours Camber arch bricks, any kind or colour,	Not exceed ing 9 in by 45 in
Compass bricks, circular and arch bricks of single radius £6 per 1,000 over above list for their respective kinds and colours	Not exceed ing 9 in by 45 in
Compass bricks, circular and arch bricks of single radius £6 per 1,000 over above list for their respective kinds and colours Camber arch bricks, any kind or colour,	Not exceed ing 9 in by 4½ in hy 2½ in

* These prices are carriag	
to London Stations.	s. d.
Thames Sand	7 6 per yard, delivered.
Pit Sand	
Thames Ballast	6 0 ,, s. d. s. d. Perton.
Best Portland Cement	36 0 to 41 0 delivered,
Ground Blue Lias Lime	21 0 per ton delivered.
Exclusive of ch:	rge for sacks.

way station.

#### STONE.\*

П				
	Red Mansfield, in blocks per foot cube	£0	2	4
	Darley Dale, ditto	0		3
	Red Corsehill, duto	0		2
	Closeburn Red Freestone, ditto	0	2	0
	Ancaster, ditto			10
	Greenshill, ditto ,,			10
	Beer, ditto	0	1	6
	Chilmark, ditto (in truck at			
	Nine Elms)			103
	Hard York, ditto	0	2	0
	Do, do. 6 in, sawn both sides,			
	landings, random sizes per foot sup.	0	2	8
	Do. do. 3 m. slab sawn two			
	sides, random sizes,	0	1	3

All F.O.R. Landon.

# THE BUILDING NEWS

## AND ENGINEERING JOURNAL.

	$\mathbf{Effin}$	$_{ m gham}$	$\mathbf{H}$	ous	e
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	smith, W. View and plans Mr. W	I. It
	F.L. I.B.A. R.B.A. MITCE, Super.	n's nd r
	Architect to the London County Con	11:
ì	Five houses in Prognal Lane and Greefackay	Learning

Five houses in Prognal Latte and Greefia way toarden. Hampstead, N.W. Views and points. Mr. Cyrs. A. Firrey, Architect.
Building News Testgring Club. A Garden Pays, on Views, plans, sections and clevation Selected designs, First design by September Morn, Second design by Walbroke Detail of Octagon to Lower, Church of St. Microwy Whitechapel, Meerrs, John Medland and H. Hardwicke Langston, Joint Architects.

#### SHILLING PLANS FOR RURAL COTTAGES.

College
Architectural Association Prize Works Exhibition
Prize Distribution at the A.A. School of Architecture
Building News Designing Club.—A Garden Pavillon
The National Prize

Obituary
Artists' War Relief Exhibition

We pointed out on page 430 of our last volume, and indicated there several previous occasions on which we had already shown how failure had followed the attempts of local authorities to build rural cottages from stereotyped plans, giving out contracts for such—especially in Ireland—to builders evidently unacquainted with local needs, and without proper architectural supervision. We are glad to see the Society of Architects have taken this matter up in connection with a report of the Advisory Committee of the Board of Agriculture and Fisheries, which we briefly noticed on page 286 of our issue of March 5 last. That Advisory Committee consists of Mr. Christopher Turnor (the chairman), and Mr. Coril Harmanyorth, Mr. Paymand Mr. Cecil Harmsworth, Mr. Raymond Unwin, Mr. Lawrence Weaver, and Mr. C. E. Varndell. Working drawings of the designs given are to be had at a shilling or eighteenpence a sheet, and the specifications in each case at one penny. Twenty-three types of cottages are shown.

As the Society of Architects have pointed out in the remonstrance which the secretary has addressed to Lord Lucas, the President of the Board of Agriculture, the report contains a warning against the indiscriminate use of standardised designs, points out that an important factor in economy is competent supervision during erection, and states that in many cases "consultation with the builder" will enable economy to be effected without sacrifice. There is no reference in the report to the desirability of retaining an architect's services, and the natural inference is that such services are unnecessary and can be dispensed with.

Would it not, ask the Society of Architects, have been in accordance with proper and safe practice, and to the advantage of the public and in the best interests of the Board of Agriculture and Fisheries, if this report, most useful in itself, had been accompanied by a definite reference to the necessity of retaining an architect's services in order that the object which the Advisory Committee have in view may be fully attained? Local authorities, public bodies, and private building owners are already too prone to endeavour eliminate the architect whenever possible, and one result of the publication of the report will be to accentuate this tendency and to make it possible that the said plans and specifications may be so used that the object of the Advisory Committee will be defeated.

to us to evade altogether the point of the This is the Society's remonstrance. reply:

27th May, 1915. To the President of the Board of Agriculture and Fisheries.

My Lord,—The substance of the Society of Architects' objection to the report of the Advisory Committee on Rural Cottages seems to be contained in the following paragraph of their letter:—

"There is no reference in the report to the desirability of retaining an architect's services, and the natural inference is that such services are unnecessary and can be dispensed with."

are unnecessary and can be dispensed with."

Considering that the sample specification in the report requires the whole of the works to be varied out "under the direction and to the satisfaction of the architect or employer's agent," thus assuming the services of a skilled supervisor, the committee hardly think that the inference drawn is derived from the report.

The committee would further draw attention to pars. 4 and 5, which lay stress on the need for the exercise of care and taste and for adapting the type of designs to the local materials and the building into harmony with the surroundings; to par, 19, which emphasises the need for careful planning of the cottages; and to par, 31, which speaks of the limportance of a careful lay-ont plan with a view to prevent the spoiling of our villages and hamlets by the building of incongruous houses in unsuitable positions.

portance of a careful lay-out plan with a view to prevent the spoiling of our villages and hamlets by the building of incongruous houses in unsuitable positions.

They do not think these paragraphs suggest that the committee wished to checurage the dispensing with the services of a skilled advisor.

The view which is strongly expressed in the letter from the Society of Architects, that the report may have the effect of causing less cottages to be designed by architects, is not shared by the committee. Only a very small proportion of the cottages now built are designed or supervised by any professional expert. The committee helieve that this is because so few people realise how important are the many questions involved in cottage design, and how difficult it is to find a satisfactory solution within the available resources; and they anticipate that their report, by drawing attention to all these matters and showing that cottage design needs careful study if it is to be well done, will have the effect of inducing far more owners and authorities to take skilled advice than to dispense with it.

With reference to the suggestion that there should be in the report a recommendation to employ an architect, the committee, when they considered the point, were met with the difficulty that other professions claim that the planning of cottages comes within their duties. Both surveyors and estate agents carry out this work, and many of them have made a special study of it. Indeed, only a limited number of architects have given as much attention to this class of work as have many members of the other professions mentioned. In these circumstances, while the committee sympathises with the view that cottages should be designed in all cases by those fully qualified to do the work, they do not feel that it is their function to determine that none but architects are so qualified, in face of the claims and practice of the other professions mentioned. The committee have endeavoured to make clear the importance which they attach to go

The Council of the Society of Architects say in their rejoinder thereto that their observations on the report were made in the interests of architects, and not on behalf of the members of other professions or letter of the Society of Architects over to the Advisory Committee for explanation, and Mr. Christopher Turnor's reply has been forwarded to the Society. It seems to nave turned the mail of the members of other professions or intelligent comprehension than it has received so far by the Board of Agriculture's Advisory Committee if Lord Lucas's reply fairly gauges that committee's capacity!

carried out under the direction and to the satisfaction of the architect or employer's agent is beside the mark, and such reference is lessened in value by the alternative mention of the employer's agent, whom it would be unsafe to assume in every case would be skilled in the planning and designing of cottages. It is added that the chairman of the Advisory Committee admits that only a very small proportion of cottages are built or superintended by any professional expert, and the Council deprecates the alleged suggestion that it is the function of the Advisory Committee tode termine that only architects are qualified to design cottages in face of the claims and practice of other professions to do similar work.

What was suggested by the Society of Architects was that it is desirable that an architect's services should be retained, and not that members of other professions experienced in that particular class of work shall be prevented from doing it if the building owner prefers to consult them. The fact remains that the Advisory Committee in its report does not specifically express the view that the building owner should retain skilled professional advice of any kind. Certainly it refers to the desirability of "consulting a builder," but that appears to be in connection with securing economy by way of supervision; and, surely, the Advisory Committee hardly wishes to convey the impression that a builder is necessarily a skilled professional adviser on questions of planning and design? The chairman of the Advisory Committee, in the concluding paragraph of his letter, confirms the Conneil's views that the issue of the plans may lead to their use without skilled professional advice. and the suggestion that no architect would have been employed had these particular plans not be n available seems to us an untenable one. The main points raised by the Council were: First, that the Advisory Committee had not suggested the desirability of retaining an architect's services in carrying out its recommenda-tions; and, secondly, that the precedent set by the Board of Agriculture and Fisheries in this matter was unfortunate from a professional, that is to say, an architectural, point of view. Most cortainly, the Council's observations on the report still hold good, and in-justice has been done to the archi-tectural profession by the publica-tion of the report in its pre-ont form by a Government Department. That perhaps is a small matter! But the housing of the rural workers of the nation deserves more

#### SKETCHES AT THE CAMERA CLUB.

The committee of the Camera Club may be congratulated upon the sneess of their bold experiment in inviting a display of sketches by members. Each exhibitor was restricted to half a dozen frames, and the committee have evidently made a careful selection from the pictures submitted. The outcome justifies the expectation that many of our leading experts with the camera have attained their repute as a result of being able to compose a good picture, and have an eye for colour harmony, and no little technical skill in draughtsmanship. A good, if limited and somewhat unequal output of work, chiefly in water-colour, is on view on the club-room walls at 17, John Street, Adelphi, The best work of those sent in by W.C. The best work of those sent in by Mr. Marcus Adams is "A Street in Jerusalem." Mr. H. J. A. Bowden, now a captain on active service, sends a clever rendering of "Le Quai Vert, Bruges he has chosen the picturesque aspect looking along the canal westwards, with the steep Horse Bridge in the foreground, and to the right, peering above the rearward walls of the Palais de Justice and the Hotel de Ville, is the crown of the Belfry Tower. Another excellent sketch from the same hand shows "The Sand Dunes near from the marsh behind. Of Ostend Captain Bowden's three sketches in the village of Witley, near Haslemore, that of the old vicarage and adjoining cottages and the twelfth century church with its central oak-shingled spire, is the most attractive. Mr. Charles H. L. Emanuel contributes some impressionist views of the Cornish "St. Ives" and of "Pilchard Boats" in the bay, and also two works in silver reponsee, of which the better is the tier of superposed houses at "Montreuil." A penchant for effects of evening light and rain reflections is evident in the exhibits of Mr. E. T. Holding; in No. 21, " The Valley of the Teign, South Devon," the space given to the sky, for the display of enmuli clouds, and in order to convey the impression of a wide expanse of moorland landscape, is disproportionate; and the same excess in sky scope is visible in his Waxham, sky scope is Norfolk. Mr. F. J. Mortimer, whose name we associate with fine photographs of rolling billows and ships scudding under clese-recfed canvas, shows some colour schemes for magazine covers and programmes, and drawings in black and white of a French type for comic papers. Mr. Donald Macalister, now a Lieutenant the 19th Battery, Royal Garrison Artillery, has three exhibits, the best being a sketch in greys, browns, and greens of a formal old-world garden at Chideock Manor. Dorset, the foreground being prowided by a fountain basin, having in the centre a large stone bowl supported by three herons. The hon, secretary of the London Salon of Photography, Mr. Berram Park, is represented by half a dozen boldly executed panels in oil colour from his sketch-box. Perhaps the most attractive work in the exhibition is that in black and white sent in by Mr. C. H. ment at the Regent Street Polytechnic, who proves himself an architectural draughtsman of considerable ability. No. 38. "Caudebee en Caux." depicts the well-known Flambovant pieced Hewith head of the Photographic Departmasonry of the church spire rising over the houses of the main street. Next to it is a sketch in the market place at Wells Somerset, looking over the fountain towards the two Mediæval gateways in the close, with the central and south-western towers of the Cathedral ris-ing above the roofs of the old shops and of Heaven," and the full length of the

houses between. Another careful drawing is a view from the north transept into the a view from the north transept into the massive Norman nave of the Church of St. Cross, Winchester; "near by is one of the delicate thirteenth century pillars against a broken pier in the south transept at "Netley Abbey," in fine contrast to the bulky circular shaft and scalloped capital of a Late Norman pier at "St. Bartholomew's, Smithfield." Mr. Alex-Bartholomew's, Smithfield." Mr. Alexander Keighley shows some Italian landscapes, vigorously rendered in monotype. Eustace Calland has been sketching on the banks of the Lake of Geneva; his Glion Sur Montrenx" has a background of serrated Alpine peaks enhanced in effect by the water below; and No. 46, limned in the same neighbourhood, portrays the village, and detached by heaving clouds are mountain masses looming against the sky-line, an entrancing atmospheric effect very familiar to all visitors to the shores of Lac Leman. Of the works of Mr. Walter Thomas the best is "Early Morning, Cornwall," a vision of a line of inhospitable granito cliffs viewed over a foreground of angry sea.

#### A SCULPTOR'S PHOTOGRAPHS OF REIMS CATHEDRAL BEFORE AFTER THE BOMBARD-AND MENT.

An exceedingly interesting and exceptionally fine assemblage of large photographic pictures and studies illustrative The Glory that was Reims" is now on view in the Leicester Galleries, Loices-The views were all taken ter Square. by the cathedral sculptor, who has had charge of the statues and carvings of this church during the past twenty years prior to and since the Germans wrecked the building. The walls and screen of the gallery are devoted to the display of 113 subjects, but the entire series actually numbers 200 pictures, the remainder being shown in the folio or on the table in a second room.

The prints include general and detailed views of the building from different standpoints showing the church before the bombarding took away the roof and battered the windows and walls, besides smashing much of the sculpture. Several more recent photographs depict the fabric as it stands now, including bird's-eye views looking down on to the top of the nave groining left open to the sky and roofless. The northern portal of the west front in its denuded condition, No. 88, is a particularly well lighted and artistic photograph, the débris in the foreground adding much to its pictorial effect. "sad and sorry" as the destruction wrought on so grand a masterpiece must for ever be. No. 3, taken from the northwest, shows the cathedral of Reims in all its glory, with the pride of its western portals intact—perhaps the noblest example of Early Gothic in the whole of France, with its twin towers 267 ft.

 $\Lambda$  grand set of detail photographs, each 23 ins. long (Nos. 11, 12, 15, 16, 22, 23, 26, and 27), add much to the copious illustration of the iconography of the great porches, and these again are further elucidated by special studies of individual figures or parts, such as the pair of prints, No. 8 and No. 40, of "La Viergo de la Visitation," the former detail illustrating the lovely features of Our Lady and St. Catherine (more advanced in years), both modestly draped in a sculpturesque style almost Greek in the manner of its refinement. No. 17 of Notre Dame de Reims," of which M. Rodin speaks in such unmeasured praise,

infant Christ held on her arm. This exquisite statue has been badly mutilated by the German shells.

oy the German shells.

It is not easy to select special prints for notice where there are so many, and all so very good, but No. 6 for its subject—the Tympanum of the "Romanesque Portal"—has attracted much attention with its carved responds and angel filled semi-circular each under which in semi-circular arch under which, in a recessed canopy panel, are seated the Blessed Virgin and Child. The set of three pictures hanging in situ 42, 43, and 44, furnish perspective pictures of the three great west portals. Nos. 49 and 85 are devoted to gargoyles. The first shows King David seated playing on the harp above the grotesque sort of rhinoceros with its metal-like treated snout. The second print illustrates in sharp perspective a series of cattle, with the lead lining of the troughs in their bodies nearly dressed over the masonry on top of each beast. The big heads of SS. Peter and Paul (62 and 66), from "The Portal of the Last Judgment," are immensely decorative and fine, and so are The the carvatides of the west front. interiors of the church, such as No. 7, of the northern transept, with the organ over the doorway, are very valuable as illustrations of the beauties now gene. Many readers will be glad to hear of this exhibition, which will remain open during August.

## SCHOOL OF ARCHITECTURE EXHIBITION, UNIVERSITY COLLEGE.

An exhibition of students' work, done during the session of 1914-15, is on view this week up to Saturday next, the 24th inst., at 5 o'clock, in the school attached to the University buildings in Gower All who are interested are ad-Street. mitted free of charge. We illustrated the new premises and studios specially erected for the School of Architecture not so long ago,\* and this is the first entire session held in this new building since its completion. This has not been a very propitious year, owing to the war, for the normal conduct and consequent success of any school devoted to the arts of peace. Professor F. M. Simpson's expenience, however, has not been singular; m all sides we hear of young men having to leave their class-rooms and studios. This, therefore, must not be overlooked, though we are far from saying that this display is marked by indifferent merit or paucity in the amount of work accomplished even if brilliance in design may, perhaps, be said to be conspicuous by its The average standard nevertheless, been maintained, and a highly creditable show is now made. The principal events recorded are the results of two competitions for prizes given by Sir William Lever for the encouragement town planning, the scheme being divided into two stages under the newly founded Department for the study of this subject. No. 1, a scheme for a central railway station on the Surrey side of the Thames, and No. 2, for the "architectural development of a portion of the above. In the premier contest Mr. A. G. Wood is awarded the first prize of £15, and Messrs. H. N. Fisher and L. H. Shattock are bracketed as equal, the money prize being £10. The winners in the second competition are not by any means identical with the first, as Mr. II. N. Fisher takes the £15 prize, Mr. Ignace Reicher the £10 prize, while Mr. A. G. Wood has an hon. mention.

There appears to be some discrepancy between the station buildings' plans shown to the smaller scale on the town

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planning lay-out scheme, and the plans worked out presumably as an architec-tural development to a much bigger scale. The portions thus amplified in neither case seem actually to correspond. The shapes of the block of buildings in the second stage appear to bear no reference to the planning of the station included in the first stage. The drawings are hung at the extreme ends of the great studio, very far apart from each other. and, therefore, are not easy to compare.

The station chosen by the winning competitors is intended to be built at Waterloo, an ideal problem formulated without regard to finance, and entailing several changes of enormous magnitude. It would hardly be possible to describe these designs in detail, except at great length, for which we have no space. Mr. A. G. Wood has conceived a very interesting and ingenious proposal for rearranging not only the station itself, but the contiguous railway system of lines and new approaches which would necessitate another bridge over the Thames from the Temple, the other two ways being from Waterloo Bridge and from Hungerford Bridge, all three roads being brought into a Grande Place fronting the station. the quadrant train tracks being behind Stamford Street and York Road. St. George's Circus would be reached by an in-clined continuation of Waterloo Bridge Road going seemingly through a subway and emerging a good way down south, beyond the limits of the station rendezvous. We need not discuss this project further save to add that the scheme as such is quite worthy of the first place. Messrs. Fisher and Shattoch deal with the same problem rather differently, while some of the other town planning competitors have chosen Victoria Station or the G.W. Avenue island site at Shepherd's Bush, the King's Cross improvement, or the N. circular road at Hendon, much adroitness being displayed and serious solutions being fairly well aimed at, considering the early position of this Town Planning Department now in vogue at University College.

The most ambitious part of the exhibition is devoted to the enlarged designs for the railway station buildings, and it is a matter of regret that Mr. Wood happens to have come in third. Mr. H. N. Fisher's plan is accorded the prize, and it deserved this distinction. Waterloo Station, according to his scheme, would present an enormously long façade, the building being a detached rectilinear parallelogram, with a central entrance in front and secondary entrances at either return end. chief portals consist of three semi-circular archways, with iron and glass weather pents projecting level with the springing course, and having a clock attached in the middle co-ordinate with the tympanum of the central opening. All this is very American in manner. There are three doorways to each arched span. Above the arcade rises an hotel with an Ionic colonnade of nine bays set between two pilastered pavilions, and finished off with an inconsequential-looking and shaped blocked skyline. Low side wing buildings extend right and left, with the attic-like plain walls and the semi-circular ironframed roofs of the pair of big waiting-rooms well recessed behind the frontageline. Each end of the whole frontispiece terminates with pilastered tower-like blocks. having similar archways below leading to the Customs departments. The ground stage is in keeping throughout, but it does not go well with the superstructure, which looks stilted. The plan is well lighted, and in many respects well thought out. The great central booking-hall encloses a particularly spacious ticket-office for the main lines services, the tube and suburban four ticket offices being in small square

places, one at either corner of this big enclosure. The waiting-halls, right and left, measure 206 ft. by 76 ft. each, with lofty proportions to match. Two wide, long corridors run the entire length of the building, and have cross exit doors, two in each flank, at the ends of the front restaurants. A pair of inquiry offices are placed in each corridor, with columned halls intervening behind them and set between the two big waiting-halls and booking-office. No seating accommodation is indicated on the plan, and we look in vain for the essential conveniences for travellers and their waiting friends. Restaurants, smoking-rooms, and ladies toilet rooms face the Grand Place, and men and women's lavatories (not suitable for closets) measure 45 ft, by 32 ft., with windows adapted for one room only. These are placed next the Concourse of the station, along which main side come the luggage and minor waiting-rooms, amply large enough, perhaps, for everyday needs without the big halls. At the ends are passengers' corridors and exits from the main lines. The company's station officials' offices are situate far apart at the ends of the building on the first and upper floors, cut off from each other rather seriously some hundreds of feet away. The entrances to the hotel are put on either end of the station entrance vestibule, which figures 136 ft. by 40 ft., so that all hotel visitors have to more or less mix with the traffic on going in and coming out, with their bags and baggage interfering

with the hurrying public.

Mr. Ignace Reicher, who wins the second prize, has given his building a distinctly foreign appearance, with its vast semi-circular arches leading to the booking-office, set in the midst between two projecting wings, and measuring 60 ft. by 36 ft., with galleries round. Columned café and restaurant rooms flank this body of the premises, with adjacent waiting rooms and such-like all crudely laid out, with a departure vestibule in front of the booking-hall and Concourse platforms at the ends of the premises, right and left for arrivals, far away from the ticket-procuring places. On the main Concourse are two four-square detached blocks of buildings, consisting of waiting and retiring rooms. The elevation is poorly and heavily coloured. There is a fairly good detail, but the figures for sculpture are indifferently drawn. No hotel is attached

to this station.

There are only two other designs, Mr. A. G. Wood's being given an Hon. Mention. His is by far the better of the pair; indeed, we prefer his scheme to the plan placed second. Architecturally, it is more English, consistent, and refined. A fifth elevation in pencil is shown, but seemingly it has no plan, for none is exhibited

The "first year's students" work we thought commendable, and we noticed some almshouses and homes for the aged in a Georgian style by Messrs, H. W. Cash and C. C. Nauheim, the latter's work being based upon the well-known Black heath type of similar housings. The post-office at Wells is shown carefully measured up and plotted, also a good sheet of pen-and-ink details of the chapel door, Greenwich Hospital, but the authors names of these drawings were absenred.

#### ARCHITECTURAL ASSOCIATION PRIZE WORKS EXHIBITION

On Friday last the annual awar is wellannounced and the collection of societas drawings exhibited to pards view on the Royal—Architectural—Massim—Tatter, Royal Architectural Massim Tarres, Street, Westiminster, as the result of the year's course in the London Science of year's course in the honden sense, of Architecture. The display, it not so numerons as heretofore, is certainly very reassuring, and though a good namer. including some of the more brilliant men. have been called away on military duty. the work done in their absence is workmanlike and highly creditable, judging by this present exhibition. The prizes awarded are not given for any individual competition design upon which a special effort is concentrated, but are taken in recognition of the merit displayed by the winners throughout the whole session, Sustained effort is in this way encouraged in accordance with the system maugurated long ago at the Architectural Association. and we need hardly say it has always had our warm approval.

THE A.A. TRAVELLING STUDENISHIP

is taken by Mr. Wilfred C. von Berg, a gentleman of Dutch extraction resident at Croydon, but who has recently left the school to join the English forces. The subjects of his designs, common to the whole of the students in the third-year course, are those set from time to time by the master, Mr. Robert Atkinson, F.R.I.B.A., or perhaps by the assistant master in this grade, Mr. L. H. Bucknill, A.R.I.B.A. These problems necessarily are varied, and not necessarily of a tour de force character, though perhaps more than often of rather a monumental kind, as, indeed, seems inevitable. The reserve displayed by Mr. von Berg is one of his essential merits, and the reason, perhaps, of his success; while his draughtsmanship is excellent, based on the Parisian model. The triumphal arch he submits has a bronze equestrian group of six horses in a chariot surmounting the composition, which displays a pair of trophies on the face of the main walls. The Lord Roberts Memorial consists of a truncated obelisk of elegant outline and detail. The areaded courtyard shown for an Italian palace steers clear of marked originality which too frequently degenerates into the bizarre. The entrance proposed for a museum has twin columns of a Composite order, with bronze deors and standard lamp-like bronzes flanking the nortal. Another ambitious project is the plan of a council house, with division lobbies at the sides and a members' hall behind the council chamber. Coming down to more mundane matters. Mr. von Berg has designed a small country house having a large common or living room, with a loggia opening into the garden, and the dining-room leading out of the livingroom - an excellent idea to save service and space, provided the meal-place is not too large and is really more like an alcove-This plan suffers from insufficient light to the common room, which is sa reficed to the façade, so as to obtain breadth. The result is somewhat stilted elevationally. and the landing is wasteful. The exterior is in stock bricks, with red vertical divisions, presumably "Georgian." Mr G. B. Tubbs' house on the other wall is a more practical scheme, if we except his A memorial, erected by subscription, to the late Dr. Mongle, physician, who for over twenty years practised in Kinross and district has been unveiled at Kinross. The memorial consists of a drinking fountain, surmounted by a bronze portrait bust of Dr. Mongle, which was designed and executed by Mr. John S. Rhind, sculptor. Edinburgh, and is erected on a site at the corner of Graham Street and Swansacre. dark store out of the kitchen, with no vonface below. pair of arms at the ends of the plinth. The memorials of the departed should rather aspire to indicate life eternal and express at least a hope in futurity. So many menuments look like refrigerators.

THE JAMAIS SILDENISHED of £40 is desert, by awarded to Mr. C Dranden, who is represented by capital set of drawings, not Jernaps quite so a compassion in style as these by Mr. on Berg, out workmanine and renation His everstree, bringe connecting two papers trainings is quest and appreten tions and this quality also is observately th the things sailed for a pata day of stream, though perhaps some of these ratter designs on view are apt to and the commonplace. Mr. firm the street and street façade in street same and street façade in street is well thought out. The swags over the decreasys would be better away. The Andrew Oriver prize of 25 5s. 1s taken by Mr. F. P. M. Weothouse, whose work is distinctly reditable. His time study for a brick-out t s reen in front of a big courtyard is worth naming, done as it was without help, and we rather prefer his artidealer's street front with the marble treatment on the ground floor round the shop, and we like the iron balcony over, below the three arched windows on the first floor.

Mr. J. C. C. Bruce over-emphasises the length of his lintel or hidden girder above the shop opening by including both the side doors into the one wide-spanned space which he divides up with bronze uprights, adding some horizontal bars which dwarf the effect where more height The upper handling of this is wanted. front is on the right lines. The Italian palace courtyard by Mr. G. B. Tubbs is one of the best and the street front sent by Mr. C. Reixa is studied on old 18th Certury hines, though the big spandrel window on the second floor niight make many difficulties mable, above the triple lights below, divided by Ionic columns. Mr. G. B. Tubbs is more spirited than some with his bridge, having an Italian pavilion or covered way very open at the sides. His cemetery tomb sketch is fetching and forcible, but the trees suggest a site in a vast park where land is of no moment The pretentions baldachino for a catheural high altar by Mr. T. C. Evans is too ambitions, not to say a bit out of hand, with its twisted columns and gilt rococo canopy very out of drawing.

IN THE SECOND YEAR CLASS

Mr. A. Holes carries off with relat the Howard Colls prize of £15 15s. His parqueting half overlooks a formal garden and marble-enclosed pool, with rather attenuated columns to the side verandahs. The study of a courtyard after Mansart and the court of a French château are very praisworthy on right lines of study thatched bottage is pleasing, but whether a compact and almost onle-shaped cottage is suitable for thatching seems doubtful, the material suggesting a haysta it or a long, ramiding, quaint sort of building. Mr. W. P. Wigglesworth is a clever student with an excellent de sign for the dining hall in a park, though I' is no doubt over rich with the range of statues above the parapet and columns The Italian Rebetween the windows. naissance composition of an arch showing Santa Maria della Salute at Venice bevend in the distance makes a 2 sol drawing for a student's trial. We noticed Mr. G. A. Galsworthy's château front of XVII date, with the arched entrance, all well theories like red herrings across your path. Stablied on precedents Mr. P. M. Hill's Have absolute confidence in your teachers

The cemetery temb set in a French dining-hall design in brick and tree alcove is not exhilarating, with the stone has end pavilions breaking the roof, but they scarcely project enough for that. The orangery by Mr. W. E. de Souza and another by Mr. P. E. V. Maager deserve attention, but Mr. Hodge's orangery is the best, and his details are workmanlike. The Entrance Scholarship drawings by Mr. J. L. Shepherd admit him to the school, and so does the winning of the Banister Fletcher Scholarship by Mr. Jean Gelwin.

PRIZE DISTRIBUTION AT THE A.A. SCHOOL OF ARCHITECTURE.

The annual meeting for the distribution of earnizes gained by the students of the Archi the prizes gained by the standards of Architecture was hold at 16. Tutton Street, S.W., on Friday afternoon, Mr. H. Austen Hall, F.R.I B.A., the President of the Association, occupied the clear, and owing to the depletion of the school by war conditions, there was a much larger number of old members of the Association and friends of the students (including

about a dozen ladies than of young men.
In opening the proceedings, the President remarked that since they met for a prize disti bution twelve months ago much that was then unexpected had happened, and their then unexpected had happened, and their school of Architecture had been greatly affected by the war. At the very onthreak of hostilities, early in August, they lost by recruiting for our new forces four masters and about hity students out of the seventy then on the roll. Fresh students came in during the session; but many of these and others of these who temained were drawn away by the those who remained were drawn away by the recruiting officers in the next room, so that they were now reduced to five-and-twenty, none of whom were eligible for service on one ground or another. Some of those still with them had tried three or four times, but with out success, to enlist. The year had thus been one of exceptional worry to all concerned for its and success, and they had furtherusefulness more a difficulty in arranging lecture courses on account of the absence of masters and the constant diminution of and changes in the Under the unprecedented circumstudents. stances, the quality of the work that had been turned out was remarkable. The standard turned out was remarkable. The standard and character of the work had been well maintained; the masters and men had alike set themselves to their studies with determination, and the Council were gratified, nay delighted with the outcome, and thankful to Mr. Robert Atkinson, head-master, and his capable staff for what had been accomplished. Some of Some of the masters and men had been granted com-missions in the Army, and others had as loyally served their King and country in the ranks. There was a sad side to the subject in the casualties reported. From their first year men. Mr. R. W. Wilson had been killed from their second-year students Mr. J. D. S Othell was reported wounded and missing and the Hen. Anthony Methuen was wounded: from their third-year class Mr. H. A. Ryan and Mr. J. H. Jacob were wounded and two members of the evening school, which he might incidentally mention had been necessarily suspended during the war. Mr. T W. Donald and Mr. H. D. Ainsworth, had been killed. Addressing himself to the students present, the President continued: The great edgect of all study is to reveal truth, and to you as students it is also to obtain a standard f padement and of comparison, whereby to arry on, at a high level of thought, the art here are surrounded from the first day of your entrance into the school with the presentation if the finest known works of architecture. You have in the masters who direct your studies men who are enthusiasts, men who put their work before everything else. It is not surprisand the one everything else. It is not surpris-ing, therefore, if you find enthusiasm comes easily to you, and, above all, if it comes soon. Those of us who have had these advantages are fully aware of the incalculable value they will be to you, and through you to the development of architecture in this country. Most earnestly would I say to you. Do not be discouraged by those who criticise the ten-dency in modern design, and throw their

and m yourselves, and do the best that is in you. On the foundation of the culture you me acquiring the future of your art will sale. Four ceaseless efforts must be to express the highest conception of design you may eyet received, and to accept no lower standard than the best in whatever work you undertake.

Mr. H. M. Fletcher, hon. secretary, read the following list of prizes and studentships, warded by the Council, which were distributed to the students by Mrs. Austen Hall. Mr. H. M. Fletcher, hon. secretary, read

First YEAR: First Prize, value £1 10s., V. J. Wenning. Second Prize, value £1 ls., H. E. Mills. Prize for Greatest Improvement, Volume of A.A. Sketch Book, F. A. McEvoy. Special Prize. Volume of A.A. Sketch Book, W. B. January.

W. B. dancee.
St. OND YEAR:—"Howard Colls." Travelling Stadentsnip. value £15 15s., A. Hodges. Second Prize, value £5, W. P. Wigglesworth, Prize for Greatest Improvement, value £2, W. E. do Souza. Master's Prize, F. W. Halfmide. Special Prize, volume of A.A. Sketch Book, P. V. E. Mauger. The Association Two-Year Course Certinicate is awarded to the following students:—G. B. Galsworthy. F. W. lowing students: -G. R. Galsworthy, F. W. Hartinde, A. Hodges, P. M. Hill, P. V. E. Mauger, W. E. de Souza, and W. P. Wiggles-

worth.

Thed Year: —A.A. Travelling Studentship, value £25 5s., W. C. Von Berg. Andrew Oliver Prize (value £5 5s.) and President's Prize (value £5 5s.), F. P. M. Woodhouse. Book Prize, value £5 f. Reixa. Book Prize, value £2, N. F. C. Day. Master's Prize, J. C. C. Bruce. Master's Prize, G. B. Thbbs. Vacation Prize, value £1 Is., F. P. M. Woodhouse. Vacation Prize, value £1 Is., C. J. Brandon. "Jarvis" Scholarship, value £40, C. J. Brandon. Special Prize, two volumes A.A. Sketch Book, b. H. Hutton.

FOURTH YEAR:—Special Prize, value £5, R. A. Duncan.

Duncan.

A. Duncan.

A.A. Essay Prize, value £10 10s., T. C. Evans. A.A. Entrance Scholarship, value £52 3s., J. L. Shepherd (Charterhouse).

Banister Fletcher Studentship, value

"Banister Fletcher" Studentship, value £23 ds., Jean Godwin.

The following have been recommended for Third Year Certificates of Exemption from the R.I.B.A. Intermediate Examination:—

N. F. C. Day, G. B. Tubbs, F. P. M. Woodhouse, and F. Reixa.

Mr. Ernest Newton, A.R.A., P.R.I.B.A., in proposing a vote of thanks to Mr. Austen Hall, said he feared that Mr. Hall, in giving him that privilege, thought that as President of the Royal Institute he not only ought to be able to speak with authority on the future of architecture and the aims to be pursued in teaching students, but that it was his duty to do so. Unfortunately, election to the chair at 9, Conduit Street did not carry with it in his case a gift of tongnes or prophecy. He had seen in his lifetime so many movements all of which were said to be destined to be permanent, but which had had their day and passed away, but at the risk of appearing to shirk his task of pronouncing ex cathedra on a subject which all of them thought about and which none of them considered they had yet solved, he should confine himself to a few general remarks. Was he not right in assuming that vaguely they had in their minds that some form of Classic was the right thing for large monumental huildings? For churches they balanced between a Classic and a Gothic form, according to their temperament. In designing houses they left themselves the greatest latitude. That in itself should be enough to show that architects now in practice had by no means made up their own Speaking for himself, his admiration for the teachers of architecture who would keep their heads and pursue a definite aim amidst this confusion knew no bounds. to teach composition, construction, and the forms and leatures of every known style from the Parthenon to the buildings of the nineteenth century, which architecture had been so much "revived" as to be practically moribund. One often saw in modern Clas sical buildings certain radical errors which he was sure were never acquired at the Ar chitectural Association. For instance. building of several stories which was merely a nest of smallish rooms of moderate height was often treated like a temple with columns and entablature complete. Let them examine the plan, and they would see how perversely ingenious the architect had been in getting windows for his rooms behind the entablature. Now surely all would agree with him that however fine the proportions delicate and learned the details of such and deflecte and learned the decars of such a building might be, it was wrong as archi-tecture. Then, again, this same type of building would have charmingly designed features, pavilions, pediments, and so forth. apparently marking something in connection with the plan, but comparison with that plan would show that they were merely stuck on as part of a composition. A.A. students would never do that when they were entrusted with the edifices of the future. They would always, he was sure, cast their buildings in a gracious mould and make their composition express the purpose of the fabric He was sure that students at 18, Tufton Street were taught to analyse all the features of the various buildings on which they based their essay designs, and were made to understand those features belonged only to that particular building where they occurred, or to one of a like nature, and ought not to be annexed, as part of the designer's stock-intrade as an architect, to appear in all the buildings he might be called upon to design in the future. Another point was that modern buildings generally had as many features to the square inch as old ones had to the square yard-even more sometimes It was a great art to leave out—not because one did not know what to put in—but because one did not want to put it in. In designing a building, the indiarubber was often a more useful and valuably ally than the pencil. He had not touched upon the influence that material must have upon design, nor had he alluded to the necessity for grappling with a problem and solving it fairly and squarely without tricks and sub-terfuges. Even if the result was ugly, it would at least be true. As for the study of modern planning, that was a chapter by itself, and he must not venture to refer to it in a vote of tbanks. There must, for in-stance, be a best arrangement for all the stance, be a best arrangement for all the departments of municipal buildings, just as there was for the parts of a ship—the right kind of entrance, the best position for the council chamber, and so on. If all this could be standardised, what a simple task a competition would be! All that the architect would have to do would be transfer to the contract. would have to do would be to perfect per fection. When one considered how much there was for an architect to learn, it was almost incredible that anyone should have the courage to begin. Indeed, to be serious, there must be something in the discipline of an architect's training that made for courage and a sense of duty. Some sixteen hundred members of the profession had given up all their prospects as architects to become soldiers, and no doubt before next session opened many more would have fol lowed their gallant example. Many architects had already died for their country, but no one who died for his country had lived and died in vain. They could not tell what the future had in store for them, whether next year there would be any prizes and prize giving, but that afternoon the front was engaging their attention, and in very cordially proposing a vote of thanks to Mr. Hall he was to be allowed also to congratulate the prizewinners.

Mr. Arthur Keen, past-president, seconded the vote of thanks. As a member of the Board of Education he had examined the testimonies of study submitted by candidates. and had been impressed by the high standard of the designs sent in from the Tufton Street School and by the capable grasp of the problems shown by the students. The quality of the A.A. School work reflected the greatest credit on the teaching of Mr. Robert Atkinson and of his assistants. He felt that their headmaster was the right man in the right place. Students who loyally and industriously worked in the School were laying a very good foundation for a successful career in future years.

In memory of his late wife, Dr. Godfrey owe has given to St. Peter at Gowt's Church. Lincoln, an oak altar table, which has been made by Mr. C. R. Lucas, builder, Sibthorp Street, Lincoln, in keeping with the design of some of the late Mr. Hodgson Fowler's work in the chancel.

#### BUILDING NEWS DESIGNING CLUB.-A GARDEN PAVILION

On the whole possibly "September Morn presents the more attractive and picturesque design. His drawings are set out well on the sheet of paper, and the building bespeaks its purpose unmistakably. We also must give him credit for the superiority of his perspective sketch, because in a competition of this kind among students a recognition of draughtsmanship ought to obtain its due. We would rather select a good building indif ferently drawn than a poor building merely adroitly delineated in a chic sort of manner. The general rule, however, is that good drawing and good design synchronise. We are not ing and good design synchronise. likely to place too much stress upon draughts. manship per se, neither are we overlooking the painstaking care displayed in the execu tion of the geometrical elevations submitted by "Walbroke." He is mostly workmanlike, and neatness induces accuracy of detail. Qualities of this sort are highly praiseworthy and indispensable. The treatment and manner or style distinguishing the proposal placed second, if not exactly of a high order, bears comparison in many ways with the desig sent in by his confrère "September Morn. Hence some diffidence in arriving at our ultimate selection for the premier place, not that we doubt this decision as a proper conclusion. Some may question its rightness and others may consider we had little choice, which is true enough. In some particulars the lay-out of "Walbroke's" façades is preferable. out of "Walbroke's" façades is preferable, specially in the spacing of the west end, where the arched opening more consistently forms part of the sturdy rusticated plinth. The casual fashion of the arch treatment adopted by the other designer is not altogether happy. At the same time, "September Morn" has realised our intention by making the long side of this summer house overlook the lake, which is, of course, its principal prospect. The conditions are distinct enough. They provide conditions are distinct enough. They provide that the approach to the pavilion is to be on the land side, with a way down to the boat shelter under the entrance steps. No mention whatever is made of the land end. The build ing properly ought to present its main façade to the east, to be viewed from the owner's house over the water. The pavilion, in fact, is considered as part of the property in ques tion. By thus setting out the boathouse alongside of the shore of the lake a much wider creek is insured than could be possible when the waterway is reduced by its contiguity with the much more restricted end of the The conditions mention an environ ment of willow trees, common to such a site, close to the pond. The "pictures" of both close to the pond these designs avoid such specified ambrosia details. "Walbroke's" perspective in this respect looks derisory, and the foreshore as shown might be mistaken for the fag end of a litter heap or perhaps a bit of a disused slate quarry. By locating the building the wrong way round about with reference to the lake he has made his scheme somewhat irrelevant

Undue importance must not be attached to incidental matters such as pictorial draughts manship. Still we cannot refrain from acknowledging that neither of these perspectives precisely display the eagerness proper to a "sketch," and all sketches ought to be artistic, even if only roughly so. It is too common a fault with many that they set up to be "artistic" without being artists. The to be "artistic" without being artists. The word "artistic" has been tabooed by architectural professors who reckon themselves authorities beyond a doubt, and the term for that reason by a certain cult is banned. No other word, however, actually expresses what is intended. Success depends upon the artist being possessed of his subject before it can come off, and the work must not express a trifling mood, however slight in execution the work may be. It must have some true grit about it and evince a force compelling its expression. "September Morn," limited by his conventions and laboured effort in design, has vet to comprehend architectural relevance and dignity in composition. Correct ing, he fails by non-attention to detail. he gives us nondescript windows instead of mullioned windows bargained for. The spacing of his lights is not in conformity with spacing of his lights is not in conformity with pipes and deep cesspool heads to match, figure what is customary to expect, and when he in "Walbroke's" drawing, and we suppose does employ mullions the result falls short of the tubes turn in through the wall above the

any improvement up in the containty out setting out window (penings A ) and the middle of the beg wind w might be middled his preportions and a ideal character thus justifying itself. The fene-trated in "Walbroke's" scheme is mean note on "Walbroke's" scheme is mich in the con-sistent. "September Moth' in the line in-portance of another item viz., where the chimney in the back elevation rises above the broad and quoined fireplace breast projecting between the two doorways. The ince emphasises the position by breaking round, as it must do, to preserve the full section throughout. This solitary smoke flue in consequence appears to be stuck on, and looks paltry and thin, set up in this mean, awkward fashion. By omitting to include a back costa-tion "Walbroke" fails to show his method of managing this same little ticklish detail so conspicuous on the "off side" of his building. The end elevation submitted by him ing. The end elevation submitted bedoes, however, include a stone topped pediment, or something of that kind to ease off the architectural lines, but as to how this is actually to be done we are left to conjecthre. We have noticed the inconclusiveness displayed by the elevations of the design which we have put first. For instance, the author has not made it clear whether the brick facings really run through to the reveals of the windows or not. He has been at some pains to show the headstones and sills in rather an ostentations or, shall we say, emphatic maner, and so the inference would be that masonry dressings to these openings are intentionally omitted. If this be so, the upper and lower blocks of stone would suggest a spotty effect in execution, and particularly so should white stone be used for the lintols and sills, and the difference of colour happen to be intensified by employing strong and selfassertive red bricks for the walling. The importance of texture imparted by the choice of barmonising materials is frequently overlooked, and not enough care is taken in setting out the proportions of solids to voids in architectural conceptions. These deductions may doubtless be elementary, but certainly architects seldom realise their consequence, and likewise omit to avoid the objectionableness of spotty masonry or of fussy detail. Faults like these result from a want of native artistic sense. Party colourings are considered hand-some, and vulgar contrasts appeal to the ignorant, who know no better, but architects ought to do so. The colour blind are hopeless whatever pretensions they make to capacity in designing.

The pair of deorways in the pavilon by "September Morn" are not in accord with the dignity of the double set of steps and terraced approach. The effect seems inconsequential, and by starting the stairways close up to these openings the result is not only awkward, but positively dangerous. The boat-house landing stages provided in this design look more serviceable and furnish better access to the boats, which in coase quence are less cramped for room than in "Walbroke's" sheller, with its farr w "end on" allowance of space. The latter scores a point, however, by sliding his ir or gates back, right and left, on the more face of the plinth wall. His competitor has saved himself the fag of thinking out such its dental requirements, and he also has not dental requirements, and he also has not bothered to show how the projecting external face of his plinth comes in relation to the extrados member of his arch where the set off dies on to the segment of the pening. These minor details and various things serve to constitute the press and cors about these up to these openings the result is not only to constitute the press and cors about these designs creating the doubts already all ded to in ascertaining their relative meres in this to in ascertaining their teactive mere's it it is little contest. The proportions and governal effect of the roofs and clock purrets tell in favour of "September Morn" With this conclusion the parapet to the clovar in submitted by "Walbroke" has a direct concern. The absence of rainwater heads and down pipes scores, on the other hand, against the scheme which we put first. An eaves guttering is drawn by "September Morn," but he rests content and we are uninformed as to how the water gets its discharge. Carelessness of this kind is blameworthy. Big stack

by the r of water into boat pina: The piter, i treatments, so far pather from the sections of these 11 ch s, may be taken on the average TWO THEY as about a constant we recomb oth are rather meffective and management 2. The symmetri cal repetit, in of the windows in the second placed building might be expected to insure a more digitated result, as the other plan leaves too lift c wall space for the wainscot-ing. We are disappointed with both prerutus respect, and the ceilings, of which the conditions made a special note, are which the changes shade a special poet, are very jet. The circular disc in the middle of "Waller se's colling is common-place in least of access to the clock is sentiarly a year for in each scheme, with space for the bels and chiming gear.

This is the concluding subject of our Club's wirk for 1914-15, and although the problem was the easiest proposed during the past unual session the number of designs submitted happens to be by far the smallest ever known since the Building News Designing Club commenced about forly years ago. For this time of the year the proposal was reasonable enough. but owing to "the emergency period" through which things are passing an abnormal abarement in the work of the members was only to be expected. Their energies bers was only to be expected, their energies have naturally enough been diverted from the pursuit of the arts of peace to the patriotic task of helping forward the defence of hearth and home. In so far as this particular competition for a Garden Pavilion is ticular competition for a Garden Payinon is emerical, though "the spring tide has been form out of our season," the situation was savel by the receipt of the two capital schemes sett in by "September Mora" and "Walbroke, "those well-systamed endervours to the last merit unstanted approbation, seeing that the last merit unstanted approbation, seeing that they both made time to compete not withstanding their many other engagements The following is a copy of the conditions issued for the guidance of members: A Garden Payiron at the end of a lake, which also is to form a shelter for small rowing boats, the approach to boat-house being formed by a small creek flanked by willow-tress, which do not encroach upon the level site, the shore being 4ft above the water-line. The floor of the pavilion to be 5ft above the ground, at directed by stone steps. the treatment architecturally to be Georgian. in red brack and stone. Qu'et dignity in design is required, and the roof, overed with green slates of graduated sizes, is to show, and a simple clock turret, with chimes, may rise from the ridge, and be covered with lead. The size of the pavilion made to be 30ft. by 15ft , with a dreplace, and below, a fuel store of small dimensions to be provided. Inside the walls of the pavilion to be panelled in oak, and a decorative plaster ceiling is intended, with frieze, but not too ornate. The windows to be multioned in stone, and have metal casements. The boat shelter to have wrought from gates above the water line, and small meeting timber stage at the back inside, with approach from the land side under the pavilion steps. Scale 4ft to the inch. Two plans, three elevations and one section, with perspective sketch, taken from the lake side. The building will face east, and can be seen over the water from the house to which the property belongs. The accompanying drawgroup by new ags. The arcompanying unawa-ings softice to indicate the attractive cha-racter of this undertaking, which lends itself to a pretty inventiveness by affording scope for the limagnation and display of unassum ing taste withour unduly taxing effort or calling into relation very much specialisation However, like most simple things, a garden However, like most simple things, a garden payment is not unite so easy a subject as would arrear at first sight. Such an occasional and in a unional structure demands a degree of reserve coupled with a cultured appreciation of architectural attainments to give a new regard to the uses of the the 25% of our regard to the uses of the belief 25% of the belief 25% of the reverse stell is so small that it requires to be handled in a big way without being a large. All straining after novelty from so, we sake has to be avoided to the control of the contro novels, if r 78 we stace has to be avoided, and no traffing with in sherest detail is allow able. Such a f small r by he reckoned, perhors, as ideal, and we do not claim that the losins now put forward exactly or even

approximately reach that standard. Both the competitors rank very closely, and considering the plans on their merits a perspections decision was hardly likely; indeed, as we have said, some difficulty occurs in stating reasons for a preference in favour of either.

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#### NATIONAL FEDERATION BUILDING TRADES EMPLOYERS OF GREAT BRITAIN AND IRELAND.

The half yearly general meeting of this federation will be held at the Masonic Hall, Great George Street, Leeds, on Wednesday, the 28th mst, at fen in the forenoon, to deal with the business mentioned on the agenda.

with the business mentioned on the agenca.

1. Notice calling the meeting
2. Minutes of last annual meeting, held January
27, 1945, and business arising, if any,
28 Welcome to representatives from colonial and
foreign rederations.

4. Ropert. In accordance with decision of a
former meeting, a short interim report will be submatted to the meeting and published in the N.F.

e ord.

7. Consider recommendations from yesterday's outed on the following matters:—

as Report on apprenticeship question, (b) Report on contract conditions with local

on organic on contract conditions with local authorities, in Resolutions of the National Board of Conciliation:

"That this board, recognising the difficult position in which both employers and workmen in the binding trade find themselves, in consequence of the high cost of materials on contracts taken before the war, and of the high cost of living in consequence of the war, recommends that the National Federation take into consideration the position with a view, if possible, of employers granting some special assistance, where circumstances may justify it, to their workmen before winter comes in, and that the reply of the federation be considered at a special meeting of this board to be held in Vorkshire on July 29." That the United Builders' Labourers' Finon be admitted to membership of the conclusion boards wherever working rule agreements exist between branches of the N.F.B.T.E. and the United Builders' Labourers' Union, subject to the approval of the parties at present affiliated to the scheine."

scheme."

3. "That the Liestrical Trades Union be admitted to membership of the conciliation board wherever working rule agreements exist between branches of the National Federation of Budding Trades Employers and the Electrical Trades Union, subject to the approval of the parties at present affiliated to the scheme."

(b) Reference from conference on proposed proposed

or the scheme,"
icrelies from conference on proposed
ional scheme for demarcation commutees,
at the scheme as amended be recommended
or the approval of the various parties, with
request that a return of the result be
nade in time for the October meeting of
but board." made

Application from the Brickhayers' Society (London Order) for re-amiliation to the concilation scheme.

(f) Any other recommendations from the executive

6. Next meeting. 7. Such other business as may be presented by the no suferit

Provisional Programme.—Tuesday, Provisional Programme.—Luesuay, July 27, 10 a m.—Meeting of the Administrative Committee, at the Masonic Hall, Great George Street, Leeds. 2.50 p.m.—Executive Council meeting same place. 8 p.m.—Reception by the President of the Yorkshire Federation to representatives of E.C. and G.M. and their ladies. Wednesday, July 28, 10 a.m.— General meeting at the Masonic Hall. 1.30 p.m.-Luncheon to members and their

The herlquarters of the gathering will be at the Queen's Hotel, City Square, close to station, where a special tariff has been arranged for members.

### ARTISTS' WAR RELIEF EXHIBITION.

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An exhibition of pictures and drawings is being arranged by the Imperial Art League and the Royal Institute of British Architects jointly, to be held in the Galleries of the Royal Institute in Maddox Street, for the benefit of painters and architects who are suffering from the effects of the war. It will be opened on Wednesday, July 28, and will remain open for some weeks after that date. As far as the Royal Institute is concerned, it is proposed to divide the exhibits into two classes: (a) Works given to be sold for the benefit of the War Relief Fund of the Architects' Benevolent Society (these may he works by the donor or by any other artist; the works by architects sent to be sold for their own benefit. No distinction will be made in the catalogue. All architects,

therefore, who have saleable water-colour, pen-and-ink, or pencil drawings or etchings are invited to send them to be sold either in class (a) or class (b). All works should be distinctly marked (a) or (b). A small percentage will be deducted from all sales to cover expenses. As the time for making the necessary arrangements is very short, and the number of drawings for which space can be found cannot yet be ascertained, it may not be possible to hang all that are sent in; but it is proposed to remove drawings when they are sold and to hang others in place of them, in order to show and sell as many as possible. Exhibitors are asked to send to Mr. Harry Redfern, the hon, secretary, 9, Conduit Street, W., a list of the drawings they propose to submit, with the prices to be asked. Drawings illustrating buildings in Belgium or Northern France would be likely to find purchasers. All works not sold will be returned to their exhibitors.

#### ---OBITUARY.

The death is announced at the age of 70 of Mr. Lewis Sheppard, who was in practice as an architect in Worcester from 1876 until 1905, when he retired. He built and restored many churches in the Midlands, enlarged the Grammar School at Bromsgrove, and restored, after a disastrons fire, the Elizabethan mansion of Severn End, the seat of the Lech-mere family. His last work was to plan the Laslett Almshouses in the city of Worcester. How was succeeded in his practice by his elder son, Mr. George Lewis Sheppard, A.R.I.B.A., of Worcester and Folkestone, now on active service with the Royal Engineers.

Mr. Ralph Dain, retired architect, died on July 11, at his residence, Liverpool Road Burslem, within eleven days of his 86th birthday. Mr. Dain had lived in Burslem for over sixty years and had planned some im-portant public buildings in Leeds and Manchester, as well as many in the Potteries. He was one of the oldest freemasons in Stai-

Captain George Pigrum Bowie, L.R.I.B.A., 5th Batt. 1st Canadian Contingent (Vancouver) fell in action on July 7, aged 34. He was the eldest son of Mr. and Mrs. A. H. Bowie, of 9, Bernard Gardens, Wimbledon, and was in practice when the war broke out as an architect at 705, Bank of Ottawa Build-ings, Hastings Street West, Vancouver. He joined the Royal Institute of British Architects as a Licentiate in 1911.

The death is announced of Mr. Gerard Wight, of Melbourne, who for many years was a Fellow of the Royal Victorian Institute of Architects. A Victorian by birth, he was born in 1860; educated in Melbourne, and in 1836 took his degree as M.C.E., in the Melbourne, the Melbourne, and the Melbourne, bourne University. Prior to taking his degree, he was engaged in survey work on the railway line to Ballarat via Bacchus Marsh, under Mr. Cussen (now Judge Cussen), and was afterwards articled to Messrs. Smith and Johnson, achitects, of Melbourne. In 1885 he won the first prize for the design for the Merri Creek Bridge, which was afterwards built under his supervision. For some years he was in partnership with Mr. Wm. Lucas, architect, carrying on business under the name of Wight and Lucas. In 1891 he went to Europe with his late principal, Mr. Johnson (who became, subsequently, the President of the Institute). Mr. Wight's last important of the Institute). work was the Geelong Church of England Grammar School, for which he and Mr. Phillip Hudson had gained the first prize in a public competition, and the work just com-pleted was carried out under their joint supervision. For many years Mr. Wight held a seat on the Council of the Royal Victorian seat on the Council of the Royal Victorian Institute of Architects, and in 1912 he was elected President. In conjunction with Messrs Henderson and Little, he also represented the Institute upon the Faculty of Enginering at the Melbourne University. He had been unwell for the past year, and died suddenly on May 8, at his residence, Church Street, Hawthorn. He was unmarried.

The parish church of the Mumbles, Glam., is being restored at an estimated cost of £11,000.

#### LONDON COUNTY COUNCIL THE REGULATIONS FOR REINFORCED CONCRETE CONSTRUCTION.\*

(Continued from page 34.)

Splays and Brackets at Ends of Beams and Bracketed Work.

70. Where the end of a beam is splayed for the purpose of increasing the resistance moment, such splayed work shall not be calculated at a greater angle than 30 degrees from the horizontal.

#### BRACKETS.

71. In cases where bracketed work in reinforced concrete is provided in the structural design to carry loads, and to act as a cantilever, it shall be reinforced sufficiently to provide for the stresses due to such loads.

#### SLABS.—EFFECTIVE DEPTH.

+ 72. The effective depth of slabs shall be † 12. Ine enective depth of slabs shall be measured from the compressed edge of the constructional concrete to the centre of gravity of the tensile reinforcement. In the case of floor slabs the effective depth shall not be less than three inches.

#### DIAMETER OF BARS.

73. The least diameter or thickness of independent reinforcing bars in slabs shall not be less than one quarter of an inch.

#### WIRES.

74. The wires under tensile stress in connected mesh and similar reinforcement in slabs shall be at least one-tenth of an inch in diameter or thickness.

#### SPACE BETWEEN BARS.

75. There shall be a distance of at least one inch between bars in slabs except at joints and at points where the bars are in direct contact and transverse to one another.

76. All meshed reinforcement shall be of such direct and transverse to the state of th

such dimensions as will enable the coarse material in the concrete to pass easily

through the meshes of such reinforcement.
77. The maximum distance between bars or strands of the tensile reinforcement in slabs shall not be greater than 12 inches, and not more than twice the effective depth of the

#### DISTRIBUTING BARS.

78. In cases where independent reinforcing bars are provided in one direction only, distributing bars shall be provided on the top of the lower tensile bars at right angles thereto. Such distributing bars shall not be further apart than 18 inches, and shall have an aggregate cross sectional area of at least 0.08 per cent, of the effective cross sectional area of the slab; or the diameter of each of the distributing bars shall be at least 1-16th of the effective depth of the slab, and the pitch of the distributing bars shall be not greater than four times the effective depth of the slab.

79. Wiring used in slabs for the purpose of holding hars in position shall not be re garded as reinforcement.

#### RESISTANCE MOMENTS.

The resistance moment of reinforced concrete construction under transverse loads shall be determined by formulas based or. the following assumptions-

(a) All tensile stresses shall be taled

by the steel.

(b) The strain in any layer or fibre is directly proportional to the distance of that layer or fibre from the neutral axis

(c) The tensile elastic modulus of steel shall be assumed to be equal to the compressive elastic modulus of that mateal. (See regulation 53.)
(d) The elastic moduli of the concrete

remain constant within the limits of the

working stress.

(e) The stress-strain graph is a straight

(f) The anchorage, together with the grip between the concrete and steel, is sufficient to make the two materials act

NOTATION FOR BRAMS AND SLARS.

area of tensile reinforcement, in square Α

melies.

a = arm of the resistance moment, in inches.

B = bending moment of the external loads and

forces, breadth of rectangular beam in inches, or breadth of rectangular beam in inches

breadth of rectangular beam in inches, or breadth of the flance of a tee beam in inches or breadth of slab in inches.

permissible compressive working stress, at the extreme edge of the concrete in compression, in pointals per square noch.

total depth of slab in inches,

effective depth of the beam or slab in inches, i.e., the distance from the compressed edge of the constructional concrete to the common centre of gravity of the tensile reinforcement.

— elastic modulus of concrete in compression.

elastic modulus of steel in tension or compression.

e elastic modulus of steel in tension or compression.

length of the effective span of a beam or slab,

Ex

= modular ratio, (See regulation 54)

distance of the nentral axis from the com-pressed edge of the constructional concrete of the beam or slab, in inches.

= neutral ax s ratio,  $n_1 = d = n$ .

percentage of tensile reinforcement = 100 r.

 $\begin{array}{l} p = \text{percentage of tensile reinforcement} = 100\,r, \\ Q = \text{qualifier in the equation } R = Q b d^2, \\ R = \text{resistance moment generally}, \\ R_c = \text{resistance moment of the internal stresses} \\ \text{in the learn or slab in terms of the permissible} \\ \text{compressive working stress}, \\ R_t = \text{resistance moment of the internal stresses in the beam or slab in terms of the permissible} \\ \text{tensile working stress}, \\ A \\ \end{array}$ 

r = ratio of A to b d, i.e.,  $r = \frac{A}{b d}$  and A = r b d.

s<sub>1</sub> = slab depth rat o = d<sub>t</sub>/d
 t = permissible tensile working stress, in tensile reinforcement, in pounds per square inch.
 t<sub>1</sub> = ratio of the tensile stress in the steel to the compressive stress at the extreme edge of the

concrete under flexure =  $m\left(\frac{1}{n_1}-1\right)$ 

W = total weight, or working load.

#### Beams and Slabs. BREADTH OF FLANGE.

82. For the purpose of computing the resistance moment of a tee beam, the breadth of the flange shall not be taken at more

(a) One-fourth of the effective span of the tee beam;

(b) The distance between the centres

of the ribs of the tee beams;
(c) Twelve times the thickness of the

alab:

whichever is the least.

(Also see regulations 45 and 46 as to combined stresses in beams, slabs, and other

members.) 83. In the case of - (ell) beams the breadth of the flange shall not be taken at more than tour times the thickness of the slab, provided that where the moments due to the eccentricity of the compression are adequately provided for, the width may be increased, but not beyond one-half of that allowed for T (tee) beams.

#### BREADTH OF RIB.

84. The minimum breadth of the rib of a T (tee) or r (ell) beam shall not be less than one-third the depth of the rib below

the slab. (Also see regulation 66.) 85. Rectangular beams shall be secured oo. nectanguar neams shall be secured against buckling whenever the length of the beam exceeds 20 times the least width thereof, or whenever the length of the beam exceeds 30 times the least width measured from outside to outside of the outermost longuage in the length of the outermost longuage in the length of the outermost longuage. gitudinal reinforcement.

#### SLAB REINFORCEMENT.

86. When a part of a slab is taken as forming part of a tee beam, the reinforcement in the slab transverse to the beam must cross the full breadth of the portion of the slab forming the flange of the tee beam.

#### NEUTRAL AVIS WITHIN THE SLAB.

87. In the case of slabs, rectangular beams and tee heams reinforced in tension only when the neutral axis is within the slab, i.e., tee heams in which r is less than

$$\frac{s_1^2}{2 m (1 - s_1)}$$

(a) The position of the neutral axis shall be obtained from the equation-

$$n_1 = \sqrt{(m^2 r^2 + 2 m r) - m r}$$
, or

$$n_1 = m r \left[ \sum_{i=1}^{n} \left( 1 - \frac{2}{mr_i} \right) - 1 \right] - r$$

$$n = \left[ \sum_{i=1}^{n} \left( m^i_i r - 2 n r_i \right) - m r_i \right] t$$

(b) The mean compressive stress in the concrete be taken at

(c) The arm of the resistance mement shall be obtained from the equation—

$$a=d-rac{n}{3}, ext{ or }$$
  $a=d\left(1-rac{n_1}{3}\right), ext{ or }$ 

approximately, for tee beams, a = d =

(d) The tensile resistance moment at every cross section shall be at least equal to the bending moment at that section and shall be obtained from the equation-

$$R_t = tA\left(-d - \frac{n}{3}\right)$$
, or  $R_t = tAd\left(-1 - \frac{n_1}{3}\right)$ , or  $R_t = trbd^2\left(-1 - \frac{n_1}{3}\right)$ 

$$R_tQbd^2 \text{ where } Q = tr\left(-1 - \frac{n_1}{3}\right)$$

(c) The compressive resistance moment at every cross section shall be at least equal to the bending moment at that section and shall be obtained from the equation-

$$R_c = \frac{c}{2} b n \left( d - \frac{n}{3} \right), \text{ or}$$

$$R_c = \frac{c b d^2}{2} n_1 \left( 1 - \frac{n_1}{3} \right), \text{ or}$$

$$R_c = Q b d^2 \text{ where } Q = \frac{c}{2} n_1 \left( 1 - \frac{n_2}{3} \right)$$

NEUTRAL AXIS INTERSECTING THE RIB.

88. In the case of tee beams, reinforced in tension only when the neutral axis intersects the rib, i.e., tee beams in which r is greater

$$\frac{s_1^s}{2m(1-s_1)}$$

(a) The position of the neutral axis shall be obtained from the equation-

$$n_1 = \frac{\mathbf{s}_1^2 + 2mr}{2(s_1 + mr)}$$

(b) The mean compressive stress in the concrete shall not be taken at more than

$$\left(1 - \frac{s_1}{2n_1}\right) \circ cmr(2 - s)$$

$$s_1^2 + 2mr$$

(c) The arm of the resistance inclient

where
$$a = d \left[ 1 + \frac{\pi}{3} \left( \frac{3}{2n} + \frac{2}{s_1} \right) \right]$$

$$a = d \left[ \frac{s_1^3 + 4mr_2}{6mr_1(2-s_1)} + \frac{12mr}{3mr_1} \right]$$
or approximately  $a = d = \frac{2}{3mr_1}$ 

d) The tensile resistance moment at every cross-section shall be at least equal to the bending moment at that section, and shall be obtained from the equation

$$R_{t} = t A a, \text{ or}$$

$$R_{t} = t b d^{2} \left[ \frac{s_{1}^{1} + 4 m r s_{1}^{2} - 12 m r s_{1} + 12 m r}{6 m (2 - s_{1})} \right]$$

<sup>\*</sup> Sub-headings and italic cross references do not form part of the regulations.

<sup>†</sup> NOTE.—Five inches is the least thickness for fire-resisting floors in the principal Acts.

or R Oba- where

$$Q = \begin{bmatrix} s_1^2 + 4 \otimes r s_1^2 - 12 m r s_1 + 12 m r \\ 6 m (2 - s_1) \end{bmatrix}$$

e. The compressive resistance moment at every cross-section shall be at least equal to the bending moment at that section, and shall be obtained from the equation.

Re 
$$c = \left(\frac{1 - s_1}{2 n_1}\right) i d$$
, ror  $c = d$ , i  $\left[\frac{s_1 + 4 \cdot r s_1' + 12 m r s_1 + 12 m r}{6 \left(s_1 i + 2 m r\right)}\right]$ 

or R = QA B where

$$Q = \frac{s_1 + 4 m r s_1 + 12 m r s_1 + 12 m r}{6 (s^2 + 2 m r)}$$

#### Compressive Reinforcement

59 In sections reinforced in compression due allowance shall be made for the depth

of the compressive reintorcement from the compressed edge of the beam.

9: The equations in Regulations 87 and 88 may be used in conjunction with Regulation of when the compressive reinforcement is located at or near the centroid of compressive in the control of the control o pression in the concrete.

#### Beams Supporting Other Beams.

91 In the case of a beam supported at its end by a transverse beam

a Longitudinal bars of the supported bann shall be continued across to the further side of the supporting beam, and the ends of the bars shall be hooked by The whole shear shall be provided

for by the tensile resistance of the shear or web reinforcement acting in conjunction with the compressive stresses in the

Provision shall be made to resist any torsion in the supporting beam, and to resist any negative bending moments on the supported beam, but the positive binding moments on the supported beam shall be calculated on the assumption of ends being freely supported.

92 At the ends of beams supporting transverse beams the bars shall be so arranged as to give the same margin of safety as required by Regulation 91

### Notes on Drawings or Diagrams.

95. Notes shall be added to the drawings or diagrams of all beams and pillars showing the loads which have been provided for.

#### PART IV

#### PILLARS AND OTHER STRUIS.

94 The term "strut" when used in these regulations shall be deemed to include any

compression member at any angle.

95. The term "pillar" when used in these regulations shall be deemed to include any pillar, p.er, post, column, detached support, or any other vertical compression member.

P.Hars shall be designed on the assumption that the concrete and the vertical bars are shortened in length in the same propor-

#### HATTO.

97. In calculating the strength of a pillar the maximum ratio of length to gyration rad us or the maximum ratio of length to effective diameter shall be taken.

#### Length.

3. The length shall be measured between the lateral supports, irrespective of any splayed work in excess of that allowed as part of the beam by Regulation 70.

#### EFFECTIVE DIAMETER.

94 The effective diameter shall be measured to the outside of the outermost vert al reinforcement, and shall be measured in the direction of the lateral supports which determine the length of the pillar.

#### REINFORGEMENT, BINDING

1 All pillars shall be provided with vert al and lateral reinforcement. 191 Each pillar with rect.linear laterals binding shall have at least four lines of vertical reinforcement throughout its entire hands.

engra

1.2. Each piller with curvilinear laterals by ling shall have at least six lines of errord reinforcement throughout its entire length.

103. The least diameter of rectilinear laterals (binding) shall not be less than 3-16ths of an inch.

of an inch.

104. The least diameter of curvilinear laterals (binding) shall not be less than \( \frac{1}{2} \) in.

105. (1) The pitch of the laterals (binding) shall not exceed 6-10ths of the effective diameter of a pillar of any part of its length or sixteen times the diameter of the least vertical bar.

(b) At the ends of a pillar for a length equal to one and a half times the effective diameter the pitch of the laterals (binding) shall not exceed 3-10ths of such effective diameter.

105. The lateral reinforcement (binding) shall be firmly secured at each end. 107. The volume of lateral reinforcement

(binding) shall not be less than 0.5 per cent. of the volume of the hooped core.

#### VERTICAL BARS.

108. The diameter of vertical bars shall not he less than ½ in, or greater than 2 ins. 109. The total cross-sectional area of the

vertical reinforcement in any pillar shall not be less than 1.0 per cent, of the area of the

#### JOINTS.

110 Joints in the vertical reinforcement of pillars shall only be made at or adjacent to a floor level or other point of lateral support. 111. In all joints in the vertical reinforce-

ment there shall be provided an overlap at least equal to twenty-four times the dia-

meter of the upper bar.

In cases where there may be tension in the pillar, the ends of the bars shall be formed as required by Regulation 48.

#### RECTANGULAR PILLARS.

112. In the case of rectangular pillars in which the ratio between the greater and the lesses diameter exceeds one and a half, the cross-section of the pillar shall be subdivided by cross-ties, and the number of vertical bars shall be such that the distance between the bars along the longer side of the rectangle shall not exceed the distance between the bars along the shorter side of the rectangle.

NOTATION FOR PILLARS, STRUTS, AND OTHER COM-PRESSION MEMBERS.

by the lateral reinforcement (binding) measures to the inside of the hooping.

- cross-sectional area of one bar of the binding or lateral reinforcement.

or lateral remforcement, area of the vertical reinforcement. permissible direct compressive stress. (See regulation 42.) form factor, depending upon form or type of binding or laterals. (See table in regulation 118.)

gyration radius of the area  $[\Lambda + (m-1)]A_P$  about an axis passing through the centroid

about an axis passing through the centroid of the area. increased stress permissible in the core of a pillar suitably hooped, actual length of the pillar as defined in the regulation numbered 98.

modular ratio =  $\frac{F_s}{E_c}$ . (See regulation 54.)

permissible load or pressure on pillars with both ends fixed and with a ratio of virtual length to gyration radius not exceeding 45. (See first column of figures in regulation

122.)
percentage of volume of binding or lateral reinforcement with respect to the volume of hooped core in any given length of pillar - 100 V<sub>1</sub>.

piten of the binding or lateral reinforcement spacing factor depending upon the spacing or putch of the binding or laterals. (See table

putch of the binding or laterals. (See table i) regulation 118.) volume ratio or ratio of the volume of binding or lateral reinforcement to the volume of the hooped core in any given length of pillar. (See regulations 116 and 117.) virtual length of the pillar, strut or other compression member for different conditions of the ends. (See regulations 122 and 124.)

#### FIXED ENDS.

114. A pillar or other strut shall be deemed to have fixed ends when the ends are sufficiently secured to other parts of the construcon having such rigidity as will maintain the axis at the ends in its original position and direction under all loads less than the crippling load.

#### (To be continued.) >-000-

Major General Peter Pierce L. O'Connell, provinces, has died at Bromley, Kent, aged a white-eight. He retired so far back as 1878.

### Building Intelligence.

WESTBURY PARK, BRISTOL.—The Right Rev. Dr. Forrest Browne, as Commissary for the Bishop of Bristol, consecrated on Sunday week the east end of St. Alban's Church, including the chancel and a chapel dedicated to St. Oswald. The western portion of the church, consisting of nave, north and south aisles, and transepts, was completed in 1909. The work at the east end new nearing completion consists of the choir and sanctuary, a chapel on the south side, and vestries for choir and clergy on the north. The external stonework is in Brentry limestone. Internally the chancel and chapel are lined with ashlar work. The total length of the building is 150 ft. and total length of the building is 100 It. and the width across the transepts 75 ft., the height to the apex of ceiling of chapel being 37 ft. above the chancel floor. The reredos in the chapel is of Beer stone. The total cost has been about £13,000. It is hoped in the page future to complete the tower at in the near future to complete the tower at the north-east corner, the height of which will be 86 ft. above ground level. The conwill be 86 ft. above ground level. will be so it, above ground level. The con-tractors were Messrs. Pittard and Sons, Unity Street, Bristol, and the architects Messrs. E. G. Rodway, A.R.I.B.A., and C. F. W. Dening, F.R.I.B.A., Gaunt House, Orchard Street, Bristol.

WEYMOUTH —At a meeting of the Wey-

weYMOUTH—At a meeting of the Weymonth Town Council the Advisory Committee reported that they had accepted the tender of Messrs. Partinson and Sons, Limited, of 50, Parliament Street, Westminster, for the erection of 115 houses on the Pye Hill estate for the sum of £32,722. For the erection of thirty tenements on the Granville Road estate the tender of another form are received, but on the tender of another withdrawn Messrs. Pattinson were approached, and they agreed to take over the contract for £6,445. The Pye Hill scheme was subsequently reduced from 115 to 96 houses, and the contract price brought down to £27,024. Each house or tenement is provided with a bath, and has hot and cold water supply. It is the intention of the comwater supply. It is the intention of the committee that the houses on each estate shall be dighted by electricity if arrangements can

he made.

### PROFESSIONAL AND TRADE SOCIETIES.

NOTTINGHAM AND DERBY ARCHITECTURAL SOCIETY.—On Friday, July 16, about twenty members accepted the invitation of Mr. W. V. Betts, architect to the Nottingham Co-operative Society, to invest the steal construction and function spect the steel construction and fireproof flooring at their premises now being erected in Parliament Street, Nottingham, Mr. Betts explained the plans and drawings and then conducted the party over the huilding. The front in Parliament Street will be in buff terra-cotta with large display windows. At the conclusion of the visit, the president of the society, Mr. Harry Gill, complimented Mr. Betts on his carefully thought out building, and thanked him for so fully describing the points of construction.

#### -WATER SUPPLY AND SANITARY MATTERS.

MATTERS.

BALLYMENA—In order to increase and improve the water supply to the town of Ballymena, derived from mountain springs some eight miles distant, it was recently determined to construct an additional 7-in, cast-iron main 4,800 yards in length from the storage reservoir to the filters. The pipes will be cast in three thicknesses, which will be tested after being laid to static heads of 450 ft., 600 ft. and 700 ft. respectively. Owing to the high velocity of flow in the main, pressure relief valves are provided on the up-stream side of the various sluice valves. Messrs, James Ross and Sons, of Belfast, have taken the contract at £3.097, the engineers for the extension being Messrs, Swiney and Croasdaile, MM.Inst.C.E., of Belfast. of Belfast.

The town council of Dartmouth have roved the recommendations of the Water Committee with a view to carrying out suggestions in the report of Dr. St. George Mivart, Local Government Beard inspector, with respect to the water supply.

### Gur Illustrations.

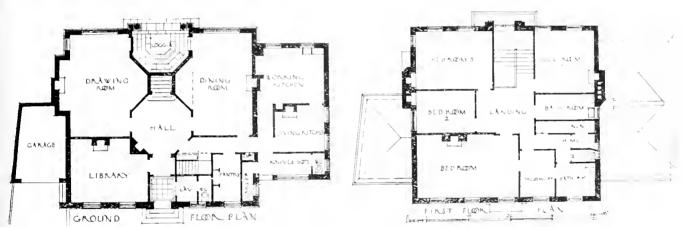
FIVE HOUSES IN FROGNAL LANE AND GREENAWAY GARDENS, HAMPSTEAD, N.W.

These houses, grouped together, are both commodious and picturesque. The sketches reproduced herewith are on view at the Royal Academy Exhibition this year. The reproduced herewith are on view at the Royal Academy Exhibition this year. The buildings occupy a well-wooded and exceptional site in a very favourite part of Hampstead. Mr. Cyril A. Farey is the architect, and the owner, Mr. George W. Hart, of "The Drive," Hampstead, has erected all of these residences. We quote as an item of general interest the prices allocated for each house. The first perspective on the top left-The first perspective on the top lefthouse hand corner of the double page inset plate re-presents "Erskine House," Greenaway Gar-dens, and herewith in the text we reproduce the ground and first-floor plans. The setting out is somewhat original, centring round an octagonal hall with a vista from the front The staircase window on the west lights the hall, and the roomy loggia is a useful feature in the lay-out. Purple and brown stock bricks are used, with red dressings and tiled roofs. The situation is on the crest of the hill, and the balanced front is of Queen Anne character. The kitchen premises are well isolated and on the other side 12 ft. The hall is a wide corridor and the of the house is a garage. The dining-room staircase is obscurred from observation from the ceiling level are gratings communicating measures 24 ft. by 18 ft. Drawing-room the main entrance.

There are seven bed with air ducts. The foul air is extracted by 15 ft. There are four bedrooms on the first mains in the ample garden for a garage ternal staircase at the southern end of the

side of the plan page is shown the lay-out of this house. The fine position is taken advantige of in the contrivance of the rooms. which are insured the maximum of sunshine The plan is disposed on broad lines, simply managed, with the entrance set well back from the road and the reception rooms get a view of the garden at the rear. Brick treatment is adopted, much being made of bold chinneys. The drawing-room is 27 ft. by 20 ft., library 18 ft. by 15 ft., and the danner room 22 ft. by 16 ft. Five bedroom occupy the first floor and two maids' rooms are in the roof. The price is £3.575, with a ground rent of £46. The last perspective to the right hand of our illustration is an effective sketch of "Greenaway Corner. The plans will be found to the top left-hand of our single page. A view of Frognal Lane is commanded from this spot midst some very bandsome old trees in an ideal position tacing south-west. The north and east winds are screened by rising and well timbered grounds beyond. The compara-tively small size of this house is distin-guished by spacious apartments, commodiously considered. The dining-room scales 23 ft. long by 15 ft., facing west, and having

accommodation has been provided. The Mail floor. Washlose, monitor from the male room and particles, monitor from the male factors partity, dining half, the room, administration to be and store Mezzanine between 12 and contact floor layatories. First floor, and contact floor layatories. First floor, and contact floor layatories, for still a second contact floor layatories. First floor, and contact floor and its floor layatories. First floor, as the floor for the floor, and a sitting it is in the staff. Second floor Milling it is in the staff. Second floor Milling it is in the staff. Second floor while we have for materials. The whole of the room store for materials. The whole of the room light as possible, having the card to the use of the repective rooms. The external walls are faced with rell sand faced bricks; the window openings have steel casements with lead kannes. The roots are constructed with fir common rafters, oak purlins and prowindow openings have seen careauants can be ad kames. The rads are constructed with fir common rafters, oak purhis and procupals, and are covered with rad sand-faced tiles. The principals are exposed to view. The floors are constructed of steel and constructed on the deal. crete, and generally are finished - il deal boarding, the laundry wing, k'tcheng, and dining hall having wood block flooring. The internal walls are plastered, and the classrooms and trade rooms have a wood dado 3 ft. 6 in, high. The kitchers and the laundry wing have a glazed the dado 5 ft. high. The warming of the building is by steam radiators. Behind the radiators are inlets for the admission of fresh air, and year



ERSKINE HOUSE, GREENAWAY GARDENS, HAMPSTEAD

£3,650, with £50 ground rent. The right-hand top view shows "Tramore" in Frognal Lane. Its plans are set forth on the upper right-hand corner of the single-page sheet of plans. This is not really a large sheet of plans. house, but contains some adaptable facilities, such as either a big drawing-room or a billiard room and general lounge. The dining room, 21 ft. by 15 ft., accommodates a party without crowding, and has direct service. There are plenty of cupboards. Five bedrooms and two bathrooms on the first floor, with the servants' quarters above. double-fronted exterior is in variegated red bricks, somewhat similar in treatment to house already named. The price is £3,300, with £42 ground rental. "The Corner with £42 ground rental. "The Corner Chimney House," Frognal Lane, occurs on the lower left corner of the inset page of views, and the two main floors figure in the lower corner to the right of The consingle page illustration. trivance is not common and a picturesque group is the result. The angle-set porch group is the result. The angle-set porch leads to an octagon, with the staircase facing the entry. The drawing-room, 26 ft. by 15 ft., is very sunny and projects in front. the best bedroom and bathroom en suite being placed over same. The dining-room, figures 22 ft. by 15 ft., and the library 18 ft. by 12 ft., looking towards the road. There are eight bedrooms and a garage. The price is £2,975, and a ground rent of £38, for which there is a fair-sized garden. The middle picture represents "Varley's." in middle picture represents "Varley's." in Greenaway Gardens. At the bottom left girls in various trades, and the following Madras is also taking part in the conference.

£50.

OF OCTAGON TO TOWER, DETAIL CHURCH OF ST. MARK, WHITE CHAPEL, E.

The pinnacles and upper part of the octagon surmounting the tower of this church were exceedingly crude and unsightly, and, having become dilapidated, it was decided to take down the overhanging portions and other parts which appeared dangerous, and creet thereon a structure more in character with an ecclesiastical building. We reproduce the working drawings. The encasing of the working drawings. The encasing of the tower has been carried out. The additions begin from the stone weathering which terminutes the rectangular brick buttresses at the four corners of the tower, the central brick octagon remaining as formerly. The upright posts and cusped stays at the angles of the octagon, also the lantern and traceried corona surmounted with pinnacles and cusped openings, are all in teak. Mr. John Medland and Mr. H. Hardwicke Langston were joint architects for the work. Messrs, Harris and Wardrop were the contractors.

#### L.C.C. TRADE SCHOOL LIME GROVE, HAMMERSMITH.

This building is jurify three stories high and partly one story. The latter, which forms the northern wing, has been built with the external walls of sufficient thickness to carry an extension of the same height as the

floor and three more above. The price is £3,200 is the price, and a ground rental of building affords an alternative means of escape in case of fire. The building has been designed by and carried out under the supervision of the superintending architect to the London County Council, Mr. W. E. Riley, F.R.I.B.A., R.B.A., M.I.C.E., the coltractors being Messis, W. Lawrence and S. g. The design and plans constitute, we think, one of the most successful examples of the schools erected by the London County Couned, and certainly the most economical advantage of the system of construction adopted has been obtained without any sacrifice of legitimate architectural effect.

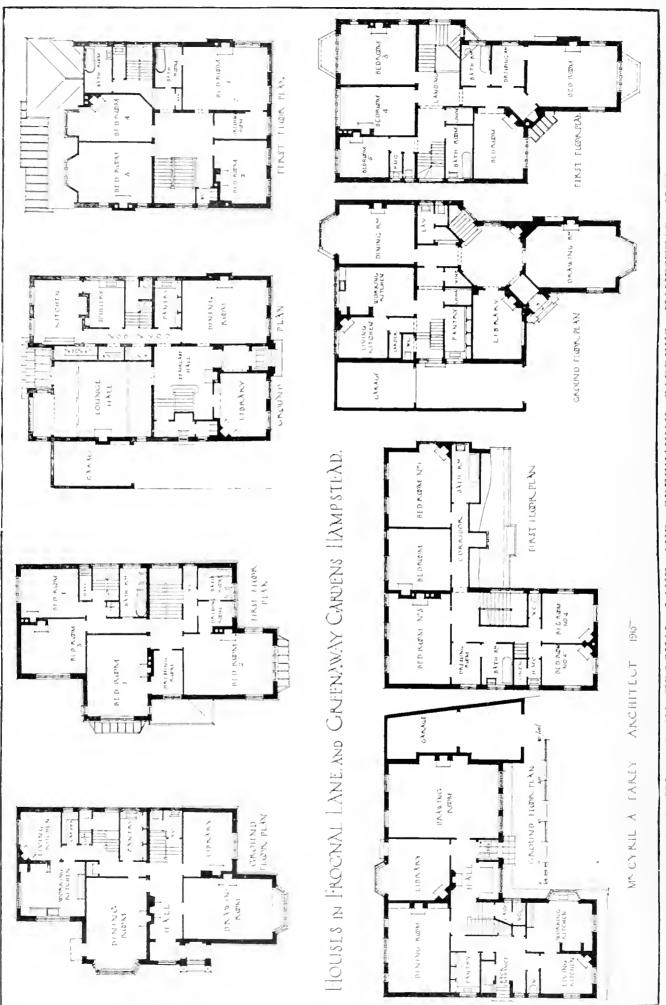
#### A GARDEN PAVILION

The description of these designs (c) the description of the state of the garden pavilion submitted in correction with the Bennoung News Designing Clab will be found in our Referee's topoit of a ther page.

A new police of the state of the state of the architect of the state o

sewage disposal.

Mr. J. K. Lancashire, I C S, who is on special duty in connection with town planning, has visited Octacamond to confer with the Government of Madras on town planning matters generally, and on the lines of action to be taken. The Sanitary Commissioner of the properties of the conference.

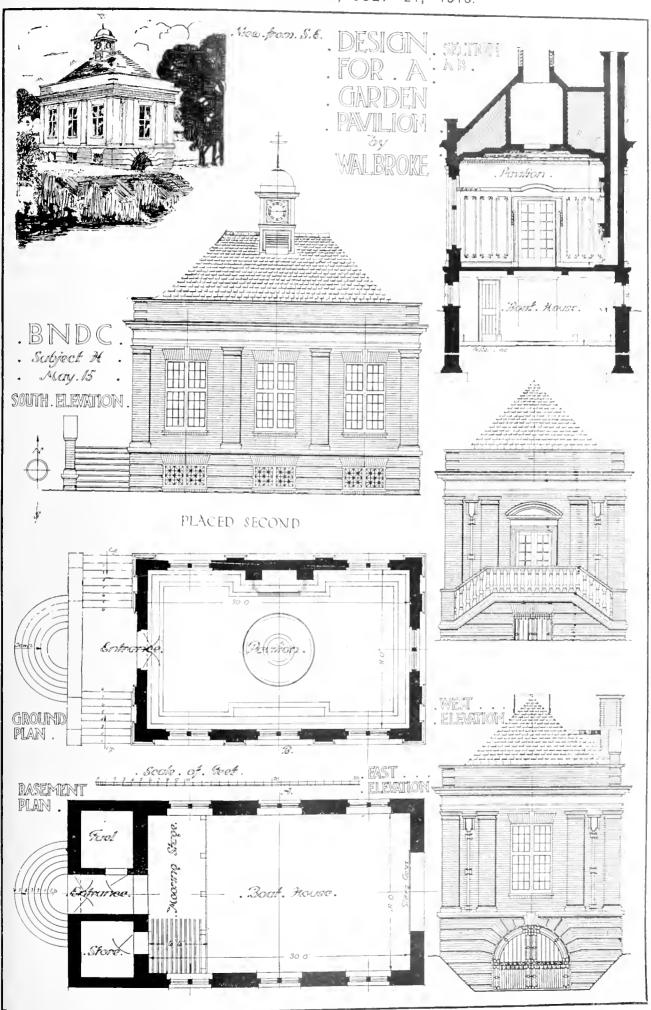


FOUR HOUSES IN FROGNAL LANE AND GREENAWAY GARDENS, HAMPSTEAD, N.W. (Plans reading from Left to Right; --" Greenaway Corner," "Tramore," "Varleys," and "Corner Chimney House,")

Mr. CYRIL A. FAREY, Architect.



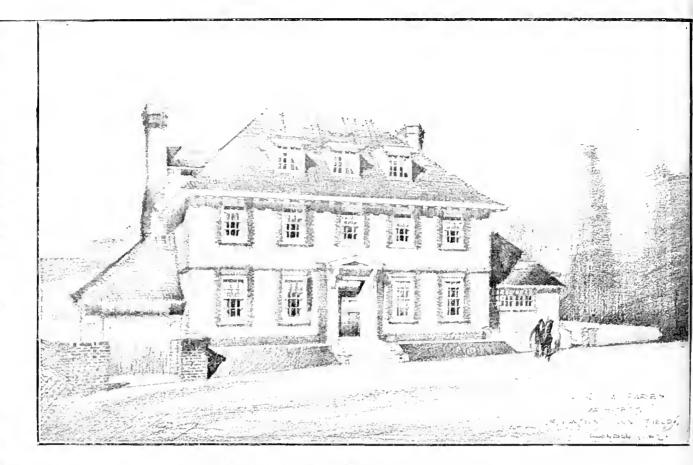
A GARDEN PAVILION.—Design by "September Morn," placed First, "BUILDING NEWS" DESIGNING CLUB.

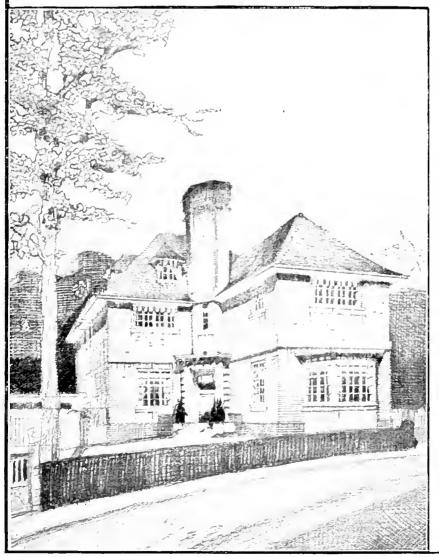


"BUILDING NEWS" DESIGNING CLUB. A GARDEN PAVILION.

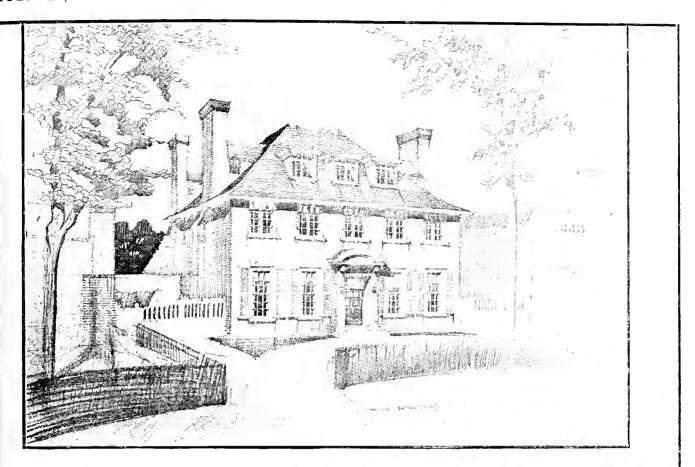
Design by "Walbroke," placed Second.

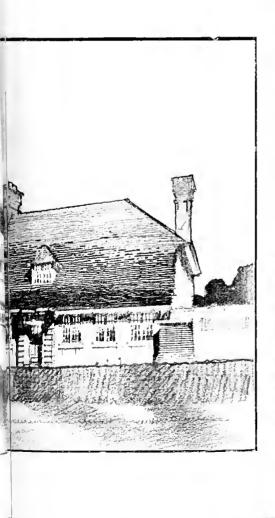
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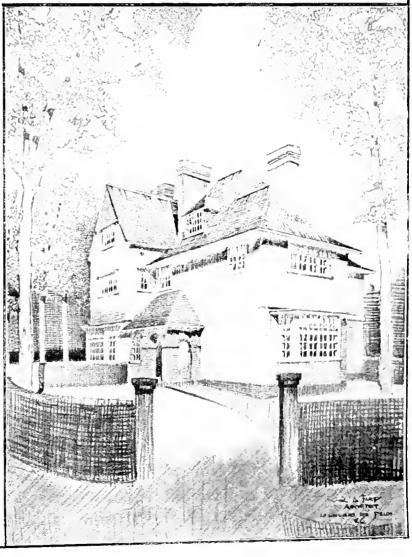




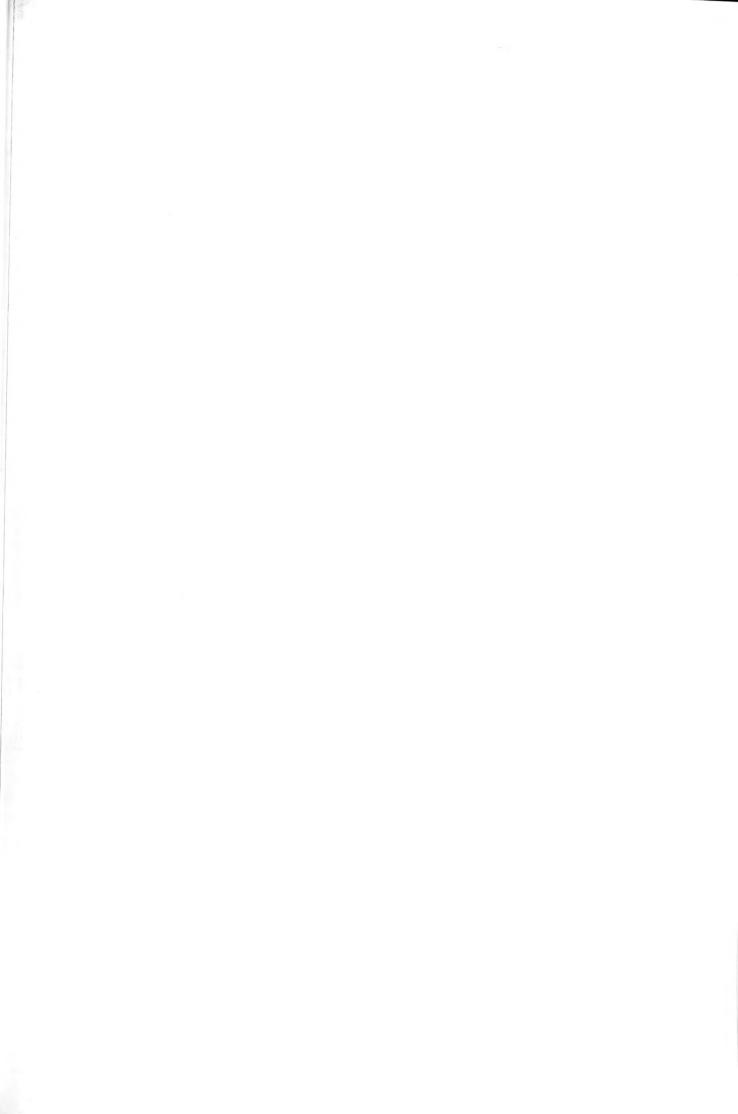


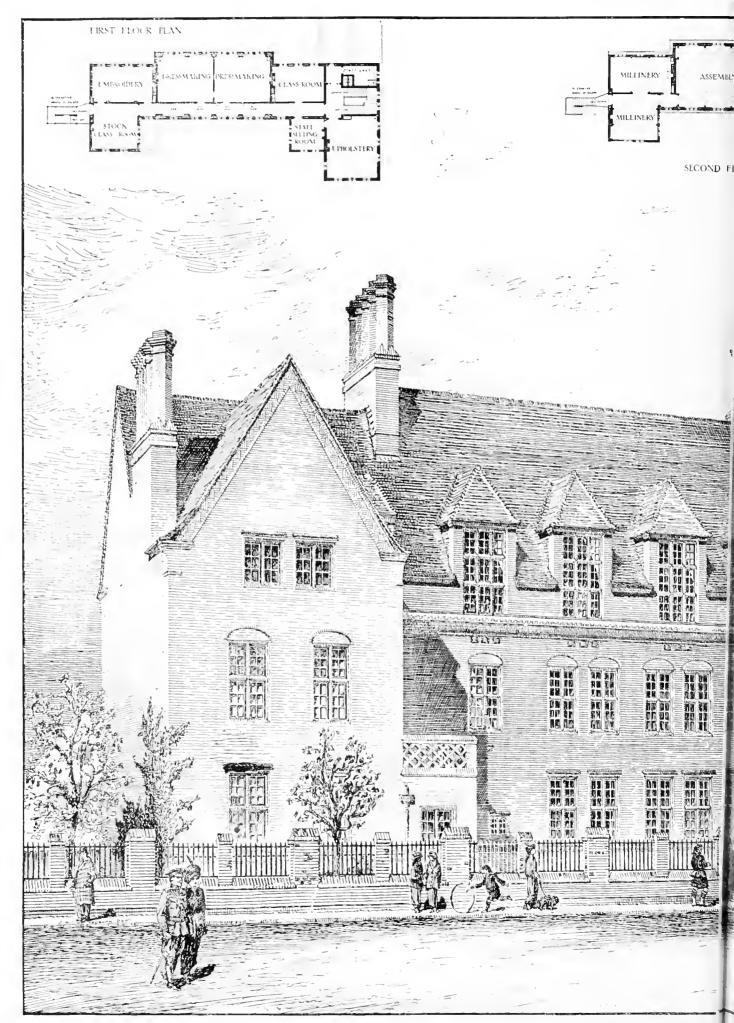




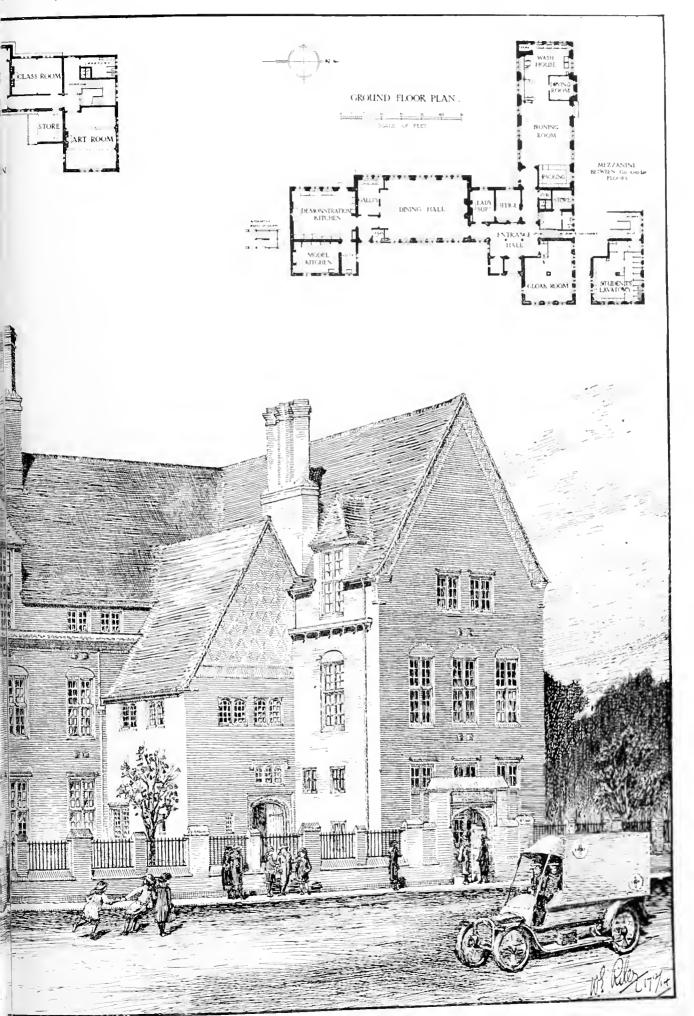


GARDENS, HAMPSTEAD.—Mr. Cyrll A. Farly, Architect. 6," and "Greenaway Corner," reading from left to right)

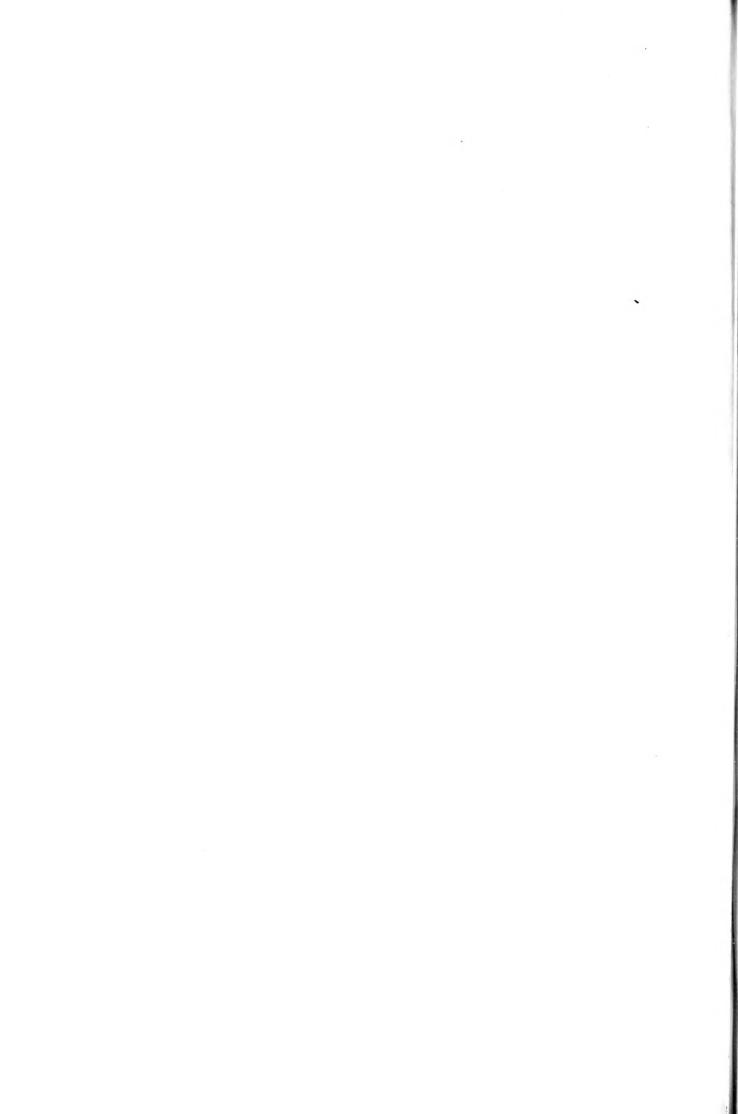


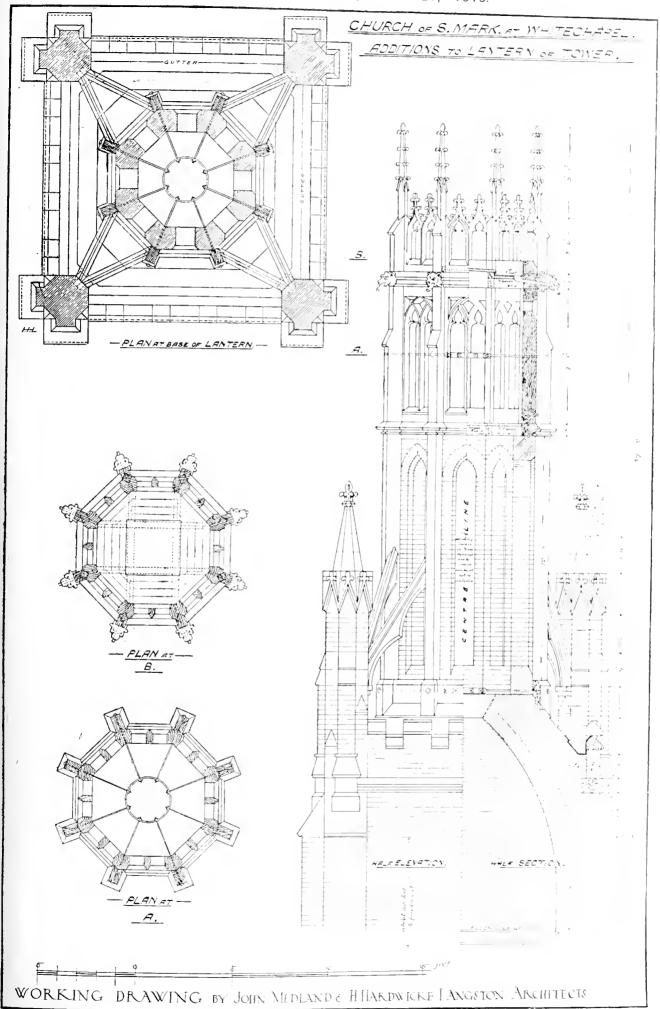


L.C.C. TRADE SCHOOLS FOR GIRLS, LIME GROVE, HAMMERSMITH.-Mr. W. F.



F.R.I.B.A., R.B.A., M.I.C.E., Superintending Architect to the London County Council, Architect.





DETAIL OF OCTAGON TO TOWER, CHURCH OF ST. MARK, WHITECHAPEL. E.

### Currente Calamo.

Filer. Car rof to Australian on after an interval of furteen years thist attempt to bring the architec Six as a gether in 1901. There are s its an Institute f Architects. The Stocks vary greatly in size, as do the Institos New Seith Wales and Victoria rank listing a state two larger Institutes, whilst listen a is the smallest. If, therefore there was to be anything like equality representation upon the Federal " became necessary that each State or i made an equal number of representaes, and equal voting powers. The idea of the firmation of the Council is to be ter ; in the conference of the Presidents f tiv State Institutes, held in Melbourne At the invitation of the Institute f Ar to is of NSW, a further confera was arranged, to meet in Sydney in Note to Just. To this Sydney conference, . . . Institute sent two representatives, and the pair light of federation, rather than unimat it, has agreed upon, as a working basis. The general resolutions of the conference, as ag subrequently been laid before the arr is listitutes, the policy which had been , lopted was affirmed by the Institutes. further onference was held in Melbourne last April, and the following resolution was natumentsly adopted, and up in which the un il vas constituted i- "Whereas it was whiled at a conference of representatives the State Institutes, held in Sydney in November, 1914; That it was desirable to torm a Federal Council to represent the State Institutes of the Commonwealth,' and this being confirmed by the respective Institutes, the said Federal Council is hereby constituted."

Having teen only constituted, the first nescess was the election of the president, and the secretary and treasurer. Mr. A. W. Anderson, the President of the Institute of Ar hate is of New South Wales, was unani m usly elected the first President, and Mr. W. Newman (N.S.W.), the Secretary and Treasurer. It is obvious that both these afteers must belong to the same State, otherass the air instrative work, when the Connell is not in session, would be very difficult. The members of the Council are to be appointed by the Cancils of their respective Institutes, the term of office being thelp months. The Councils of the States the han the State in which the Federal Con. The setting are empowered to appoint a ostal test a take the places of any of their representatives who may be unable to attend the Foliera, Council. In order to provide Land a minority of the States transacting or somes of the Corn al, the quorum shall they to formed when five or more States are represents but each State shall, at all i. . meetings, be entitled to two votes to provide the necessary funds for the work of the Council, the operated to levy upon the per of membership of each State ( mui Capita T Vitoria ras just paid the due fig. his per member as its quata for the ct to year. The objects for which the believe Countill's symbolished are: I represent the profession in the Federal

lab it uniformity in Australian

The operation and powers of the Council empower it to deal with.—

1 Martier of Foldral interest.

Any question which may be referred to the rederal Council by any institute. The ruling of the Council shall be find, and binding on the State 153 ture.

The annual meeting shall be held during April or May, in such State as the Council may do ,de Au litted balance-sheets, and an St. s in the Commonwealth, and cach annual report shall also be presented. We in terstand that Adelaide is chosen for the i eting in 1916.

> After framing the constitution under which the Federal Commonl will work, the Council settled down to the consideration of conditrans of a supertions, and issued a lengthy sie, showing the guiding principles to be embodied in future competitions. The aim is that there shall be clear instructions to impetitors, the minimum of work in the preparation of the designs, fair and reason able prizes, which shall not be merged into the commission of the successful competitor. gether with obtaining professional advice during the adjudication. Another subject healt with by the Conneil was the scale of professional charges. There are still those al stell Australians that 5 per cent, is the tendard fee of the British architect. But. is is remarked, if anyone will refer to the Kalendar" of the R.I.B.A., he will find along list of items which are not included n the 5 per cent. charge; and it is contended hat the British architect, with his 5 per ent., comes off much letter than his Ausalian brother with his 6 per cent. Federal Council has, therefore, carefully least with the problems of remuneration, and, whilst laying down a model scale, has left some of the final determinations to the various State Institutes. Other matters were balt with in a business-like fashion, which augurs well for the future of the Federation, to which we very heartily wish success in every respect.

Since the war broke out many fresh business contracts of service have been entered into for the purpose of arranging to "carry on" during the war, usually with reduced salaries The legal position of the parties to these old and new agreements is sometimes not easily determined. The recent case of Raggow v. Scougall and Co., heard on July 16, is, therefore, of some interest to the building and other trades, in which such fresh arrangements have been made for the duration of the war. In this instance the plaintiff, by a written agreement of August, 1915, entered into the service of the defendants for two years at a certain salary, with a proviso that, if the business should be discontinued during that period, When the agreement should come to an end. the war began defendants thought of shutting down their business. Then the plaintiff made a fresh agreement with the defendants, as did other employees of the firm, by which he accepted a lower salary for the duration of the war, with a proviso that when it ended, the old agreement should revive and he effective. He went on at the reduced salary until last February, when he claimed payment at the old rate, and, this being refused, he sued for the excess. the City of London Court he got a judgment in his favour on the technical ground that there had been no consideration for reducing his salary. Now, on appeal, the High Court has emphatically reversed that ruling. The judges there held that the new agreement was quite clear and binding, as it provided the set of metally the views of the per- was quite clear and binding, as it provided to the anomal metalty and for carrying on at a lower salary while the per- defining the set of the set

old agreement and the old terms when the war was over. So a perfectly fair and just arrangement was supported and backed by the law, and the plaintiff will have to pay all the costs of this ingenious attempt to do what the judge called a dishonest thing.

One thing is certain about the State scheme for insurance against damage done by enemy aircraft and by bombardment from the sea, and that is unless it is seriously modified it will fail. The bombardment phase of it does not apply to ninety nine hundredths of the country, because it includes only damage done from the sea; but the fact that the anti-air damage premium for private honses is to be as high as is charged on the ordinary fire insurance policy is sufficient condemnation to the ordinary citizen. Ordinary fire danger is always with us, the Zeppelin peril it the worst is relatively remote, and to charge the like premium against the risk of each is to feed the fire insurance companies and court failure. There are other limitations also which render the scheme futile in our opinion; and, speaking generally, it seems another characteristic attempt to solve the problem of giving nothing for something so ingeniously contrived in con nection with the National Insurance Act.

"She may go to Halifax and not come ran the tag of an old musicback again, hall song in our gilded youth, though why the advisory permission was granted remained one of the many mysteries we have never solved. Probably because the wellwisher knew the lady would never leave Halifax if once she got there. That, anyhow, is likely to be the resolve of all readers of the excellent and informatively illustrated handbook, "Halifax: A Commercial and Industrial Centre," just issued by Messrs. Sells. Ltd., at the Sign of the Sundial, 166-169 Fleet Street, E.C., at 2s. 6d., post free 2s. 10d. Its perusal will make it as clear as crystal that this ancient and thriving town. with its varied prosperous activities in trade and commerce, offers one of the most advantageous locations in the three kingdoms for new works, or extensions of old ones, and any architect, builder, or land agent might do far worse in these none-too-busy times than run down for a day or two and explore the district in the interest of clients watching for opportunities. The interest of the volume is enhanced by the illustrations of some of its beauty spots, and by those of some excellent residences which its residents and others have had the good taste to build.

Mr. J. Robinson, sanitary inspector at Wathas had his salary increased from £220 to £250 per annum.

The salary of Mr. J. H. Castle, town surveyor of Goobs, has been increased by the Urban Dis-trict Council by £50 per annum.

Licut, Ralph G. Dinwiddy, R.N., son of Mr. Thomas Dinwiddy, F.R.I.B.A., F.S.I., has been promoted to rank of commander in his Majesty's Fleet.

Mr. Doyle, town surveyor, has resigned his position under the Athlone Urban District Council, having been appointed county survevor of Longford.

By unanimous votes, both in the Council and in the general meeting of members at Melhourne, the name of Franz Jaffe has been removed from the rank of Hon. Fellow upon the roll of membership of the Royal Victoria Institute of Architects, as that of an enemy alien.

The City Engineer of Worcester has submitted to the Corporation a report on the best means of washing the gravel on the surface of the primary filters, and for alterations and works at the sewage farm, at an estimated cost of £2.009. He estimates the annual cost of washing the gravel at £1,000. The matter is still under consideration.

### Our Office Table.

A collection of landscapes and architectural studies by the Hon. John Collier is now to be seen in the Leicester Galleries, Leicester Square. These water-colours are very diverse, both in subject and character, garnered from different places, and including Thebes and other parts of Egypt. Judging from the date of one of them these pictures appear to have been made during a tour in 1885. Every feature is drawn with keen technical recognition and unfailing appreciation as exemplified by the artist in the interior view of a characteristic colonnade from Denderah (5), also the Temple of Edfou (23), and by two sketches of the Great Temple of Philae (9 and 27). Equally well rendered and of another type architecturally, but not less elaborate in ornamentation, appears the Mosque of Cordova and the Courtyard of Lions in the Alhambra (20 and More freedom of handling, as might 22). naturally be expected, is evidenced by Mr. Collier's charming subject of the outer of Carcassonne, the capital of the Depart-ment of Aude, in France, showing the conical roofed circular corner tower on the ramparts (14) with the fertile country beyond, wide of Toulouse. Another sketch of the same turret occurs in the interior of the walls (21). At home in the west the artist has given us water-colours of Salcombe and Saundersfoot harbours, as well as Woolacombe Sands and a garden in Devon. All these are marked by contrast, of course, to the orange trees in the garden of Lindaraja or in the spring scene at the Villa Serbellioni, from whence we get also an autumn piece (25), and "A Winter Study at Murren" (19), which hangs near the last. Probably most of these exhibits represent work done during the leisure of bygone years.

The sixth exhibition promoted members of the London Salon of Photo-graphy will be held at the Galleries of the Royal Society of Painters in Water-Colours, 5a, Pall Mall East, S.W., from Saturday, September 18, to Saturday, October 16. The exhibition will remain open daily (Sundays excepted) from 10 a.m. to 6 p.m. The private view will be held on Friday, September 17, from 3 to 6 p.m. An innovation has been introduced this season by the committee. All pictures may be submitted to the Salon, both from Great Britain and from abroad, unframed and, if necessary, unmounted. The Salon committee will see that the prints are suitably mounted if accepted, and in all cases will be shown under glass. Exhibits can thus be sent safely and cheaply in packages by parcels post, and the result ought to be that the committee will receive the best available work of the year from which to select a display.

At the meeting of the London County Council yesterday (Tuesday) it was reported that reductions in the maintenance votes for the current financial year amounting to £156,747 had been made by the various spending committees of the Council, and all the committees were instructed to consider and report on possible further reductions. The Council on March 7, 1911, sanctioned expenditure not exceeding £20,000 for the acquisition from the South-Eastern Railway Company of a portion of Nos. 9 and 10, Strand, required for widening the road to a wirth of about 80 ft. The price to be paid was recently the subject of an appeal by the Council to the Court of Appeal, and the settlement is being effected at £18,550, in accordance with the findings of the Court. Housing Committee reported that a group of twenty-six cottages on the Norbury estate, providing accommodation for 166 persons, are nearly completed. Inclusive rents for the cottages have been fixed as follows: Four rooms, bathroom, and scullery, 10s. 6d. a week; four rooms and scullery, with bath, 9s. 6d. a week; three rooms and scullery, with bath, 8s. to 9s. a week; three rooms and scullery, 8s. 6d. a week.

authorities to Freemasons associated with the authorities to Freemasons associated with the West Lancashire Provincial Library to visit the Lathom Memorial Chapter House. The cently roofed. The architect (Mr. G.Ibert Scott) considerately left to the chief sculptor. who happens to be a member of the craft, the detailed decoration of the Chapter House which aheady presents a large proportion of the Masonic features to be embodied. Several of the leading Biblical characters associated with the building of King Solomon's Temple are recognisable among the statuettes visible through the scaffolding, while the working and emblematic tools used by misons, operative or free, have been florally entwined. The common gavel is encircled by the thistle. this being part of an elaborate scheme embracing the lily and the rose in a novel form of architectural treatment.

The Bribery and Secret Commissions Prevention League, Incorporated, now possesses records of exactly 102 convictions under the Prevention of Corruption Act, which came into force on January 1, 1907. The list may not include all the cases, as no official record is kept for the United Kingdom. In thirteen instances terms of imprisonment have been Prevention of imposed. The maximum fine has been imposed eleven times, and the fines have exposed eigen times, and the mes have exceeded, in the aggregate, £2,000, while the costs imposed by the Court, when stated, have averaged about £10. The reports of the 102 cases show twenty-seven cases conneoted with canteens. Army or Navy our chases, etc. thirteen attempts to bribe the police, ten instances of bribery concerned with trade secrets, seven with weighing and packing; and it has been proved that bribes have been offered to, among others, solicitors (two), a doctor, a borough surveyor, a clerk (two), a doctor, a borough surveyor, a clerk to a board of guardians, a county council inspector, a town council officer, an in-surance assessor, a mercantile marine officer, a motor expert, the hon, secre-tary of a miniature rifle range, pro-fessional footballers (four), and to one woman cook. The persons convicted include twelve manufacturers (automatic machines, blouses, boots, bottles, chemicals, guns, textiles, typowriter supplies), nine merchants (coal, hay and straw, metal, timber), eight shopkeepers (butchers, dairymen, fishmongers and fruiterers, grocers), six commercial travellers. five clerks, four persons driving motors (at tempting to bribe the police), and three motor agents and repairers, four persons connected with the cinema film industry (one of them the owner of a picture theatre, six betting men, eight labourers, carmen, etc., and a solicitor (convicted on two charges), an actor, a boarding-house manager, a builder, an emigration agent, a farmer, a hotel valuer, a metal broker, a restaurant keeper, etc. There have been three appeals against convictions, each of which was unsuccessful. In the period under review there have been, of course, many other convictions for bribery under the Public Bodies Corrupt Practices Act, the Liceusing Acts, the Customs Laws, Act, the Liceusing Acts, the Customs Dance, the Merchant Shipping Act, and the Common

At the meeting of the Canterbury House of Laymen, held last week, Lord Parmoor presiding, the vice-chairman, Chancellor P. Vernon Smith, submitted the report of the Committee on Dilapidations, containing a number of recommendations. As amended, Committee on Dilapidations, containing a number of recommendations. As amended, the first was: "That the House is not prepared to approve of the provisions of the Draft Bill for amending the Ecclesiastical Dilapidations Acts, 1871 and 1872 and for other purposes) which substitute for the district program as central anthority." existing system a central author tv Approval was given to a provision for the compulsors was given to a provision for the compulsors survey of the buildings of a bene fice every five years, and a number of other provisions which it was felt might be en grafted upon the existing Acts, and it was resolved that in every diocese the Diocesan Board of Finance should make grants in alof dilapidations or for paying the surveyor fees or salaries, or the other costs of all ministering the Acts. It was further to solved that diocesan surveyors should be paid

and scullery, with bath, 8s. to 9s. a week:
three rooms and scullery, 8s. 6d. a week.

Facilities were comteously given at the end of last week by the Liverpool Cathedral

Application," published in 1886, and revised the number of trained men who been released for active service.

and F. N. Spec. 5: Hayma are:

crown.

The handlest coatest and the prophone message recorded a non-language phone message recorded a non-language been essued by their get Proper Action Company, Ltd., of the entire Brown and a language at the language and the street. Wester story the side of every readers in street, and a conditional and a proper at the side of every readers in street, and a conditional and a street, and a conditional and a street, the side of every reader's matrix of the neutry bound hand as a dramatic standard and hand to the half front unalpendet, may arranged for so of subscribers' mames and numbers are terming instant reference easy, at the five of a series of slips to be ever the message. At the top centre is a sepanded a period for the inscription of the message. The way elections likely wall space and is a major of sixty, decorative as it will prove a dispusional decoration of the message.

The following short list gives, no burn, to a Pittsburg newspaper, the total rander of church edifices built in the United States area during the seventeenth offiny which have escaped the destroying and offine, and the more destrictive near that I will and the more destructive negle that a conferent attitude of many St. Lake's, St. 5, field, Va., 1632, a brick building of we had Joseph Bridger was the architectitis St.p. 10 sees we called because it was boint 1692; "Gloria Dei," Swedish, Philadephia, 1697; Trinity, Wilmington, Dell, and the Dutch Reformed Church at Oakland, Nol., both built of stone in 1698.

A draft of a new ordinance to govern fire proof construction of buildings in New York City, prepared by a committee of the Board of Aldermen, with Mi. P. P. Miller as expert, contains the following rule for determining the safe carrying capacities of concrete slab floors: "The gross lead in pounds per square foot of floor space shall not exceed the product of the depth in inches of the reinforcement below the top of the slab, by the cross-sectional area in square inches per foot of width of the tensional steel, divided by the square of the span in feet, all multiplied by the following coefficients: cinder concrete is used 14,000 if the reinforceis not continuous over the support 18,000 if the reinforcement consists of rests or other shapes securely hooked attached to the supports, and 26,000 if the reinforcement consists of steel fabri contimuous over the supports; and when stone concrete is used, 30,000 and 40,000 respectively." The rule is a portion of a revision of the city's building code, now in progress

A new Constitutional club has been formally opened at Rhyl. The architect was Mr. X. Grumpton, and Mr. W. Rickersgell was the

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Mr. George Culling, J.P., member of the Norfolk County Conneil, and past chairman of the Swaffham Urben District Council, who has for the last five-and thirty years been in business at Swaffham as a builder and plumber, died last week, ared fifty-of-th years. He held many public offices in North West.

Norfolk.

The relative merits of cast remaind vitrod stoneware pipes for house sewer drains for a been exhaustively investigated for a year of Mr. A. C. Shaver, chaif santhar aspect of the City Government of Pasadeta. Indement is in favour of the east reaching the conclusion arrived at a translation pipes can be made restored fat the lents for pipes can be made restored fat the lents for ing, whilst the signal villager up a least discussion, whilst the signal villager up a least discussion pipes can be far as the can be thrown out of a language to the pipes can be from the sewer to clean the translation of the farmer to clean the translation of the farmer to clean the contract Railway Company.

entire sewer to clean it.

The Great Central Raftway Company his made arrangements to facilitate is exceptionally its employees be the row 4. Per Cert William Loan, and thus enable the smallest investor to acquire this excellent Generalized the subscriptions reaching 25 or notices of 25, the sum can be converted into War Loan Stock, and the necessary stock certificate will then be issued. This effort on the part of this leading railway company to encourage thrift, and directly benefit the country, is very commendable, especially when is borne in mind the number of trained men who have already been released for active service.

COMPETITIONS.

DUNDALK. IRELAND. - The new original in treatment and at the same time Louin country offices. Dandark, competition, a libere to the principles laid down by Owen testra ted to are needs in practice in Fredand. Jones." restricted to are neets in practice in Freland as over settlen and we give the assessor's report. The watness of the competition. Design No. 14 are: Messrs, O'Calaghan at i Woba, FFR.LA.L. 31, South Frederick Street, Dablan. The design placed second settle work of Messis, Batchelor, A.R.H.A., and H. ks., FFR.LA.L. 86. Merrion Space, Dablan and the design placed third, No. 15, is that it Mr. Thomas J. Cullen. 25. Sit. L. Street. Dablan. The award of the **>** in: k Street, Dablin. The award of assess r has been approved and a cepted by the rimittee. The plans are now being exhibited in the Com il Chamber, Court II asc. Dundalk. The cost was limited to 20. O, exclusive of fittings, furniture and equipment. The style of the building had armonse with the Court House, Dundalk a building with Doric portico of considerable ment, which adjoins the site, and Irish materials were to be specified. The selected urchitects have to prepare a perspective of their design forthwith showing the entire scheme. The following is the award of the assessor, Professor W. A. Scott, FRIAL.

45, Mountjoy Square, Dublin, July 8, 1915.

LOUTH COUNTY OFFICES.

Dear Set. I beg to report that I have examined the numeteen designs submitted in competition for the new county offices for County Louth, to be creeted at Dundadk, and place the designs as follows:

(1) The design No. 14.
(2) The design No. 15.
(3) The design No. 15.
(4) The design No. 15.
(5) The design No. 15.
(6) The design No. 15.
(7) The design No. 15.
(8) The design I place first is straightforward and a good solution of the problem, while the architectural treatment is the best of the designs submitted, having regard to the conditions of matelying the old building and as to the cost.

The light major the largest room in the courthouse is not unduly curtailed. A reconsideration of the arrangement of the standard is desirable, and this competition should submit a modified plan according to

competitor should submit a modified plan according.

The design No. 12 is a good second. I commend its arrangement of the conneil chamber, committeeroom and lobbe, and also the staticase. The ground 
plan would have been improved by a direct entrance 
to the staticase hall.

The congested area at the public convenence is a 
defect, but the width and lighting of the courtyard 
is 2000.

The architectural treatment is not of the same 
quality as the planning.

The design No. 15, which I place third, presents a 
good islangiant the width and lighting of the court.

The architectural treatment is not of the same quadity as the planning.

The design No. Li, which I place third, presents a good plan don't be width and lighting of the court variation not so good as in the prenated designs. The offices near the entrance are not well preportioned. The committee rooms are rather remote from the council chamber, if these apartments are to be used as sorts.

The architectural effect of this design would be better than that of the second premated design, building. I thus a typical chamber, a well with the existing Library to the council of the second premated design, building.

I thus a typical to direct attention a contained of the chamber to the council of the council of

idding. I thing to putit to disport attention to the high landed to which to try der number of the designs

fandated to which the Lee of the reached.

The scaled envelops which accompanied the committee curve designs 1 shall submet to your committee on they consider this my award. Yours faithful W. A. Scott.

DONCASTER—The berough surveyor, Mr F O Kirby, has completed the draft cond tons for the processed competition for the severage and swage date all scheme, and the Council of the Iost tution of Civil Engineers will be requested by the corpora-

OWEN JONES PRIZES In this com-OWEN JONES PRIZES. In this com-tier than for designs for functure and hir its high age, open to students in 8 hoors of Art, the trives have been awarded this year by the evanthers of the Board of Edminion to the following students:—John B. Baswell, 8 to of Art. Notice than, for a design for the rest of the current: Frederick W. H. Bread Wiles Scholaff Art. Product

t dhizently studied, there are some which are

## Trade Nelvs.

#### WAGES MOVEMENTS.

Tees side Plumbers' Wages.—The operative plumbers recently gave their employers notice for an advance in wages of one penny per hear - 2.d. to 11d. According to agreements the question came before the Conciliation Board, who were unable to come to a decision. At the manimous request of the Board, Mr. S. E. Bargess, borough surveyor of Middlesbrough, andertook to act as arbitrator. He has now given his decision to the effect that the wates remain unchanged. Mr. Burgess pointed out that the request was for an advance of wages, not a war bonus, and he had considered the question on those lines. The decision affects Middlesbrough, Stockton, and the Hartlepools.

#### TRADE NOTES.

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The British Reinforced Concrete Engineering The British Reinforced Confere Engineering (Co., Limited, intimate that they have (since July 2) removed from their premises at 82, Victoria Street, Westminster, S.W., to I. D.ckinson Street, Manchester, where larger and more convenient offices have been secured in close touch with their works at Trafford Park,

Manchester.

In the desire to avoid purchasing any article that has the slightest appearance of German origin or manufacture the public are apt to conclude that unless the commodity they find include to buy has a thoroughly English feed inclined to buy has a thoroughly English some it must necessarily come from Germany This projudice has even occasionally affected an article like "Ronuk" Floor Polish, which is English from "top to bottom," and it may be interesting to explain the derivation and meaning of the word "Ronuk." When this meaning of the word "Ronuk." When this famous polish was first invented the owners were anxious to get a thoroughly unique name were anxious to get a thoroughly unique name for it, and a retired army officer, who had been much in the East, suggested "Ronuk," which is derived from a Persian word mean-ing beauty, splendour. The owners were much struck with the peculiarity of the word, and our readers can see there is not the shadow of a shade of connection with Germany.

of a shade of connection with Germany. Messrs McNeill and Co., Limited, of Bunhill Row, E.C., tell us of important inquiries for their slag wool consequent on the appearance in The Bullione News of their advertisements illustrating the various types of hostile aircraft. This series of advertisements have proved conclusively that topical events may with advantage suggest good subjects for technical as well as everyday advertising. technical as well as everyday advertising.

MEETINGS FOR THE ENSUING WEEK (To.Hay).—Builders' Benevolent Institution. Thirty-eighth Annual Meeting Koh-i-noor House, Kingsway, W.C.

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WEDNESDAY (July 28)—National Federation of Building Trades Employers, Semi-Annual Mestage Mysome Hall, Great George Street, Leeds, 10 a.m.

#### ---PARLIAMENTARY NOTES.

THE MALL IMPROVEMENT SCHEME.

On a vote of £32 000 for the improvement of the approach to the Mall being applied for in the House of Commons on Thursday night. Mr. Pringle expressed the view that it world be most undestrable to expend money on this work at research Mr. Both Wilson. this work at present.—Mr. Beck (Vice-natiberian of the Household) stated that no reschave been awarded this year by the terrs of the Board of Education to the terrs of the Board of Education to the control of the Board of Education to the Camberlan of the Household: stated that no interest and the second of the Board with this scheme. The control of the London County Council, and the Covernment of the barrgains which were constituted by the barreness of the Phonix II strained County Council, and the Government was the results of the London County Council, and the Covernment of the Dosedon County Council, and the County Council, and the Covernment of the Dosedon County Council, and the Covernment of the Dosedon County Council, and the Covernment of the Dosedon County Council, and the County Council, and the County Council, and the County County

#### CHIPS.

Mr. John Graham, Dromore, Co. Down, has commenced the erection of the new offices for the Great Northern of Ireland Railway Comat Sheriff Street and Common Dublin.

The Tees Valley Water Board, Middles brough, have ordered the preparation of plans for the construction of a reservoir at the top of Ormesby Bank for a water supply certain Cleveland villages

At Wincanton, yesterday Tuesday), Mr. P. M. Crosthwaite held a Local Government Board inquiry into an application by the rural district council for sanction to borrow £3,300 for works of water supply.

The county council of Derbyshire have received the sanction of the Local Government Board to the borrowing of £6,000 for the extension of Penmore Hospital, and £1,600 for a secondary school at likeston.

The dissolution is announced of the part-The dissolution is announced of the part-nership which has hitherto subsisted between G. Henderson and H. Brown, architects and surveyors, at Acresfield, Bolton, Lancaster, under the style of Henderson and Brown.

The urban district council of Fareham, Hants, have received a letter from the Local Government Board, expressing approval generally of the sheme for sewerage and sewage disposal works. The estimated cost is

In our Chip on p. ix. last week concerning Mr. C. J. Innocent's paper on the ruined hall at Thorpe Salvin, read before the Hunts Archæological Society, the name of the sixteenth-century builder of the mansion was as Henry Sandford instead of Hercy

The Council of the Auctioneers' and Estate Agents' Institute, 34, Russell Square, Bloomsbury, W.C., are desirous of obtaining a complete list of those members who are now serving with his Majesty's Forces. Members are asked to forward to the secretary their names, with rank and unit.

Mr. R. W. Furniss, architectural assistant in the Birkenhead borough surveyor's depart-ment, has been appointed by the Health Committee of that corporation clerk of works in connection with the proposed sanatorium at Thingwall, at a salary of £130 a year, plus travelling expenses.

The corporation of Dundee have approved the changes in the plans for the pavilions at the King's Cross Hospital suggested by the architectural inspector of the Local Government Board. The conneil will proceed with the work when the approval of the Treasury to the expenditure is obtained.

The interment took place at Birkdale Cemetery, on Friday, of Mr. Albert Wright, one of the best-known builders in the district. It is estimated that deceased, who was sixty-eight years of age and leaves a widow, was responsible for the erection of 30 per cent, of the modern villa residences in Southport and District.

The new Public Building at Brantford. Ont., The new Proble Building at Brantiord. Out., was opened recently. The building consists of four floers, and cost approximately \$300,000. It is occupied by the Post Office, Customs, Inland Revenue, and Indian Affairs Departments. The contractors were P. H. Second and Sons, and the work was carried out under the supervision of Mr. C. W. Hall, the architect. Mr. J. Graham was clerk of the works.

Only one objector attended the inquiry, conducted by Mr. A. W. Brightmore, D.Sc., M.Inst.C.E. Local Government Board inspector), to the application of the Southampton Corporation for sanction to borrow the sum of \$11,000 for the preprint of \$12.000 for the sum of \$12.000 for terporation for sanction to borrow the sum of £14 000 for the provision of a water tower in connection with the waterworks undertaking, held at the Municipal Offices. Southampton, on Thesday, in last week. Mr. E. C. Rodda, the waterworks engineer, explained the proposals.

posuls.

An ar neve to the district offices of the Prudential Assurance Company in Belfast is completed. The exterior is New Gree in style, the columns being of Newry gran to and the other stone of Portland. The entrance hall, in which the walls are lined with majodea tiles, leads into the general office, which is some 30 fr. square. The flooring is of black and white marble, while the dado is of dark stained wood. A state of compartments opens off the general office. The syme are was designed by the compact of architecture, Mr. Paul Waterheide, M.A. F. R.L.B.A., London, with Messrs, Young and Mackenzie as local architects, the builders being Messrs. Courtbly Brothers, Belfast

### Intercommunication.

REPLIES.

[13142.]—CONCRETE BRIDGE.—I trust the following will be of service to "Bombard":—Bending moment about the middle and at the supports of a beam or slab with both ends fixed and a single concentrated load at the centre:

$$B = \frac{W l}{6}$$

Bending moment on a beam or slab with one end fixed and one end freely supported, and the load uniformly distributed

At the fixed end 
$$B_{c} = \frac{W l}{8}$$
About the middle  $B_{c} = \frac{W l}{10}$ 

Bending moment on a beam or slab with both ends fixed, and the load uniformly distributed:

At the ends 
$$B_c=rac{W\ l}{12}$$
 About the middle  $B_c=rac{W\ l}{12}$ 

Bending moment on a continuous beam or slab of three or more spaus, and the loads uniformly distributed. End spans, about the middle and at the inner support:

$$B = \frac{W l}{10}$$

Intermediate spans, about the m dille, and at supports.

$$B = \frac{W}{12}$$

Bending moment on a continuous beam or slab of two spans, and the load uniformly distributed:

About the middle of spans 
$$B_{t} = \frac{W t}{10}$$
At the central support  $B_{t} = \frac{W t}{10}$ 

Reaction on adjoining support from intermediate spans in continuous construction:

#### LEGAL INTELLIGENCE.

SEWERAGE CONTRACT APPEAL. the King's Bench Division on Wednesday. Justices Darling and Coloridge heard an appeal by the Tipton Urban Descrict Council in connection with the Tipton sewerage case from touncesson with the Tipton sewersige case from a decision of the Official Referee in favour of Mr. Arthur John Plowdrill, who had sued them as assigned of a contract between the conneil and Misses. Thompson and Farley, and had a final form of the detail and final form. council and Mosses. Thempson and Farley, and had obtained judgment for £451 and costs. They claimed to recover the money in respect of a balance of the contract price alleged to have been wrongfully deducted on account of charges paid by the District Council to the Birmingham Canal Company for drawing off the water while sewer pipes were land across the canal. The Official Referee came to the conclusion, after hearing evidence and arguments for six days, that the plaintoff was entitled to £206 on his original claim and £225 on an amended claim. Mr. Distornal, K.C. on holial of the Tipton Urban District Council, said the case arose out of a contract made on needs of the Tipton Croan District Council, said the case arose out of a contract made on September 24, 1912, between Messrs. Thomp on September 24, 1912, between Messrs. Thompson and Farley and the council, and Mr Plowdrill was the assignee of the obligations and benefits under that contract, which was for the construction of sewers in the council's district. The sewers had to cross the Birmingham Canal in three places, and, for this purpose, it was necessary that the canal should be emptied. The Birmingham Canal Company charged the district conneil for the time the canal was empty. The contract and bills of quantities stipulated that the contractor pany charged the district council for the time the canal was empty. The contract and bills of quantities stipulated that the contractor should provide certain sums for these canal crossings and he responsible for them. The district had paid £700 in respect of these canal crossings, and Mr Plowdrill had paid nothing. In the settlement of accounts between the parties the engineer to the council deducted a portion of this £700 from Mr. Plowdrill's bill and certified for the balance which he was and certified for the balance which he was paid. Mr. Plowdrill then sued for the amount R = .6 W

The bending moments upon square or rectangular slabs with load uniformly distributed and supported on paid it he sued by an amendment for the

THE CROWNS POWER TO BE THE CROWNS PUWERS IN TION LAND In the Sept. Appeal on Weiners, as In-Master of the R. Cale II, we of tools and Wein Post-heart. aere d'ou e potrpussos had pertinent to Kinger, ton Assembled to Manager ton Manager to the Kinger to Avory, in the Kinger that the Kinger to Manager that the Kinger to Manager than the Kinger to Manager than the Kinger to Manager than the Kinger to Manager to Mana Just to Avory, an the King Boy of head the King by virtue of a permitted that the King by virtue of a permitted that the King by virtue of a permitted the King by virtue of a permitted the Bog by virtue of a permitted of the Bog by virtue of a permitted of the Bog by virtue of a permitted on the navio and that the air manner of a power to take the region of find a permitted ings and the docaty ofthe art for the continuous and the war and the feet of the Review of the safety and the solution and for the Review of the property. For these colds with provide the top property be the those of with property bear those of the property of the Review of the property. For these colds and the first of the property in the supplicants had failed to establish the first of the Royal companion. He trooper over, that they were entired, indeed the first of the Royal companion of the Bog by the form of almage suffered the or a nith force of the and Mr. Branks Gove the ways of the soft manner of the appear, the Short Gone of and Mr. Branks on for the Crown Mr. Brank of the Royal of the Scott contended that the companion of the Royal of Master of the Ro's, in his pagment left year on Thursday at the close of argument, expressed the opinion that the possibility of an acrophane and by the cite was an "emergency" under the Act of 102. The Court was unanimously dispute the the appeal failed and must be membered with that conclusion.

BUILDERS REGIT OF APPEAL FROM that conclusion.

the appeal failed and must be declared with costs. He and the Lords Justices would a later date state their reasons for confit 2 to that conclusion.

BUILDERS' RIGHT OF APPEAL FROM A KING'S BENCH JUDGMENT Averacy General v. Knowles. In the Lancisate Chancery Court on Finday Vice Chancely. Stewart Smith, K.C., heard this action in which the Attorney General for the Councy Paristro of Lancaster, at the relation of the Coury Paristro of Darwen, asked for an injunction to rest another defendants. John Knowles, Relater Knowles, and Walter Knowles, lenders, Dawen, from continuing to build two heaves. Knowles, and Walter Knowles, lenders, Dawen, from continuing to build two heaves appoin the corporation with regard to the raying out of new streets and the centert of powers upon the corporation with regard to the raying out of new streets and the creation of new buildings. The defendants built two houses before the street was laid out, and then eget proceedings were taken in the police court, as a small fine was imposed by the Darwer perfices. The defendants appealed to Quarter Sessions, which quasiled the conviction of the pistices, and the case was then taken to the Court of King's Bench. That Court upda I the decision of the justices. The Vio Charcellor The decision of the Court of King's Bench is final. Mr. Sutton said the plaintiffs held the decision of the King's Bench was bit ding upon the defendants, and probably the Court would not think it right to differ from the Court of King's Bench. After flut does so, Mr. Sutton added, the Court of Q after Sessions formally confirmed the decisions of the king's Bench was bit ding upon the defendants, and probably the Court would not think it right to differ from the Court of King's Bench and the decision of the King's Bench was bit ding upon the defendants and probably the Court was settled, but the defendants spid the fire the corporation then understood that the rest of particular arguments the Vice Chancelles si, I was a consider the matter and give jettles to Mr. Aco

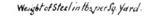
The Board of Truston of Delivers Newark, Del., have a problem Frank Miles Day, of Philes problem to the college buildings own over \$225,000

over 8225,000

Mr. William Arthur Mason, of \$1, c.t., or Row, Burmingham, surveyor and valuer, whose death took place on April 5 has left estate of the amount of £17,435. Testator of: £2 to Regim of them is Feeder ek Hod evand the goodwill of his manness and office furriture.

An additional be the various architectural

An exhibition by the various architectural societies of the Pacific coast has been opened in San Francisco. The collection comprises examples from nearly every town and city of importance in California, as represented by upwards of three hundred individuals and ficus.



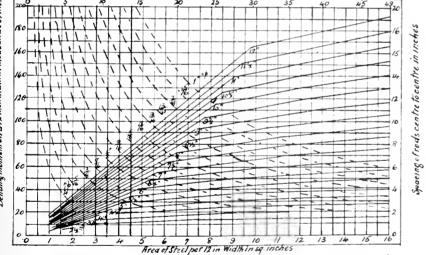


Diagram. For calculating minferoements in slabs. Based on limiting stresses of 600 ths. per so, in in the Concrete, and 16 ooo the per sq. in in the steel. The full lines are for slabs of effective depth stated LP, 12"= 12 ins. depth from top of Concrete to centre of steel. The overall depth must be increased to allow for at least & cover of concrete to the steel, so that the total thickness of a 12" in slab would be about 13 ins. The dotted lines show sizes of round rods the spacing of which is given on the night hand rertical seals.

four edges, and reinforced in two directions at right angles to each other, should be determined as for slabs reinforced in one direction only, with the load reduced, however, by multiplying it by the following factors: For the shorter span—i.e., breadtb—

$$Fb = \frac{1}{I + \left(\frac{b}{l}\right)^{\frac{1}{2}}}$$

For the longer span-i.e., length-

$$Fl = \frac{1}{1 + \left(\frac{l}{-1}\right)^4}$$

Where b = breadth or shorter dimension and l = length or longer dimension.—James Bromley, Rothwell Estate Office, Miller Arcade, Preston, Lanes.

sams provided in the contract which he had agreed to pay to the canal company. Although he had not paid a penny, the Referee not only awarded the amount deducted, but the amount provided in the contract. Mr. A. A. Hudson, K.C., in support of the Referee's finding, argued that the urban district council had incurred liabilities with which Mr. Plowdrill had nothing whatever to do, and after had incurred liabilities with which Mr. Plow-drill had nothing whatever to do, and after the canal was crossed the district council entered into one ious agreements with the canal empany. Eventually their Lordships allowed the appeal as to £225, but affirmed the de-cision of the Official Referee in regard to the balance of £205. Judgment was entered accordingly, with no order as to \$55.

#### TO ARMS!

#### 4th Battalion "Architects" Central London Regiment Volunteers.

Recruits are urgently needed for the Regulars, Ferritorials, and Volunteers. Intending recruits should apply to Battalon III adquarters, where they will be advised as to the branch of the Service for which they are best suited.

ORDERS FOR THE WEEK BY LIEUTENANC COLONIA, A W WARDEN.
Officer for the week C, S, Peach Next for Duty. L. R. Guthry.

ORDERS FOR THE WEAR BY MARDEN.
ORDERS FOR THE WEAR A W WARDEN.
ORDERS FOR THE WEAR C. S. Peach
Nort for Duty, L. R. Gotthers.
REGIMENTAL INSPECTION.
Sunday, July 25, 1915. All members, including recents, must attend. Objects: Drill order with haversacks and water bottles) Members of Ministon Shifts I to 4 inclusive will parade at camp as ordered. Remainder parade by the Langham Hotel, Portland Place, W., at 2 p.m. Munition Shifts from camp will renderous there. Applications for leave must be received at the Adjutant's Office. Io. conduct street, W., not later than this evening. July 21 MUNITION CAMP.
All members of Shifts 1-4 parade at camp. Saturday, 24th inst., 3 p.m. (train, 2.2 Waterloo), for weekend, unless ordered to the contrary.
Shifts for duty, weekend commencing Saturday, 31st, shifts 5-5 inclusive.
Members other than those detailed for munition work who desire to sleep in camp for weekendshould notify the Quartermaster at camp, not later than the first pest of Thursday morning of each week. These men should report themselves to the Orderly Officer on arrival in camp.
Hours of parade for men net sleeping in camp i—Saturday, 3 p.m. (train Waterloo, 2 2 p.m. for Hampton Court), and sunday, 11.15 a.m., at camp in each case. (Train, Waterloo, 10.16 a.m.)

A few names are still required of members able to sleep in camp during the week, not necessarily for the whole of the period. Applicants should state for what period they are available Postal Address of Camp—4th Battalion C.I. R.V. Camp, Summer Garden, East Molesey.

FUMMER CAMP. July 31—Vagast 16.
Names must be received at the Adjutant's Office not later than Friday next, the 23rd inst. All members are expected to attend for one week at least. Company and Pateon Gummander lasts of men attending should be forwarded to the Adjutant at Camp by first post Saturday morning next. The cost will not exceed abs. per week

BATTALION COMPETITIONS.

Entites in writing should be forwarded to the Adjutant at Camp by next saturday morning at latest.

Entries in writing should be forwarded to the Adjutant at Camp by next saturday morning at latest.

DERLIS AND PARADES.
All drulls and parades will be held as usuad.

RECRUITS.
A number of regnits are required to replace those reantly paned the Regular and Territorial Annaes, or who have obtained commissions. Applications should be addressed to the Adjutant's edice.

RECRUIT DRILLS.

Company Others are reminded that they must detail the teessary No.0.'s as instructors.

"A" toys: Dan's Yard, 515 and 645 Wednesdays and Fridays. If wet, the e-drills will be held at Willbank School.

"B" (voy. Dan's Yard, 545 and 645 Wednesdays, of tees p.m.

"C" Coy: New being formed Drill ground and monature raine. Charad Electic Supply Company's Generating Station, helde Road, St. John's Wood, N.W.

"D" Coy. Mercer's School, The days and Thursdays, 645 p.m.

SCHOOL OF ARMS
As usual, at Mi'bean, School, Erasmus Street.

Westminister, on The days, 6, to s. p.m.

CORRESPONDENCE.

Enredment forms of new members and all correspondence regarding regrating for the Army of te financial matters, must be addressed to the Adjutant, by Companyters.

P. TUFTON STREET, WESTMINSTER, SW.

By Order,

L. GUTHRIE Adjut on

-The London County Coots il Tramways and Imprevements Bill, including a scheme for laving tramways along Mansell Street to Tower Hall, was considered last week by a Select Committee of the Horse of London price parties of the Mansell Street scheme were the Corporation and the Port of London Authority. In the vesselt the Select Committee rejected the proposed thereby reversing the decision of the

In the result the Sole t Committee rejected the proposal thereby reversing the decision of the House of Commons Committee.

The circumstances surrounding the death of Mr. Stephen Coates, a well-known Middlesbrough builder and contractor, who was killed on the railway at Ormesby Station on Thursday, were investigated by a Middlesbrough lary on Friday night. Evidence was given that decised I had affected from incomia, and had been very depressed. A signalman said that Mr. Coates got in the first of way and deliberate when he had not not put I is head on the line when a mineral train was approaching. A very had a similar when was

### LATEST PRICES.

N.B.—All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

#### TIMBER.

Owing to stoppage of supplies all prices have advanced considerably.

Per ton.

Per ton.

	$-$ F $\epsilon$	er to	٦n.		Рe	r to	n.
Rolled Steel Joists, English, Wrought Iron Girder Plates Steel Girder Plates Bar Iron, good Staffs	9	12 15 15 5	0	13	£9 10 9 8	0 17	6 0 6 0
Do., Lowmoor, Flat, Round, or Square Do., Welsh		0 15			0 5	0 17	0
Boiler Plates, Iron— South Staffs Best Snedshill Angles, 10s, Tees 20s. pe	9	0	0	11	8 9	15 10	0
Angles, 105, 1ees 205, pe Builders' Hoop Iron, for bonding Ditto galvanised, £ Galvanised Corrugated Sheet Iron	g, £ 19 t	212	5s.	to	£1 pe	2 15 r to	n.
No. 6ft. to 8ft. long, inclusive gauge	18 t Pe 13 1 Pe £6 . £6 . 8	r to 0 ( 0 r to 17 17 5 5 15	n. 0 n. 6 6 0 0 0	to	Pe £13 14 Pe £8 8 8	10 0 r to	n C O n O O O O
Corrugated Iron, 24 gauge	. 16	0	0	11		_	
B.B. Drawn Telegraph Wire, Gal	van	ise	a—		В	w.	G.

0 to 8 9 10 11 12 B.W.G. £10 10s, £10 15s. £11 0s. £11 5s. £11 15s. per ton. Cast-Iron Socket Pipes-

 Yought-Iron Tubes and Fittings—Discount off

 Standard Lists f.o.b. plus 2½ per cent.)—

 Gas Tubes
 66½

 Water-Tubes
 66½

 Steam-Tubes
 60

 Galvanised Gast-Tubes
 55

 Galvanised Water-Tubes
 514

 Galvanised Steam-Tubes
 45

#### OTHER METALS.

		Per ton	١.	Per ton	
ı	Lead Water Pipe, Town	£32 10	0 to	_	
.	Country	-33 10	0 .,	_	
.	Lead Barrel Pipe, Town	. 2 10	0,,	_	
	Country	*37 10	0 ,,	_	
.	Lead Pipe, Tinned inside, Towa	•34 10	0 ,,	_	
	Country	*35 10	0 ,,	_	
	Lead Pipe, tinned inside and				
	outside	*37 O	0.,	_	
	Country	*38 0	0,,	_	
	Composition Ga-Pipe, Town	*35 10	0,,		
	Country	*36 10	0 ,,	-	
Γ	Lead Soil-pipe up to 42in.) Town	*35 <b>1</b> 0	0 ,,	_	
	tountry	·36 10	0 .,	_	
	Over 45in, £1 per to		• .		
,	Lead, Common Brands	17 17		£'8 12	6
t	Lead Shot, in 28lb, bags	24 15	0 ,.		,
	Copper sheets, sheathing & rods	102 U		103 0	(
	Copper, British Cake and Ingot	90 10	0 .,		(
	Tin, English Ingots	162 0	0		(
	Do, Bass,	163 0		164 0	(
	Pig Lead, in lewt. Pigs. Town	23 0	0 .,	24 0	(
	Sheet Lead, Town	*32 0	0 ,,	_	
	Country	*33 0	0 ,.	_	
}	Genuine White Lead	*37 10	0 ,,		
3"	Refined Red Lead	31 0	0 ,,		
r	Sheet Zinc	115 0	0 ,,		
	Old Lead, against account	22 0	0 ,,		
r	Tinper cwt.	9 10	0 ,,	_	
	Cut nails (per cwt. basis, ordinary	0 14	0	_	
-	hrand)			_	

. For 5 cwt, lots and upwards,

#### SLATES.

	in, i	n.	£ s.	d.	per l	,000 of
Blue Portmadoc	20 - 1	01	12 12	6	1,200 €	at r. stn.
	16	8	6 12	6	+ 4	* 1
Blue Bangor	20 1	10	13 2	6	* *	* 9
	20 1	2	13 17	6	4.5	4.7
First quality	20 ., 1	0	13 0	0	* 1	4.9
.,	20 1	2	13 15	0	1.1	11
,, .,	16	8	7 5	0	7.5	4.9
Eureka unfadirg						
green	20 1	10	15 17	6	9.9	4.9
	20 ., 3	12	18 7	6	11	* 1
	18 :	10	13 5	0		
	16	8	10 5	0	5.0	4.5
Permanent Green	20 ., :	10	11 12	6	4.5	,,
					1.0	1.5
	16 .,	8	6 12		* *	1.5

#### BRICKS.

(All prices net.)

(A)	1 p	rice	S I	net.)				
First Hard Stocks	£l	15	0	per 1,000	along			
Second Hard Stocks		11	0	9.3	9.7	, 1	ive	r.
Mild Stocks	1	9	0	4.5	deliv			
Picked Stocks for	2	Š	0		raniv.			
Flettons		14	0	11	11			
Pressed Wire Cuts		18	0	**	11			
Red Wire Cuts		14	0	11	11	- 1	,	
Best Fareham Red	3	12	0	**	1.9		9	
Best Rd Pressed	,	_	_					
Ruahon Facing Best Blue Pressed	5	0	0	9.	9.7	,	,	
Staffordshire	3	15	0	.,		,		
Ditto Bullnose	4		ŏ	11			1	
Best Stourbridge Fire-								
bricks	4	0	0	11 31	. 11	*	· a ·	in.
23m. Best Red Ac-	١.	10	6		t, deli ull tru			
crington Plastic	4	10	О		n Lor			
Facing Bricks	-			, ,	200		Per	
31" Accrington Best	R	ed	P	lastic F	acing		,000	
Bricks						£2		ç
3g" ditto Second Best	Pla	asti	c c	iitto		2	2 11	6 3
Ditto Ordinary Sec Ditto Plastic Engl	201	orir	У.	Bricks			17	6
Sewer Arch Brick,	no:	r	10	re than	3½ in	-		-
thickest part						2	0	0
31" Chimney Bricks fi	tf∈	or o	uts	side work		2	6	0
32" ditto ditto through	(8)	nd t	hr	ough	Oota	2	U	U
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gons; Z <sub>2</sub> and 2 r	ıuı	us	Du		54001	3	7	9
Accrington Air Bricks	. 9		2 c	onrse dee	p, eacl	a 0	0	9
Ditto ditto	9	" × .	l c	ourse		0	0	ě
Accrington Camber A	rab							
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3 ,, 9"		1.5		11	14	0	2	,1
4 1, 9"		* 9		**		0		11
5 9"		1.1			**	0	4	6.
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GLAZ	ZE	D I	BR	ICKS.				

HARD GLAZES (PER 1,000).

White	, Iv	ory,	an	đ			Be	st.					
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#### MOUL! ED BRICKS,

Stretchers and Headers-Stretchers and Headers—8d each 8d. each 8d. each Internal and External Angles—1 2 each 12 each 12 each 12 each 12 each 13d. each 4d. each 6d. each 6d. each 4d. each 6d. each 6d. each 4d. each 6d. each 6d. each Headers—1000 E22 17 6 27 17 6 Quoins and Bullnose ....

Compass bricks, circu'ar and arch bricks of single radius £6 per 1,000 over above list for their respective kinds and colours.

Camber arch bricks, any kind or colour, ls. 2d each.

Stretchers cut for Closers and Nicked Double Headers, £1 per 1,000 extra.

\* These prices are carriage paid in ful. truck loads, to London Stations.

Thames Sand

7 6 per yard, delivered.
Pit Sand

7 0 ...

Tbames Ballast

6 0 ...

8 d. Per ton.

Best Portland Cement

36 0 to 41 0 delivered,
Ground Blue Lias Lime

21 0 per ton delivered. Exclusive of charge for sacks.

s, d. s. d. Per yard.

Store Stone Lime ........ 13 6 to 14 0 delivered.

Storrbridge Fireclay in sacks 27s. 0d. per ton at rail, way station.

#### STONE.

0.01.2			
Red Mansfield, in blocks per foot cube	03	2	4 3 2
Darley Dale, ditto	0	2	3
Red Corsehill, ditto	0	2	2
Closeburn Red Freestone, ditto "			0
Ancaster, ditto			10
Greenshill, ditto			10
Beer, ditto "	Ü	1	6
Chilmark, ditto (in truck at		3	101
Nine Elms)	U	1	101
Hard York, ditto	U	2	U
Do. do. 6 in. sawn both sides,	_	-	0
landings, random sizes per foot sup.	U	2	8
Do. do. 3 in. slab sawn two	^	1	3.
sides, random sizes	U	÷	3
All F.O.R. London.			

# THE BUILDING NEWS

## AND ENGINEERING JOURNAL.

### Effingham House. The National Competition's War-Time Display... Royal College of Art Students' Work Exhibition, 1915

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has a condition. Portain after the Bombardment Exhibition of Photographs, Lenesster Galleries Lenester Square, by the Sculptor in Charge of the Building for the past twenty years.

Strand, W.C.

Rehousing for the City Corporation Summe Street, Southwark Mr. Victor Wilkins, Arch

theet.

The New Law Courts Duchan, for the Umon Government of Sonth Africa. View facing Duchan Bayand the Entrance Had with One of the Corridor to the Courts. Mr. Stanley G. Hudson, I'R.B.A.A. Architect

The First Church of Christ Scientast, Walter's Road, Swarsea. View and plan, Mr. Glendinning Mox. Kirkealdy and Dysart School Board, Blair Hill School. Sciented design; plan, clevation, and section. Mr. Wilham Williamson, F.R.L.B.A. Architect.

### THE NATIONAL COMPETITION'S WAR-TIME DISPLAY.

The Elizabethan Oak Room, Leigh Hail, Esex Builders' Benevolent Institution
The London County Council
The London County Council Regulations for Reinforced Concrete Construction—Continued Correspondence
Our Illustrations
Currente Calamo

Currente Calamo
Water Supply and Sanitary Matters
Trade Notes 

Unlike individual academies, tional establishments, and particularly schools of architecture specially concerned with men students, this annual exhibition of works submitted from all parts of the British Isles, and also from New Zealand. has not been materially affected-at any rate as regards the number of competitive efforts, by the unsettled state of affairs during the past twelve months in consequence of the war. No fewer than 1991 exhibits were open to public inspection at the Victoria and Albert Museum on Friday last. This result is not perhaps un-expected, seeing that "business as usual" has been carried forward in a quiet way in many a remote centre of artteaching as well as in the industrial towns which have been more or less unusually busy on profitable work incidental to military affairs. Apart from these considerations, it must be remembered that a very large proportion of these competitors are women; and even in normal times of late years the successes recorded in these exhibitions at South Kensington have been carried off by the gentler sex, who not infrequently have far surpassed the men in the excellence of skill displayed by prizewinners.\* This, no doubt, is so on the present occasion, especially in the jewelry section, in which men are generally conspicuous by their absence, while in the Department of Architecture 1914-15, contributed to only by men, the number of exhibits and the standard of work have certainly never reached a lower level. For many years we have had no alternative but to point out again and again the entirely unsatisfactory state of things still

\*The following abstract gives an approximate idea of the proportion of the sexes among the medal and other approved works now on exhibition. London is represented by a total of \$75 exhibits, of which 141 are hy women, who secured all 3 of the gold medals awarded in London, S out of 14 silver medals, and 27 out of 41 bronze medals. Leicester sends 95 works, 27 being by women who obtained 4 out of 5 silver medals and 2 out of 5 bronze medals. Birmingham shows 65 exhibits, 25 being by women, the male students taking a gold medal, a silver medal, and a bronze medal. Manchester's total representation numbers \$2, of which women show 26 works, men taking 1 gold medal, 1 silver medal, and 2 hronze medals. Leeds has 41 exhibits, with 15 to the women's credit, but out of the 6 medals taken one only goes to a lady. Kingston and Hull show 33, with a proportion out of this of 24 women, who also secured all the medals given to this school. Nottingham sends successfully 41 works, with a proportion of 11 to women; they take only two medals out of 21, two being gold medals. Bradford shows 30 exhibits, all by men except three, and these are among the "commended." Newsatleon-Tyne shows a modest 12, a third being by women. These figures, taking them for what they are worth, are fairly representative, and out of the 74 quoted women scored 276. The total number of works submitted was 11,129 hy 267 schools, classes, etc. The total awards are 7 gold medals, 58 silver medals. 163 bronze medals, 334 book prizes, and 1,428 "commended." Of the 7 gold medals women have won three.

prevailing in connection with the "mistress art" throughout the land in the schools of art conducted under the ægis of the Board of Education. We have over and over again said very much what the examiners in Architecture are now plainly stating in their report this year. The paucity of the display in this section of the National Competitions War-time Exhibition is, however, not solely due to the absence of the best of the students on military service, though this is the prime reason set out in the judges' remarks. At any rate, it is only indirectly true; by which we mean that the R.I.B.A. having last autumn suspended their prize competitions, the usual migration of unsuccess ful designs from Conduit Street to South Kensington has for once been made impossible; and to that extent we are glad. because the absence of such works, which never ought to have been admitted, demonstrates clearly the futility of the methods which at last are now correctly recognised by the assessors in their pertinent observations upon the drawings as submitted in competition for the national medals and prizes this year.

Mr. E. Guy Dawber (the hon, secretary of the Institute), for the first time we believe, has joined the Board of Examiners his confreres being Mr. Reginald Blomfield, R.A., past P.R.I.B.A., and Profes sor E. S. Prior, A.R.A. It will be patent to everyone outside the water-tight compartments of the Board of Education that architectural authorities, such as these capable experts so well representative of the profession, are convinced that all this amateurish child's play of this department dealing with the most ancient and supreme of the Fine Arts ought to be reconsidered. This we have repeatedly insisted on without avail, and it remains to be seen whether even now any improvements will be attempted by the Government. The Report says, what every one can see for themselves, that this class in 1915 is distinctly below the average level of works shown in recent years, and we have already stated one very good reason for this decline. The examiners point out that the fantastic and meaningless use of colour still obtains, accompanied by "such ignorance of architectural design as to imply the absence of any intelligent control on the part of the master. For example, designs for a market hall: in one of these adequate lighting for market purposes under the hall has not been provided. In another design for the same subject solid piers of masonry are shown on the ground floor, carrying nothing except a 14-in. wall, which is supposed to support a roof of 42 ft. span and a heavy clock turret, without any tier or abut-

ments. Drawings are submitted showing an entire absence of any architectural sense or knowledge of construction; and it is no solution of the problem of design to leave large blank sections, omitting all details of construction, on the hypothesis that reinforced concrete will do all that is necessary. The examiners wish to point out ' (and this is the crux of the whole position) "that it is mischievous for students to attempt architectural design unless there is adequate provision for architectural teaching by trained and competent men, and that in their opinion, in the absence of such provision architecture should be definitely omitted from the school curriculum. Ignorant or inade-quate instruction in architecture does more harm than good, and the results are too often seen in the works of the speculative builder." And further, as to measured drawings, "the examiners regret to note that in certain cases drawings executed under the master's supervision are far from satisfactory."

That is conclusive enough, and needs no further comment unless it be to add that men who are engaged, as art masters must be, in teaching all sorts of art and craft work are naturally incapable of concentrating enough attention on the task of teaching architecture, of which at best they have but a slight acquaintance, particularly if their personal prelibections run, as they usually do, in what they conceive to be the more important branches of draughts manship, painting, or modelling, to say nothing of applied design. Of decoration they display no knowledge, and so "give splendour to obscurity and distinction to undiscovered merit," as Burke ironically said a hundred years ago about another organisation. We have enough of so-called "chats" about architecture, and need to get to the root of the business, which depends upon sound construction, and is yet the highest of the arts. The designs exhibited this year in the Royal College of Art show the best of the type of thing produced by specialising students who are the very individuals destined in a few years to be sent forth to teach architec ture to students throughout the length and breadth of the land, thus wasting money paid in fees, and, more precious still, the time of youth which can never b. redeemed, and, at the same time, landing the student in what must prove a cul-desac.

The duties of the judges this year were strangely out of all proportion to their personal status, and the highest award a £15,000 museum, of which Mr. Harold Beard, of Leeds, is the author. The tin for its judiciousness and refined Greek character, which in Leeds would the Camden School of Art, Islington, son lok as black as Broderick's famous that with a This museum has four galleries and a portional in stone and look.

The formula is strong this year, and the Camden School of Art, Islington, is once more singled out for a gold medal. It is given to Miss borothy Ballantine for a chosonné and portional in the camber of the course of the ang in re than the money proposed would gold and silver necklace with coloured privide fir. A book prize is accorded to Mr. Cuthbert B. Stewart, of Newcastle-on-Type, for a block of almshouses set out in a quadrangle with a dining hall. This subject is very like one of the advanced sindents' schemes on view this year at the R val College of Art; so much so, in fact, that both appear to be the result of the same instructions. But this may be a mere coincidence. Mr. Stewart puts the almspe ples' bedrooms on the first floor, and the colonnaded cloister or verandah in front must darken the ground-floor roms, add much to the cost, and prove very draughty for the aged to sit out under. There is much waste of space in the rooting, which is covered with red tiles, but would seem to be pretty in execution. Mr. Percy Whitehead, from the same school, gets a similar prize for an elementary school and a fireplace. "Com-mendation" is the limit of recognition dewoted to Mr. Stanley E. Rodger, of the Armstrong College, Newcastle-on-Tyne, for a garden pavilion, shown by a taking yellowish pastel view sketch of a loggia and a lid-looking side summer-houses, or tool places, which appear to make up a pleasant scheme backed by trees. "measured drawings" are not much more exhibit atting than these architectural designs, but Mr. William N. Spence, of Dublin, shows a workmanlike set of Trinity College Chapel in that city, giving plans and details of a type of building for which Dublin is so famous, and which is now much in fashion. We need not allude to the ther few things in this immediate alcove devited to architecture; indeed, that art is so insufficiently represented that to fill the wall and two side screens other things follow on. Before proceeding to the gold and silver medal works, we made a note or two at the far end of the big north gall-ry on some decorative in-terior work by Mr. Arthur E. Harvey, of Hackney Institute, for the interior of a ballroom in a country house. It proposed a Late Classic panelling for the mural treatment with pedimented over-doors and panel emblazened with heraldry over the fireplace, of which features details are given. The capital ceiling in plastering has a cove with foliations in the corners beyond the mitres, and in the centre of its All very good of its kind on old lengths. This thoroughness is worth much more than a book prize, even if the fire-place is rather flat in design. At least it is reserved and in scale. Mr. Percy B is reserved and in scale. Mr. Percy B Illindson, of the Storey Institute, Lan-caster, only scores a book prize for his Accoration drawings of a dining-room and formiture, including a fairly successful sideboard, a carving chair and a smaller me on sits. There is also a view of the room in watercolour and sets of plans showing the lay-out. We hardly think it is wise not to recognise such a standard of work, giving only a book—not that we recked the lesign to highly still, there is a limit.

There are this year seven gold modals, 58 silver modals, 163 bronze modals, 334 book prizes and 1,428 commended designs in the Exhibition. The modelled figure from the nule of a man, somewhat reroom the name of a main, somewhat he calling the Quot Thrower, admirably wins a fold medal. It is by Mr. George W. Bedford, of Leeds, who has imparted our a fine swing generally and good jose

enamel pendant, harmonious in scale and tone throughout, though, perhaps, lacking incident in its design, and undistin-tinguished by much special inventive-ness of idea. The judges in this section are Messrs. Nelson Dawson. R.E., Alexander Fisher, R.B.S., and George B. Heming, the same examiners who almost invariably have decided these awards for some years, and nearly the same words were repeated in report this time as those printed in 1912, when a gold medal was given to Miss Dorothy Munro, of the Camden School, for a Scotch-like enamelled cloak School, for a Scotch-like enamelied cloak clasp. Last year four silver medals went to the same Islington school, besides a bronze one for jewelry. On the present occasion Mr. Wilfrid L. Vinson of this school takes the jewelry silver medal (29) for a pendant and chain in gold and silver set with stones. We think the pendant is rather bizarre in effect and overdone by its attachments. A brenze medal is won by Miss Cecilia Adams, of Belford Park, from the Central School of Arts and Crafts, Camberwell, for two necklaces; one in gold having a pendant with a Medieval castle set about with jewels and foliage beautifully executed. and with an idea of its own, and the other in enamelled links of a delicate chain and carrying a moonstone drop pendant wrought about with ideal settings. In the same showcase, and as a centre to the other two exhibits in the place of honour, is an exquisitely rich necklace in zold and enamel, blue and white, interspaced with ball chains in enamel, bearing an engraved swivel pendant illustrative of personalities of the contemporary "Dance" set in a jewelled and foliated frame by a jewelled a jewelled and fonated frame by the same lady (374), and for this work a book prize was thought appropriate! Miss Dorothy Hollam, also from the Peckham Road School, has a bronze medal for an enamelled plaque not particularly interesting. When competitors send in a group or set of similar works of art with a view to recognition on their merits in the same class, it seems unreasonable to divide them up so as to give two minor prizes in lieu of one substantial reward, especially when the rule "b" precludes the successful student from receiving more than one of the same It looks like giving with one class prizes. hand and taking back with the other, particularly when the asterisk is added signifying that the competitor is not qualified, no matter what his or her skill may be, to receive any prize as recommended by the examiners. There is no quibble for which some plausible excuse may not be found, and this, perhaps, is one of such.

A gold medal is well won by Mr. G. Rayner Hoff, of Nottingham, for modelled design for a plaster panel over a theatre or opera-house proscenium. The work is rhythmic in the progression of the low-relief figures, with an exquisite reserve and power of grouping, flatly handled, with horses at the tail-end of the procession. Miss Gwen White, of Mary-lebone. Polytechnic, for a stained wood Inssing case, somes a gold medal by her accomplished handicraftsmanship, though the uniquires recken the opaque pigment here used detracts from the vivacious colour displayed by her work last year. of the head in particular, the figure ex-cellently modelled in its detail. The Jewelry Class, as we have already ably noticed. This year's medal can-

not be taken by this lady, David Evans, of Manchester, sends a "Roll of Honour" frame in oak, carved with laurel leaves in a distinguished way which fully merits the gold medal accorded. The work evinces a knowledge of old work and traditional manner, while the author has impressed his personality an original and crisp handling. adding illuminated heraldic shields in the head of the frame. This is quite one of the best things in the Exhibition. Mr. L. R. Squirrell, of Ipswich, takes a silver medal for delightful studies and etchings of old houses and sheds, and Mr. Fred C. Jones has a like reward for fine book illustrations of "Gulliver's Travels" (Bradford 13). We are much taken with a glazed pottery figure of a woman in green and dark brown purple robe, from Hanley School by Mr. Joseph Bennison, whose work is of great interest in colour and modelling, for which he wins a silver medal. Miss Grace Ashmore, in the same case and from the same school, is represented by her bronze medal Piping Shepherd on a Rock, in pottery. Miss Gertrude Green has a Japanese-like figure of like kind for which a book prize is given, and the penguins by Mr. Lionel Peters, of Greenwich, are "commended." The figure studies from the nude this year are not so brilliant as usual; but Miss Constance Carver, of Leicester, has a silver medal for a direct and well-shaded-in graphic back view of a man vigorously drawn, and Miss Dorothy Bunn, of Birmingham, has fine shaded heads from the The stained glass is exceedingly well displayed this year, but the wallpaper designs are puerile. Miss Doris Boulton, of Deptford, sends some excellent coloured lithographs, for which she won a bronze medal.

### ROYAL COLLEGE OF ART STUDENTS' WORK EXHIBITION,

Notwithstanding the fact that this is the smallest show which we have ever seen since the Royal College of Art was established, the Board of Education has not yet made up its mind as to how the prizes and studentships are to be allocated, or, indeed, whether the prizes will be awarded at all. There may be a good reason for this delay, but even if competitors are few this season, there is all the more reason, surely, to encourage participators by businesslike conduct on the part of those at the head of affairs. Officials with comfortable posts possibly care little how much often depends upon some individual student's comparative success or otherwise negligence. Indeed, our inquiry only elicited a pained surprise at our wonder of the hesitancy of the Board.

The private view of the exhibition was last Friday, and it is now open to the public in Exhibition Road, behind the Science Schools in the Royal College of Art. If small, the exhibition has the merit of being compactly arranged all cn one floor and within compass, but otherwise the advantage is small, too, because there is not much of it, considering what the cost to the country just now is when money is so bally needed for more serious business; not that we are blaming the professors and officials, for, obviously, without the class attendances, there can be no material for production in proportion to the outlay.

Taking the architectural exhibits in the order of their hanging, having little else to guide us, we begin with one of the Royal Institute of British Architects, "Testimonies of Study," In other art centres these studies turn up, and it may be said in a correct way, but, for all that, it is

not easy to apportion what share the many and various professors and staff have to do with such evidences of equipment on active individual service. A first year "specialising" design (No. 25) is by Mr. H. St. J. Harrison, the subject being a monument to Lord Roberts. The structure is set upon a raised platform with an equestrian figure of great soldier seated in front of a tower surmounted by a group of "Victory." driving a chariot of three horses. Steps go down on all sides save where the ugly raking wall at the rear stops them off. An open loggia forms the base of this tower, and above its rusticated base with the pedimented openings on all four sides, the walls are devoted to military trophies suggested by the French Renaissance type of ornamentation, and wreaths adorn the attic stage with swags drooping on either The figures are most indifferently depicted.

Nos. 26, 28, 31, 33, 37, and 39 are more or less correctly termed designs for "A National Art Library," and seemingly proposed as one wing of a bigger scheme for spending public money when, perhaps, the war is done with. Mr. Harrison (No. 26) shows a long block of building with reading and index rooms flanking a central cortile or vestibule, and this above stairs has magazine alcoves, the stairs being at the extreme ends of the premises, to fit in, as we suppose, with the adjacent or ultimate additions. The stairs really are not exclusive to this National Art Library. The façade in this case has coupled columns between semi-circular arched windows having disc niches above them for the busts of great men, and surrounded by wreaths or garlands to give a due solemnity. The cupola in the middle of the structure has a very stilted and meaningless look, speaking as we can only do for the library, for it is that alone with which we are now concerned. There is a lantern story below the dome, with windows of lofty proportions. Perhaps this scheme is as good as any, though the mansard roof is not very pleasing, and the lighting is insufficient with the projecting bookcases dividing the rooms quite properly into bays, but tending, of course obscure the light in the centre of these lofty apartments with florid coffered ceilings above a very heavy cornice. detail sheet is restless in draughtsmanship; otherwise for a "first-year advanced class student," the design is commendable, even if the elevations sadly want a good plinth, which is a bad fault.

Nos. 30-32 are by Mr. J. C. Taylor, of

the Upper Division school. His design for the art library is not so amply illustrated. and has no complete plan, but a careful study is figured on a separate sheet for the tympanum of the central pediment, with the figures much better put in than usual. The sheet of details, too, is good in this respect. The Ionic caps have coarserespect. looking volutes. The segmental-headed windows in the rusticated plinth part of the façade suggest a lack of light behind the foliated grills, which are intended to give protection, perhaps, and add an interest to these comparatively poor sort of openings. The roof, being flat pitched. is hidden by the balustraded parapets The coupled columns are rather hackneyed and so is the Italianlike treatment windows, such as the late E. M. Barry rather fancied. It is notable because of the professorial fuss about advance and tall talk about Art in Architecture, and it looks odd to find contemporary professors pupils reckoned in the same category as those of Professor E. M. Barry. Possibly this result is due to the fatal effect of try-ing to be merely "scholarly," a word used really when a design appears to possess no virile merit.

The paneity displayed by the treatment adopted in No. 29 lg Mr. J. S. Krook is largely due to a thin line of brown info draughtsmanship and the wide-spaced row of single-fluted Douc columns. The pedimented windows with neat architraves see between this colonnade are refined, and in reality would work out well in execution having more breadth of walling, which is no small gain. The square heads of this fenestration would insure more light. We much prefer the cupola in this design to that of No. 26, but, internally, the dome would be quite dark, unless a skylight is intended at the crown of the structure, and which, indeed, may be intended between the upper and the lower domes. This, however, is not clearly set out. author has shown a quiet scheme of colour decoration in reds and blues. The galleries to the reading-rooms come above the windows, and there appears to be no top light. The remark of the Judges in the National Competition, which we have quoted in our notice of that exhibition, as to the sections not properly showing the intended construction of a building, certrinly equally applies to the students of the Royal College of Art, if we take these drawings as evidence.

No. 33, by Mr. M. C. Oliver, is architecturally indifferent, being devoted to a fulsome decorative scheme. No. 37 likewise is made unduly subservient to its colour adornment, which evidently is the main idea of its author, Mr. T. C. Eastmain idea of its author, Mr. 1, C. Daw well. The design marked 59 is the work of Mr. J. Xixon, who limits his proposal well and almost entirely. We preto decoration almost entirely. We pre-sume he is not "specialising" in architecture, as some are said to be. His or-namentation is much too ambitions for even a National Art Library. Mr. G. C Styles represents the "Advanced Upper of the School by his monument Division to Lord Roberts (No. 24). It consists of a short panelled obelisk-like erection. having tomb-like recumbent figures of Egyptian females stuck up on end tilted against the inclined plane on the cardinal faces of the "obelisk." The detail is course, and soldiers in contemporary khaki range at the angles on guard in close order of single file, crowded together to give room for an enormous panel with brobdingnagian lettering for the word "Roberts," in case we should forget. This is, however, a capital set of sepia-washed drawings. In No. 22 Mr. Styles furnishes a design for a public library, if we read the sections correctly. The drawings are unfinished in pencil. Massive columns of the Ionic order are employed singly, with big windows between them in two ranges to amply light both floors, one being the gallery level of very lofty apartments with flat ceilings well treated. The building has a substantial plinth pierced by square windows to the ground story. A very flat and fissy pediment marks the middle of the façade, and there is rather a clumsy look about the scheme, which is hardly done justice to by the detail study exhibited, though it is capital from the scholarly standpoint, which has its limitations. It would be a poor criticism to describe a poet's work by such a second of the standard of the scholar standard of the scholar s term. Mr. Styles shows a set of almshouses, with a dining hall schemed seemingly upon conditions similar to a corresponding proposal, obtaining a Book Prize in the National Competition, by Mr. C. B. Stewart. The College of Nat design, No. 22, by Mr. Styles, is in an X pensive stone treatment of Jacobean char acter, well worked out in that respect. but having a very indifferent plan and internal w.c.'s opening out of the bed-rooms. Convenient, no doubt, for old folks; but they are apt to be very dirty in their habits, and, anyhow, the arrangement is not sanitary, seeing that the lobbies have vision.

ne diest character attended a separate barrange of appointments content the immates content take all their mens the neither scullerns ner and is the content a Foundation will be attended at the content and staff.

Two over elaborated segam was shown. No. 11, by Mr. J. 8 Lawson as overdone but ingent as. No. 14, by Mr. J. 8 Lawson as overdone but ingent as. No. 14, by Mr. W. J. Kinght, ments the same remain, and both in a way, perhaps, are clever Mr. Lawson's Lord Reberts' Memeria Mr. Lawson's Lord Reberts' Memeria Chapel is quite prais worthy 5, 7, and 8). Some excellent studies are hung in the room of existing and historic types of design done by the students of the Lower Division." These include Gross confirmment, bronzes, and tellefs. There is to be also seen a 'Library Study' of mediaeval foliage from Lincoln Cathe iral.

In the Sculpture School, as usual, very capital work is to be seen, and a series of easts show a recumbent figure of a mode girl variously treated from the same model, the difference structurally being in the way in which the extended arm is managed. Mr. C. T. Wheeler leaves the hand outstretched unsupported. Mr. J A. Floyd uses a book as a prop, which seems needed in sculpture, and Miss Jessie M. Riding uses a crouching monkey for the same object, caining a suggestion of contrast, for the beauty of her figure is very attractive. Mr. W. S. Wilkinson's figure rests her hund on a vase. The attenuated legs of this model are to be noted. Mr. R. T. Cotterill shows in No. 13 a modelled design for a mantelpiece. rather capable, with a restrained note about the work and a figure panel over the fireplace. The unfinished composition for a similar subject, by Mr. C. W. Smith (14), is, however, much more suggestive with the curved in lines of the main cornice to the room in which the chimneypiece is to be placed. The usual arts and erafts are represented by much that is excellent and much that seems inconsequential and over-elaborated, but the glazed pottery seems equal to the standard of past years. The etchings shown in the gallery beyond Professor Lethaby's room are interesting, but somehow this year are less impressive than on the last occasion. Some clever and inimitable character studies are on view by Mr. George Belcher, the "Punch" artist, to liven up the room.

The School of Painting includes decorative and other renderings of the stories of Shahrazad or the Merchants' Story of the Jinui, of the Ladies of Bagdad, and of the History of King Younan, all very elever, no doubt, if a trifle far fetched for contemporary needs, and this, prasumably, should be the aim of the Reyal College of Art in stuffing the art such of the country. Perhaps subjects for training are of see udary importance has their subjects,

A convent and surface are to the fat Kall of the Grange ( Duch Active designs of Mesers, W. H. Byron ( S.).
Suffolk Street, Duch (

The corporation of Shell's have as a 1-to proceed without is a rivery with progress for covering a recovery with a first progress for covering a recovery with a first progress for covering a recovery with a first process of 120 vd. The week less a beauty on a content at decrease and Furnival Road widening operations. Rigid economy is being exercised in its execution, and it is expected that it will be completed for an outlay of £9 000. The plans and particulars in connection with the sheune were prepared by Mr. C. F. Wike, the city engineer, and the work is being carried out under his supervision.

#### THE ELIZABETHAN OAK ROOM, LEIGH HALL, ESSEX.

This fall dates from 1561, and was always receivated for the oak panelling and curved ak work within its walls. The Elizabethan Oak Room from Leigh Hall, Essex, is now in London. As the accompanying note states, the room can be reinstated according to the the room can be reinstated according to the oig hal plan given, but the chimney-piece at I panelling could, of course, be adapted to another plan. We understand that the room has been temporarily erected in London, in her the direction of Mr. Mark H. Jindge, A.R.I.B.A.—It can be viewed on application to him at 7. Pall Mall.

Essex is not a county particular to

Essex is not a county particularly favoured by the collector or connoissenr; indeed, on



TOP OF PILASTER.

among English counties, unduly overlooked ground, it is the Cinderella both for its own special features and its con tents. In this last respect the panelling from Leigh Hill here illustrated is important enough to correct what is only too common a view of the county's claims to consideration, and will serve to show what may still be sought for without invariably overworking districts of a more brilliant reputation to the art hunter.

Leigh Hall, now demolished, dated from 1561. Its architectural interest resided in its wealth of oak work, and the very fine carving of that. The work belongs to a period which is the most interesting point in the development of the English Renaissance, where we hind-for styles of architecture are no more to be bound by kings and queens than any ther art - Elizabethan merging into Jacobean. The nature of the work is such as to recompense the genuine art lover for the absence of any definite historical connection with the Hall, or Mansion House as it originally was known. The manor of Leigh does, however, ander surprisingly diverse forms of the name, onder surprisingly diverse forms of the name, go back to the beginnings of our history; it figures in Domesday; records occur in the reign of Edward II., and its later history is associated with such names from English history as Rich. Warwick, Bolingbroke, the manor passing from the last named to other members of the St. John family. The town of Leigh hes in the vicinity of Southend, and is given us many payad heroes and yovagers ven us many naval heroes and voyagers-Sir Richard Haddock, Whittaker, Andrew Bittel, Camden remarked upon the "lusty seamen" with which the "pretty little town" was stocked. It may be of interest to refer in passing to the "Collectanea Spectantia Manerium de Leigh," six volumes of manuscripts, as yet unpublished, in the library
of the Essex Archaeological Society.
Turning now to the oak room itself, which

in he completely reinstated in all its original · alt; of the joiner's work.

the panels, together with the carving throughout, and the culminating feature of the chimney-piece, give the room a real importance, best appreciated by a comparison with other examples of this period, like the two "oak rooms" in the Victoria and Albert Museum. One of these was removed from a house at Bromley by-Bow formerly known as the "Old Palace," dating from 1606. As set up in the museum the panelling is slightly rearranged, with parts renewed. The room rearranged, with parts renewed. The room measures 28 ft. by 20 ft. 6 in., and the panelling is square throughout. The Leigh Hall room has a length of 35 ft. and a width of 25 ft. 5 in., and the apt-to-be monotonous effect of square panelling is relieved by a charming use of diamond panels above a more complex geometrical design formed by super imposition of simple rectangles.

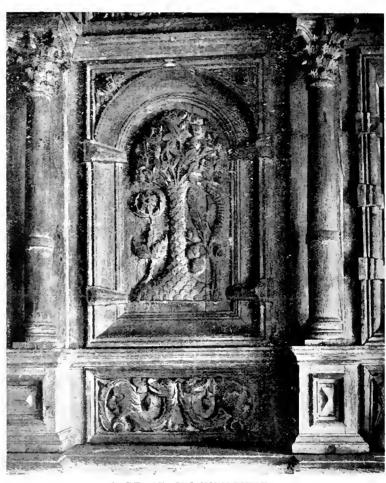
The vertical divisions so essential to the aspect of a large room are provided by characteristic pilasters, the precisely cut orna ment on which is testimony to the hardness of the oak. This is oak treated as the Greeks treated marble. The panelling is completed by a carved frieze below the final cornice,

in the right place, a minor echo of which we perceive in the subsidiary points of the rooms occupied by the pilasters, the whole being held together by the surrounding frieze.

Panelling in such extent and of such a high standard, in so line a condition, as Leigh Hall has provided us with, will become more in request as it becomes more difficult to obtain. The love of a "panelled room" seems to be inherent in our nature. It is interesting to remember that the panelling of esting to remember that the parening Elizabethan times and downwards was only a reversion to the original practice of covering the walls with wainscot, which had given way to tapestry wall-hangings, and we can see a reflection of the play of fancy so easy to be indulged in with tapestry when the idea of oak panelling came to be fully developed. It coincides with the rise of English furniture, and panelling should really be considered as a link between the purely archi-tectural form of a house and the intimate embodiment of life which alone can give a

meaning to each individual room.

So regarded, we shall find that the peculiar charm of an old English interior is to be



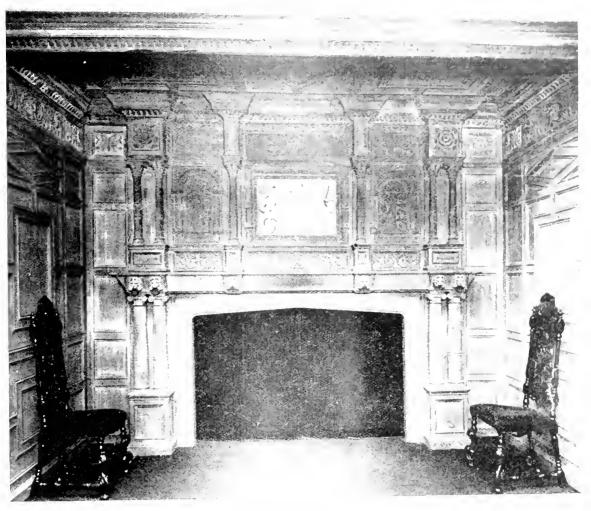
PART OF CHIMNEY-PIECE.

broken up by grotesque heads over each pilaster, which have almost a Norman vigour and much of that noble quality of the true grotesque on which Ruskin was so emphatic. is no dado, and the panelling is ex tended down to the floor, the height from floor

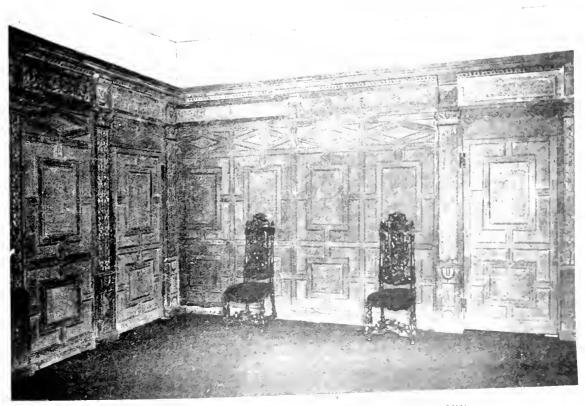
to cornice being 9 ft. 6 in.

Further detail of the room is hardly necesexcept a reference to its chief feature. the chimney-piece. This is an integral part of the room, with a more than usual archi-tectural character. The fireplace is always the nucleus of the English home, and the elaboration we find invariably bestowed on it is only the natural consequence of this impor-tance persisting throughout all styles and periods. Too often we find it indeed overdone, not quite in harmony with the rest of the room, as though it were something imported that did not really belong there. But there is no mistaking the unity achieved in the Leigh Hall room. It is a composition in features, the beautiful preservation of the model is perhaps what first strikes us. The addition of the panelling is splendid, the souldings being striking testimony to the salty of the joiner's work. The design of the right concentration of elaborated detail

explained by a sense of what in the Renaissance of Italy would seem but an unjustified violation of the spirit of a particular style. In Italy interior and exterior are dominated by the same rigidness, the actual coldness which seems the setting necessary to Italian warmth of sentiment. Unrefieved, this deliberate ansterity must ever fail to satisfy the ineradicable English nature seen underplaying every current of our architecture. Even where English reserve has flown to the Italian expression for its outer mask, its inherent love of freedom and healthy vigour was not to be denied in the intimacy of the home life, and so we find the early Englis joiner indulging in variations on the "orders English which the mason would hesitate to follow. Function and nature of material must always be the prime factors in determining the during qualities of architecture, factors which must justify the craftsman in the degree of departure from recognised standards, in pre-cisely how far he may experiment with the expression of a certain dignity of character.



THE CHIMNLY PLECE.



AN ANGLE OF THE ROOM FROM LEIGH HALL ESSEX.

of the house are asked to conform to certain e aventions, all the more can this conformity be receased in other, more personal aspects, and we shall take joy in finding that there is after all something a little more tolerant of natural impulses behind the reserve which the English character so lives to assume.

Take only the clumney-piece from Leigh Hill and the irresistible fascination of the "architecture" which in any other connec-"architecture" which is any other connection would be grotesque parody. Here, the Corinthian columns are like rapid sketches of semething actually seen abroad, and all the more convincing than orthodox Classic models based merely on some "Parallel" of the orders, faithful enough reflections of Vitrivius or Palladio but wanting the personal touch the core of parallel solutions. the orders, faithful enough reflections of Viruvius or Palladio but wanting the personal touch, the sense of a personal feeling by Mr. Frank May.

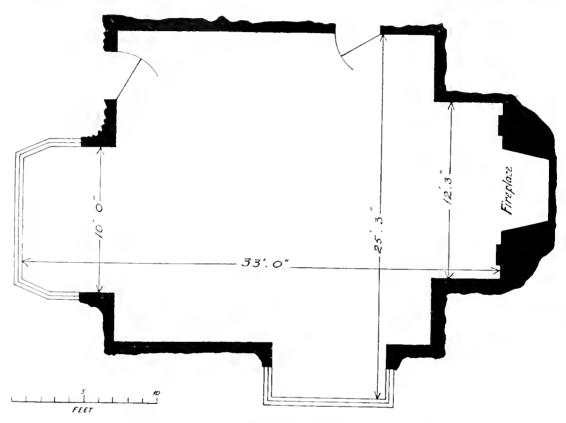
pensioners died. The institution is greatly indebted to those old friends of the charity who so generously supported the treasurer appeal last November: the amount received saved the Committee from realising any invested capital, and so retained the financial position acquired during the past sixty eight position acquired during the past sixty eight years. The Committee tender their hearty thanks for their kind assistance to the trustees (Mr. F. J. Dove, Mr. Frank May, J.P., Mr. Thos. F. Rider, Mr. T. Stirling and Mr. T. J. Bolding), and to the honorary auditors (Mr. J. T. Bolding and Mr. Hubert S. Ward, F.C.A.). The Committee are informed that Mr. George R. Holland with kindly consent to act as president for the coming year.

cluding salaries, rent, advertising, stationery and postage, had been reduced from £261 7s. 6d. to £222 10s., and the net result was that the balance on deposit current account and with secretary was reduced from £794 10s. 6d., at which it stood last year, to £521 13s. 11d. The total income from all sources was £2,600 18s. 7d., against £2,928 14s. 4d. The Chairman concluded with an earnest appeal for additional subscriptions to meet the difficult situation that would surely ensue in the building trade before long.

Mr. May moved that the balance-sheet and statement of accounts be received and adopted, and this having been seconded by

Mr. Shingleton, was carried unanimously.

On the motion of the Chairman, seconded by Mr. May, Mr. George R. Holland was re-elected as President, the Chairman expressing a hope that they would speedily see him in



PLAN OF THE ROOM FROM LEIGH HALL, ESSEX.

for the thing done, without which art is merely reproduction of what has been done already, sacrificing what an interpretation gams. Jan Ivon.

# BUILDERS' BENEVOLENT INSTITUTION.

The sixty-eighth annual meeting of this deserving charity was held on Wednesday atternoon at Kohel-Nor House, Kingsway, W.C. In the absence of the president, Mr. George R. Holland, who is at the Front, Mr. John Bolding, past president, was called to the chair.

The annual report of the Committee Management was read by the Secretary, Mr. Thomas Costigue. The Committee expressed their deep regret at the continuance of the war, and wished to mark their appreciation. war, and wished to mark their appreciation of the action of the president and the members of the Committee who were serving in his Majesty's Forces. The report continued: The past year has been an exceptionally trying one for this charity, as it, in summon with othe hastit tions, has experienced the last of much support in compact and the last of much support in compact national to be much as appeals made to meet mational to be. The Committee deplace the death of Sir Arthur Charles Lucis, Bart., who for more years was a general contributor to this institution and or end treatures. During the past year two men as I four women have been added to the past years the summer of additional trustees. Turning to the expenditure side, the amount of pensions and burial moneys paid the 13 women. During this period five male

balance-sheet and statement of accounts, which had been carefully scrutinised and audited by Mr. Hubert S. Ward and himself. He went through the details seriatim item by item, comparing them with those of last year, and pointed out that, considering the excep tional circumstances, the institution had well maintained its position, although he felt that there ought to be a much more general response from members of the trade, and that the number of subscribers and donors ought to be larger. The annual subscriptions last year. £368 I6s., only showed a falling off of less than £10 on the previous year's amount, £578 8s., but owing to the decision to abandon the annual dinner the donations showed a serious diminution. The deficit was reduced by a response of nearly £100 to an appeal sent out by the treasurer, Mr. Frank May, but even then they only received in donations

The Chairman next submitted the annual, full health and strength at the head of the

On the motion of Mr. Frederick Higgs, seconded by Mr. Carter, Mr. May was re-elected as treasurer, with hearty thanks for his successful efforts by circular to increase the funds of the institution.

The Chairman said the next business was to elect eight members of committee in place of those retiring by effluxion of time. He suggested that the retiring members be reelected, and that he put the names separately.

Mr. J. Chessum asked before the names were given that the number of attendances for the past year of all members of committee be read out. There were some who had not been more than once or twice to the monthly meetings, and in the past a member put in an appearance for the first time for twenty years. No one present recollected him, and the Chairman had to ask how it was he had come there. To send invitations to such members was a waste of the secretary's time, of stationery and postage, and he moved that all who had failed to attend more than twice in the year be struck off the committee.

Mr. Northcroft and Mr. F. Higgs expressed sympathy with Mr. Chessum's outspoken

The Secretary read a list of the committee,

and opposite many names were recorded "attendances nil" and "once" or "twice."

The Chairman said there was another side to the question. No fewer than fifteen mem-

bers of the committee were past-presidents. who retained their seats ex-officio, and many of them were well advanced in years. No doubt it was necessary to have a live committee, but these gentlemen had contributed generously and still gave liberal aid, and even if these left the routine of committee work to younger men, the trifling sum expended on postages brought in a large return.

Mr. Northeroft moved, and Mr. Higgs

seconded, a motion that the secretary write to the members who had failed to attend committee meetings, reminding them of the fact, and that no further action be taken till next

year.

This was agreed to, Mr. Chessum's motion being withdrawn, and the following eight rebeing withdrawn, and the following eight retiring members of committee were re-elected en bloc: Mr. H. Arthur Bartlett, Mr. T. Hall, Mr. B. Hannen, Mr. H. Holloway, Mr. J. W. Lorden, Mr. J. C. Nicholson, Mr. F. G. Rice, and Mr. William Shepherd.

The hon, auditors, Messrs, J. T. Bolding and

H. S. Ward, were re-elected, with thanks for past services, on the motion of Mr. Shingleton, seconded by Mr. T. Stirling; and votes of thanks to the committee of management and the trustees brought the proceedings to a close.

### THE LONDON COUNTY COUNCIL.

At Tuesday's meeting of the London County Council a report was submitted by the Improvements Committee recommending that Earl Grey's option on the crescent site in Aldwych and the Strand be extended until 1917. The option price was £3,000 a year for taking a lease for ninety-nine years at a rent of \$50,000 a year, or buying the free-hold at £1,500,000. The committee have treated the past year on the moratorium principle and have extended the option.

The Local Government Committee reported

that they have authorised the destruction of documents relating to the late Works Department. "These documents," they ob partment. "These documents," they observed, "cannot have any bearing on questions that may arise as to the general working of the late department, and the space is needed for storage of records of permanent

value.

The same committee stated that they had considered whether the work in connection with the ground plan and the 6-in. map of London should be proceeded with at the present time, and also the whole question of the continuance of the work. They arrived at the opinion that the value of the ground at the opinion that the value of the ground plan to the Council justifies its being kept up to date. The necessity for the separate publication of the 6-in, map will disappear now that the Council has prepared the municipal map. This map will be kept up to date, and the cost will become a general establishment charge.

General Purposes Committee recommended that, on the understanding that the Council accepts no responsibility in the matter, Mr. W. E. Riley, the architect of the Council, be permitted to advise the governors of the North-Western Polytechnic Forther as to modifications of the plans and specifi-cations of the North-Western Polytechnic with a view to the erection of the building at a cost within the amount at their disposal

The Commissioners of His Majesty's Works have inquired whether the Council would be willing to undertake the maintenance and management of the new Government housing estate at Well Hall. Woolwich, which has been provided for the accommodation of munition workers. The estate, which is about 100 acres in extent, will comprise altogether some 1,300 houses, and the gross rental is About 800 estimated at £37,000 a year. houses are completed, or are on the point of completion, of which about 100 are occupied, and the remainder will be finished shortly. The Housing Committee recommended that the Council accept the responsibility, and that the estate be managed on the lines of the Council's cottage estates.

The applications of the town council of New port, Mon., for leave to horrow £6,950 for road widening and £1,493 for the purchase of a site for a destructor have been sanctioned by the

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Local Government Board.

THE LONDON COUNTY

(Continued from page 62.)

#### FORMULE.

115. In a pillar with fixed ends the stress in the concrete in the area bounded by the lateral reinforcement shall not exceed

- c, in a pillar with the minimum of hoop
- ing or binding, i, in a pillar with more than the minimum

$$i = c \cdot [1 + f s \cdot V_1]$$

binding or lateral reinforcement to the volume of the hooped core may be obtained from the equation

$$V_1 = \frac{i - c}{c f s}$$

117. The value of V actually provided, in either round or square pillars, may be ascertained by direct measurement or from the equation-

$$V_1 = \frac{4 Ab}{d p^b}$$

DR \_TABLE SHOWING THE VALUE OF A

E LONDON COUNTY COUNCIL following table the party of a scentained by using the about a feet of the virtual lagrance at the about the most of the virtual lagrance at the virtual lagrance at the with regardless kill and lagrance.

	- /-	1 * 1	1	4.1	
Combine of axi ar ereis	+ 1	1		į.	
Both ends fixed in position and dure the				i	
One end fixed in position and direction		ı		4	
One end fixed in position but not in hirecare		1	1	+	
Both ends fixed in position but not in lineed		ı		á	
One end fixed in position and direction and					
One end not fixed in position and directly n		,			1
Ţ					

ARCHES. (AESO SEE RESULTATIONS 44-45-5)

16. The required ratio of the volume of landing to lateral ratio of the yolume of lateral ratio.

### PART V

126. Where the dead leads at the equation posed loads of, in or upon a leaded 2 are transmitted to the foundations by a series of reinforced concrete pillars, Leans, arches, or other constructions designed and constructed in accordance with these regulations, any ex-ternal enclosing walls of reintered concrete between such pillars may be of any threshess not less than four inches provided that such enclosing walls are designed and constructed in accordance with these regulations to resist

<ul> <li>Form of lateral reinforcement or binding.</li> </ul>	Form factor.	Spacing of laterals throughout the length of the pillar (in terms of diameter of hooped core).	Spacing factor s.	Value 1
Helical (curvilinear on plan). Helical do. Helical do. Circular hoops Circular hoops Circular hoops Rectilinear Rectilinear Rectilinear Rectilinear Rectilinear Rectilinear Rectilinear Rectilinear	1.0 1.0 0.75 0.75 0.75 0.5 0.5 0.5 0.5	0.2 d or less 0.3 d 0.4 d 0.2 d 0.3 d 0.4 d 0.2 d 0.3 d 0.4 d 0.5 d 0.5 d 0.6 d	52 24 16 32 24 16 32 24 16 8 0	32 24 16 21 13 12 16 12 16 12 10

119. Notwithstanding any other provision in any loads and pressures they may have to these regulations the increased stress in the concrete of pillars shall not exceed one-third of the utimate compressive resistance at four

months as given in regulation 159.

120. The working stress in the vertical reinforcement shall not exceed m times the stress

in the concrete. (See regulation 54.)

121. The permissible load or pressure on pillars with both ends fixed and with ratios not exceeding those in the first column of figures in regulation 122 shall be obtained from either of the equations-

For Pillars with the minimum of hooping or binding

$$P = c [A + (m-1) A_r]$$

For pillars with more than the minimum of hooping or binding-

$$P = i [A + (m-1) Av]$$

122. For pillars the permissible load or pressure shall be obtained from the following

					-		
For the maximum ratio of virtual length to gyration radius	$\frac{v}{g} = \frac{v}{g}$	45	54	63	72	81	90
For the maximum ratio of virtual length to effec- tive diameter for square pillars	$\frac{r}{d} =$	15	18	21	24	27	30
For the maximum	r - =	12	15	718	21	21	27
Permissible load .		P	0,8	P-0.6 I	0.4 F	0.2 P	Nil

For other ratios higher than those in the first column of figures the stress shall be proportional to the above. STRUTS.

125. Struts shall be subject to all the rules applying to pillars, and the combined stresses at any part shall not exceed the permissible stresses for pillars of like ratios. (See regularities of the permissible stresses for pillars of like ratios. tions 44, 45, 46.1

As to Conditions of Ends of Struts and PILLARS.

124. For the different conditions of the ends of pillars and other struts mentioned in the

\* Sub-headings and italic cross references do not form part of the regulations.

carry.
127. In any case where any wall or put

of a wall is intended to support vertical b or resist lateral pressures, it shall be of such thickness as may be necessary to keep the stresses within the limits prescribed by these regulations for the construction of pullars.

beams, and other members.

128. When portions of the external walls between the reinforced concrete pail as and beams are constructed of brackwork, stone. work, or plan concrete, such portions of walls shall be of a thickness not less than  $c_2$  in, for the topmost 20 ft, of their height and not less than 13 in, for the remainder of their height below such topmost 20 ft.

When such postures 22 man top 1 1 5 1 1

When such portions are constructed of hollow blocks, the blocks shall conform to the

following requirements

(a) The aggregate thickness, including any cavity, shall be at least 81 in , measured at right angles to the fact of the

(b) The sides shall be at least 2 in.

thick
(c) The ends and any interior partitions shall be at least I in, thick

(d) The clear unsupported spec of any part of any side, end, or not ver part tron shall not be more than four times

the least thickness of such part (i) The aggregate thickness of the ma-terial shall be at least 6 m, measured at right angles to the face of the wi-

right angles to the fact of the wellProvided that a less theories shell be allowed in any case in which in let it. Lendon Building Act, 1494, such less the kness is prescribed, and provided that many case in which are external wall or work in of an external wall is not supported or carried or secured by the reinforced or nervet skeleton framed construction within the limit of leight and length prescribed by the First Schedule of the London Building Act, 1994, for the ourand length prescribed by the Flist Schemie of the London Building Act, 1994, for the purpose of determining the thickness of walls, such external wall or portion of external wall shell be of a thickness not less than that prescribed by the state of the second of the s sembed by such schedule.

#### FACING.

129. All walls and facing materials shall be incombustible and shall be securely connected

to the pillars, beams, floors, and other con tiguous parts of the reinforced concrete construction.

#### PRESSURE ON PANELS.

130. Each panel in any external wall shall be designed to resist safely a horizontal pressure equivalent to a static pressure of at least thirty pounds per square foot assumed to be acting uniformly over the area of one panel from either side. (See regulations 21 and 22.)

#### OPENINGS.

131. The aggregate area of openings in c ternal walls constructed in accordance with these regulations shall not exceed in a wall of any story above the ground story two-thirds of the whole area of such wall, and the aggregate width of such openings in such a shall not exceed three-quarters of the whole length of such wall.

#### PARTY AND DIVISION WALLS

132. Party walls and division walls con structed in reinforced concrete in accordance with these regulations shall be of such thickness as may be necessary to comply therewith, but in no part shall such walls be of less thickness than 8 inches.

133. Provided that any such party wall between a building constructed in reinforced concrete and a building of the warehouse class constructed in accordance with the Rules of the London Building Act, 1894, or as a steel-framed building, shall not be in any part less than 13 inches in thickness.

MORTAR.

134 All brickwork, stonework, and plain concrete shall be executed in Portland cement mortar. The mortar shall be in accordance with the Council's by-laws from time to time mortar. in operation.

#### PRESSURE ON BRICKWORK.

135. The pressure on any brickwork supporting reinforced concrete work shall not exceed the following—

Tons per square foot. ... 12 Rickwork, sq. Blue brick in cement mortar stock in cement mortar term of the fine louding bondon stock in cement mortar ordinary brick in cement mortar stock in

RATIO OF HEIGHT TO THICKNESS. Such brickwork shall not have a height without proper lateral supports of more than six times its least thickness, but any such brickwork with proper supports may have a height between such lateral supports not more than twelve times the least thickness of such brickwork. Such thickness shall in no case be less than thirteen and a-half

### PART VI

#### FOUNDATIONS

136. The pressure of foundations on the natural ground shall not exceed the follow

Nature of ground.

Nature of ground.

Natural bed of soft clay or wet or loose sand 1

Natural bed of or licency clay or confined sand 2

Natural bed of or licency clay or confined sand 2

Natural bed of compact gravel, London blue clay, or chalk 4

157. The pressure on plain concrete in for the pressure on pain concrete in foundations shall not exceed twelve tons per square foot. The plain concrete shall be in cement and its quality shall be at least equal to that required by the Council's by-laws from time to time in operation

#### PART VII PROTECTION

158. The cover shall be measured from the outer surface of the concrete to the outer

surface of the metal reinforcement

139. The end cover to be provided beyond the anchored end of a bar coming within the provisions of regulation 48 to shall not be less than 2 inches and not less than twice the

less than 2 inches and not less than twice the normal diameter of the bar to be covered.

140. The cover of any vertical bar in a pillar shall not be less than 1; inches and not less than the diameter of such vertical.

bar 141. The cover of any longitudinal bar in a beam shall not be less than one inch and not less than the diameter of such longitu dinal bar.

142. The cover of tensile, compressive shear or any other reinforcement in slabs shall not be less than one half-inch, and not less than the diameter of the bar to be

143. The cover of any reinforcement in other members shall not be less than one inch and not less than the diameter of the har to be covered

> (To be continued.) ----

## Correspondence,

#### SHILLING PLANS FOR RURAL COTTAGES.

Sig. The Society of Architects has very properly. I think, addressed the "Board" on the subject of its report and batch of drawings and specification, which are published at the price of 1s. 6d.; specification in detail, one penny; and full-size brawings of window details, one shilling.

The idea of the Board and of its technical advisers (members of the R.I.B.A.) seems to be on the liues of "every builder of a cottage his own architect," and, in trying to defend itself against the criticism of Society of Architects, it indulges in that form of casnistical reply to which one is so well aconstomed just now within the walls of the House of Commons.

There is much to say on this particular form of depriving architects of work, and I venture to ask, through your columns, Mr. Raymond Unwin, F.R.I.B.A., and Mr. Charles E. Varndell, A.R.I.B.A., two of the architects engaged in this matter by the Board, to favour your readers with their view of the matter.—I am, Sir, your obedient servant.

WM. WOODWARD, F.R.I.B.A., 13, Southampton Street, Strand, W.C., July 24, 1915.

Sir,-Under the above heading in your ssue of the 21st inst., you set forth exception that has been taken by the Society of Archithat has been taken by the Society of Archi-tects to the report of the Advisory Commit-tee of the Board of Agriculture and Fisheries on the subject of rural housing; and you give the reply of the Committee's chairman and your own views.

At the moment I cannot again go through the Committee's report in detail, but some months ago I carefully perused it with much satisfaction, as being, in my opinion, very sound and the most helpful contribution to the solution of a matter of national importance that had come under my notice. I know nothing of the correspondence between the Society of Architects and the Board of Agriculture and Fisheries beyond what is given in your article above referred to, and sin-cerely hope that the Society has welcomed the report as I do, and has only as a matter of detail taken exception to the fact that the employment of an architect is not therein urged; otherwise, bearing in mind the national importance of the matter and the great value of the report, I venture to think the society has taken a somewhat narrow and class-interested view of a matter calling for broad-minded and generous treatment

As an architect, surveyor, and land agent with a varied and, mostly, country practice, I stand to lose as much as most by such a report if its effect be to lessen the employment of professional assistance in such matters as rural housing; but be that as it may, I whole-heartedly welcome it for the reasons I have stated. With others I (as an architect) often regret the crudities in cottage design, often perpetrated by landowners and their agents, are not obviated by the taste and skill of the architectural profession: but where such is called in the temptation of going beyond this often proves irresistible, and beautification is given which adds to expense. Everybody wishes that such could be afforded; but its deletion is less vital than the provision of accommodation at rock-bottom price, and landowners and their agents, who are sometimes more closely in touch with the hard facts of cost, etc., should, as I have done, find the report both inspiring and helpful. If they can afford the refinements that should result from an architect's advice, so much the better: but the more pressing and primary consideration is accommodation, and I urge this fact more strongly than I should have a year ago, as I

the expenditure on this war must mean simpler and rougher conditions for most of in most directions-perhaps first housing.

Seldom do I trouble the Press with my views, and I choose you for this infliction as yours is the only architectural paper that I have taken continuously during the last nearly twenty-five years.—I am, Sir, yours

faithfully,
R. E. Brinkworth, F.S.L., M.S.A. Bath, July 25, 1915.

### ACTION AGAINST THE INSTITUTION

OF CIVIL ENGINEERS.

ELLIS DE VESIAN v. THE INSTITUTION.

Sir, In view of the full report which was given in your issue of June 16 of the proceedings in the action of our client, Mr. John Stuart Ellis de Vesian, against the Institution of Civil Engineers, we trust that you may see your way to give equal prominence to the result of our client's appeal to the Court of Appeal against the decision of Mr. Justice Neville of June 9 last, refusing the iniunetion asked for, namely, that the defendant and its president might be restrained antil the trial of the action or further order from proceeding on their resolution to expel our ient from membership of the Institution, This appeal came before the Court of Appeal on the 19th instant, and occupied the court during the greater part of two days, and resulted in the court unanimously reversing the decision of Mr. Justice Neville and de-ciding that our client was entitled to the injunction asked for until the trial of the action.

This results in restoring to our client his full rights, for the time being, as a corporate nan ber of the Institution of Civil Engineers, but, as very little publicity is likely to be given to this particular aspect of the case in the Press, we would ask you to make it prominent by inserting this letter in your next issue. Yours faithfully,

ELLIS DE VESIAN AND CO. 8, Old Jewry, E.C.

#### DISTRICT SURVEYORS AND THE L.C.C.

Sir. In your journal of the 14th inst., you mention, among the proceedings of the London County Council, the report of the Building Act Committee, that they recommended the Council to dispense with my services, as well as those of another district surveyor, as from November 30 next.

The legality of the proceedings is, I believe, still in question in another case, and I had received and agreed to the postponement of any question as concerns myself whilst awaiting the decision of the court, I having, with the Council's consent, appointed my leputy with full powers, in accordance with Section 142 of the London Building Act, 1894. You will see, therefore, that at present I re-

You will see, therefore, that at present 1 r tun my official position.—Yours faithfully, FREDERICK WALLEN, F.R.I.B.A., District Surveyor for St. Pancras South. 96, Gower Street, W.C., July 20, 1915.

-000-

Official information has been received at Official information has been received at Lockerbie that Lieutenant Robert Douglas, previously reported wounded, has died from his wounds. Lieutenant Douglas, who was forty-two years of age, was the only surviving son of Mr. John Douglas, land steward, Murrayfield, Lockerbie. He was in business as an architecture that them and large a wilder and these in the town, and leaves a widow and three children.

The Baptist Church trustees have approved The Baptist Church trustees have approved plans for the conversion of an existing chapel in Manchester Road, Barnoldswick, into a Sunday school for the accommodation of 500 scholars, at an estimated cost of £1,600. This will necess tate the building of a new edifice, a site for which has already been purchased, with a frontage to Manchester Road. Plans for the new church (estimated to cost £6,500) are power. new church (estimated to cost £6,500) are now under consideration.

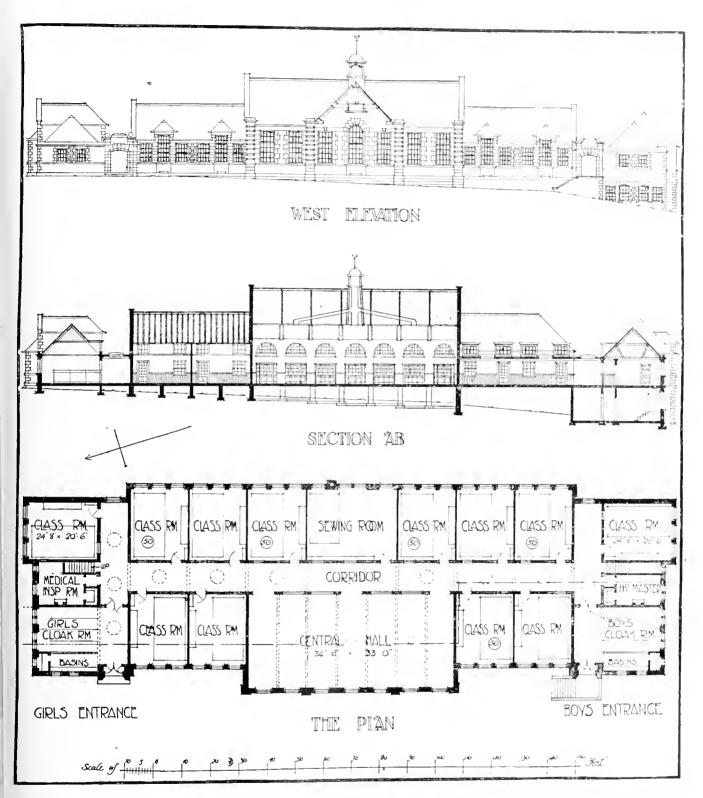
In consequence of the resignation of Mr. M R. Jones, as surveyor and inspector of maisances, the Abergele Urban District Conneil have con-In a Abergue Urnan District Council have considered the question of appointing a successor. It was urged that for the present there was no necessity to appoint a successor, and that the salary should be saved. A motion to this effect was carried, the appointment being deferred indefinitely. An amendment was moved, but defeated, that the appointment be deferred until after the war. until after the war.

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28, 1915.

BUILDING NEWS, JULY

SWANSEA.—Mr. Glendinning Monham, F.R.I.B.A., Architect, ROAD, WALTERS SCIENTIST, CHRIST FIRST CHURCH OF THE



KIRKCALDY AND DYSART SCHOOL BOARD: BLAIRHILL SCHOOL (SELECTED DESIGN). Mr. WILLIAM WILLIAMSON, F.R.I.B.A., Architect.

caldy, for which Mr. William Williamson, F.R.I.B.A., was chosen architect in competition. We illustrated the larger one in the BUILDING NEWS for February 5 last, with a good scale copy of its plan, as carried out at Pathhead. To-day's illustration shows the Blairhill School, now completing its erection by the same authority, and giving accommodation for 600 pupils. Each class has direct "through" ventilation. The school is being built in stone. The plan, elevation, and section | borough engineer.

This is one of the pair of schools at Kirk- | reproduced clearly show the capital and economic arrangements, also how the site allows room in a lower ground story at the south end.

The London Electric Railway Companies' Facilities Bill has been read a third time in the House of Lords and passed.

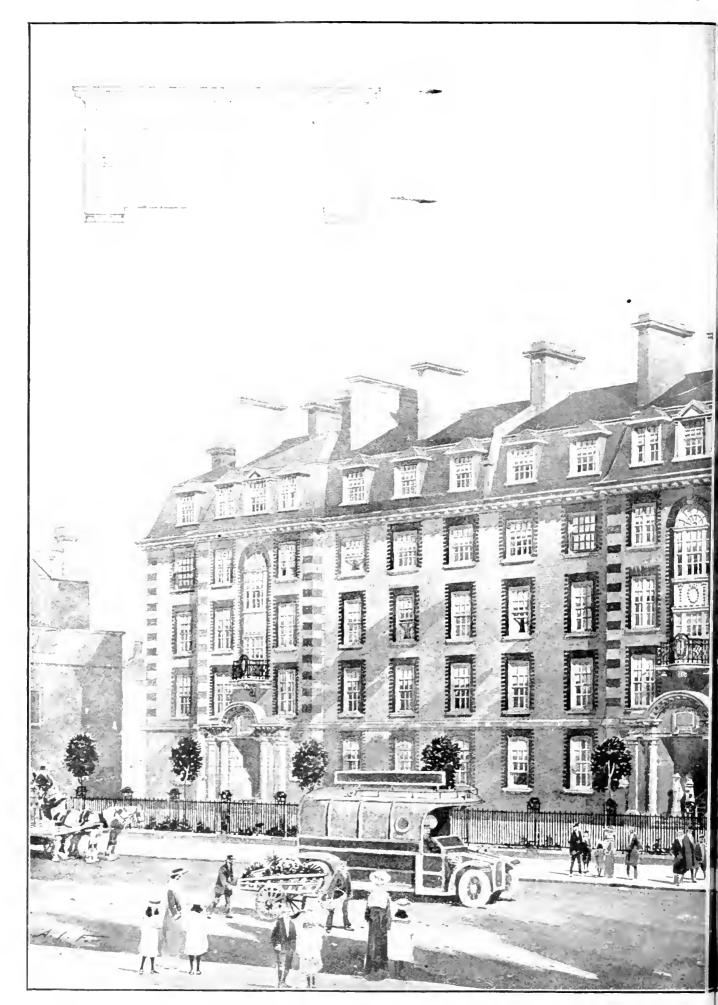
The new arcade and municipal buildings at Aberayon, built at a cost of £15,000, have been formally opened. The work has been carried out by Mr. Morgan Cox, contractor, of Aberayon, from the designs of Mr. James Roderick, becoming analysis.

Mr. H. Chubb has esigned his position as surveyor to the East Kerrier Rural District Council.

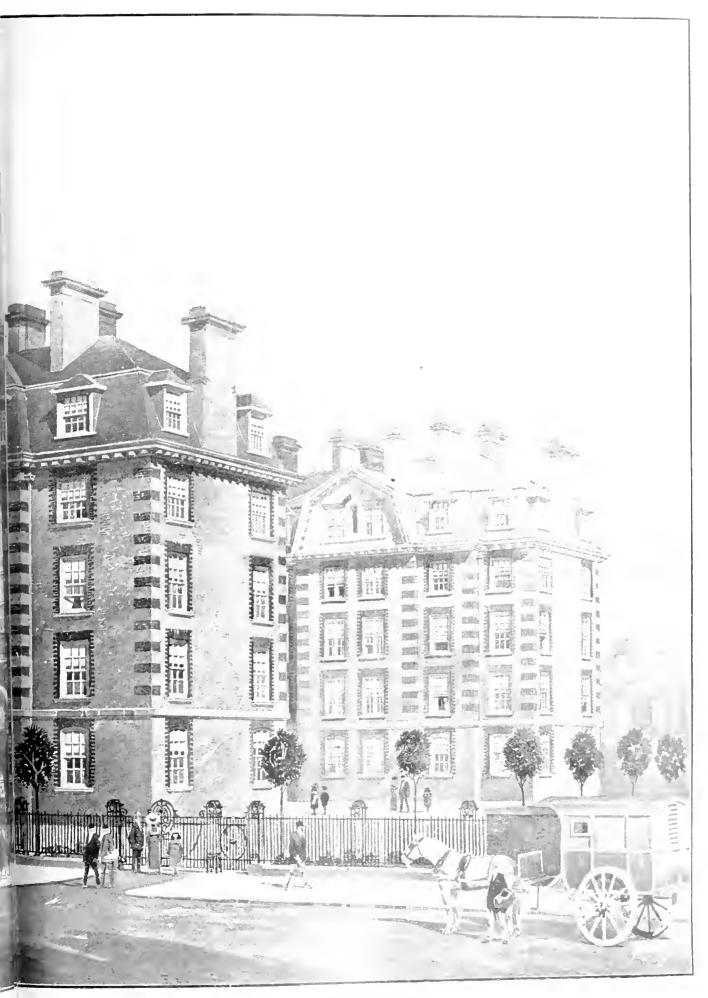
. The salary of Mr. W. Newton, surveyor to the Hawarden Rural District Council, has been increased by  $\pm 30$  per annum.

the German cement industry continues to fare badly. The Besching Fortland Cement Company, which pand a dividend of 5 per cent. for 1913, has a loss of 122,622 marks for 1914. Under the circumstances the company has transferred its allotment, excepting a small balance, to another South German company, subject to a remuneration, which is expected to leave a small profit.





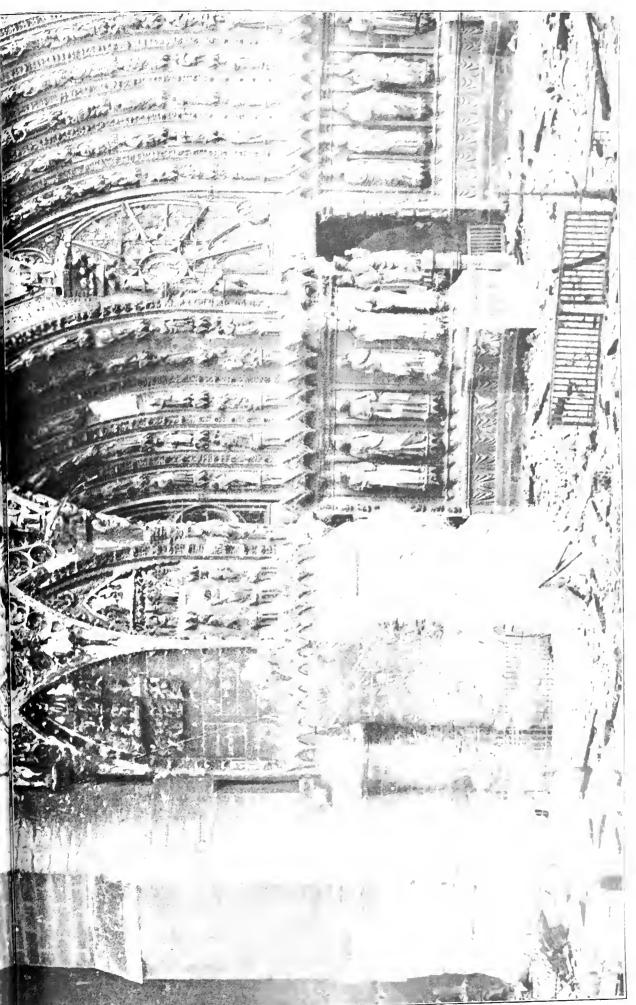
PEALODY DONATION TUND, WORKING CLASS DWELLINGS, REHCS
Mr. Vict



OR THE CITY CORPORATION, SUMNER STREET, SOUTHWARK, S.E. 48, Architect.



THE BUILDING NEWS, JULY 28, 1915.



TOURARS OF MILIMS CVIHILDRAL ALERA THE BOSHARD TO A TOTAL OF STANDARD TO A TOTAL OF STANDAR



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THE NEW LAW COURTS, DURING FOR THE UNION GOVERNMENT OF S. AFRICA.



## Our Illustrations.

CATHEDRAL PORTALS RHEIMS AFTER THE BOMBARDMENT

Fergusson says, "Rheims is perhaps the most beautiful structure produced in the Middle Ages." The fine photograph printed herewith to-day, showing the west front after its bombardment, was taken by the sculptor who has had charge of the sculptures and ornamentation of this great his toric church for the past twenty years. The picture gives an excellent idea of the havour wrought to the great portals by the German shells, and, as Anatolo France exclaims, the outrage is "infamie immortelle," making its authors "execrable a tout l'Universe pen authors "execrable a tout l'Universe pen sant." The view is taken looking towards the façade from the N.W. We have chosen it from the collection of some two hundred similar photographs forming the exhibition now open at the Leicester Galleries, Leicester Square, W. Our readers' attention was directed to this display in the BUILDING News last week, when some particulars were given descriptive of the Exhibition, which in cludes enlargements of many exceptionally artistic and well-defined studies of the more famous statues and groups of figure carvings. as well as a large series of notable details of the architectural elaboration of the fabric itself, which is not only one of the most exquisite cathedrals of its date in the whole of Europe, but ranks as the third in size in France, Amiens and Chartres alone surpass ing Rheims in scale and magnificence of de sign. The first attack upon it took place on September 17 and 19 last, when the shels falling on the church set fire to the roof, burnt part of the western towers, and shattered the windows and sculpture. The fusillade was renewed in November, and repeated last February, as well as during the month of July. A Commission was appointed by the French Minister of Education to investigate the state of the structure in the autumn of 1914, and photographs were taken as records illustrative of the condition in which the building was then found. Messrs, Ernest Brown and Phillips have prefaced their handy little catalogue of this exhibition of photographs with a quotation from the Commissioners' report. Before reproducing this paragraph we may mention that the pamphlet alluded to is presented to every visitor to the collection, and also add that the proceeds will go to the credit of the French Rel. of Fund. The admission charge is one shilling. The catalogue is interspersed with seven reduced reproductions of typical examples of the prints, including a general exterior view and also an interior of the Cathedral, so that the brochure is very useful for reference The same series of photographs is being shown simultaneously in the Musée des Arts Decoratifs of the Louvre, Paris. A smaller collection, which was lately on view by the Medici Society in London, served to enlighten many on the character of the desolation wrought by the Germans at Rheims, but this assemblage is by far the finest yet on view to public inspection in the Metropolis. The Commissioners' report, just referred to. says, "Although disfigured in its lines and in the details of its decoration, the Cathedral in the details of its decoration, the Cathedral of Rheims still stands. Its stout construction has resisted the shock of the projectiles. The roof of the building can be restored, the masonry repaired, but the sculpture can never be replaced, and the Cathedral will bear profoundly the mark of validalism which has surpassed imagination." On October 15, the bombardment was renewed, and repeated during the end of November and again in February this masonry repaired, but the sculpture can never be replaced, and the Cathedral will bear profoundly the mark of validalism which has surpassed imagination." On October 15, the bombardment was renewed, and repeated during the end of November and again in February this year. Another attack was made about July 16, and may occur again at any time in the mear future. Dr. Capitan, member of the "Commission des Monuments Historiques," has enumerated the further deplorable damage done since the official report to which we have alluded was presented to the Govern ment in Paris. The defence made by the Germans of their acts of vandalism is, of course, futile, and the following declaration

the Ares Coursel of the Archby hap-Rhead Last enquoted. In the name of Emane of the Cardard Archba hope of Rhemes and a system myself hour by according that processing to the improbable German most forms denote to the improbable German most forms denote the improbable German report. Note to the improbable German report. Note to the court in front of the incidence is the court in the incidence in the i year when the four authorised gospels, a simply I for printed in the English Bibbs, were compiled and quited to a in their present form. Fill the unith century this church are mind infact, but about 100 km like 100 km. Arch's ship Elbo founded the new cathedral, and Rumaldi, architect to Louis 1., the arch we are was sent by that morarch to assist in the building, which has trashed in 362 AD. A great fire destroyed the fabric in 1210, but will a two years the existing structure was begun, and Arcab shop Aubri de Humbert laid the foundation-stone. Jean d'Orbais was the designer of its plan. The first architect who succeeded him was Jean de Coup. He in turn was followed by Caucher. Coup. He in turn was followed by Catchel, and many more architects more or less known to fine took up the work as time went on. The consentation of the choir was celebrated in 1241 v.n., the erection of the rest of the Cathedral being continuous till 1481. A terrible fine happened in that year when the upper parts of the church were bully burned, the towers of the transcribency entirely consumed, or, as records say. being entirely consumed, or, as records say, being entirely consumed, or, as records say, being entirely consumed, or, as records say, being entirely consumed to the work of reparation under at army of artificers. The fabric escaped further harm, and remained substantially in that from the cort y days of the sixteenth. that from the early days of the sixteenth century til the great European War. The plan of Rhelias Cathedral measures 466 ft place of Rhelas Cathedral measures 466 ft in length and 96 ft, in width, the height being 122 ft, and those diamensions tally nearly with Amieus and Chartres. The building is vaid out on the lines of a Roman cross, with ousummate si, it as regards the poise of its parts and with reference fu solids and voids the west front is enabled by 550 status. The west front is enhabled by 550 statues allustrating incidents from the Passion of Our Lord, the life of the Virgin Mary, and scenes from other subjects, not forgetting to name the "Crivit desc." if a classic term can preparly be applied to such supporting Michael diguies is these at Riicins, which are spoken of by a recent writer as being beyond the courte of Rechn of Mary in Propagate de Soissons descend the are spoken of oy ... being beyond the courts of Roetin or Mestrovic, Betharde de Soissons des gued the Mestrovic, Betharde de Soissons des gued the home with the court of the florid neat west "rose windox," which is 40 ft in diameter, and till the Germans been barded the Cithedial it was entirely filled with beam tal 2 iss of late thirteenth century date. "The Gallery of the Kings" above this sandov is formed by a row of colossal figures set in the niches extending the whose width of the clevation. In the middle the "Bapt'sm of Coxis" is represented flanked by the Monarchs of France. The western towers are 277 ft. high. There should have been six towers to this Cathedral according to the architect's original design have been s x towers to this Crithedral according to the archited's original design but the four terminating the two transplats have mover been really completed. The Kings of France were consecrated at Rheims, and Clovis, when he was the Archbishop, anointed the Sovereign of his back with the new order of the source of the

THE FIRST CHUPCH SCHENIIST, S. O.

The landry loop half and from adver-erceted and the early date. The extra-of thin sand faced by sings, the rads by the ex-Wish cates and record mally all the words in the architect as Ah. Gerel FRIBA, and the extra-contract were Me sin Land Br

PEABODY DONATION FUND ING CLASS DWELLINGS STREET, SOUTHWARK

By an a rangement lict core position and the Peabody Dethese dwest is to shirt y to a a ste in Summer Steel. Sore commodate these people of the who will be ded one drive the St. Paul's Bradge should be will consist of four blocks as instances in height. The covariance drive to be brust of Lates by said faced dress in 28 to trace by decreases. The process and wrought more A commodity redefined four resumed to except the land four resumed to except. and four rounced to creeks, laying in addition its consistent smallers, and which will be included with exacting the trayer of places horses, and the terminal value free discharge Collection of the permeable of and dryn = 1 | Fach living room | ventilated next ad-| Cond fitting

## Currente Calamo.

V st yesterday mea, the overing was be defrom M. Roder's impressive bronze group, "The Barglers of Calais," in the Votera Pallie Garders without ceremony, To group is well worthy of the reputation its scriptor, and ne'y synchronises with contrast between the element intervendone of the most locable of Eugland's Queer's and the absence, hitherto, of any such that destat one on behalf of mercy on the part it is spense of the modern embediment of all that is barbar as in warrine. Whether the brave burghers, even after the lengthy stege the French had so gullantly endured, were quite as forform as M. Rodin represents them we have before ventured to doubt. That the groups the reures of which are about ste size is in united on a base far too high is certain. Compare the effect with that of the three times as lar as life size of the statue of Richard Cour de Lion in Palace Yard and its modest but quite sufficient pedestal. Pessibly the idea is to prevent the irrepressible London archin from effecting a closer a quantance with the figures or hopeless endervour. If one may judge by the daily to be witnessed evolutions of the Boy S outs and their less picturesque but proximately pushful, postprandral pals of the dinner hour, whose barebacked performances transform the sphinges which flank Cleopatra's Needle into centaurs.

Dearer gas means lewer dividends. The Gas Light and Coke Company intimates the payment of one for the past six months at the rate of £4.4s per cent per amount. That is the lowest for a 10 d many years. Ending eleven years in De ember, 1907. £4 3s, was paid, but from then, with cheaper cas, there was a gradual supresement to £4 17s. 4d. in June. 1914. Last December it dropped to £4 13s, 41 Early last year the ordinary stock was quoted £1073; by last July it had re-eded to 93; and at the present time it is round about 80. Why not pipe-line gas to London from the pit's month and sell a lower grade gas for heating at, say, Is, per 1.000 and leave lighting to the electric undertak.ngs". We should all use it then, and London would be smokeless.

On this juge of our issue of June 16 we reports I the refusal of Mr. Justice Neville on June 10 to make any order on the application of Mr. J S. E. de Vesian for an injunction to restrain the Institution of Civil Engineers from interfering with his rights as a member of that institution, or with his enjoyment of the use and benefit of the institutom, and from acting upon or enforcing a rea lation of the council of the institution purporting to expel him from membership, and from omitting his name from the register or list of members of the institution, and from announcing that he had been expelled from or had coased to be a member of the institu-Mr. Justice Neville was of opinion that there had been no irregularity in the jul, a' proceedings of the commil, and he de med to make any order on the motion The reanth of the come nappealed, and the apvos head for July 20 before the Master of the Roles, Level Justice Pickford, and Levil Justice Warrington. The Master of Let i distince Waitington. The Master of the Roberton and the appellant was only a 302 note for an anjunction until the trial contact their. There were points of difficulty and of some importance in the case, and it was more satisfactory that a decision

in these should be reserved until the trial. when evidence would be adduced in the usual way and discovery would have been obtained, There was no use in discussing these points at present. An injunction until the trial of the a tion would not hurt the defendants. and would prevent the plaintiff from being in any way injured pending a final decision. The Court would therefore grant an injunction until the trial. Lord Justice Pickford and Land Justice Warrington concurred.

At the meeting of the Town Hall Committee of the Manchester Corporation last Wednesday the question of the reinstatement of two men at the City Surveyor's Department was again considered. The matter was supposed to be settled three or four weeks ago, when the committee decided in favour of the men going back to work with the approval of the City Surveyor, but the Council, at its meeting on July 7, called for further consideration of the subject. The committee do ided on Wednesday last to find the men some employment and to recommend that they be paid as from the time they were discharged to the present.

We heartily congratulate Mr. Hammerton. the Thames waterman who has saved the public from the monopoly the Earl of Dysart claimed of the ferry rights at Twickenham. He well deserves to be associated hereafter with other humble but spirited champions of public right whose memory is cherished by all who value it, and the courage which has maintained it against usurpers in high places Epping Forest was saved by a poor forest woodman, who sixty years since stood boldly up to one of the lords of the manor, not that the liberal backing of the City of London should be forgotten, which spent £25,000 in costs during the fifteen years' battle that ensued. Similarly Timothy Beck, a Hampton Wick cobbler, in George the Second's time, is gratefully remembered for his stubborn opposition of the action of Lord Halifax, then Ranger of the Park, who tried to close it to the people.

A valuable paper by Dr. A. Maxwell Wil hams, M.D., B.Sc., the Medical Officer of Health to the City of Edinburgh, in the July issue of The British Journal of Tuber culosis (London: Bailhere, Tindall, and Co., 8, Henrietta Street, W.C. 1s, 6d.), will well repay careful perusal. Dr. Williamson, after a careful analysis of the health combitions of his own city, arrives at the conclusion we have always maintained that the right method of attack on tuberculous disease must be along the line of improved housing conditions. Here are his Doints :---

1. Pulmonary tuberculosis is a disease which in 70 per cent or 80 per cent, of cases occurs in houses of three rooms and under; the number of cases is larger in two roomed houses than in three; larger in houses of one room than in two; and the number of cases of tuberculous disease increases almost in direct proportion to the number of small houses in any district or ward of a city.

2. That since the year 18-2 the number of deaths from tuberculous has shown a rapid and steady decrease, and a like statement applies to the general death-rate indoor disease.

recons timerculosis has shown a rapid and steady decrease, and a like statement applies to the general deatherate and the deatherate from other forms of infectious disease.

3. That this decrease has been taking place quite apart from, and irrespective of, any succeed offset of

3. That this decrease has been taking place quite apart from, and irrespective of, any special effort to deal with the condition other than the preventive measures, which have been carried out in the ordinary match of public health administration.

4. That the establishment of sanatoria and dispensiones, while useful aids in carrying on a general cruiside azonist this form of disease, are not of themselves likely to be attended by markedly hene heid results in the absence of other definite preventive measures.

Had we spent half the money that has been wastefully devoted to National Insurance on healthy housing, we should have had ten times the value for it. For beyond all question, as Dr. Williamson says, "If statistics prove anything, they prove to the hilt that the disease originates and thrives in direct proportion to the unsatisfactory nature of the house and its surroundings; and they prove invariably that an improvement on these conditions is followed, as by the law of cause and effect, by an immediate fall in the tuberculosis rate,

#### >-OBITUARY.

We greatly regret to learn that Mr. Allan Whitfield, of Whitfield's Safe and Door Co., Oxford Street, Birmingham, died on the 14th inst., after a long illness. The business will be carried on under the same management, and we are sure the wide consideration so well deserved in the past will be continued in the future to this, one of the oldest and most enterprising firms in the kingdom, and second to none as regards its reputation for its well-known specialties.

We regret to hear that Mr. James Willing, head of the well-known firm of advertising flead of the well-known firm of advertising contractors, of 125, Strand, passed away at his residence, Rock Hall, Teddington, on Monday evening, the 26th inst., at the age of seventy-seven. Up to a fairly recent of seventy-seven. Up to a fairly recent period Mr. Willing took an active interest in municipal affairs, having at one time been hairman of the assessment committee of the City of Westminster. He was a prominent Freemason, being a member of many lodges, including the "Willing," which was named after him, and the "Strand," of which he was the oldest founder, and he was a liberal supporter of the Masonic institutions and an officer of the Grand Lodge of England. He leaves three daughters and one son, and his heery presence and general Lonhomie will be missed by a very wide circle of friends. The funeral will take place on Friday at Hampstead Cometery at noon.

#### COMPETITIONS.

CANBERRA—The Austranan manage.

Home Affairs states that he will shortly refor designs for the CANBERRA -The Australian Minister of vive the competition for designs for the Federal Parliamentary buildings at Canberra. The competition will be confined to the British Empire. The Minister added that this competition was only for Parliamentary and not for administrative buildings. Asked as to what the prizes would be, the Minister said they had not been fixed, but he expected that they would be the same as previously fixed—viz. £2,000 first. £1,500 second, £1,000 third. The Minister said a lot of work was being done at the capital, and he thought there was quite sufficient for the next six months

WHITEHAVEN.—The borough surveyor, Mr. E. E. Stiven, as assessor, has selected for the purposes of a joint small-pox hospital for the borough and several adjoining urban and rural areas the design prepared by Mr. 11. Irving Graham, of Harrington. mated cost of the scheme is £3,500.

#### -TRADE NOTES.

Mr. J. Craddock Perkin, F.R.I.B.A., has removed from 181, Queen Victoria Street, E.C., to No. 62, Moorgate Street, E.C., and his new telephone number is London Wall

# WATER SUPPLY AND SANITARY MATTERS.

MATTERS.
OLDHAM WATER SUPPLY—An important addition was made on Wednesday to the Oblham water supply, when the new filtration works at Castbahaw were formally tion works at Castb-haw were formally opened. It is estimated that an additional 90 million gallons a year will now become available for supply purposes.

The Rural District Council of Doncaster have resolved that a town-planning scheme for the Careroft area be carried out by the council, with the co-operation and assistance of the Adwick-le-Street Urban District Council.

# Our Office Table.

By the recent death of Mrs. Sale, of Holt, Worcestershire, the water-colours bequeathed by her husband, the Rev. J. C. Sale, who died in 1897, have come into the possession of the Department of Prints and Drawings at the Department of Prints and Drawings at the British Museum, and are now on exhibition in King Edward's Galleries. They include two sketches by Turner. "Glacier des Bossons, near Chamonnix," and "A Storm at Venice"; "View on the Dee," "Flocks." "The Vale of Clwyd," "Beeston Castle," and "Stanniage Company." and "Stepping-stones at Bettws-y-Coed," by David Cox; and examples of W. J. Muller, P. de Wint, William Callow, James Holland, and Egron Lundgren, and other wellknown

A start was made last week with the civic survey of Greater London, under the scheme drawn up as a professional war relief measure by certain architectural and kindred bodies, and approved by the Govern-ment Committee. Several men have been employed on the work already, and a further number of the 150 eligible in London took up their duties on Monday. Greater London, South Lancashire, and South Yorkshire were the three areas mentioned by the Government Committee in making a preliminary grant of £1,000 at the end of June, and a beginning will be made as soon as possible in Manchester, Liverpool, Leeds, Sheffield, and other places in those areas. Mr. H. V. Lanchester and his co-directors for the different areas have just completed the general details of the survey programme. The maps and diagrams which are to record in the most accessible manner the entire life and interests of the communities will be grouped in seven sections, and considerable ingenuity has been necessary in scheming the colours which are to show at a glance the physical vital, density, recreative, industrial, traffic, and housing characteristics of the areas. The seven groups referred to cover physical features, mortality, population, public and private recreative opportunities, classification of industrial, residential, and transport occupations within the areas, traffic and relative areas of streets, buildings, and open spaces. The hon, directors for the three areas are:— Greater London, Mr. A. R. Jemmett, F.R.I.B.A.; South Lancashire, Professor Abercrombie, A.R.I.B.A. (Liverpool University); South Yorkshire, Mr. H. S. Chorley, F.R.I.B.A. (Leeds).

In an address at the recent annual meeting of the American Federation of Arts in Washington, Mr. Charles R. Ashbee, M.A., F.R.I.B.A., speaking as an English architect and art worker, deplored the effect of the war on British industrial art. He said that just before the war he had worked out a plan by which a labourer's cottage could be designed and built for a thousand dollars, just the amount that it costs to fire a 16-in. gun. Now no cottages are built and millions of money are shot away on the battlefields. Mr. Ashbee's workshops are all closed, three of his workers are at the front, a fourth is drilling cavalry, another is learning to drop bombs from an aeroplane, and another, "the best enameller in England," is making cartridges.

A conterence was held on Tuesday in last week at King's College, when several Belgian experts expressed their views upon the future reconstruction of their country. The chair was occupied by M. Borbonx, Secretary and member of the Belgian Chamber of Repre-Dr. Horta, architect and director of the Ecole des Beanx Arts, Brussels, stated that in the work of reconstruction in Belgium there would be needed a small number of expert directors. It would be necessary to study the character of Belgium and the Belgians in all their perfections and imperfections. He suggested that a committee of the burgomasters should be called to enable re-building to be undertaken, not from senti mental grounds, but from the practical stand point of supplying in the best manner posculture. He also proposed that besides the highways for commerce, new roads should be built near the railway lines for the use of the various works. With the outbreak of sible the needs of modern industries and agri-

motors. Town-planning should be stidied, but its theories should be put into practice with the utmost discretion. Mrs. H. D. Aelaud, hon, secretary of the Belgian Belgian and the state of patriation Committee, urged that our national duty to Ledgium would not cease with the departure of our Belgian refugees.

Mr. P. J. Sheldon, the county surveyor of Essex, in his annual report, states that main roads, exclusive of those under contract with urban authorities, cost for upkeep and in-provements £115,472. A principal item was tar-painting, 3,511,523 super. yds. having been treated at an average cost of 1\(^2\_34\), per vard. The year's expenditure was consider ably less than the estimate, owing to the difficulty, through the war, of obtaining granite, but the result had been that the general condition of main roads had distinctly lowered, and this, he feared, would scriously affect the roads for some time to come. No ordinary road crusts could stand the strain imposed by the exceptionally heavy vehicles now in use during such a winter as the past one, and the sooner this was recognised the hetter, and more stringent regulations made as to the weights that might traverse the highways. Owing to the war it had been possible to spend only £108,810 of the auticipated amount of £173,920 under the scheme of resurfacing to cost £576,890 in five years.

Stability of Masonry," by Ernest H. Sprague, A.M.I.C.E. (London, Scott Greenwood and Son, 8, Broadway, E.C., 4s.), is a useful manual of earth and water pressure on walls and other structures, both from the graphical and mathematical points of view Prominence is naturally given to the former. The volume is based on lectures given by the author at University College and the West minster Technical Institute, and includes ninety-two illustrations and three folding

The energetic campaign for the extension of the lumber export trade of British Columbia has directed attention to the timber resources of the province, their present development and prospects. In an interview, the Hon. W. R. Ross, Minister of Lands, said that because they needed reliable information in order to manage their forests intelligently he began a forest survey in 1912. and a very considerable area had already been covered. The figures obtained gave something definite to go upon. Besides the eight and one-third million acres under timber license, a million acres under old timber leases, a million acres of deeded timberland, threequarters of a million acres held under railway grants, the Crown timber reserve, created in 1907, was very considerable. In the coast forests a solid third was Donglas fir, which was the finest all-round wood in the world; over one-fifth was cedar, and there was an immense stand of Western homlock. The world was now beginning to realise what Western hemlock was. Our pulp and paper mills had gone great things with it already but the hig uses of this wood were only just beginning. The development of the lumber hus ness was just a matter of transportation The Province had developed a fine system of rallway transportation inland; so far, they had not done the same seawards. If the lack of sea-going tonnage that was stifling the export lumber trade were supplied, there would follow an expansion in the lumbering lusiness and activity in every form of

After charging dehenture stock interest and sinking final, transferring £40,000 to general depreciation reserve account and £2,000 to barge and rolling stock depreciation account, the net profit of the Ratish Portland Cement Manufacturers. Limited, for the year to April 30 last amounts to £146.375. A dividend of 5 per cent is recommended on the ordinary of 5 per cent is recommended on the ordinary shares for the year, against 7 per cent, for the previous year, while the "carry forward" is £70.767, against £64.322 brought in. A year ago £40.000 was allocated to general depreciation, and £11.755 written off pre-liminary expenses. The year under review, embracing more months of the war, opened with a normal demand for Portland cement and a reduction in manufacturing costs re-

affected c c c control to the first function of the first factor o and materials, the structure of community of the equal to the demand, recent manufacture, particularly men by the ark of more manufacture, particularly men by the ark of more method that the ark of mention and mention are more more more mention and mention and mention are more more more more more mention and m

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PROFESSIONAL AND TRADE SOCIETIES.
ARCHEOLOGISTS AND THE RESTOR ATHOX OF DEERHURST CHURCH. To annual meeting of the Bristo and G. Goster annual inceting of the Bristo and G. Froster shire Archaeological Society was held at the Guildhall. Gloucester, on Alednosday, the president, Mr. C. E. Keyser, F.S.A., being a the chair. The hon, secretary, Mr. A. E. Hierry, read the report, which stated that certain archaeological discoveries had been made at Bristol and Shirehompton. The report model the rellaminary for the content of the c port made the following reference to Deerhurst Church, near Tewkesbiny. "In 8-ptember last the yiear and churchwardens of Deerhursh Church obtained a faculty author, sing the rebuilding of the apse and the consequent alteration of the 16th century pews on north, east, and sides of the communion table, In view of the fact that the church is one of the very few left in which this arrangement of pews has been allowed to remain. strong protests were raised by members of the society and others against the proposed alterations

BRISTOL SOCIETY OF ANTIQUARIES. The second excursion of the season, under the auspices of this society, took place in Saturday, the 17th inst., when a visit was paid to Banwell Parish Church and the ancient camps and Bone Caves in the vicinity. At the church, the Rev. C. S. Taylor acted as guide. Mr. Taylor stated that it was agreed that a church stood upon the site since 885. The chancel screen, a masterpiece in woodcarving, with elaborate fan tracery, was erected in 1520, and the old register records that £700 was paid to the carver. Attention was directed to the fine timbered roof, with its stained plaster panels to represent word. The stone pulpit, with its delicate tracery, supported on a slender octagon stone pillar, is an item of note. Above hangs a ornamented oak sounding board, erected in the reign of James 1.

SOMERSET ARCH\_EOLOGICAL SOCI-ETY.— This society held its staty seventh annual meeting at Tanuton on Tuesday in last week. Mr. A. F. Somerville, who pre-sided, said that there had been no excursions during the property of the property The during the year owing to the war, council's annual report, presented by Mr that the membership was 9.5, a decrease of nineteen, the first since the new century began. There were twenty five new members, but losses by death had been heavy, and the way had caused some resignations. The definit but losses by death had been heavy, was had caveed some resignations. It on the general account was £124. It been no falling off in the acous museum specimens, and much with had been accomplished. The gadopted on the motion of the Death Dr. Robinson, who said to be a adopted on the motion of the Point Dr. Robinson, who said it leads oughly live character of the said to of the centre of its work, the Cisti Field Wilde river construction in VI .

Farl Wilde river convenients interested YORKSHIRE GEOLOGISTS TOTR.
The Yorkshire George. So rety stades tour through the Wollbarr Villege of Saturday, in let the body by a first List. May be of Locks. My dies E. Berg if The party journey I by transt Artification where they were met by many the List of which the remainder of the tripers, smaller the remainder of the tripers, smaller. The route taken was via Leathley, where the parish church an interesting example of Saxon architecture was visited, to the Lindbey Wood Reservoir. Swinsty Had, a sixteenth century building, which belongs to the Leads Corperation, was also visited. It is one of the best examples of Elizabethan buildings in Yorkshire, and is in its original state. Luncheon was provided by the Lord Mayor at the Waterworks Lodge, and the party, after inspecting some of the works, returned to Leeds by train.

#### LEGAL INTELLIGENCE.

ARCHITECT'S CLAIM AHERNE'S TORD A the Birmingham Assies on the fillest week Mr. Justice Bailhache by dear to be action to recover £1551.s.. three conflicts was Mr. Justine Bailhadies of the conflict of the public and conflict of the secondary of the public and conflict of the secondary.—The appeal was desirable and conflict of the public and pu

THE CROWN'S RIGHT TO REQUISIHON LAND. As sidered pulgments were
greater the Say one Court of Appeal on Fr.
ay by the Master of the Reals and Lord
before Pickfort and Warner ground had been
and deals no of Mr. Jastice Avery by an
attact ground by whose ground had been
taken by the Crown for military purposes, as
to which, ringly had right in law to obtain
comparison. We reported the original hearties before Mr. Justice Avery in our issue of
the 12th first. If St. and the appeal, in which
ideal was now delivered, in last week's
namber, p. 61. Mr. Justice Avery, in his judgmout, held that the regulations under the
Defence of the Radim Consolidation)
Act, 1914, conferred on naval and military
authorities during the continuance of the war
to abe late and inconditional power to take
essession of later and buildings and to do
ary other net for the public safety and the
security of the Realm, even though that Act
interfered with private rights to properly. He
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failed to see the say of right in law to competsation, and he can be a fine appellants were
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Mr. Dake's Commission

ford and Warrangton also delivered judgments ford and warrington also delivered judgments dismissing the appeal. Lord Justice Warrington station that the opinion of the authorities as to what he we was necessary for the public safety must, if they acted reasonably and in good faith, be conclusive.—The appeal was dismissed.

The corporation of Chicago have under dis-cussion plans for the erection of a new muni-cipal court be, ding and central police-station on city property, on the south side of Madi as Sirest, to cost approximately \$1,500,000.

The application of the Beverley Rura. District Council to borrow £12,000 for sewag works for the townships of Brantingham and works for the townships of Brantingham and Elloughton has been the subject of an inquiry before Mr. A. G. Drury. Some opposition was offered and the inspector intimated that there would be no satisfied given to the loan until after the war.

A memorial to the late Mr. Andrew Lang, which has been creeted in the public library of his native town of Selkirk, was unveiled on July 31. It is a tablet of Sienna marble, in the upper portion of which is a circular bronze medallich portrait of Mr. Lang by Mr. Percy Portsmouth, A R S.A., while side panels having are representing Meditation and Literature

The Austroneers and Estate Agents' Listitute has issued in booklet form a list of the names of 455 members who are serving with his Majosty's forces. The Council announced that at the term nation of the war it is proposed to place in a prominent position in the irst: tette in Rassell Square a suitable permanent record in memory of members who have lest their layer in the conflict. ives in the conflict.

The extern drainage scheme, which has taken for rivears to complete, was opened at Newquay. Contwall, on Tuesday in last week, and the event was colebrated by a lunched given by the chairman. Sir Robert P. Education for the chairman sir Robert P. Education of the scheme cost £12 00, and the extension of the xestern cutfull £2(00), which was equal to £5 per head of the ne mal population of the town.

The Stockton on Tees Town Council have The Stockton on Tees Town Council have a needed with regret the resignation of Mr William Force, who has been in the service of the gas maintee for fifty years. He is to receive an address recording appreciation of his services, and their appointed consulting erganer at a salary of £250 a year. Mr. Matt Duct, who has been assistant manager for twive and a half years, is premeted manager at a commencer stary of £420.

at a commence of salary of £450.

The final receiving of the present season of the St. Panule Electricological Society took phase on Salarday, when a visit was read to the Greek Church of St. Sophia, Moscow Road Bayswarde, W. under the guidance of Mr. T. Costa by permission of the Rev. the Great Arch mandride C. Pagonia. The party was afterwards conducted over the "Chapillof the Asconsion." Bayswater Road, built for the late Mrs. Hamplen Gutney and decorated with frescors by the late Mr. T. Wentworth Shields.

As the result of a motor accident in Sandling Read, Maid-tone, the borough surveyor (Mr. T. F. Bunting) was last week confined to his bed for some days, but is now about again.

The Bishop Auckland Urban Council is making application to the Local Government Board to borrow money in connection with the sewer age scheme, which is costing, complete, £28,000.

Mr. Alexander McDonald Cobban, inspector to the Winterton Urban D.strict Council, has been appointed surveyor and inspector to the Brumby and Fredungham Urlan District Coun-

The resignations of Mr. Brecken, waterworks engineer. Mr. D. B. McLay, assistant engineer on construction; and Mr. R. M. Grancey, bridge engineer, have been accepted by the city consult of Vancouver, the resignations to take effect on July 31. It is understood that the city has not sufficient work in hand to keep the engineering staff employed.

The contract for the second addition to No. 1 elevator of the Montreal Harbour Commissioners has been let to the Geo. A. Fuller Company, Limited, Montreal. The piling contract is now being earried out by the Peter Lyall and Sons Construction Company, Limited, Montreal. The plans were drawn up by the John S. Metcali Company, Limited, Montreal. This is one of the largest contracts given out this means in the city. this season in the city.

The new town hall at Wallasea is rapidly The new town hall at Wallasea is rapidly assuming more imposing proportions now that the tower has been commenced, and the river perspective is being improved by the excavation of the high ground leading up from the promenade, and preparations for the formation of a series of steps and glass terraces on the slope. The architects of the town hall are Mossrs, Briggs, Wolstenholme, and Thornely, of Liverpead, whose designs and plans, selected in connection, were illustrated in our issue of competition, were illustrated in our issue of  $M_{\rm SM}$  =6, 1915.

A special meeting of Inverness Town Council has been held to appoint a burgh surveyor in specession to Mr. Scott, who received an appearance in the Port of Trinidad. There were hityen, the applicants for the vacancy, and a leet of seven was drawn up. A vote took place between the names of Mr. Alexander F. Mackenzie, architect, Inverness, and Mr. Smith, Engineers' Office, Highland Railway. Mr. Mackenzie was appointed by fourteen votes to five. The new burgh surveyor, who is a native of the verness, has had considerable experience in his profession as an architect, and was for some time a member of the town council. For the past few years he has been on the staff of the Lands Valuation Department, and carried out the valuation in the Island of Lewis.

In order to afford a water supply to houses A special meeting of Inverness Town Council

In order to afford a water supply to houses about to be creeted in Woolwich by H.M. Office of Works, the Metropolitan Water Board have authorised the Works and Stores Committee to incur expenditure not exceeding £900 in connection with the re-laying of about 1,400 yards of 8-in, main in Well Hall Road. 1,400 yards of 8-in, main in Well Hall Road, Kent district, and that the work be carried out under the board's annual contracts under the direction of their chief engineer. An extension of main to the districts of 1de Hill and Goathurst Common. Sevenoaks Rural District, was approved, subject to execution of guarantee agreement by Sevenoaks Rural District Council. The work will be carried out by the board's pipe-daying contractors at a cost of cm. The work will be carried out by the board's pipe-laying contractors at a cost of £1.964. The board also agreed to the laying of about 1.050 yards of 12 in main in Willesden Lane from Edward Road to Coronation. Road, for the purpose of improving the supply

den Lane frem Edward Road to Coronation Road, for the purpose of improving the supply.

The Surrey County Council recently purchased three pieces of land from the Metropelatan Water Board for the widening of Postsin art is for improving the junction of Thornfill Road with the Portsmouth Road at the point in question. The improvements have been carried out at the joint cost of the county council and the Esher and Dattons Urban District Councils. When the improvement has been completed the Water Board will be off with a piece of land containing 185 square yards or thereabouts, beneath which two 5¢ in, mritis pass. The land cannot be in the form a receptacle for rubbish and be an unsignity feature when seen from the aljoining highways. The Esher Urban Destrict Council have no warranged with the Water Board to take the land on lease at a nomical rent and to plant it with ornamental shrubs and lay out grass, and generally keep it up as a public garden, they paying a merely nominal rent of 10s a year. The arrangement will be carried into effect under the Open Spaces Act, 1906.

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

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	OUR HILLSIRATIONS.		

Eighteenth-Century Irish Houses, Beaulien, Co. Louth, and Cashel Palace Hall, Tupperary, from a Goody in Mansions in Ireland," by Mesers Thomas U. Sadheir, M.V., and Page L. Dickin son, F.R.I.V.I.

The London City and Midland Bank, Ltd., Metro polition Branch, Wolverhampton, View and plan Meers Cossins, Peacock, and Rewlay, Vicinteets.

## Strand, W.C.

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a Water Archite		11 17			71	11	-

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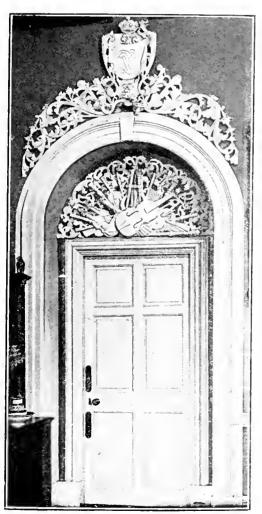
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and plan. Meser, Marchitects
V.M.C. Vew Promises. Michele ReView and Plans. Mr. Greetin
F.R.L.R.V. Architect.

only alternative was a purhorus character fabout a dozen of the chef domains, while the lesser specimens had to be omitted. Thus it came about the last volume issued by the Georgian Society, published in 1913, was devoted to a few Dublin is pre-eminently famous for its Georgian architecture, and several eminent representatives of the fine arts and learned bodies in the city founded "The Georgian Society" a few years ago for treasure homes; indeed, we are given to the fine arts and treasure homes; indeed, we are given to trained, together with their historic par-

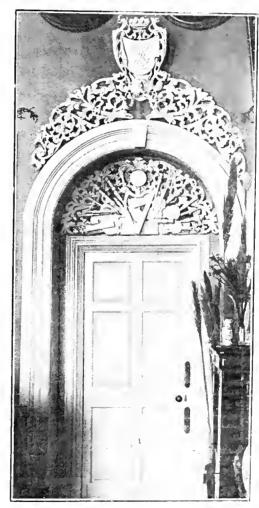
#### EIGHTEENTH-CENTURY IRISH HOUSES.

(WITH ILLUSTRATIONS.)

Subsequently, however, having devoted four handsome volumes to Dublin, the committee turned their attention to the wider field, including some of the more



BEAULIEU, CO. LOUTH.—DOORWAY IN HALL. From "Georgian Mansions in Ireland."



BEAULIEU, CO. LOUTH. DOORWAY IN HALL From "Georgian Mancions in Ir I and

the express purpose of collating an authentic and copiously illustrated record of the best Georgian domestic work in Dublin. At the outset little idea was entertained of attempting a survey of the country houses of Ireland, mainly built though they were during this epoch. There was no intention either of covering the ground occupied by the historic decorative work of the Hamoverian period in other parts of the country.

Indicate a half-impression provated among the organisers of this special scheme, when it was decided to devote their fifth book to Irish country houses, that the analysis included in the ariginal survey houses included in the ariginal survey instituted by the society. The editors were mable to cope with such a number of buildings, consequently their few of the typical Georgian houses left

untouched by the committee. Domestic buildings of secondary importance are frequently much more suggestive than grander structures, and therefore this new, acter and merits the space given to its book will be welcomed.

Some of the buildings previously dealt with, as above stated, should here be enumerated, or it might appear that the author had overlooked the richest Georgian examples in Ireland when richest arranging their material for the work just published in Dublin. The society having given these big places, there was no occasion for illustrating them again. The first to be named is the palatial seat of Castletown, near Celbridge, Co. Kildare, being the earliest stone-built residence in the Classic style erected in Ireland. The buildings comprise a four-square central block with lateral wings connected by segmentally planned colonnades. The composition presents a refined monu-

the Mid-Victorian period, when new windows were inserted, but the house still well retains its 18th Century charillustration as a leading example of its time. The ornate saloon, with its somewhat pretentious organ case, suggests the effect of over-elaboration, and is lacking in dignity. Newbury Hall, in the same county, is particularly interesting because of its construction in red brick. The arrangement of the plan consists of big wings with intermediate buildings joining them up to the central or crowning block. Powerscourt House, Co. Wicklow, and Castletown, in Kilkenny, are likewise amply illustrated. The last-named is singularly fine, comprising a middle composition of the typical Late Renaissance kind with arcaded verandahs terminating

most part they are very characteristic, and are still rich in good paintings and plate, often containing exceedingly good 18th Century workaday furni-ture as distinguished from show pieces, for the cabinet work of Ireland is marked by much excellent style of its own. Old Irish furniture is distinctive, mostly wellfinished, and it will bear comparison with English contemporary productions. This supplementary but otherwise complete volume, though primarily intended to be a context to those which the Georgian Society brought out, will be valued for its own sake, quite apart from their five former books. In size, style, and binding the work is uniform with them. authors, Messrs. Thomas U. Sadleir, M.A., M.R.I.A., and Page L. Dickinson, M.R.I.A.I., acknowledge in their preface in tall, opulent-looking pavilions having ogee-shaped roofs. Much suggestive detail C.V.O., the Provost of Trinity College,



CASHEL PALACE, TIPPERARY: CARVING ON STAIRCASE. From "Georgian Mansions in Ireland,"

mental extensive façade in the Italian abounds, and the excellent doorways of manner. The "Long Gallery," common elegant proportions add to its charm, The to earlier mansions, is more than 100 ft. house was built between 1767 and 1770 in extent, and a lordly feature is made of the "Grand Hall," besides which there is a very spacious staircase hall in keeping with the rest. No plans of the building are furnished, and this absence of plans materially reduces the architectural value of all these publications of the Georgian Society. Russborough Court, in County Wicklow, has a similar lay-out, extending, however, to greater magnificence, being 700 ft. long, measuring out to out. All the elevations are faced with wrought stone, and the design is attributed to Bindon and Castle, well-known architects of their day. The estate is hard by Blessington. The mansion has a beautiful saloon, and is remarkable for the great variety of its mantel-pieces. Summerhill, Co. Meath, is of a similar type, quite as important in scale, and well worthy of its architect. Richard Castle, who commenced its erection in 1731. The proportions are more lofty than usual, making an exceptionally fine building. Some eight years later the same architect was engaged by the Duke of Leinster to recast his pre-Georgian mansion Carton, his famous seat near Maynooth, Co. Kildare, Further alterations were made to this place during

from plans by David Ducart, the archi-The Marino, Co. Dublin, supplies the only measured plan included in this Volume V., published by the Georgian Society. In their previous books restricted to Dublin, more plans are provided, the most important being those printed in Volume IV. of Leinster House, accompanied by sections to scale nicely drawn and reproduced.

The Georgian town residences in Dublin no longer remain in the occupation of the rich, for whom they were built, while in some streets only their shells stand intact. In the majority of instances these long-neglected mansions are used for housing the distressed poor. About the better parts of the city similar sometime opulent residences are utilised by institutions, or have been converted into hotels or adapted to office requirements. The country houses of Ireland, on the contrary, have been more fortunate, being very largely maintained in their original status notwithstanding "Castle-Rack-rent" stages and various ruination difficulties incidental to their chequered his-

Dublin, for his sympathetic co-operation as President of the Georgian Society in furthering the production of this publication, for which they alone are responsible. The volume cannot fail to be recognised as a standard work on the subject. Mr. Dickinson served as joint hon. secretary of the society, and consequently had the whole business before him. His partner, in his professional practice, Mr. R. Caulieild Orpen, R.H.A., has lent a hand by contributing some cleverly-free pen-and-ink sketches, interspersed in the text, and more marginal illustrations are added by Messrs. L. Giron and J. Haughton. Mr. Milford Lewis, the wellknown architectural photographer, of Dublin, who supplied most of the views and details of ceilings and other decorations for the illustrations issued by the Georgian Society, has been also retained for the same work in this book, besides executing all the copper engravings from his own photographs. We have been per-mitted to reproduce those given by the Dublin University Press, the printers of the whole series in question. The book contains eighty full-size plates, besides twenty smaller drawings in the letterpress. The buildings represented are tory. These historic homes do not always Abbey Leix. Beaulieu, Bessborough, possess many valuable curios, but for the Caledon, Cashel Palace, Castle Ward,

Curraghmore, Desart Court, Furness, Palatten Hall, Turvey, Belgard, Castle Upton, and Heywood. The last-named Upton, and Heywood. house possesses an exceptionally handsome Georgian punch bowl used by the notorious "Hell Fire Club." The cup was made in London by Anthony Nelme and bears the Hall-mark of 1700. It is illustrated to a good scale. Some drawings by Robert Adam are also reproduced in the final pages of the volume.

Our inset plate to-day comprises the entrance front of Beaulieu and an interior of the hall, from which an heraldic carving is shown in detail. We add here a pair of doorways in this apartment for the sake of their elegant enrichments. From Cashel Palace the hall is photographed, and added to this there is a smaller illustration of the carving on the string of the staircase landing. I rior to printing particulars of the subjects depicted in their book, the authors have devoted a chapter to an informative essay on the "Development of Georgian Architecture and Its Application to Irish Requirements."
When these 18th Century dwellings were built, English architects were very often imported to design and carry out their execution. No genuine Tudor-dated mansion exists in the whole of Ireland. and the only exception of that period is furnished by the house of the Ormonders at Garrick-on-Suir, while very few houses are to be found which can rightly be called Jacobean. Irish fortified castles, still very numerous, were long retained for use after the English had abandoned the erection of that earlier class of buildings altogether.

Beaulieu, in Co. Louth, lies between Drogheda and the sea-shore. The house is reckoned the earliest of its kind erected in Ireland carried out in stone, with redbrick dressings, the bricks being of Dutch manufacture. The bold eaves and dormers bespeak the Caroline period, to which the property belongs. The hall is an exceptionally good one for such a residence, rising as it does through two stories. is the more notable for the admirable Early 18th Century pierced wood carvings, which we have previously mentioned. The door cases have bold, deep architraves of the style of the last quarter of the seventeenth century, and some of the ceilings much resemble Jacobean plaster work. The staircase is a capital Mid-Georgian example. The Tichborne family was long associated with Beaulieu. and the great treasure shown to visitors is the famous portrait by Sir Joshua Reynolds of Lord Rokeley, Archbishop of Armagh, of whom Sir Joshua painted five portraits. The charm of Beaulieu is its well-balanced dignity and unpretentious, homely look, though, strictly speaking, the Georgian style in Ireland was exotic, being the architecture of an English garrison; but, all the same, some of these houses are so Irish in character as to wear almost a foreign appearance to

English eyes. Cashel Palace, in Tipperary, has for long been occupied as the Episcopal home of the holder of the Protestant See. The house is hard by the famous Rock of Cashel, where King Donal Mor O'Brien built his great cathedral in 1169 and fitted it in between the Round Tower and Cormac's Chapel, both of which buildings were already in possession of the Rock. The noble chapel, "that perfect flower of Irish architecture," like the earliest churches of Ireland, had its orientation the festival of Beltane on May 1. The orientation of Cashel Cathedral, now long since in rmins, was taken from the sun's and Gibls. 1915. Dublin. £11s. net. fixed by the position of the rising sun on

point of rising on the feast of St. Patri V. the delication saint, May 17, and in thes was King Donal ingeniously worked in his building and dovis I a regulated orienta-tion. Cashel Pala: is a commodious two storied building curried out in red break with limestone dressings. Much of its homely character and style is due to it. range of dormers. The roomy hall is panelled in red pine and has bold Corin thian columns, as so if in the illustration. The staircase occupies a hall of its own and typifies its Early Georgian origin, worked out richly with twisted balusters. The bedrooms preserve their original windows ats and broken architraves to the doorways, while the mantels differ in their detail, a l dating about the year 1810. The mansion itself was erected in 1750 by Dr. Theophilus Bolt in when he was Archbishop of Cashel. Of the remainder of the houses so well represented in this book, we have only space to mertion Caledon, a white building distinguished by decerative finish of a high class inside. Curraghmore, Co. Waterford, occupies a splendid position in the delightful valley of the Suir. Ranking as it does among the best in Ireland, it is so genuinely Georgian that the building on the garden side might easily be mustaken for some English country seat. The kernel of its structure is a modernised castle belonging to the class of medieval strongholds built by the Barons. This has been faced up in its towering form after the manner akin to the François Premier or French Renaissance, rising between much lower flanking buildings to the front sides, and these wings represent the stern pure Georgian type of the strictest simplicity. The ceilings and handsome chimney-pieces form perhaps the chief architectural merit of Curraghmore. Desart Court, built in blue limestone, has bold terraces and stately gardens disposed in a handsome fashion, worthy of this ducal home. Lord Desart owns some very fine cabinets and other choice old furniture. There is a noble staircase in the house, quite worthy of its

Florence Court, likewise freely photographed in this volume, is palatial in scale, with wide and areaded wings in accord with so splendid a mansion. It is the finest Mid-Georgian place in Ulster, and is chiefly remarkable for its extraordinarily free and fanciful plaster ornamentation, said to be French. Some claim this work as that of native craftsmen, which is probably correct, because there was a local school of clever plasterers at Waterford well known for their skill in following the style perfected by the Brothers Adam. Furness is comparatively modest in size, but is distinguished by special points of its own. Platten Hall represents a type much imitated nowadays by English and Scottish architects when affecting the mann-risms of the less pompous form of the "Late Renaissance. The dining-room, here so well shown, is specially admirable, true to style and holdly panelled in oak, with a refined white and grey ucuble chimney-piece; the whole apartment being adaptable as it stands to present-day taste. The book scenes to present-day taste. The book contains a few contemporary and ther portraits, including Remney's exquestic printing of Lady Arabella Ward at Castle Ward, the seat of Viscount Banger \* ---

At Lowesteft in inquiry was held in Thursday before Mr. H. Shalford Bidwell, respecting an application by the corporation to the Local Government Board for leave to borrow £7,500 for works of sea defence.

PAINTERS Sections ARCHI 1048 WAR L. L. EXHIBITION

The I was II. at Indistrict and the pursuit of pursuit of the angle of the Artist's extreme and and statisment who constructed being a simple of the angle of the pastels, and discussed in the appastels, and discussed in the artists of the arti passes, and a constraint which are to be a set of the mecessite is an ests and so the private view too, place on the day, when Princess Least, artist of no mean capacity, given most feelingly constraints. most feelingly charged to be a linear feeling to be a linear Institute of British Arch + is the tion being displayed there and a joining Maddex Street Galaces the purpose by the Institute mission has been adepted in the hope that many will avail themselves of viewing to works of art thus generously exhibited to, the benefit of the charitable tunds of the professions concerned, the Reyal Institutof British Architects and the Imperial Arts League having co-operate I with this end. The exhibition will be open for several weeks, and the prices quoter aras a rule, very moderate, so that all those who are in a position to buy may secure some really good bargains as will as assist the deserving art workers who are so sorely in need. Remembering the many equally laudable and spontaneous Remembering the displays that have been and are being held all over the country for war funds and in aid of different classes of sufferers, it must

Not a few painters and architects well known for their skill and facility with the pencil, pen, and brush are conspicuous 'v their absence, but this perhaps may be readily accounted for by their not having been personally applied to purched, we are aware that this was partly the case, but the oversight possibly was quite uninter tional. The result is none the less to regretted whatever the cause, seeing the some of our best men are not represented. The collection on the whole, nevertheless, is highly creditable, and certainly livers in interest, even if the impression at first sight is that many of the exhibits and its to the work of post days. There may indeed, be critics who will urgether the tile collection includes too mary stagers." but after all viry few sket hes and drawings in the section on the section on the section to the section to the section of the section 118.

be admitted that the exhibition is a re-

markably good one, thoroughly represen-

tative in character, and fraught with an

individual interest of its own,

great gallety is deviced losing pictures. In the cludes severally Royal V. others well kn with free Files of a catalogue, our first in teachers will kn with free Files of a standard number of the Change of the Change of Mr. A. K. Brown, R.S.A. with a row of cotters' that the homes beyind a cornfield and reasons in the first management. field, and reapers in the foreground, all excellently rendered. Next to this is a pastel, by Mr. John Charlton, of a very friendly-looking seated lion by the side

and their varying moods. Miss Eva Roos (Mrs. 8, II. Vedder) is rich in the colour-scheme of her Strohi wedding-party before the velandah of a stone-built Oriental temple. Its warmth is a good fell to the next adjoining seascape in moonlight, by Mrs. Mrs. Medden when wedder in Mr. Alex. Maclean, whose work is one of the pleasantest in the room. There is a tack of brilliance in Mr. Harold Speed's smaller study (No. 12) of "A Capri Bay." with the dead, deep waters of the rock sound paid devoid of all reflection of the shore. One of the largest, if not the biggest exhibit is "The Storm: Its Burst of Passion Spent," given by Mr. A. Carruthers Gould, and showing a village among the hills illumined by a rainbow effect broadly handled in an impressionist way, with water-logged flats in the front of the picture, distraught as it is by the elements, tellingly painted in a making a handsome gallery picture. oils.

Mr. Frank Calderon, with his modest "Shelter," adds a foil to this storm scene by showing a ploughman and two tired horses enjoying refuge under the trees during a passing shower, so meely and capably depicted. Mr. David Murray, R.A. is the generous contributor of "In the Heart of the Highlands," a fine the Heart of the Highlands," a fine example of his masterly skill, and Mr. Arthur Hacker, R.A. shows an oil sketch of a brown field, group of trees, and a woman at work, called "Hoeing," Sir Ernest A. Waterlow, A.R.A., graces the row of poplars in front and farmstead to the rear alongside of the stack-yard. The whole thing is delightful, almost like a Constable in its manner and tone. "Fountains Hall from the Gardens" is not an architectural sub-ject as here rendered in Mr. John Lavery's dashingly done and highly capable impressionist study of the flowerbeds, terraced lawn, cut yews, and topiary work. Architects would never recognise the great Jacobean mansion near the Cistercian's Abbey rains from this picture. as the house serves merely as a foil to the graphic confusion of flowers and foliage, which at a distance looks wonderfully real in this offhand clash of colour brains, as Sir Joshua said, being max d with the paint.

Very different to the last-named is the "Moorland Pasture" sent by Mr. J. Courts Michie, A.R.S.A., a lovely-toned big sky son, well mellowed by time, miles the spen country, where two oxen and a woman give a personal in-rest "Loch Shiel" is another Sotch mosa, suggesting a more rmy effect in water colour, with some sters, learnest also looking thoroughly keeping, by Mr. A. K. Brown, R.S.A., s., s. with needs in introduction here. The effect of the Disgrape. "Its leaving we want the star thing in an oil sub-I in the pister's cap is lovely in tone, I very wide the D is enrious to note the last named landscape that the cow put in vermillen or nearly so, and yet looks quite right owing to Mr. Browne's ich and sonse of values. The blue the recolorizated by at Canadale Bay, by the traditional day at Canadials Boy, by the series printer, as most cap rivating adose, so a bag landscape of Windsor astless, a time members at Eton Wick.

Mr. Herbert J. Snell A vast exclusive if Say merges in a long, dark line on the headson. A The Allegory, by Mr. I have J. Solomen, R.A., is decorative, and the Granting Sea. the first breezily by Mr. Licel F. A R A is figured by a boy and the last named. "Sculling," by Mr. H.

of his to calbent spouse, both strongly woman, suggesting a story which entities arrawn with a close knowledge of big cats the gallery. "The Ice Manden," in blues and their varying moods. Miss Eva Roos and cold tints, the work of Mr. T. C. Start Valdorius rich in the colour- Gotch, is beautiful and vastly more than a colour while "Sweet a study of the nude; while "Sweet September" furnishes a truly English pastoral, with the orchard and embowered cottages by the banks of a river. It is thoroughly and artistically painted by Mr. E. W. Watte. The telling ideal of The Eye of the Storm," shown by Mr. Fom Mostyn. is Rembrandt like in breadth, showing the snow-peaks beyond the valley, where the wind-brushed shrubs in the gloaming light up the middle picture beyond the hush under the forest

On the screens, Sir Aston Webb, R.A., has a gateway from Bruges next a circular bastion tower and conical roof with its lantern stage, near by the "Late and Flat pediment over the archway in stone. Two other water-colours, by the Two other water-colours, by the late Alfred Waterhouse, R.A., from Rome and Quimper, are to be welcomed as in evidence of his capacity as a colourist equalled by very few of his contemporaries. Sir Ernest George, A.R.A., shows several of his beautiful etchings, and the most typical of his sketches here seen is that of the great portals of St. Trophine. Arles, drawn with every appreciation of the statuary, the whole being lightly washed, with good results. The timbered front over the fishing-tackle shop in "A Street in Exeter" is another typical sketch by Sir Ernest George. One the smaller gems of the gathering is a pair of storks so eminently characteristic of the late H. Stacy Marks, R.A. (220). also so true in all his renderings of birdlife. Mr. W. Walcot shows several of his masterly etchings of architectural compositions, but his chef d'aurre is a powerfusitions, but his ent a nature is a powerful study of the vast portal of the modern Palace of Justice at Brussels. Mr. Andrew N. Prentice does himself and his subjects justice in "A View in Skye" and "View in Perugia," a pair of pleasing little water-colours. We were much taken with the old square at Semur, France; the brilliant sunshine midst cold colourings in a narrow way at Chatillon, Val d'Aosta, with its arched side entries, as drawn by Mr. E. Guy Dawber. Mr. Ed. Warren sends a deliente pencil skotch of a florid Gothic oriel, · Tha Eckes Fenster, Nurnberg, rightly rendered. Rheims Cathedral is drawn in elevation by Mr. Arnold Mitchell, and dated 1886, and the same architect shows similar big fronts of Lich field and Wells Cathedrals, all carefully and tellingly realised as to their elabora tion of iconography. Mr. Curtis Green is fully represented, and his most telling drawing is the "West Portal, Cre попа, He also supplies a pen sketch of Countains Hall, which gives a very dif ferent impression to the painting, already mentioned, by Mr John Lavery, VRA (24) Mr S. D. Vishead's Kent Farm and Marsh Side, Re-alvers, show no little capacity as a officers, show no fittle capacity as a cuter-colour sketch i, and Mr. Phene Spiers sends "The Ruins of St. Cloud After the Commune." Mr. Buffles Davison's work is on view several Cloud times, but the gem of his series is a small dashed-in ivory coloured seascape. "After George Sheffield," Mr. Alfred Yeates Mr. Herbert Wigglesworth, Mr. Barclay Niven, and Mr. J. Joass send water clears, one and all capital in their own lirection. Amongst the most delightful is "Bromeswell Heath, Suffolk," with

woman, suggesting a story which enriches diffeathcore Statham, looks sadly out of the gallery. "The Ice Maiden," in blues drawing, with little knowledge of boats and the sea resembles a hayheld on a very choppy day.

#### R.I.B.A. EXAMINATIONS. Preliminary.

The Preliumary Examination, qualifying for registration as Probationer R.I.B.A. was held in London, Bristol, and was need in London, Bristof, and Manchester, on June 8 and 9. Of the 80 candidates admitted, 36 were exempted from sitting, and the remaining 44 examined, with the following results:—

Centre. Examined, Passed, Relegated. London ...... Bristol ...... Manchester ... 44 16

The passed and exempted candidatesnumbering together 64—are as follow:—

The passed and exempted candidates—mumbering together 64—are as follow:—
Attcheson, Henry Maynard, 4, Buxton Road, Breghton, Allson, Frederick William Harforth, 36, Raichills—Avenue, Chapeltown Road, Leeds; Molerson, George, 8t. Giles' House, Norwich; Archley, Max Hertot Nevil Cuthbert, 23, 8t. John's Road, Chiton, Bristol; Ayers, William Ceed, 77, Kyan Street, W. Bowling, Bradford; Barber, Norman Arthur, Vicarage Avenue, Derby; Bateman, John Ambrose, 56, Constantine Road, Rampstead, Bennett, Harvey Ernest, 5, Donro Villas, Cheltenham, Benson, Christopher Augustus, Carliett, 4t. Pentre Street, Grangetown, Cardill; Hooth, Harry Ernest, 29, Sydney Street, Brighton; Brown, Charles Robert, 2, Povident Place, Colchester; Rurkitt, Cech. 3, Westbourne, Ringhton; Brown, Charles Robert, 2, Povident Place, Colchester; Rurkitt, Cech. 3, Westbourne, Charles, Charles,

#### Intermediate.

The Intermediate Examination, ing for registration as Student R.I.B.A., was held in London, Bristol, and Manchester, from June 4 to 11. Twenty one candidates entered, with the following

Centre	Lyamaned.	Passed.	Relegated.
London	13	5	<b>~</b>
Bristol	. 8	9	1
Manthester .		**	
			_
	**1		5.7

The passed candidates are as follow, the names being given in order of morat .-

#### P = Probationer.

P-Probationer.

Philp, Arthur Thomas [P. 1913], 34, Alderney Street, S.W.; Francis, Bernard Thomas [P. 1912], "Michigan," Watering Hill, St. Austell, Cornwall, Johnson, Henry Andrew [P. 1911], The Vicariage, Great Harwood, Blackburn; Warwick, James Gay [P. 1912], 103, Park Road, Peterborough, Todd, Harrold Edgar [P. 1912], Hart's Cottage, Amonsbury, near Bristol; Bonnister, Harry [P. 1914], 65, Edith Grove, Fulham Road, S.W., Winebaum, Goodman George [P. 1911], 13, "Shiplake," Calvert Avenne, Bethnal Green, N.E.; Metcaffe, Harry [P. 1993], 173, Shear Brow, Blackburn, Emes, James Albert [P. 1965], 14, Nightingale Square, Wandsworth Common, S.W.

The number of failures amene the relevance

The number of failures among the relegated candidates was as follows:

A. Principal Styles and General History of Archiveture, 1: Bl. Simile Applied Construction, 8: A. Principal Styles and General History of Architecture, 1; Bl. simple Applied Construction, 8; B2. Theoretical Construction, 8; C1. Historical Architecture: (a) Greek and Roman, 2, (b) Byzantine and Romanesque, —; (c) French and English Gothic, —, (d) Italian, French, and English Renatssance, —; C2. Mathematics and Mechanics, 1; C3. Design, 5.

#### Exemptions from the Intermediate.

The following Probationers, having produced satisfactory evidence of their training and qualifications, were exempted from sitting for the Intermediate Examination, and have been registered as Students:-

and have been registered as Students:—

Dey, Berendra Nath [P. 1913], 36, Otago Street, Glasgow [Government C. L. College, Subpur]; Dhama, Bhanwar Lall [P. 1913], Consulting Architect's Office, Bombay [University of Allahabad]; Ford, Thomas Francis [P. 1912], 36, Hanover Park, S.E.; Gonrlay, William [P. 1913], 2, Badmoral Tetrace, Queen's Park, Glasgow [Glasgow School of Architecture]; Hardy, Thomas Charles [P. 1913], 15, Carmichael Place, Langside, Glasgow [Glasgow School of Architecture]; Honeyman, James Maren [P. 1915], H.M. Office of Works, 3, Parliament Square, Edinburgh [Glasgow School of Architecture]; Lawrence Frederick Orchard [P. 1915], H.M. Office of Works, 3, Parliament Square, Edinburgh [Glasgow School of Architecture]; Lawrence Frederick Orchard [P. 1915], Ladbroke Terrace, W. [King's College]; Napier, James [P. 1915], c/o J. Burnet and Son, 239, St. Vuncent Street, Glasgow [Glasgow School of Architecture]; Shaw, Robert Philip [P. 1915], 26, North Bridge Street, Bathgate, Limithgowshire [Edinburgh College].

In accordance with the special concession

In accordance with the special concession granted by the Council to Probationers on military service who are candidates for the Intermediate Examination and whose timonies of Study have been approved, the following were also exempted :-

Intermediate Examination and whose Testimonies of Study have been approved, the following were also exempted:

Barlow, Smith (F. 1911], "A" Company, Amy service Corps, Aldershot, Berry, Harold [P. 1910], "Knebworth," Station Road, New Barnet (Queen Victoria Rufes); Burleigh, Harold [P. 1911], 7, Priory Road, West Hill, Hastings (University of London O.T.C.); Daniel, Thomas Elewellyn [P. 1909], Bryn Dovey, 37, Cranbrook Park, Hford (Royal Naval Air Service); Eaton, Alexander Robert Charles [P. 1994], 203, Neville Road, Forest Gate, E. (Bedfordshire Regiment); Hall, Daniel Carby [P. 1911], Prudential Buildings, Leeds (Army Service Corps), Hall, Herbert James [P. 1913], 104, Cornerswell Road, Penarth, S. Wales (Glamorgan Yeomanry); Hall, William Basil [P. 1900], 33, Carlingford Road, Hampstead, N.W. (Royal Fusiliers); Hope, William [P. 1908], 37, Beverley Terrace, Cullercoats, Northumberland (8t. John's Ambulance Brigado); Hunt, Reginald [P. 1911], The Homest ad, Summigwell Road, Oxford (Oxford and Bucks Light Infantry); Jarvis, Harold Edgar [P. 1911], 62, Blacker Road, Birkby, Huddersfield; Larkin, Horatio Edward Arthur [P. 1914], 71, Peel Street, Kensington, W. (13th County of London Territoriads), MacKenzie, Frederick Wheatley [P. 1908], 20, Oakwood Gardens, Seven Kings, Essex (Middlessex Regiment); Mansfield, Roland Edward [P. 1912], "Tounoxy," Torquay Drive, Leighson-Sea, Essex (Royal Engineers); Martindale, Christopher James Faweett (P. 1904], Moor Side, Garden City, Carlisle (Royal Engineers); Mercer, John Frederick Lees [P. 1911], 11, Park Mount, Revidge, Blackburn (Royal Engineers); Ramsden, Eric Alfred [P. 1912], "Tounoxy," Torquay Drive, Leighson-Sea, Essex (Royal Engineers); Ramsden, Eric Alfred [P. 1912], "Tounoxy," Torquay Drive, Leighson-Sea, Essex (Royal Engineers); Ramsden, Eric Alfred [P. 1912], "Tounoxy," Torquay Drive, Leighson-Sea, Essex (Royal Engineers); Mercer, John Frederick Lees [P. 1911], 11, In Park Konnt, Revidge, Blackburn (Royal Engineers); Smith, Arthur [P. 1909], 29, One on Street, [P. 1913], 6. Bierton Hill, Ayleshury, Bucks (Royal Bucks Hussurs); Williams, Percy James [P. 1911].

"Carne," Carmarthen (Welsh Regiment). Wood.
Thomas Spencer [P. 1912]. Hawthome House Bandsworth Wood (Royal Tield Artillery)

Final and Special Examinations were held in London from June 24 to July 2 Of the 52 candidates examined, 27 passed, and the remaining 25 were relegated. The

seen the decided

success for the condition of the object of circles, and a point of a state of the condition of the condition

| Under a special Regulation this gentleman, being a foreign subject and not eligible for membership, will be granted a Certificate.]

The number of failures among the relegated candidates in the final examination was as follows:--

A. Design, 12 B. Construction—(1) Foundations, Walls, Roofs, (tc., 45, (2) Iron and Steel, 19; C. Hygiene, 19; D. Proporties and Uses of Building Wateriaks, 9; E. The Ordinary Practice of Architec-ture, 13; F. The Thesis, 3.

#### THE FINAL: DESIGNS APPROVED.

The Board of Architectural Education announce that the designs submitted by the following students have been approved:

SUBJECT XXL

SUBJECT XXI.

Brandon, t. J. Hutton, L. D. H. Traumer, F. Darthall, J. A. Kellock, A. D. Tubbs, G. B. Day, N. F. C. Mungpia, G. Wilkinson, P. Dincam, R. V. Reva, F. Woodhouse, F. G. (b) Disjon for a liosible for Mare Suddings on a furthfluckling Structure, St. Diramor St. Diramor Structure, St. Diramor St

sauter, M. C. Taylor, R. V. Vinden, G. Wilson, J.

### THE LONDON COUNTY COUNCIL REGULATIONS FOR REINFORCED CONCRETE CONSTRUCTION \*

Concluded from page 90.)

### PART VIII. MATERIALS AND TUSTING. Concert

144 All cement used shall be Portland cement of slow setting quality and shall be in accordance with the British Standard

Specification from time to time in operation 145. The quantity of cement shall be determined by weight, and ninety pounds shall be deemed to be the equivalent of one cubs

146. The sand shall be clean and gotty It shall be composed of hard s becous grant or of materials permitted under regulat e 150. It shall be free from clay or any animal, vegetable, or bituminous matter 147. All sand shall pass through a new later of the control of th

three sixteentlis of an inch square mea-

i the clear 148. The sind shall be separated from the corse material before the materials in

101 1

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e. Z. del i le B. i fu tera lenze u materil

Par. Suphare Land Land

152 - Lin

rial's a l'he to e in 15 i. The conserva a size as will pur-quarters of an in

154 The consecution of size allowed for to the provisions of regular not be larger than such the bars forming the rest tween the reinforcement [19]

155 The course mater a nature, shall be therough;

156 The volume of norweexess of what would be required. pletely the interstors and yould of a material.

157 The volume of the set!

more than twice the volume of the set

158 The volume of course note:

not be more than twice the volumes for dis-

Proportions and Filimais Resistant 159 The concrete shall be unput of cement, sand, and coarse in the control of the following or intermed its profit is and the ultimate compressive resisting to be less than that specified for the profit of the compression of the control of the co portion adopted

Proportion volume			Timate c resistance por serio	71 3 (* 1 1 4	fourth
Cement.	Coarse	V	I in 6th after intxing,	or 4 r. t. h a ter to 5 f f	VALUE of our
1 2 1-2 2 1-5 2 2 2	4 4 4 4	6543	1 600 1 F . ((5) 2 c. (1)	2,10	50

Also some gulator - 41 Ale 140 Also strong in 158, 162 ) 160. For determining the to-crete, tests shall be made to less than four nobes rela-tions than say to be seen

preparation, setting, in the preparation, setting, in the the state of the radio at the case far as people of the control of that would about the theory of the reinforced with.

I trimy of Research of the control of

#### Pricing

164 The concrete shall be placed in its final position before initial set has taken

place.

In the case of beams, pillars, and walls, the thickness of the layers of look concrete shall not exceed three inches before ramm.nb

As soon as possible after mixing, the concrete shall be properly rammed into the moulds in such a manner and under such conditions as will secure a compact mass, without voids and of the greatest possible density for the proportions used.

Steel

165. All metal reinforcement shall be of steel which shall comply with the British Standard Specification for structural steel for bridges and general building construction from time to time in operation.

166. All metal for reinforcement shall be cleaned of all scale, dust and loose rust, improbably before the standard of the stand

mediately before depositing the concrete

167. Butt or scarf webling shall not be employed in any tensile reinforcement.

168. The builder or other person directing the work to be executed shall, for the purpose of due supervision of the construction of the building, furnish the district surveyor with reasonable proof as to the quality of materials to be used in such construction, and shall make any tests which shall be reasonably necessary.

TESTS AND TESTING.

169. If at any time during the construction or within two months after the completion of the reinforced concrete construction it is months after the completion found necessary to test any part of such construction by reason of any sign of weak-ness or faulty work appearing in the con-struction, the builder or other person causing or directing the work to be executed shall make such tests, and, if the tests show the work to be faulty, it shall be reconstructed and reinstated in accordance with these regulations. 170. The total deflection of beams or slabs

freely supported and uniformly loaded and subject to the permissible working stresses not exceed 1-600th of the span the span is twenty times the effective depth, and shall be in proportion for other ratios of

span to depth, and for other conditions of ends and stress and loading. 171. The superimposed test load on any floor, roof, or other structure shall be not more than one and a half times the superimposed load for which such floor, roof, or other structure has been designed. The or other similar member which has been experimposed test load on any beam, slab, or other similar member which has been exposed to frost during the first week of har dening, shall be not less than one and a-half temes the superimposed load for which such floor, root, or other structure has been de-signed. The superimposed test load on any beam, slab, or other similar member which has been exposed to frost during the first week of hardening shall be not less than one and a half times the superimposed load for which such beam, slab, or other member has been designed

172 Loading tests shall not be made until the explry of ninety days from the date of laying the concrete.

#### PART IX.

FORMWORK OR CENTERING.

FORMWORE OF CENTERING.

175 For the purpose of these regulations, the terms "Formwork" or "Centering" shall include all forms, modds, sheeting, shuttering, planks, poles, posts, shores, strats and somitting, these uprights, walling, and all other temporary supports to the concrete during the process of setting.

174 The formwork or centering shall be of such during the policies of setting, and setting of the concrete.

setting of the concrete

and setting of the concrete

178. The vertical strutting shall be main\*ained continuous through the lower stores
to the foundations of toother floors or beams
which are sufficiently set to afford the re-

pillars below such beam or floor slab shall be partially stripped so that the pillars may be examined on all sides.

## PART X.

WORKMANSHIP.

178. All reinforcement shall be placed and maintained in the position shown on the

179. The concreting in any member shall be carried out as continuously as possible.
180. Where work has to be recommenced

on a surface which has hardened, such sur face shall be well hacked, swept clean, thoroughly wetted, and covered with mortar composed of equal volumes of cement and sand.

#### DRY WEATHER.

181. Concrete laid during dry weather shall be protected against too rapid drying. During the first week of hardening it shall be kept damp by means of wet sacking or other methods or by watering daily (Sundays and holidays included).

#### COLD WEATHER.

182. Concrete shall not be laid when the temperature is below 4° Centigrade (39° Fahr.), and shall be protected when neces-

183. Concrete or mortar which has been frozen shall not be used.
184 The concrete or mortar in any beam.

slab, strut, or other similar member which has been exposed to frost during the first week of hardening shall be removed, or such members shall be tested as provided for in regulations 169 to 172.

#### CUTTING. .

185. No cutting for piping or any other purpose shall be done which would reduce the strength of any part of the structure below the standard required by these regulations.

#### STRIPS AND BLOCKS.

186. Blocks or strips of hard wood, coke breeze, or other equally fire-resisting material may be embedded in the concrete and used solely for fixing purposes, provided that—

(a) they do not reduce the strength of ny part of the structure below the anv standard required by these regulations;
(b) the area of such blocks or strips at

any z.ven cross section is not included in the calculated compression area of any beam, slab, pillar, or other constructional member.

#### INLAID MATERIALS.

187. Soft wood or other equally combustible material shall not be embedded in the con-

#### OVERLAID MATERIALS

---

188. Wood or other combustible materials may be placed on or over the surface of the concrete provided that any voids or hollow spaces between the combustible and incom-bustible materials be filled up with materials of an incombustible nature.

New offices are being built for the Great Northern of Ireland Railway Co. at Sheriff and Common Streets, Dublin. The contractor Mr. John Graham, Dromore, co. Down.

The city corporation of Edinburgh has agreed to soll to Messrs. Redpath, Brown, and Co., Limited, an area of 17 acres of land at Gorgie, formerly part of the markets, for the erection of new works and arrisans bouses.

Mr. Robert Forster, divisional road surveyor, Alston, who poined the Westmoreland and Cumberland Yeomanry, has received a commission as second heutenant in the 11th Bittalion of the King's Own Yorkshire Light

At Leyton on Thursday, Mr. A. W. Bright-neire, an inspector under the Local Govern-ment Board, held an inquiry as to the applica-tion from the Urban District Council for sanc-ton to borrow £1.1% for purposes of the electricity under aking.

The foundation stone of the new church which are sufficiently set to afford the required entering state of the new church of St. Margaret, Scotswood, was laid last week structure.

176. All form work or centering shall be removed without shock or vibration.

177.—Before the formwork or centering under any beam or floor slab is removed the design of the new church of St. Margaret, Scotswood, was laid last week or a site at the pureton, of Denton Road and Armstrong Road. The church when completed will provide accommodation for 550 pressure, and will cost £5,500. The architects are Messrs, Hicks and Charlewood, Newcastle-on-Tyne.

### OME AMERICAN METHODS C GAUGING THE FLOW IN SEWERS SOME

In designing new relief or intercepting sewers and sewage treatment works it is becoming a more common practice to gauge the flow of sewage in existing sewers. The measures adopted by a number of cities in sewer gauging were described recently by Engineering and Contracting as discussed before the Boston Society of Civil Engineers.

The Massachusetts State Board of Health uses a comparatively simple and inexpensive type of recording gauge. It is described substantially as follows by Edward Wright, Jr.

The gauge is used mainly for measuring sewage at disposal works where the sewage

passes over a weir, although it has been used in the measurement of stream flow and in the measurement of the flow of trades and wastes where it is possible to install weirs.

The gauge, Fig. 1. consists of a copper float to which a rod and pencil are attached. and a cylindrical drum, which is caused to revolve by an ordinary clock mechanism. The float rod engages in two brackets which The paper are provided with roller bearings. upon which the diagram is indicated wrapped around the drum and held in place by pins at the top and bottom and by rubber The elevation of the starting point in relation to the crest of the weir is obtained by means of a hook gauge. The actual head on the weir is indicated.

The moving parts of the gauge are constructed of brass, and while corrosion starts in very rapidly, the gauge is so constructed that little or no difficulty ensues from this cause in its operation. The clock is so constructed as to run seven or eight days, and except when weather conditions interfere, the gauge will run without attention for this

length of time.

Owing to the great amount of moisture which at times rises from the sewage in the tanks where the edge has been used, it has been found impossible to produce a pen-and-

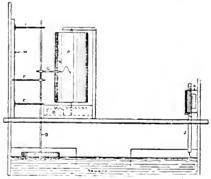


Fig. 1.—Automatic gauge used by Massachusetts Board of Health.

A, Revolving drum covered by paper that receives the record: B, clock: C, float: D, float rod: E, braces for float rod: F, finger, engages slide in upright. H: G, pencil, bears against paper on drum (A; J, hook gauge rod; K, hook gauge block and vernier.

ink diagram, and, in fact, the moisture rising at certain sewage disposal works has been so great that the paper would be torn by the pencil, and to overcome this the very best quality of paper has been used.

The most remarkable feature about this

gauge is that its cost, exclusive of the weir. is only about \$25 or \$30, which includes about \$4 for the clock mechanism.

The gauge is very sensitive and, in fact, the effect of matters rising with gas in the sewage in the measuring tanks under the float has frequently been indicated. Most of the inaccuracy is due to the floating matters in the sewage, which displace the float and tend to

clog the weir.

The flow of the sewage at the sewage disposal works at Marlboro, Mass., is measured by means of a trapezoidal or Cippoletti weir, placed in a channel leading to the sedimentation tanks. The sewage enters the screen chamber through a long cast-iron pipe siphon, passes through a coarse bar screen, and along a channel 7 ft, wide to a trapezoidal werr. The crest of this weir is 2 ft. long and the sides have a batter of 1 in 4.

The crest of the weir is set 18 in, above the floor of the channel. The weir itself is the floor of the channel. The weir itself is made up of 6-in, by  $3\frac{1}{2}$ -in, by  $\frac{1}{2}$ -in, steel angles belted together and set in concrete. The inner edge or crest is planed to a true, sharp edge. The depth of flow over the weir is measured either directly by hook gauge or rule, or by means of a recording gauge of the Bristol type. This description is by Frank A. Marston.

The original plan provided a cast-iron pipe well, with connection to the channel a few feet above the weir, in which the diaphragm was suspended. The recording gauge was fastened to the wall of the screen house. After operating the plant for several months it was found that considerable sludge and scum collected in the diaphragm well and proved to be objectionable, although it may not have had any serious effect on the diaphragm or on the operation of the recording gauge. Because of this collection of scum the diaphragm was removed from the well and was suspended in the channel itself. which arrangement has proved more satisfactory.

The average depth of flow is obtained from the circular chart by the use of a circular planimeter, and the quantity discharged by the trapezoidal weir is computed from the following formula :-

 $Q = 3.366 \ 2.5 \ L \ h^{3/2}$ Q = quantity in cu. ft. per second.

L = length of crest of weir = 2 ft. h = head on crest in feet.

In the design of the plant, the possibility of using a Venturi meter or some other form of measuring apparatus was considered, which would obviate the necessity of constructing an open channel with its attendant difficulties due to the deposition of solid matter, but it was felt that the city would not be justified in going to additional expense for this purpose.

The trapezoidal form of weir was chosen because of the great variation in flow to be measured. During dry weather single daily flows have been recorded as low as 150,000 gallons in twenty-four hours, and during the spring flow has reached as high as 2,300,000 gallons in twenty-four hours for a single day

In studying the operation of the plant, it was found desirable to know the number of doses discharged by the automatic siphon from the dosing tank each day, and to obtain this information Mr. George A. Stacy, the Superintendent, installed another Bristol gauge in the dosing tank. This new gauge has operated in a more satisfactory manner than the other, perhaps partly due to the fact that the diaphragm is immersed in settled sewage. The charts obtained from this new gauge have been satisfactory and of considerable value.

They show the rice and fall of the sewage level in the dosing tank, and are used not only as a check on the quantity of sewage, but especially to determine the quantity applied to the various filter beds.

After about one year's service, a new rubber diaphragm was installed in the screen chamber gauge. The old diaphragm ap-peared to have been attacked by something in the sewage, possibly sulphides. which partially rotted the rubber.

From the beginning of the operation of the recording gauge in the screen chamber, the attendant has kept daily readings of the depth of flow over the weir, measured directly at a point a short distance above the weir. The attendant was instructed to take these measurements at approximately four o'clock each afternoon, and from the data thus obtained it has been possible to check the readings of the recording gauge and to

ably close and furnished a fair chell is the working of the gate. The Marlboar ably close and innesed a forecast the working of the jets. The Marlboursewage sycem is largely on the separate places of hit the variation, without of sewage through the day is quite 10 july for certain average.

The experience with this type of record, gauge at Marlhoro, although somewhat adverse, is not of a sufficiently serious nature to prevent the gauge being used in other places. The experience seems to point out, however, that it is very important that the gange be thoroughly tested at the factor before it is installed, and that every preat the factory cantion be taken to make sure that the tube connecting the diaphragm with the records gange be absolutely air tight. It is also of advantage to have the diaphragm immersed in as nearly clear water as possible, although the gauge has operated successfully in what might be called thick sludge. Apparently septic sewage has some action on the rubber of the diaphragm, requiring its renewal per haps once a year, but this can be easily done by a man of average mechanical ability and should not be a source of serious trouble. Where a slight leak does occur in the pres sure tube or in some other part of the mechanism, it is exceedingly hard to locate and much harder to remedy. On the whole, the records obtained in Marlboro have been very valuable, and experience seems to justify this type of instrument as against a more expensive type, under the conditions at this particular plant.

The engineering department of Newton Mass., maintained sewer gauging apparatus at three of the connections of its samtary sewer system with the metropolitan trunk sewer near the Charles River for a period of about a year during 1992 and 1903. These gauges are described as follows by Edwin H. Rogers:

The gauges were in the form of a weir, with

apparatus to measure the depth of flow, consisting of a float and a connection therefrom which registered the rise and fall of the sewage on a perpendicular revolving drum operated by clockwork. No reduction gear was used, the actual rise and fall being recorded. The drums revolved once a week, requiring the renewal of the record chart every seven days.

The weirs were located in manholes of the samtary sewers, and as their crests were raised from 1 to 2 it. above the invert sewers, they proved more or less of an obstacle to the dis charge of the solid matter in the sewage, retaining a considerable amount of sludge which had to be frequently removed.

Considerable difficulty was experienced in

the maintenance of the clocks, principally on account of the dampness which rusted out the hair-springs in their escapements and also tended to promote the growth of mildew in the works in such quantities as to stop them within a month, even though they were entirely enclosed in brass boxes.

The results obtained were in the main satisfactory, owing principally to the care ex ercised to keep the apparatus in suitable working condition.

In 1906 to 1908 attempts were made by the department to record the flow in three of the main surface drams of its separate sewer system for the purpose of obtaining data relative to the run-off of storm water. In one drain a weir was constructed with automatic registering apparatus, but was a failure owing to the sand and other wash from the streets interfering with the operation of t' anparatus

In another instance a float was install d in a chamber beside the drain and connected with the invert of the drain by an inverted

Owing to the amount of rise and fall of the

fill in the records for the periods that the gauge was out of commission.

A number of daily records were selected as being representative of the variations in flow, and from these a curve was plotted showing approximately the percentage which the four o'clock p.m. rate of flow is of the average for the entire day for varying rates of flow. By means of this curve the average daily flow was estimated, having as a bas's a single measurement made at four o'clock in the afternoon. The results have been reason

The results have been reason

A number of daily records were selected to be two between the flow and the register chart. This method of measuring the flow could not tus between the flow and the register chart. This method of measuring the flow could not tus between the flow and the register chart. The equit ment as a sexest from the true off to it consists of the Flow and the pipe connection between the drain and the register chart. This method of measuring the flow could not tus between the flow and the register chart.

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Various methods have been even all 5 the measurement of the first Box -

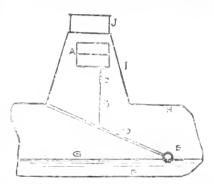


Fig. 2.-Water stage register used in brooklying sewers,

ewers, and these methods are been less the i by Edwin J. Fort.

Of the several methods on plays is at Br. I lyn the most successful lave feet the use.

the knite-edge weir.

The self-recording water stage 102 Ger rereferred to may be used in all sizes of sewers The self-according water stag begins referred to may be used in all special sewers for domestic flow or storm water for the using this method the hydraulic print of the flow is obtained by claimed by claimed the flow is obtained by claimed the respective of the sewer for the depth of flowing the The value of n, in Kutter's formeral as determined mainly by the exercise of planetation the part of an experienced observer. In the absence of experimental data, Kutter's formula for velocity is then applied a day this means the quantity of flow softened.

Weir measurements are used to exert in the out fall trunk sewer.

The game and we're the etter flow of a drainage area or district an be word in the out fall trunk sewer.

The game and we're the descript which follows, have been used in exception work of this character in a chief of disage areas in this brough, and it is also have been quite satisfact ry.

Objection may be made the second of the value of a is ball the greatest care should be referred to the value of a is ball the greatest care should be referred to the value of a soft production of the value of a sof

rilbon to ker; tin tension so that the motion of the float cm will be transmitted to the re-ording device; D an adjustable float arm to which the other end of the ribbon is attached: E. a c pper ball that; (F) represents the inner bottom of a 42 m, sewer; (G) the namal flow line; (H) the uner top of sewer;

(I the manhole, and J the head, The gauges are calibrated by raising the first 0.5 ft. at a time, and noting the value of the movement on the recording device. In is way calabration curves and scales are

When installing a gange, the sewer in which it is to be placed is carefully measured, and plotted showing the value of depths of flow. The gauge is then C 117 C of for all depths of flow. The gauge is then placed in position, the ribbon attached to the float arm and counter-weight, a blank record placed on the drum and the pen inked record placed on the drum and the pen integrand pressed down on the record ready for recording. The ball float is then placed #5 ft, from the bottom of the sewer, the position of the pen and the elevation of the float ball being recorded on the blank record; the float ball is raised 5.0 ft. more and the new position of the pen and elevation float recorded. This operation is repeated until the float ball has reached the inner top of the The elevations are then corrected for the depth of water required to float the ball By comparing this record with the Q curve a scale is made so that it will give the value el Q for any position of the pen on the record. The height of a flood wave is shown on a

well sanded vertical flood stick by the sand being washed off as high as the water rises. This gives a very sharp line for the height of the wave, and is of advantage in determin-

ing the slone.

The use of the weir is well illustrated by a concrete example; one of our problems was to determine the infiltration and the maximum and minimum flow of sewage for a large disthe population of which was about

To obtain the desired information a weir was used, and the flow automatically gauged during the entire day and night for each day

of the week.

The weir used was located in the outfall sewer, or outlet flume, and belonged to the sharp-crested type, with end contractions suppressed. The crest length measured 25.84 ft., and the height 2.17 ft. The head on the crest when not affected by storm or snow eater varied from 362 ft. at 4,30 a.m. on Fr days to 543 ft at 3,05 p.m. on Tuesdays.

The device for recording the heads consisted ci an automatic water stage register placed cer a "basin" jut located just ontside the connel and about 16 ft, up-stream from the weir crest. The jut was connected with the frame by means of a 3-in, iron pipe, 3 ft, reg, and on the noor and perpendicular to the sele of the approaching channel. The zero for the register was letermined by means of a hook gauge and a Y level. The correction to slack motion of the register was deterjoined by the hook gauge to be 2 of 1 per

Bazin's fermula, Q MLD v2GD, for supseed weirs with velocity of approach, was ed to plot the results of the investigation. is suggested, however, that Hamilton oth's formula, Q = 3.29 LH<sup>2</sup>, for weirs of at lengths, may give more accurate results. The total mean flow for twenty-four hours The total mean flow for twenty-four hours as indicated by the gauge records was 1 123,000 gals. The total amount of water singled to the district gauge, according to information received from the Water Department was 17,767,000 gals. The total amount of ground water finfiltration in day was 75,500 gals.

signiz in one way sometimes involves ex short ve gain. The president of a Canadian short we gain. The president of a Canadian structure company states that in one case the mg of concrete by reducing the size of mass on successive floors was \$2.50 per mm. On the other hand, the increase in m case was \$5.70 per column, entailing a of \$7.47 per column. This is a very good mple of why it is cheater to use the same dimensions. One way to avoid frequent (2es it columns sizes is to vary column re-trement in successive stories.

# Our Mustrations.

NEW YALCA BUILDINGS, SWANSEA

The new YM.C.A. buildings creeted at Swansea on the site of the old Longlands Hotel, St. Helen's Road, were designed by Mr. Glendinning Moxham, F.R.I.B.A., Swansea. The materials used externally were thin red local bricks and Portland stone. Internally all floors were of steel and coninternally an moors were of steel and con-erete construction. The woodwork was chiefly of selected oak. The plans below the perspective show the ground and first floors of these extensive premises.

SANDSTONES. CAMBERLEY.

This house is now in course of erection for Colonel W. J. C. O'Shaughnessy. It stands amidst pines, on an elevated site adjoining the Camberley Heath Golf Links, commanding extensive views of the surrounding country. Externally the house is being built hand made sand-taced bricks, supplied by Messrs. Thos. Lawrence and Sons, of Brack-nell, with Monk's Park stone to the entrance door and window over, and to the stoep columns and cornice. The roof is to be covered with hand-made sand-faced antique tiles. The woodwork is to be painted white. Internally it is proposed to carry out the main staircase, the panelling in the ball, and the floors of the best rooms in oak. The principal fire-places are being specially made to the architect's designs, based on genuine examples of tire-places of this period, in keepthan Corbett, of Bagshot, is the general contractor, and Mr. H. Reginald Poulter, of Camberley, is the architect. A lodge has already been erected at the drive entrance.

LONDON CITY AND MIDLAND BANK, METROPOLITAN BRANCH, WOLVERHAMPTON,

This building, designed by Messrs, Cossins, Peacock, and Bewlay, of Birmingham, for the Metropolitan Bank before the absorption of that company by the London City and Midland Banking Company, occupies one of the most prominent sites in Wolverhampton. immediately adjoining the Art Gallery. basement and the ground floor are almost entirely given over to banking requirements the two upper floors are arranged for offices for letting purposes. The banking hall walls are panelled in mahogany to a height of 10 ft., and the fittings are carried out in the same material, the floor of public space the same material, the non-dependent photos page 1 being payed with a Siberian green and Breche rose marble. The ceiling, which is divided up by beams supported on columns, is finished in curiched plaster. The exterior the building is executed in Darley Dale

SAXON CRYPT, REPTON CHURCH, DERBYSHIRE.

This water colour sketch has been sent us by Mr. William Swindell, of Derby, in further illustration of this famous crypt fol-William Swindell, of Derby, lowing upon our correspondent's request for drawings on page 654 of our last volume. Mr. Harry Gill, M.S.A., of Nottingham. lent a smaller photographic view and a plan of the crypt, which we gave in our issue for June 16 last, accompanied by several interesting particulars not furnished by our previous contributor. The crypt measures about 13 ft square and the four detached columns are 12½ in, in diameter and nearly 6 ft. 6 in, tall. The sketch shows on the right one of the stype approaches which occur on either hand, forming a communication The stype to the left is with the church now built up, and the vestries occur above. The monument seen in Mr. Swindell's draw ing at the far end has now been removed and we believe stands under the tower at the west end of the maye. We can recall no drawing of this crypt, illustrated elsewhere, in any architectural work. Repton is in the postal district of Burton-on-Trent.

FIRST PREMIATED DESIGN FOR SEVEN COTTAGES AND SHOP, BROMBOROUGH PORT ESTATE, PORT SUNLIGHT.

PORT SUNLIGHT.

This design for these cottages was awarded the first premium by Mr. Geoffrey Lucas, FRI.B.A., the assessor in the competition promoted by Messrs. Lever Bros.,

Ltd., just lately. The following conditions had to be observed: That the cost should not exceed £1,500 for the group. £200 per cottage, and £100 in addition for the shop. The sites were set out 80 ft. deep, and the widths were left to the competitors to decide, with a minimum of 17 ft. The position of the group was to be a corner site.

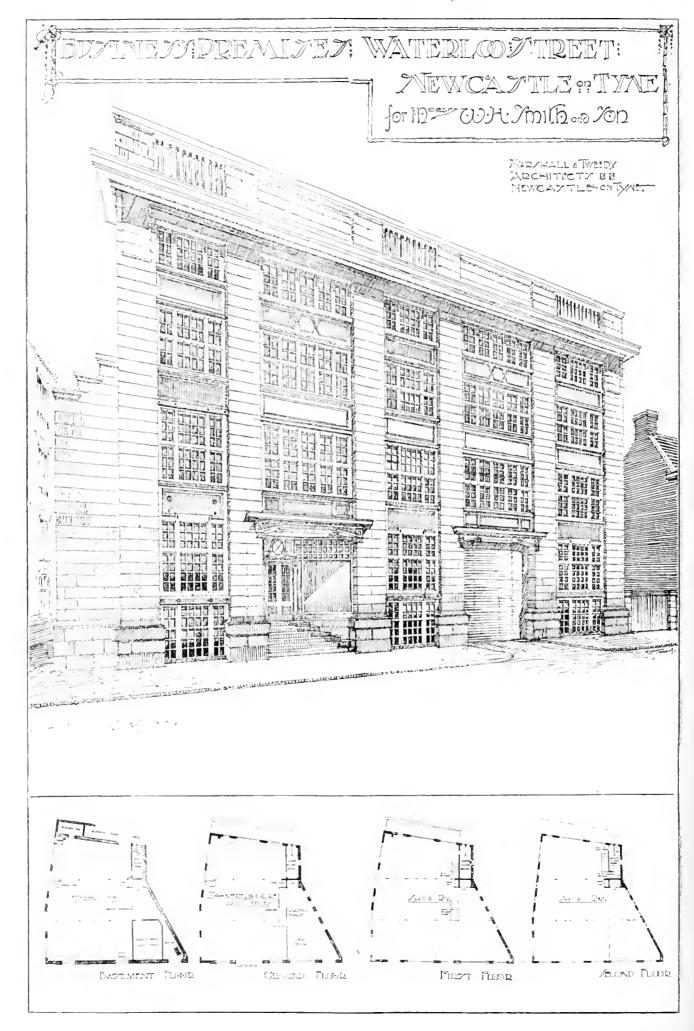
The scheme illustrated shows the treatment suggested for the four corners of two cross roads forming a shopping centre or square. Strict economy in planning was essential, as the living room had to provide an area of not less than 170 sq. ft. and the scullery 100 sq. ft., and the height from floor to floor was to be 9 ft. 9 in. Back yards approached from back roads were to be provided divided by brick walls. The approached from back roads were to be provided, divided by brick walls. The materials to be used externally are rough east over stock brickwork with red facing bricks where shown, sand-faced tiles for the roof covering, and elm boarding in the gables. A plinth of smooth trowelled gables. A plinth of smooth trowelled cement, tarred 2 ft. above ground, runs round the block on three sides. The shop front is suggested for general use, but the front is suggested for general use, but the designs would have to be individually varied in detail according to the various trades to be provided for. The architect is Mr. Ernest G. Theakston, F.R.I.B.A., 36, King Street, London, and Wendover. Bucks.

NFW PREMISES FOR W. H. SMITH AND SON IN WATERLOO STREET, NEW-CASTLE-ON-TYNE.

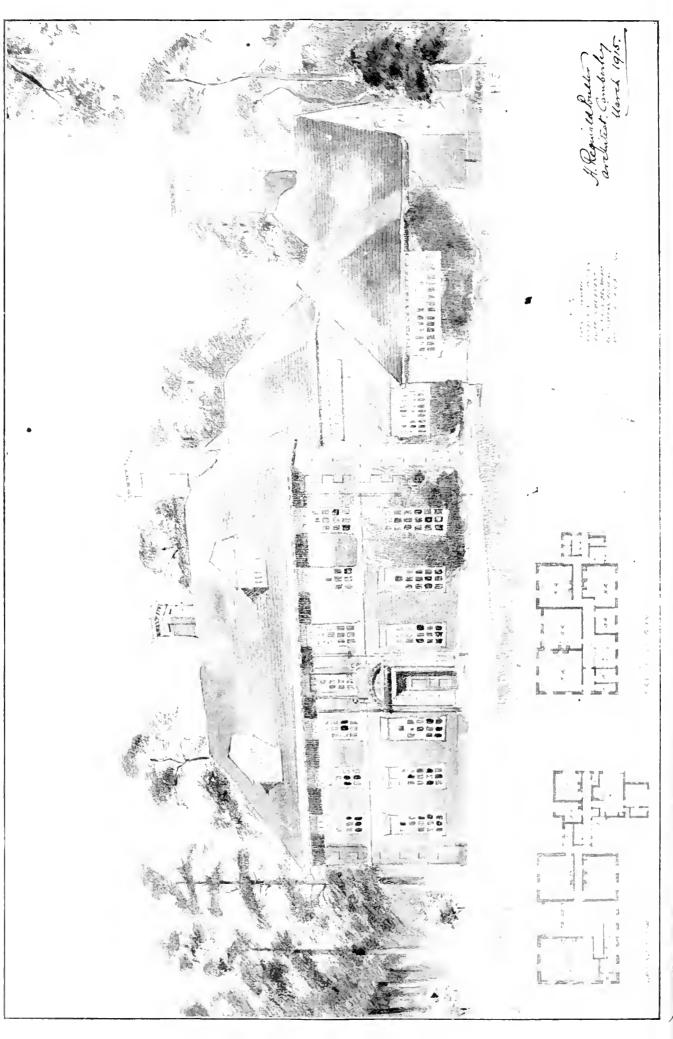
These new premises, which are being erected, will present several new features in warehouse construction. The whole scheme is being carried out under the superintendence of the building and estate department of H. Smith and Son, of which Mr. F. C. Bayliss is the manager, and the architects are Messrs. Marshall and Tweedy, 17, Eldon Square, Newcastle. The front elevation to Waterloo Street will be stone, with iron panels and steel window frames. There are panels and steel window frames. There are two main entrances—one for goods and one for offices and showrooms. The basement is approached by means of a sloping way at back of building, as well as by stairs, lifts, and elevators. The contract for the main structure and foundations has been been been decay. and elevators. The contract for the main structure and foundations has been placed with Mr. Thos. Clements, Newcastle, White glazed bricks will be used in the basement. The floors and staircases will be carried out in ferro-concrete by Messrs. Melwille, Dundas, and Whitson. The steel girders and columns will be provided by Messrs. Redpath, Brown, and Co., of Edin-The steel windows and iron panels will be supplied by the Crittall Manufacturing Co., Braintree. Oak block floors will be carried out by Messrs. Hollis Brothers, Hull. Electric lifts and conveyors are being provided, and everything which will make for the general comfort and convenience of their customers and staff has been embodied, for it is realised that environment itself is an important adjunct to the progress of the individual as well as the business. There will be quite a new feature in the doorway, from which some interesting developments may be The whole scheme has been expected expected the whole scheme has been worked out with the idea of providing increased facilities in every direction for prompt and regular despatch, for which the firm and its Newcastle house are noted. With the further provision of adequate means for warehousing, and dealing with books, stationery, fancy goods, and the many varied classes of stock, the new premises, when completed, will be the embodiment of purpose and of all that is best in an up-to-date wholesale business. By this means Mr. W. II. Manning, the manager, and his staffto whose energy and ability the growth of the lusiness is due—will be able to continue even more effectively the policy of adequate service and satisfaction, on which success so much depends.

The City of London Corporation decided on Thursday to acquire the freehold and leasehold interests in various properties in Cloth Fair at amounts in most cases considerably below those originally asked by the claimants. The Corporation also agreed to purchase for £3,922 the interests of the Vintners Company in Nos. 67 and 68, Leadenhall Street, in connection with the work of widening there in progress.



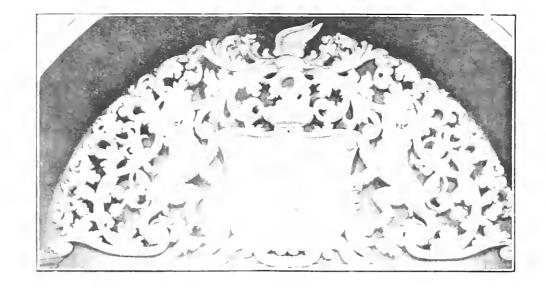


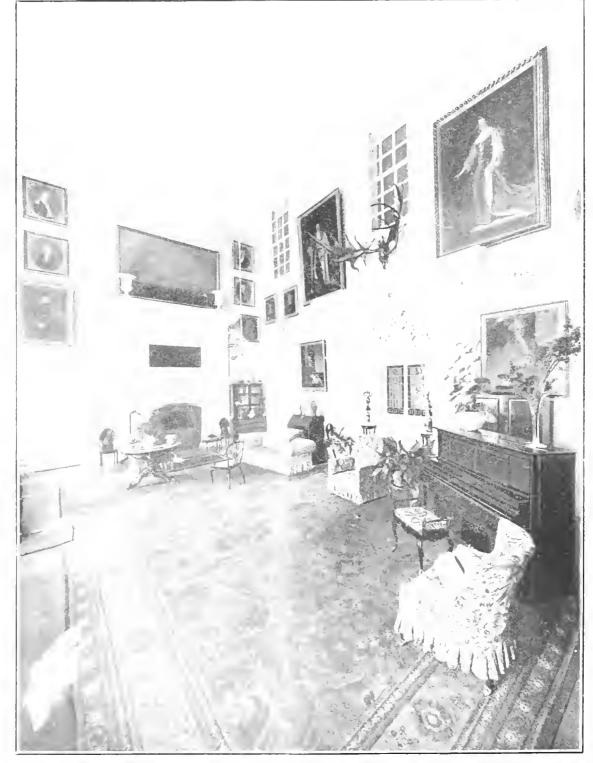




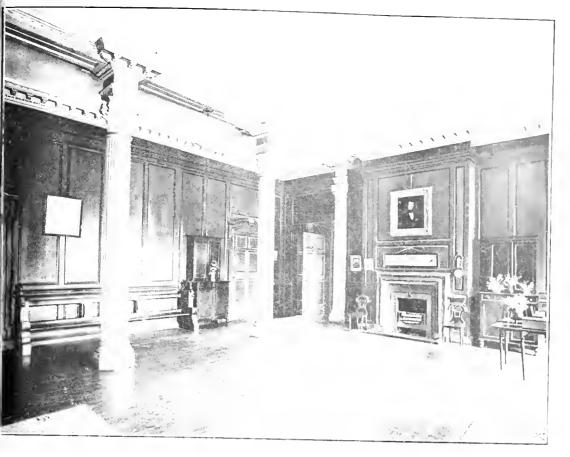
THE BUILDING NEWS, AUGUST 4, 1915.

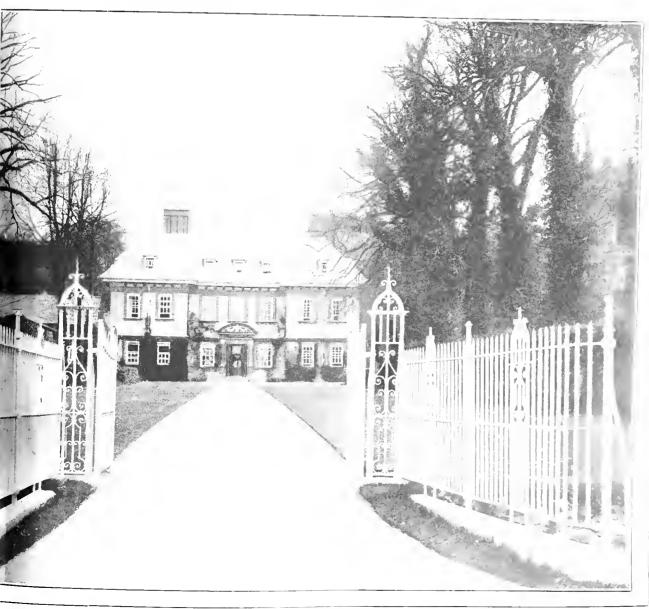






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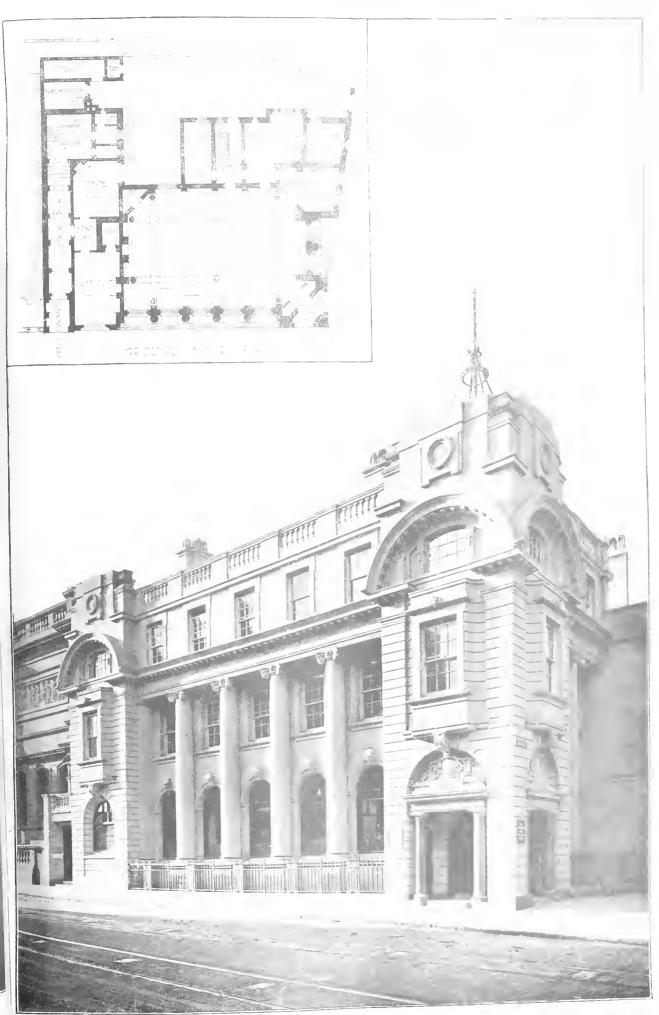


PALACE HALL, TIPPERARY, FROM GROBALAN MANSIONS IN IRELAND." AGE L. DICKINSON, F.R.L.A.I.

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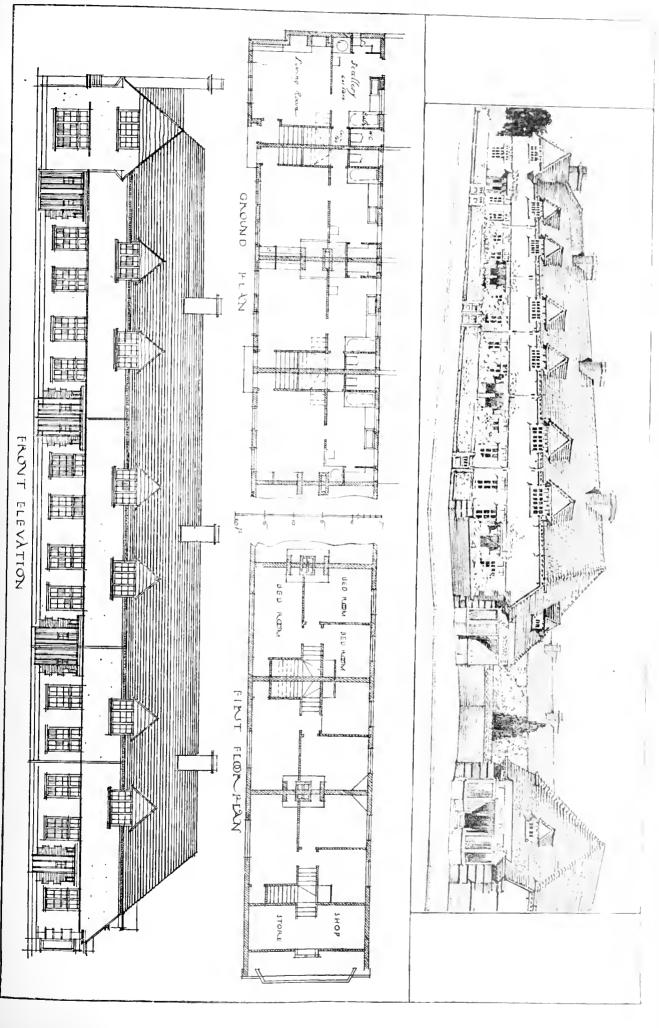
THE BUILDING NEWS, AUGUST 4, 1915.



Thos. Lewis, Ltd., Photo.

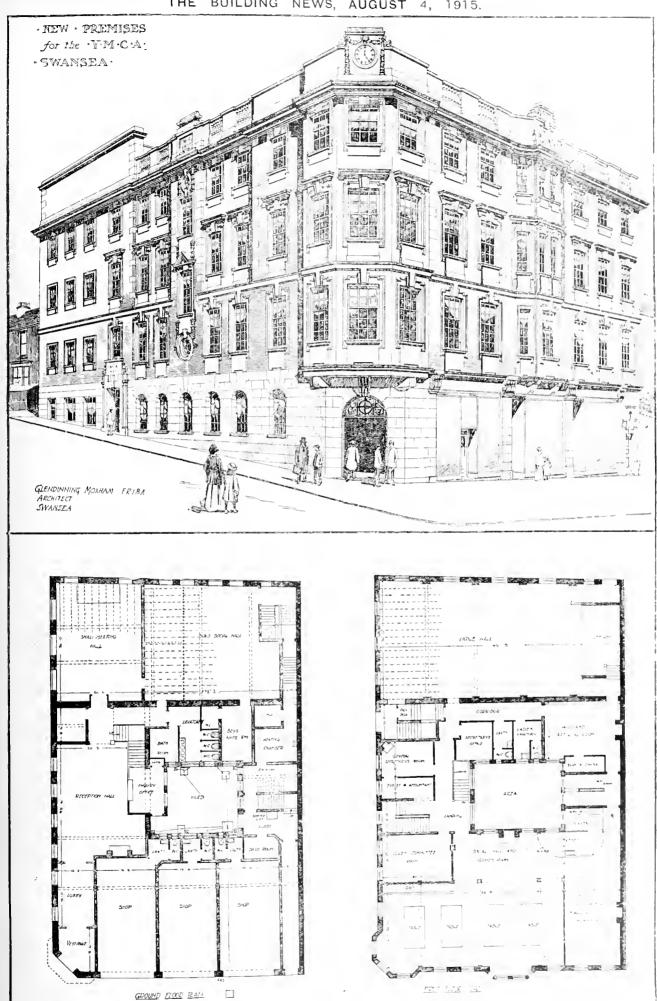
Messrs, Cossess, Proc. ., and Bewlay, Architects.

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FIRST PREMIATED DESIGN FOR SEVEN COTTAGES AND SHOP, FOR MESSRS. LEVER BROS .- Mr. Ernest G. Theakston, F.R.I.B.A., Architect. BROMBOROUGH PÖRT ESTATE, PORT SUNLIGHT,





Y.M.C.A. NEW PREMISES, ST. HELEN'S ROAD, SWANSEA. Mr. GLENDINNING MONHAM, F.R.I.B.A., Architect.



#### – Calamo. Currente

The ways of the law are wonderful, and especially in the matter of conveyancing. which was supposed to be simplified. The Act of 1881 was intended to make things plain in regard to property. Everything was to be shorter and clearer, and undoubtedly the Act meant well. One of its provisions dealt with the notice to repair which was to be given for breaches of covenant in a lease. Such notice must specify the particular breaches complained of, require them to be remedied, and ask for money compensation It all looked simple enough in the Statute Yet in the case of "Fox (Pauper) v. Jolly the House of Lords has only just decided the legal points in an action which began in June, 1912, so that for three years this very small matter has been hanging about the Law Courts. The notice affected six houses, and dealt with the repairs required under general headings, instead of giving a separate schedule of dilapidations for each house, as the lessee contended was legally necessary. Fortunately, the Law Lords, after long arguments on the authorities, were able to hold that the notice was good, as it told the lessee what he was required to do, and was sufficiently specific in details. They added that it would be very hard if a landlord was, in every case, bound to serve a surveyor's specification of repairs with such a notice. It would greatly increase the cost to the losing party. The decision will become a precedent for future use, as laying it down that the Statute of 1881 does not impose the obligation of drawing out a full and detailed specification to be served with every notice to repair. The House of Lords has once more brought in common sense, but it takes a long time to get there, and three years' litigation is a costly business.

The action reported on another page, by Messrs. Charles Clegg and Son against the Manchester Athenæum authorities, is another instance of the too common disposition of representative bodies and public authorities to penalise architects for their own second thoughts. Nothing could well have been clearer than the original contract made between the Athenæum and their architects. and nothing transpired at the trial to support in the slightest degree the contention of the defendants that the whole scheme was a tentative one, and that when it was abandoned. all they had to pay their architects was  $1\frac{1}{2}$ per cent, on the lowest tender. Mr. Justice Atkins put the whole case in a nutshell, and we congratulate him on the clear and satisfactory terms in which it was phrased. We think he was right in disallowing the charge made for assisting to procure a mortgage. Work of that kind hardly comes within the province of an architect, though, of course. there is no moral objection to his undertaking it. If from any cause he fails, he can hardly expect to be paid. But every other item Messrs Clegg and Son claimed for was perfectly fair and regular, and we have little doubt that, although they have quite rightly succeeded in establishing their claim. an amount of work was done by them which they will never be paid for, which rendered it one of the least profitable jobs they ever undertook to execute.

A joint meeting of the Parks Committee of the Edinburgh Town Council and the Gladstone Memorial Committee was held last week, Lord Provost Inches and Sir M. Mitchell-Thomson, two members of the Glad-

stone Memo a Council a being const. Su James Gather PRSA, another conour of the Memoria. Committee, sent a 2011 on Alexium of the Artificial reported on the S. I.A. on a site not bear good fleet to, he 80 dames would agged that the status to taken to Glasgo v. The Joint Committee first covered two suggested these for the memorial nother East Prince Stoot Gardens. One of these is almost opposite the Royal Hotel at a place on the terraco close to the Adam Brack statue. This site is the one in the East Garden selected by the sculptor, Mr. Pittendrigh Mac2 fliving, and supported by Sir James Guthire, provided that the memo rial is set facing the south, with the back of the statue to Prices Street. This, the sculptor says, is more sarry so as to allow the light from the south to play on his figures The Gladstone memorial on this site would involve the removal of the Adam Black statue mearer the Scott Monument. The other site in East Princes Street Gardens is one near the statue to Professor Wilson Christopher North) a statue which would have to be removed to make way for the newer memorial. In this case the Gladstone Memorial would be set facing west, with one of its sides to the street. The Joint Cem-mittee, it is stated, were ananimously of the view that under to conditions would they grant the Adam Black memorial site unless the Gladstone Memorial faced the street; if the statue was set with its face to the street. the Parks Commuttee have no objections to recommend the Town Council to grant this site. They also agreed that they could recommend the Christopher North s.te, and they approved also of suggesting anew a site in Sanghton Park.

The artistic genus of the French people, wisely cultivated by the action of the Ministry of Art, is a great national asset, and a pathetic instance of its patriotic application, inspired by maternal comradeship, is given by the Paris correspondent of the W for in the course of an interesting parrative of a motor-car tour over some of the buttleneds in France. He says: "On the national highway, a few miles east of Vitry le-Framois, two privates and a sergeant were completing a very artistic meaning at marking the resting-place of sixty-five French soldners killed in the Battle of the Marne. While we talked with the sengeant a touring car appeared at the end of the long white highway. In a tew seconds it had reached the graves, had stopped, been followed by a second car, and the soldiers were standing to attention before General Franchet d'Esperey. After the general and his staff had saluted the fallen heroes, he turned towards the ser geant and congratulated him on his work. I wonder how much this monument will cost me" remarked the General. 'Not a penny, sn.' What' grante column, carved wo d ruings, modallons, tavel, flowers you have done all that for nothing. The sergeant expanied that the grante brock had beer tourd among said wreckage, and was theirs for the cartage, wood was plentful period and flowers and gravel had been give. Thus they had elected a mornment or quiet teste. and yet worthy of the men whose rest ng place it marked, without asking for any fin dfrom the State Treasury."

We are  $\frac{1}{2}$  ad to note, from the Canadia vival in the building tride in the Dominion. The exters style of storage permits, of a total value of \$1.04.115 were issued in the cry strength, down to a total value of \$1.04.115 were issued in the cry strength, down to a total value of \$1.04.115 were issued in the cry strength, down to an about The pro-Continue Kernel, the esty considerable to

similarly, and reporof the nigery of the beauty

The Cape Tryon of July 4 tributed descriptor of the chromatics discovered by Mr. F. South African of 25, He & Stoot 1 which we are told is "lat to the comprehend." but which it is in twenty-four coloured movance structures of pure barmons steet scale the law of light scales or generators, as Mr. Free them, are examples of mather it the natural arrangement and right ship of colours in every possino is groups of one, two, three, four two Put in more popular larguage, a c if a basic colour is taken in ticolours must be employed to n ... ture harmonions. Thus it is posthe glory of the Cape Penils () varying Table Mounter, trans trans The writer says, "I pala tt at 25. Hout Street, e I ifter men up a narrow, withing states 1 yet so harmon as y tho dod impression of restrict set of The most natural yet 2 12 15 ther tops faintly used by the moon effect and ore solid both up of nature 1960 to stringlessible to tear notification of away or derfully fas nating mostthe wall- Il promates tion of this feet as ode of coordinate source builty at the 200

but met outstale timbers lie between the istern scal and and the Great Dividing Radge, which runs, roughly, parallel to and 200 miles from the coast. At about the 21st ara el of seath latitude a spur runs westvaid nearly to the South Australian border. addieurs on its crests and slopes much valule tim'er. Forests are also found on the Pulam. Johnstone, and Gilbert Ranges. The principal cacalypts are irontark, grey sp ttel, ud red gum, blackbutt, and turpen tine: Moret in Bay, brown and Bunya Bunya ones represent the conifers; and red cedar, recht tubpwood, rosewood, red bean, and Plack bean are among the brush timbers of nuc grain. On the extensive plateau west of the Divide there is but little timber, and tohards the vast basin of the interior the low adges and banks of the short water-courses lear a growth of stunted eucalypts, such as the cimlet gura, the desert she oak, acacias, and mallee. The chief supply of mill timber enalypts, Moreton Bay pine, etc.) is in the southern coastal region, from the New South Wiles border as far north as Gladstone. In the regions between Rockhampton and l: Zham the supply is not so plentiful, but corthward of the latter town the red cedar. curi pine, and black bean are luxuriant, Large supplies of these valuable trees are found on the Barron Valley reserves, and in other localities between Ingham and Port Douglas. Inland from this zone of heavy tores: is another, less densely timbered, bear and express and other pines, ironbark, and a ac.as. In the south-western regions of the State the cypress pine flourishes.

Sir Edward Carson may be serious in demeancur, but he is a master of the art of rejartie. During one case in which he ap-Deared be had more than one passage-at-arms with the judge, who finally drew attention to a discrepancy between the evidence given by va of Sir Edward's principal witnessesne of whom was a carpenter, and the other a takern-keeper. "That's so, my lord," instantly retorted Sir Edward. "Yet another ase of difference between the Beuch and the

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A: the meeting on Wednesday of the Bristol Docks Commutee, a draft specification and mract drawings for a footbridge across the each end of Portishead Dock were approved. and the engineer was authorised to invite tenders for the work.

A beginning is to be made with the work of diverting the Hulme Barracks site at Manuester into an open space. A special estimate if the Parks Committee for levelling ground and other works, at a cest of £350, will be considered at the meeting of the Manchester City Council to day (Wednesday).

The municipality of Montreal North have accepted plans for a main drainage scheme drawn up by Mr. F. C. Laberge, of Montreal and have awarded the contract for the work to and have awarded the contract for the work to Mr. J. Chartier. Montreal, at the price of \$127.6.1. The drains, which are to be constructed of concrete, will run the entire length of the town, and will discharge into the Back River at two points, the pipes being earned 644 feet into the river.

Halesowen Rural Council discussed on Wednesday the appointment of a district surveyor in succession to Mr. G. H. Dallow, who is leaving to take up a position at Much Wenlock. The General Purposes Committee recommended that General Purposes Committee recommended that the position be advertised at a salary of £150 is very £c. For annum more than has been part to Mr. Dallow. A motion was brought forward that the cauch make temp rary arrangements for a groung out the work until the consistency of the war, the mover being of tunion that they would get a much better a becaute the close of the war than they would the treat time. The vetting being equal, the tresent time. The veting being equal, the charman gave his casting vote for the committee's recommendation that a fresh appointment be preceded with.

### Our Office Table.

Fresh regulations for technical schools, schools of art, and other forms of provision of further education in England and Wales came into operation on Monday last, and can now be purchased through any book-seller from Wyman and Sons for 2d. They show the conditions of grant specially applicable to the various schools and classes. There are very few modifications from previous arrangements, one being under even-ing schools. No. 34. D, providing that the Board of Education may pay an instalment of the estimated grant in advance of the final payment. As to the endorsement of certificates, a new rule, No. 59, enacts that ' (a) Examinations upon the courses of study as set out in the syllabuses must be held in each year of the course. These examina-tions must be held by the teachers, with whom must be associated for the examinations in the last year, and if desired, for those in earlier years, an external assessor or assessors. The board may exceptionally approve other arrangements for examining students taking senior part-time courses.

(b) It an advisory body has been established for the school or for any particular course, members of that body should be associated with the teachers and assessors ertificates or diplomas in the award of 65. D. provides that "No addition may be made without the Board's consent to the record upon any endorsed certificate or

The programme of the Department of Technology of the City and Guilds of London Institute for the session 1915-16. containing regulations for the registration. conduct, and inspection of classes examination of caudidates in technological subjects has just been published. As compared with former years there are several alterations in the arrangements. The conditions governing the award of full techno logical certificates to painters' decorators' work, cabinet-making. and binding and embroidery have been modified, and the lists of works of reference have been revised and brought up to date. About eighty subjects are comprised in the About eighty subjects are comprised in the examinations. The programme of 394 pages contains full syllabus of the various subjects, and is published at 9d. net by Mr. John Murray, Albemarle Street, W.

John Murray, Appenance School.

The fifty-eighth annual report of the Trustees of the National Portrait Gallery states that the plans prepared last August by H.M. Office of Works for the muchneeded extension of the gallery have, with minor changes, been accepted. These prominor changes, been accepted. These provide for a single gallery along the Orange Street frontage, practically in a line with the existing building. Some difficulty was experienced in adjusting the floor levels of the proposed new building to those of the present galleries. The trustees were aware equality of floor levels was cardinal principle in the construction of all modern museums, and in accordance with their representations the Office of Works produced new plans, which were examined February, 1915. The number of visitors during 1914 was 119.928, a decrease of 16.503 upon the total of the previous year.

The West Bromwich Town Council dis-cussed on Wednesday the question of the Mayer's Green housing and improvement scheme. On account of the demolition of houses in carrying out a public improve-ment, the Council must, under the Housing of the Working Classes Act, 1903, under-take a housing scheme. The Sanitary Committee reported that the Local Government Board required the erection of houses on a site or sites to be approved by them, and according to plans also to be approved by them. The scheme has to be approved by them. The scheme has to be carried out within twelve months from its approval by the Board, but it was very doubtful whether the Board would require the scheme to be executed within that period. The committee recommended that the be carried out, stating that particulars as and the hemlock, and all four are to be seen, to site, kind of house, and rental would be treated in a variety of ways which serve to

submitted later. An amendment was proposed that the scheme should be postponed until after the war. Mr. Bell said the condition of things in the Mayer's Green area was absolutely a disgrace to the town. Some of the people were living rent free in hovels which should have been demolished years ago. The amendment was lost be votes to 9, and the report was adopted. should have been demolished

The British Vice-Consul at Bangkok (Mr. 11. Fitzmaurice) reports that the bulk of the cement now imported into Siam comes from Denmark and French Indo-China. Recently, however, a firm at Bangsue, near Bangkok, commenced the manufacture of cement, and the annual output of this new works is estimated at 120,000 barrels or 20,000,000 kilogs. (about 44.092,000 lb.), a quantity very nearly equal to the average importation of cement into Bangkok during the last five years. The British Vice-Consul adds that if this local factory is The British able to produce the quantity and quality of cement its promoters expect (as to which some doubt is expressed), and at the same time to compete in price with the cheap cement now imported from French Indo-China, the importation of cement into the cheap Siam may practically cease.

At the meeting on Wednesday of Corporation of Birkenhead Alderman Solly, chairman of the Parliamentary Committee, gave the council some information regarding the town planning schemes for the Oxton, Claughton, and Rock Ferry districts. Those residents who had inquired concerning the scheme had been satisfied with the information given them. Long before the work began a decision was taken to " the districts mentioned for the protection of property, and books of reference were prepared at a cost of £200. If the council had not proceeded with the serving had not proceeded with the serving of notices on owners and residents affected the expenses incurred would have been rendered useless. By town planning the council could settle how many houses should be erected per acre. By serving the notices the districts were protected from any danger of being spoiled and their amenities were preserved.

At the meeting on Thursday of the City Court of Common Council, Mr. Ernest Edward Finch, M.Inst.C.E., M.R.San.Inst., for the past half-dozen years Chief Assistant in the Engineer's Office, was unanimously appointed Chief Engineer of the City at a commencing salary of £800 a year, the appointment to date from Christmas, 1914.

Mr. Finch, formerly Chief Assistant Engineer of Bermondsey, and then Borough Engineer of Pethnal Green for six years, was appointed Chief Assistant in 1909, and since then the Corporation has paid over £800,000 in settlement of compensation claims in connection with the widening of Fleet Street, Bishopsgate, and Leadenhall Street, the work being carried out by the engineer's staff

In his annual report to the City Council of Bristol, Mr. L. S. McKenzie, A.M.I.C.E., states that the number of new houses erected within the civic boundaries during the year is only ninety-eight—the lowest on record, while the number of void houses remains practically the same as the previous year. The small number of new houses is doubt-less largely attributable to the scarcity of labour and the abnormally high price of materials. Nothing definite has been accomplished in the direction of town-planning, but the question of arterial roads has been under consideration.

The fact that the war has shut off the Russian and Baltic wood supplies has turned the attention of timber buyers to the resources of British Columbia in this and the Trade Commissioner of the Canadian and Commerce Department has arranged an exhibition at 87. Union Street, Glasgow, in order that commercial men may have an opportunity of seeing what British Columbia can produce. The principal woods British Columbia has for export are the giant Douglas fir, Columbia spruce, the red cedar,

show the numerous purposes to which the timber of the province may be turned. The natural woods are shown, and also samples of The the timber when it has been dressed, stained, and varnished, and utilised as doors, panels, cornices, etc. The uses of the woods for street paving, barrel-making, and flooring are street paving, barrel-making, and nooring are also demonstrated, and a number of photographs are on view descriptive of the logging operations carried on in the province and the manufacturing and shipping capacity of export mills. The opening of the Panama Caral has reduced the shipping distance from Canal has reduced the shipping distance from British Columbia by about half.

The "Strand Magazine" for August contains a well-illustrated article on "The Value of Observation in War," by Mr. Frederick G. Cooke, M.S.A., of the Eastbonrne Volunteer Training Corps. The paper is substantially the admirably sug-The gestive lecture on the same subject delivered at 9, Conduit Street, W., before the Central London Regiment of Volunteers, and fully reported in our issue of May 14 last. The author demonstrates in some new photographs how by besmirching and mottling his uniform and modifying the stiff outlines of his service cap a sniper may adopt pro-tective coloration when in the field almost as effectual as that of the feathered snipe from whom he derives hints. Mr. Cooke writes us:—"It was through your publishing my address last May that I got into communication with the editor of the 'Strand Magazine."

The Council of the University of Liverpool have just issued the prospectuses of the School of Architecture and Department the School of Architecture and Department of Civic Design for the ensuing session. The School of Architecture is under the charge of Mr. C. H. Reilly, M.A., F.R.I.B.A., the Roscoe Professor, assisted by Mr. L. P. Abercrombie, M.A., A.R. I.B.A., Lecturer in Building Construction, and Mr. L. B. Budden, M.A., A.R.I.B.A., assistant lecturer and student instructor. Mr. Giles Gilbert Scott, F.R.I.B.A., is the Reader in Gilbert Scott, F.R.I.B.A., is the Reader in Ecclesiastical Architecture, and the subject of Greek Art is taken by Professor R. C. Bosanquet, M.A., F.S.A. The autumn term begins on October 5, in the Department of Civic Design. Mr. L. P. Abercrombie is the lecturer, Mr. T. H. Mawson deals with Landscape Design; Mr. J. A. Brodie, the city engineer of Liverpool, and Mr. H. E. L. Martin, B.Sc., with Civil Engineering: Dr. E. W. Hope with Civic Hygiene; and Mr. H. Chaloner Dowdally, B.C.L., an exLord Mayor of the city, with Civic Law. Lord Mayor of the city, with Civic Law. This department, founded in 1909, was the first school in this country exclusively designed to meet the need of students who wish to study town-planning.

### OBITUARY

Quebec has lost a well-known architect in the person of Mr. Rene Lemay, who died at his summer residence at Cape Rouge recently. During his active career Mr. Lemay contributed extensively to Quebec's archi-tecture, and many of the modern edifices which are monuments to the commercial expansion of the ancient capital were planned by him. Among the buildings which he designed are the Merger Building, the designed are the Merger Building, the Dominion Fish and Fruit Building, Quebec Technical School, Caisse d'Economie, St. Roch's, the Lindsay Building, and the new St. Patrick's Church, besides other splendid buildings throughout the province, including Chicoutimi Cathedral. The late Mr. Lemay represented St. John's Ward in the City Conneil for its years and he was a former Council for six years, and he was a former President of the Dominion Association of Architects.

The death took place on Thursday morning of Mr. James Ramsden, builder and decorator, at his residence, The Elms, Walmersley Road, Bury, Lancs. He was a well-known man, and last year was president of the North-Western Master Builders' Federation. Federation.

An isolation hospital is about to be built at Ely at the joint cost of the town and rural districts councils. Mr. S. J. Wearing. A.R.I.B.A., of Norwich, is the architect, and Messrs. Parren and Son, of Earith, Hants, have fallow the have taken the contract at £3,223.

LEGAL INTELLIGENCE.

ARCHITECTS ACTION AGAINST MAN CHESTER ATHEN.EUM. At the Manchester Assizes, on the 20th ult., Mr. Justice Athin, sitting without a jury, began the hearing of an action brought by Messis. Charles Clegg and Son, architects and surveyors, Economic Buildings, M. inchester, against Mr. H. Stafford Golland, hon, secretary of the Manchester Atheneum (sued on behalf of the officers and members of the institution) to recover sums amounting in the aggregate to £721 for work done and services rendered. Mr. Acton and Mr. Jordan appeared for the plaintiffs, and the defendant was represented by Mr. Atkinson, K.C., and Mr. Brocklehurst.—Mr. Acton said there were also associated with the plaintiffs in the action Messis. Hurrell and Taylor, quantity surveyors, Manchester. The Atheneum was an institution in the city, devoted to artistic, literary, and intellectual pursuits. In July, 1912, Mr. Golland consulted the plaintiffs with a view of removing the hall from the top to the ground floor of the building. Messis. Clegg were of opinion that it could be done, and that it would be necessary to prepare plans and take out quantities. The wish of the Atheneum authorities was that they should only have one firm to deal with for the purpose of payment, and Messis. Clegg, therefore, made arrangements with Messis fixed by the Royal Institute of British Architects, and Messis. Clegg prepared sketch plans, Various alterations were suggested by the compicts of the work they would LEGAL INTELLIGENCE. fixed by the Royal Institute of British Architects, and Messys, Clegg prepared sketch plans, Various alterations were suggested by the committee of the Atheneum, and these were made in the sketch plans, which were obviously distinct from working plans. There was a suggestion that the Manchester Corporation should buy the building, but this was not carried out. Amended sketch plans were finally passed by the corporation, and the members of the Atheneum at a meeting resolved to proceed the corporation, and the members of the Atheneum at a meeting resolved to proceed with the work. Messrs, Clerg then prepared sectional working plans, and Messrs, Hurrell and Taylor took out the quantities. It appeared that Messrs, Clerg's original approximate estimate was £17,000, but this was greatly inverses all by the alterative suggested by these mate estimate was £17,000, but this was greatly increased by the alteration suggested, by tests as to the Ioundations of the building, and other matters, and the lowest tender was £29,000. This was reduced in consultation with the plaintiffs to £21,177, some of the more expensive items being cancelled. Ultimately, however, the Athenaum authorities decided that owing to the war they would not proceed with the work. The plaintiffs thereupon sent in their bills of charges. A sum of £310 had been paid, but the defendants disputed liability to the event of £721, which the plaintiffs now

pare wick. It was some everythin. It was read accept our from the constitution these gentlemen who energy to grow many themse was to any expense without a virial pretty definitely what it was. They wind to have an idea of it. What them addition to have an idea of it. What them addition to have an idea of it. What them addition the winds to you was in connection with the some yes. In further cross exam nation the winds and he knew there were two parts of Athenaeum one wanted to proceed with work and the other did not. Mr. Godinal him it was imperiant to winds to deep the process in the figure of the bond should be addedoned before them a definite figure beyond when it at the bond should be addedoned before them a definite figure beyond when it at he did not a not a not be saying to Mr. Godinal that he was proper to offer special terms. The plans he proper for submission to the corporation would be do for working drawings. Mr. J. W. Ha Brazennese Street, Minchester, quantity veyor, Mr. A. J. Murgatroyd, aromest, M. Chester, and Mr. J. W. Beauman, and the Manchester, gave evidence as to the reliableness of the charges made by the position. Mr. Akhisson, for the defence, submit it was a stowhat the cost would be, and it was a form making a special contract with the architecture did be to quote the terms of the Reval I state of Beitsh Architects, and to see a form as to what the cost would be, and it was a form did to consider the persons one was do a ing with, who did not know about the senior test.—The Judge: Amenest the arts do as with at the Athenaeum, is not architecture one Mr. Atkinson: It is only a club, they have nothing to do with architecture there. The Judge: Amenest the architecture one Mr. Atkinson: It is only a club, they have nothing to do with architecture there, Leading with, who did not know about the senior with at the Athenaeum, is not architecture one Mr. Atkinson: It is only a club, they have nothing to do with architecture there was not a syllable about it. Mr. H. Stafford C. land, how, secre they could go to that himit. They if it is plaintiff's estimate for £17,00% together withis reports as to the carrying out of the wirk. There was strong opposition to the scheme is the institution. The witness gave his versies of conversations with Mr. C. T. Clegg dures the progress of the negotiations, in which leddiffered materially from the evidence witnessed to them given by Mr. Clegg. He has not the faintest idea, he said, that in addition the charges they had already made, plaintiffs intended to charge the Atheragus with the cost of preparing working drawy, and making a survey. He had no dear the were under any liability beyond £25. Ge Wednesday, witness, in forther examilition by Mr. Atkinson, said nothing would have persuaded his board to go beyond £17 the work proposed, and Mr. Clegg assures member of the board that sum. When seem the carried out for that sum. When seem for as he was concerned he had no idea whethey were giving him it struct at 8 who is a very color of 25 tor the color. with the work. The plaintiffs thereupon sent in their bills of charges. A sum of \$230 had been paid, but the defendants disputed liability to the extent of \$221, which the plaintiffs now sought to recover. At the close of counce's statement the judge suggested that all the parties were men of position in Manchester, and the case appeared to be one in regard to them a arrangement might with advantage be arrived at—Mr. Acton said the plaintiffs were quite prepared to leave it to the indee. They only sought to recover what was fair. The judge's suggestion was, however, not adopted,—Mr. Charles Theodore Clogg, one of the plaintiffs, who was called on Tuesday, said the charge is had been been considered in the index of the plaintiffs, who was called on Tuesday, said the charge is made were in accordance with those recognised by the Royal Institute of British Architects, of which his firm were numbers. The suggestion that the Corporation of Manchester should buy the Athenaum building was not carried out, and the alterations to the building which the directors proposed were abandoned by the Board on account of the war. If eventually the changes should be carried out the directors proposed were abandoned by the Board on account of the war. If eventually the changes should be carried out the directors proposed were abandoned by the Board on account of the war. If eventually the changes should be carried out the sirvestors would have the advantage of the work done by his firm, and by Messes, Illurrell and Taylor, the quantity surveyors. When, following the instructions of the defendant, he invited to describe the work work in the director of the work of the defendant was not misleading, having regard to the proposals he was then asked to exceed the theory of the control of the control

. It twees, the plans submitted to the rp ration and the working drawings. Mr. G. Nieck Mr. W. Fletcher, and Mr. H. Furber, G. N.s. I. Mr. W. Fletcher, and Mr. H. Furber, directors of the Athenaum, all said, in evidence that they understood the 1½ per cent, would cover everything. Mr. Justice Atkin, in giver pudgment, said in the absence of any express agreement between the parties there could be no dispute that the reminieration when the architects were entitled to receive would be 2, per cent, upon the amount of the owest tender, and, in respect of alterations and other work the usual professional terms. The real defence in the case was that the defendents had always been anxious to know be The real defence in the case was that the defendants had always been anxions to know be forehand what the limit of their expenditure was going to be, that before they decided to go on and obtain renders for the work they tried to find out how much they had to pay the architect, and that they understood the sum they would have to pay him was 1½ per contribution of the limit of the contribution of the sum they would have to pay him was 1½ per contributions of the contr sum they would have to pay him was 1½ per cent, upon the lowest tender. It was for the defendants to make out that there had been a special contract. In order that working plansing be preparted it was necessary that quantities should be taken out, because it was urterly impossible that original sketch plans would suffee. He was satisfied that in the absence of proper plans no quantities could be taken out that would be of the slightest value, He found that Messis. Clegg were entitled to recover the sum that they claimed namely, 2½ per cent, upon the lowest tender of £21,177 and 1½ per cent, in regard to the quantities, together with some other charges, including the charge for the survey. He deadlowed as and 1½ per cent, in regard to the quantities, together with some other charges, including the charge for the survey. He disallowed an item with regard to assisting to procure a mortgage. The total claim allowed was £932 2s. 7d. From this amount there had to be deducted £310 5s, already paid, leaving the amount, for which he gave judgment, £671 17s. 7d. In answer to Mr. Atkinson, the judge said he did not think he should grant a stay.

CROSS CLAIMS BY ARCHITECT AND BUILDERS. His Honour Judge Moss sat for seven hours at Wrexham County Court on July 26 to seven hours at Wrexham County Court on July 25 to hear an action brought by Alderman Edward Hughes, trustee for Lewis Brothers, builders, Wrexham, against John Henry Swains n, architect, Wrexham, for the pay-ment of £207 15s 7d., balance due in respect of a residence built for him by Lewis Brothers. Defendant counterschained £169 odd for delay in executing the work, and alleged defective work. Defendant had paid £120 on the claim into court, and plaintiff had paid £15 into court, with a denial of liability. It appeared that in April, 1911, Lewis Brothers agreed to build a house for Mr. Swainson at agreed to build a nouse for Mr. Swamson as £915. They were to complete it in five months, but the time was extended six weeks when the contract was signed in Angust. The house was not finished until April, 1912, and the builders stated that the delay in completing the work was due partly to the indecision of the architect as to what he required, partly to changes and exhibits to the work mr. covainally provided as to what he required, partly to changes and additions to the work not originally provided for, including an extra room, and partly to a strike, which caused delay in the delivery of tiles. Mr. Pryse Lewis one of the builders, said it was impossible to complete the work sconer, owing to the alterations made by the defendant who was building the house for hims f. The work could have been completed within the time stand if they had had a roas a about arometer who knew his own mind.—Evidence was given by independent witnesses. reas a abre are inteer who knew his own mind.—Evidence was given by independent witnesses as no be satisfactory nature of the work done. —Defendant gave evidence to the effect that owing to the delay in completing the house he had to stay at an hot' and to incur additional expenses. He did not do anything to prevent the completion of the work within the period provided by the contract. He had to exercise extended evolved the contract would not now been necessary if the work all here excluded with energy and extendition by the builder. The hearing was ado trued to Sentender II. ad a greet to Sentember 11.

ade recells. Seatemore II.

BUILDING HOUSES WHERE THE STREET IS UNDEFINED ATTORNEY.
GENERAL, v. KNOWLES. As the Lanershire Charter Charter Charter on the 27 mit, the Vice Charterly Mr. Stewart Smeth. K.C.) gave allowed in the series. It was an action in which size Attorney General, of the Councy Pally welf Literature of the Councy Pally welf Literature of the Councy Pally welf Literature, as the relation of the Councy Pally welf and injunction to restrain the defendants. Messes, John Robert, and Walter Krowles, builders. Darwer for most timing to be defendants.

Robert, and Walter Krowles, builders. Darwer for most timing to be defendants. The mban district council of Farnham have obtained sanction to the Lorrowing of £15 240 for works of sewage disposal.

A theatre is to be built at a cost of over £100,000 sterling in Monroe Avenue, at Grand Rapids. Michigan. The architect is Mr. Lee the Lorempy of Grand Rapids.

the Darwen Corporation Act of 1887, one clause of which provided that before property could be built the street must be defined. The corporation proceeded against them under the Act, and they were brought before the borough justices and a small fine imposed. An appeal against the decision of the justices to Quarter Society was suggestful the corporation below against the decision of the justices to Quarter Sessions was successful, the conviction being quashed. The matter was then taken to the Court of King's Bench, which reaffirmed the decision of the justices. The defendants then gave notice that they intended to proceed with their building, and the Attorney-General, on the appeal of the corporation, instituted proceedings for an injunction. The Vice Chamber of the decision of the ceedings for an injunction. The Are Chan-cellor said that in their defence the defendants asserted that the judgment of the Court of King's Bench was wrong. Notwithstanding that assertion, he felt bound to follow and give effect to it. The defendants having been shown to have been guilty of a breach of statutory duty, and of intending to continue to commit such breach, the Attorney General was entitled to the injunction he sought to restrain to the injunction he sought to restrain the commission of the breach. The result was that he would make a declaration in the terms of the statement of claim. If the defendants were willing to give an undertaking he would not grant an injunction, but if they left they were unable to do that an injunction would follow. Mr. Sutton said the corporation felt that as this was the first case of the kind they had had it would be a guide to their conduct in other

cases that were likely to arise within the borough. They thought the matter was very important, and they thought the matter was very important, and they preferred to have the injunction.—The Vice-Chancellor: I think you are entitled to it on my judgment, and I most grant the injunction. The defendants will pay the costs of the action.—The injunction was granted accordingly.

LIVERPOOL CORPORATION v. SEW ERAGE CONTRACTOR.—In the Chancery Division, on Thursday, Mr. Justice Eve granted an application on behalf of the Laver peol Corporation for an order to restrain, until the trial of an action, William Muirhead and Co., Limited, contractors, of London, from in-terfering with the plaintiffs in the exercise of their right to take possession of the sewerage work which the defendants had contracted to carry out at the northern outlall of the city sewerage system.—Mr. Manghan, K.C., on behalf of the Corporation, said the motion was upon an order agreed to by the contractors. The Corporation, in May, 1914, invited tenders The Corporation, in May, 1914, invited tenders for the construction of a northern outfall sewer, and a contract was entered into between the Corporation of Liverpool and William Murchead and Co., Ltd., contractors, for its construction. The defendants commenced the work, and were not proceeding in such a way as to give satisfaction to the Corporation, and a question arise as to whether, in the epinion of the engineer, under Clause 45 of the contract, they had exercised due diligence and made such due progress as to enable the work to be completed within contract time. That made such due progress as to enable the work to be completed within contract time. That question was submitted to the engineer, and on the 22nd inst, he gave a certificate pursuant to the contract that the contractors had not exercised due dilgence as to enable the contract to be completed. Notice had been given by the Corporation that they were to enter the progress of the substantial statements and the statements. tract to be completed. Notice had been given by the Corporation that they were to enter upon the work, and the defendants had replied that they were going to resist the Corporation taking possession in the Court. Thereupon the plaintiffs issued a writ and notice of motion for that day.—His Lord-hip granted the internal injunction as stated, costs to be costs in

DISMISSAL OF A DISTRICT SURVEYOR BY THE L.C.C.—On Wednesday last in the High Court before Mr. Justice Rowlatt, Mr. Robert Pledge Notley applied for a declaration that the resolution of the London County Council of March last purporting to dismiss him from his office are district surveyor for Bethnal Green was il'egal and void, and further claimed an injunction to restrain defendants from enforcing

### Building Intelligence.

DEPTFORD. The new set of supper baths erected for the Deptford Borough Council at the junction of Stockholm and Ilder-ton Roads have been formally opened. The entrance is at the corner of Stockholm Road and Ilderton Road, and gives direct access to an octagonal hall, adjoining which are a waiting room and office and store. Accommodation is provided for eighteen baths, all of which are placed on the ground floor, the cubicles being tiled from floor to ceiling, with a view to keeping down the cost of maintenance. On the first floor. the cost of maintenance. On the first floor a flat containing a living-room, two bed-rooms, and a kitchen-scullery is provided for the superintendent, while the basement utilised for accommodating the boiler, fuel, and storage of hot water. The baths were designed by Messrs, Joseph and Smithem, of Queen Street, Cheapside, and erected by Messrs, W. S. Barton and Co., of Chancery Lane, W.C.

PAISLEY ABBEY.—The first part of the Abbey restoration at Paisley has been completed, and was informally opened on Thursday last. This is the cloisters, the money for the rebuilding of which was provided by Mr. and Mrs. A. F. Craig. Sir Charles Bine Renshaw, Bart., chairman of the restoration committee, who was accompanied by other members, mentioned that the work had been carried out to the plans and under the supervision of the architect, Mr. M Gregor He congratulated him and Mr. Chalmers. Taylor, the builder, on the successful com-

pletion of their work.

# Trade Aclus.

WAGES MOVEMENTS.

WAGES MOVEMENTS.
BRIDGWATER.—An adjourned private meeting of the Bridgwater Conciliation Board has been held, under the presidency of Mr. Charles Doughty (barrister-at-law, appointed by the Board of Trade), to consider the question of wages and rates of pay of men employed in the brick, tile, cement, and timber trades in the town and district. There was again a large attendance of employers and employees, and after a conference lasting several hours, a satisfactory settlement was arrived at, advances satisfactory settlement was arrived at, advances of varying degrees being made to the employees, both in regard to day and piece work. \_\_\_

#### TRADE NOTES.

Under the direction of Mr. Reginald T. Longden, architect, Boyle's latest patent "airpump" ventilator has been applied to the Chapel, Bottom House, near Leek.

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Mr. G. T. Kingston has been appointed by the Elloe Court of Sewers. Spalding to the position of surveyor, in place of his brother, Mr. W. Kingston, who has resigned the office. A Local Government Board inquiry will be held at Irlam, near Manchester, to-morrow (Thursday) into an application by the urban district council for sanction to borrow £15,900 for works of sewage disposal.

Lieutenant John Harley, M.A. (Oxon.), 13th Worcestershire Regiment, born in 1880, who was killed in action in the Dardanelles on June 4, had for some years been engaged on historical research work at the Record Office and had recently been made a Fellow of the Society of Antiquaries. On the outbreak of war he gave up his work and enlisted in the Artists' Rifles.

Mr. Egerton Swartwout, architect, 244, Fifth Avenue, New York, has prepared plans for a memorial monument to be erected at the grave memorial monument to be erected at the grave of Mrs. Mary Baker G. Eddy, founder of the Christian Science Church, in Mount Auburn Cemetery, Lanesborough, Mass. A fund of 110,000 dols, has been raised for the erection and maintenance of the memorial.

and maintenance of the memorial.

At a meeting of the Bristol United Trade Committee of Carpenters and Joiners, held last week, the following resolution was adopted: "That this committee is of opinion that all public works, such as schools, etc., which have already been sanctioned, but temporarily stopped owing to the war, should be put in hand forthwith, in order that the distress which at present prevails in certain sections of the building trade may be relieved."

#### PRICES. LATEST

N.B.-All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

#### TIMBER.

Owing to stoppage of supplies all prices have advanced considerably.

#### TRON.

Per ton. Per ton.

Rolled Steel Joists, English       £9 12       6 to         Wrought-Iron Girder Plates       9 15       0         Steel Girder Plates       9 15       0         Bar Iron, good Staffs       6 5       0	10 0 0 9 17 6
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Do., Welsh 5 15 0 ,,	5 17 0
Boiler Plates, Iron—South Staffs 8 0 0 ,,	0.15 -
South Stalls 8 0 0 ,,	9 10 0
Best Snedshill	9 10 0
Builders' Hoop Iron, for bonding, £12 5s. to	
Ditto galvanised, £19 to £19 10s	. ner ton.
Galvanised Corrugated Sheet Iron-	Tot ton
No. 18 to 20. No.	22 to 21
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### B.B. Drawn Telegraph Wire, Galvanised— 0 to 8 9 10 11 12 B.W.G. £10 10s. £10 15s. £11 0s. £11 5s. £11 15s. per ton. Cast-Iron Socket Pines -

3 in. diameter							
4 in. to 6 in	6	10	0	9.3	6	12	6
7 in. to 24 in. (all sizes)	6	17	6	1.1	7	2	- 6
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Turned and bored joints, 5s. per to	on e	extr	a.				
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Iron—         Per ton.           Cold Blast, Lillieshall         80s. 0d. to 127s           Het Blast, ditto         87s. 0d. , 97s	
Wronght-Iron Tubes and Fittings-Discount off	
Standard Lists f.o.b. (plus 21 per cent.)—	
Gas-Tubes	pe,
Water-Tubes 66	
Steam-Tubes	
Galvanised Gas-Tubes 55	
Galvanised Water-Tubes 51	1
Galvanised Steam-Tubes 45	

#### OTHER METALS

OTHER MET	ALS.			
	Per to	11.	Per ton	١.
Lead Water Pipe, Town	£31 0		_	
Country	.32 (	0 .,		
Lead Barrel Pipe, Town	^ 2 (		^-	
Lead Pipe, Tinned inside, Town	*33 (		_	
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" Country				
[Over 43 in. £1 per to Lead, Common Brands	17 17	6	£ 8 12	6
Lead Shot, in 281b, bigs	24 15		2 0 12	0
Copper sheets, sheathing & rods	102		103 0	0
Copper, British Cake and Ingot	95 10		91 10	Ō
Tin, English Ingots	162 0		163 0	Ö
Do., Bars	163 (		164 0	0
Pig Lead, in lewt. Pigs, Town	23 0	0	21 0	0
Sheet Lead, Town	.30 10	0 ,,	_	
, Country	*31 10		PR-16	
Genuine White Lead	37 10	0 ,,	_	
Refined Red Lead	38 (	0 ,,		
Sheet Zinc	115 (			
Old Lead, against account	21 (			
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Cut nails (per cwt. basis, ordinary	0.1			
brand)	0 1	ŀ 0 ,,	_	

. For 5 cwt. lots and upwards.

#### SLATES

SLATES									
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#### BRICKS,

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Best Farcham Red	111		15			
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#### GLAZED BRICKS.

HART GLAZES (PER 1,000).

White, I	vory, ar	Best.									
Salt G	lazed.	- 13	uff. (	"Le	am,	(1)	her		Se	con	d
Best.	Second	5	& B	ron	se.	('0]	om	٠,٠	Col	our	8.
Stretchers-											
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One side and two ends, square—

18 17 6 17 17 6 21 17 6 26 7 6 18 17 6

Two sides and one end, square—

19 17 6 18 7 6 22 17 6 26 17 6 19 17 6

Splays and Squints—

17 7 6 15 7 6 21 17 6 24 17 6 17 7 6

Plinth and Hollow Bricks, Stretchers and Headers

51, each 4d, each 6d, each 6d, each 5d, each

Double Bullnose, Round Ends, Bullnose Stops—

5 ', each 4d, each 6d each 6d, each 5l, each

Rounded Internal Angles—

4d, each 3d, each 5d, each 4d, each 6d, each 5d, each

#### SHOULD ED BRICKS.

Stretchers and Headers	
8d each 8d, each 8d, each 8d, each	ı 8d. eacb
Internal and External Angles -	
1/2 each 1/2 each 1/2 each 1/2 each	h 1/2 cach
Sill Bullnose, Stretchers, and Headers -	
5d. each 4d. each 6d each 6d. each	h 5d, each
Majohea or Soft Glazed Stretchers and	Per 1,000
Headers	£22 17 6
Curan, at 3 Bullnose	27 17 6

Grey Stone Linic s. d. s. d. Per vard Stoneholge Time ay in acks 27s. Od. per ton at rail, way station

#### STONE

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Red Mansfell milest per fest cube	03	2	1
Darley Dale, ditto	17	3	3
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#### OILS

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Diffe, brown		Jt.	15		27	
Cottonseed, retined		24				
Seal pale		21			25	
Cocoanut, Cochin		46	0	0.0	16	1
Ditto, Cevlan						
	1.2					
Palm, Lagos						
Ditto, Nut Kernel					35	1
Oleme				0		
Sperm		30	0		31	
Embricating, U.S		0	7			
Petroleum, refined				Fin		
Tar, Stockholm 1	at barrel	1	5	0	1	1
Ditto, Archangel	10	- 9	13	£	1	
Lunseed Oil	ma gal.	0	2	£		
Baltie Oil		0	2	1.,.		
Turpentine		0	3			
Putty (Genuine Linscod)						
Oil)	per cwt	0	3			
Pure Linseed Oil						
"Stority" Brand	13		9	0		

#### GLASS (IN CRATES

English Sheet Gla -	15 0	21 oz.	250	1
Fourths	4°d	5‡d.	16.1	7.1
Thurds	5d.	541.	t i 1.	4.1
Fluted Sheet	514	610.		
Hartley's English				1.0
Plate			100	4 1
		73.0	14. T	

VARNISHES, Ftc.

Sd. cach | 3d. cach | 6d. cach | 6d. cach | 5d. cach | Majohea or Soft Glazid Stretchers and | 1/2 cach | 1/2 cach | Majohea or Soft Glazid Stretchers and | 22 17 6 | Compass bricks, circular and arch bricks of single radius £6 per 1,000 over above list for their respective kinds and colours | 5d. cach | 5d. cac

Telephone 19x1.81 ON 1588 OGILVIE & CO. Many years connected with the outer form of W. H. LASCHLIFS & CO. 6. Republishment

Mildmay Avenue, ISLINGTON, N. EXPERTS in HIGH-CLASS JOINERY.

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WM. OLIVER & SONS, Ltd.,

120, Bunhill Row, London, E.C.

#### TENDERS.

.. Correspondents would in all cases oblige by giving the addresses of the parties tendering at any rate, of the accepted tender; it adds to the value of the stormatics.

A rox. For sundry pointing work and repairs at them schools, for the Acton Urban District Educion Commuttee;—

Rothschild school--(external);—

Date 5	and to.					£ 231		
Lerris	Et	, .				225	10	1.7
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cannon.—ror supplies in connection with forced a night, for the town council. Accepted tenders:— Channey:—

Thompson, J.			£340	0	0	
	Ash	hopper:-	,			
Morris, H.,			of ±289	11	٥	
hopper		ctor:	32.250	0	C	
Restant Ther	nson-H	onston Co	£24	()	0	

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BAITERSA.—For the supply of steel shafting for meter shop, for the Metropolitan Water Board:— Smith and Grace, Serew Boss Pulley Co (accepted) . . . £173 0 0

BATTERSEA.—For the supply of travelling cranes, for the Metropolitan Water Board:—
Morris, Herbert Ltd. (accepted). £434 2 0
(Three tenders accepted.)

(s x tenders received.)

books Committee Accepted tenders
Fischboits and Nutter—
Guest Keem, and Nutterfolds, Ltd.
Fangbolts:—
Phen v Boot and Nut Co.
Tarpaulins:—
Dallin Bree, and Son.
IR and canvas conveyor beling:—
Traffic plant—
Messes, R. Wilkins and Son.

Brissol For electrical supplies, for the Corporation Electrical Commutee. Accepted tenders:—
Viternating Current Meters:—

British Westinghouse Electric and Manufacturing Co., Ltd., Man-Manufacturing Co., Ltd., Manchester Are Lamp Carbons:—
Olive Are Lamp Co., Ltd., Woolwhile Are Lamp Co., Ltd., Hudger Christian Co., Ltd., Hudger Christian Co., Ltd., London Co., Ltd., Carbon Co., Ltd., Oxford C148-12-6, Reality Mrs. For smally of grants Co., Manchest Mrs.

Brooks's, Ltd., 188, 2d. per ton (accepted tender).

BROWNHUIS - For the laying and construction of a 9 m, stoneware pipe sewer, at Hall Lanc, Walsall Wood, for the Brownhills Frban District Council, Mr. J. H. Shaw, engineer and surveyor:—

E. J. H. Shaw, engineer and surveyor:—
Curral, Lewis and Martin, leknield
Port Read, Barmingham ... 4798 6 6
Martin and Element, Woodlands
Street, Smethwick ... 771 17 0
Lewis and Taplin, Great Tindall
Street, Birmingham ... 694 17 5
Thorpe, W., Hollywood, near Birmingham ... 629 2 0
Jackson, C. Waterloo Street, East
Tipton (accepted) ... 588 16 6

CANOCK.—For the supply of 150 larger and 30 smaller desks, for the Education Committee:—
Midland Education Co., Birmingham, accepted, at 15s. 6d. and 11s. 6d. each respectively.

Chiffon.—For construction of an additional tie tank at the North Riding Asylum at Cli for the North Riding County Council:—

Birch, W., and Sons, Ltd., York (accepted) .. £596 18 3

COLWYN BAY.—For the construction and completion of extension to Victoria Park, Colwyn Bay, for the councer, Mr. J. M. Porter, F.S.I., Estate Office, Colwyn Bay, surveyor:—

£916 I 7 680 0 0

Pritchard, R. O., Bryn Dedwydd, Conway Rowlands, R., Bod Ivor, Rhiw Bank Avenue, Colwyn Bay . 545 II 11 Hurhes and Co., Back Sea View Terrace, Colwyn Bay (accepted) 499 13 1

Cowes.—For repairs to Gurnard Bridge, for the de of Wight County Council. Mr. S. R. Cocks. ounty surveyor, St. Thomas Street, Ryde, I.W.:—

nty surveyor, St. Thomas Street, Ryde, I.W. Quinton, G. F., Carisbrooke Road, Newport ....£37 13 0

East Ham.—For cleaning and whitewashing the latrines and urmals at 19 schools and for internal repairs, painting, and sindry work at Hartley Avenue school, for the East Ham Education Com-

Hartley Avenue school repairs:—
Jarman, F., 6. Knapp Road, Bow 4350 0 0
Cleansing latrines:—
Jarman, F., 6. Knapp Road, Bow 194 0 0
(Accepted.)

EBBW Vale.—For painting external woodwork and ironwork of their 64 houses at Council Street, for the Ebbw Vale Urban Instrict Conneil. Mr. T. J. Thomas, town surveyor:—

...£115 10 0

EDINGTHER.—For the construction of foundations for the new electricity generating station at Portobello for the corporation:—

Cousin, G. and R. (accepted)  $0.05.727 \pm 0.0$ EMIL-For the erection of Mu o. 110, for Vickers Ltd., Erith. Munitions Accepted ten

Builder work:-

Dorman, Long. and Co., Middle-brough, Steelwork:

Gunning, G. H., and Son, Erith,

Furnham cemetery, for the Joint Burial Com-

Goddard and Scn (accepted) .. £64.16  $^{\circ}$ 

Figure 1 and Sch (accepted) . 104 to 0

Figure 2 for improving the water supply, etc., of the workhouse for the guardians:—

Dougl Hayes, Fermoy (accepted)

Figure 4 for improving the water supply and santary and layatory arrangements in the workhouse, for the guardians, Messrs. Coughlan and Tierney, Fermoy, engineers:—

Hayes, D., Fermoy (accepted) .. £2,429 10 0

GIASGOW. For special track work, for the Tramways Committee. Accepted tenders:— Loram Steel Co. and E. Allen and Co.

Hampton.—For providing points and crossings in connection with coal unloading and transporting plant, Hampton and Kempton Park, for the Metro-politan Water Board:—

Kerr squart and Co., Ltd (accepted) . . . . . . £57 10 0 (Three tenders received.)

(Three tenders received.)

LANCASIER. For alterations to property at the rear of George Street, Thurnham Street, and Robert Street. Mr. R. Jackson, L.R.I.B.A., Lantaster, architect. Accepted tenders:

Mason work:

Ward, R., Golgotha Road. . . . £378 0 0
Joiner work:

Pall and Riley, Greaves Road . . 131 15 0
Plumber work:

Barrow, S., Edward Street . . . 129 19 1
Cross and Sons, King Street . . . . . . 67 0 0
All of Lancaster.

Loynov,—For the supply of 2-m. and 6-in, Siemens'

All of Lancaster.

London.—For the supply of 2-in, and 6-in, Siemens' meters, complete with automatic valves and lead connections for by-pass meters, for the Metropolitan Water Board:—

Nater Board:
Laddaw, R., and Sons, Ltd., Edinburgh (accepted) . . . . £175 0 0
Lovoox, E.C.—For relaying with stone the carangeways of (a) Queenhithe and (b) Pudding Lane, or the City Corporation:

Anderson, G. J. (accepted for both)—
£559 2s. 0d. (a), £315 4s. od. (b).

Losbox, N.—For installing heating apparatus in connection with the rebuilding of the Winehester Street school, for the London County Council:— Theme, E., and Beat, Ltd., 3, Monument Street, London Bridge, 4745 0 0

Park Unsigned Brights de Foundry and Engineering Co., Ltd., 28, Victoria Street
Paloakar and Sons, 90-91, Queen 693 10 0 649 0 0 638 0 0 Street and Brockett Ltd., Mun-Vetton Cannon, W. G., and Sons, Ltd., 107, London Road.
Ltd., 22, Cross Street, Islington\*

Application of the Control 620 0 0 612 0 0 548 10 0

ton' (Architect's estimate, £590.)

(Architect's estimate, £590.)

Recommended for acceptance.

LONDEN, E.—For extending the heating apparatus, a connection with the enlargement of Redman's coal school for the London County Council:— Road school

Brightside Foundry and Engin-eering Co., Ltd., 28, Victoria Street 

Chamberlain, C., Barclay Street,
Levester
Clarke, E., Melton Mowbray
Wade, C., Luddenden Foot
Shardlow, J., Leicester
Barry, W., Ratcliffe-on-Trent
Palmer, A. E., Glenfield, Leicester
Emery and Co., Birmingham
Clarke, W. G., and Co., Grantham
Margereson and Co., West Bridgford, Nottingham
Sykes, A., Nottingham
Burnett, R., Hiekling
Doubleday, Waltham, Leics, (acc pled 342 16 340 4 336 0 316 6 315 0 303 19 298 14 0 272 0 0

tingham (accepted) . £82 0 0
RICHMOND.—For repairs to schools, for the educaon committee. Accepted tenders:—

Work at county school for boys:—
Speechley and Smith . £69 15 0
Work at county school for girls:—
Morris, W. D. and Co., Ltd. . 64 10 0

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

Effingham	House
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List of Tenders than	* *	 	\ I

OUR HELUSTRATIONS, The Butchers' Row, York. Sketched by Mr. Gordon

#### Strand, W.C.

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Premises,	W cest	Street, Strat	tied as V	ion. Butters
		afterward and A		

and detail. Mr. Francis W. B. Vorke, Architect. [91] Franch Cabinet (loth Century), now in the faint-burgh Art Museum. Measured and drawn by Mr. Scott Lawson.

Warehouse and Works, Cheethen, Manchester, for Westers, Weinberg Detail, plans, and down Mr. Joseph Sunlight, Architect

#### THE ANGLE.

The German Visitation: Sympathy with French Architects
Travel Notes in Italy
Pershore Abbey

Travel Notes in Italy
Pershore Abbey
The Golden Age of Wainscot Oak
Architects and the National War Register
Fresh Air and Eathing
"American Builders" Week at Panama
Pacific International Exposition
British Art and War
The Fire Prevention Committee

The Fire Prevention Committee
Beautifying Our Streets
Currente Calamo.
Obituary

Dignity, in architectural mass, seems largely concerned with the die-square, as seen in perspective. We are not at all cognisant of this effect in elevational drawings. On such, the cube and the rectangular are insipid—relatively so, at any rate, to their actual appearance. But rear up a real cube of 50 ft., and view this in "sharp" perspective: we now see in diagonal view, and neglecting the lower ground-level angles, two obtuse angles and one, that is to all appearance, if not technically, acute. In that nominally acute angle seems resident much of the grandeur and impressiveness of architectural mass. It is dominant, almost aggressive, as is well shown in a near view of any great square building, as in an angle of the rained Parthenon. It would appear that that quality which, for lack of a better term, we may call "over-awing," in architecture, is best evidenced in simple rectangular masses.

If, now, we cut off this dominant angle of the cubical or rectangular mass, we have the two obtuse angles as before, plus acute angle has vanished. Yet the process of sheering off the arris of the cubical building mass is of common occurrence. An architect having a corner site to deal with no doubt finds his thoughts turned in the direction of angle tower and turret, as giving emphasis to the junction of the façades. The necessary process in this case generally entails cutting off the angle of the cubical building mass. Until it appears the best course, we shall do well to give consideration to the point, bearing in mind how, in the elementary massform, the cutting away of the arris plainly results in loss of dignity. Can we afford to lose the sharp arris? This is a question every designer concerned with corner sites, and, indeed, with sites generally, should ask himself, for obviously a very important principle is involved.

to lessen boldness of effect. In apsidal ends, no doubt, the system of buttresses, pinnacles and flying buttresses, compensates for loss of dignity in the mass, and the eye gains interest in the variety and play of subordinate parts. The 135 deg, of octagonal plans must therefore be considered not only a basically weaker construction, but of less boldness; yet, since suitability of design to end in view rules, either for this reason or because we are familiar with and have acquired a taste for the octagonal tall chimney, this order of plan for this special construction is no doubt generally To cut off an angle seems, in all cases, to lessen boldness of effect. In apsidal ends, no doubt, the system of buttresses, pinnacles and flying buttresses, com-

square shaft would be deemed unsatisfactory. We may perhaps refer this antipathy to some purely esthetic consideration, or we may judge that it is because we know the square form is not suited to withstand horizontal wind-stress; and how inseparably bound up with architecture is suitability for purpose may here be seen, in that we all of us would deem nothing better in effect in domestic fluebuilding than rectangular chimneys. Again, as concerning this point, and the effect of tall chimneys, these and towers and monuments, usually founded on some plan based on or included, symmetrically, within the square, seem to be under some different general rule of design to those applicable to ordinary building construc-

Since a circle may be regarded as a multangular figure exhibiting an infinite number of straight lines on its boundary, the octagon, in this way, may be regarded as an approach to a circle. It is well understood that walls arising from a circular plan lack the dignity and impressiveness of rectangular buildings; hence, we may proceed to argue, the octagon necessarily is of inferior stermness and dignity to the square-angled plan. If we accept this as an hypothesis, we know that each time we cut off an angle we weaken effect and give less dignity, but may find a measure of compensation in added variety, grace, and eye interest. Light and shade effects attain a maximum with walls at 90deg., so that as we increase the angle we lessen the effect of chiaroscuro. In chamfering the arris we lose in boldness of contrast and definite light and shade, but we gain in elegance and grace, perchance.

For these reasons we shall do well not lightly to cut off corners of building masses unless special and, at times, practical considerations dictate. As a general rule, we do not want to chamfer every great arris, nor, for the matter of that, every small one; for we should thereby reduce all parts and the whole to a sleek tameness. On the other hand, it is doubtful if we can improve, by any scheme of

appreciated. Equally, no doubt, the gain seems to be a rugged massiveness the corner piled up with a grand and imposing mass of stones and juting salient cornices. Whatever the gain, whatever the loss, there is an addition to the pictorial, and, generally, the effect of these corners seems admirable. Yet one would not like to see the Parthenon so treated, nor can we imagine an octagonal pyramid of Ghizeh retaining the section majesty of that arising from a square plan. Plain, die-square angles, it not architecture itself, seem a necessity for quiet, refined dignity of mass. Ever, we cannot but think, the architect needs to hold fast the belief that the plainer and simpler and the more square the main mass the better the foil and affect to more elaborate and varied subcrimate additions. We value the octagon bay the more for its attachment to a rectangular-planned house; we should surely less esteem it, were it attached to a great octagonal main building.

Where, then, we are proposing to cut off a corner, we may well pender over the ultimate effect of a shoerel-off arms—a mighty chamfer in the case of a large building. It is at times unavaidable for practical reasons. We see many examples of building chamfering. They may be generally classified as the plain chamfer and the curved and incurved chamfer, all of which may have virtual fillets stopping each façade. Few will hesitate to condemn the effect of the plann chamfer a short wall joining the two main walls. The curved olianifer looks weak; while the incurved are, like everything receding and withdrawing, is essentially expressive of weakness. No doubt tially expressive of weakness. No doubt building line exigencies and high ground values mestly stand in the way of a rein-forced angle on the St. Paul's mod L. Bearing in mind the poor effect of a cornice running round a plain cut ff angle. me running round a plain out if angle, we might consider anything better that this, hence, possibly, the argument of recessed, or, as we may the letel corners, whole the means of the although feeble in its mass that containly gives a vasible better. tainly gives a vastly better effect.

### GERMAN VISITATION, SYMPATHY WITH FREN HUARCHITECES.

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Society Contrale des Architectes.

S. Rue Danton, Paris, le 5 Julhet, 1915.
Sour le Divisibilit et Tres Honore Confrerences on du Barouri et du Conseil de la Societé face des Architectes, nous venons vois extrimer for extrementes remembers, pour le temocracie contratoriels sympathie que vous nous avez sector for extrementes contratoriels sympathie que vous nous avez sector for a destruction systèmic par les armées allemendes des monuments are France, contratoriels allementes des monuments are France, contratoriels allementes allementes des monuments are forde entratoriels and forderes allementes allemen

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#### TRAVEL NOTES IN ITALY

What is the chaim of Italy! That .harm exists to very many is undoubted. When once you have come under the speal of this romantic land, the deep longing to re-turn will seize at most unexpected moments. The sight of a Roman urn, a Madonna, a majorca reputation the smell of typics or stone pane in a hot sun will be sufficient to rocal, memories of sun-baked walls, of vine-yards, cypress (venues, white towers, way side shrines, and the teeming and picturesque Lite of the roadway.

Some few years ago a party of us spent some months in the larger towns of Italy, and, feeding the charm still upon us, we arranged another vis.t. intending to spend our time in some of the smaller centres; and with this object is view landed at Naples at the care of Jeograpy last year. Propurous circumstances of to our arrival at the very stasses of via Leour previous trip terminated, so a conveyedge of the seasons was con-

VAPIES

NAPLES.

It is most not Naples during February was recentrally sight frests at neght were so cold toy so in lays, and sight settled open ingations. Comfortably settled one ingation to the famous bay we renewed particle stage streets of Naples, exposed the amount of streets of Naples, exposed the amount of the street of Naples, exposed the amount of the streets of Lagreways, a surrounded and corrow toy the old, but more recent, in denication, admired the fine effect of the capital and are admired the fine effect of the capital and are admired the fine effect of the capital and are admired the fine effect of the capital and are admired the fine effect of the capital and are admired the fine effect of the capital and are admired to the fast main. National Gardens, on the fast allowed traffic in the Chapa. As it was the season, Naples was crowded with ine season. Naples was crowded with visitors. Bertolan's Terrace was filled each

dry for attention tea with an interesting sin politin crowd well worth studying. A polisant trip from Naples is to take the trib a from the Toretto through the huge gritto or tailing, and then along the coast grifto or tailier, and then along the coast past the ironworks to Pozznoli, a dirty and most interesting spot. Here St. Paul landed on his veyage to Rome, and the old dock is well worth visiting for those in search of the picturesque. Solfatina is easily reached by carrage or by walking from Pozznoli. The guide conducted us over the glistening bed of the crater by a devious path, avonuing the numerous boiling mud springs. The ground sounds hollow underfoot, and when a light is applied to the sulphurous vapour issuing from crocks and rents in the ground. the smoke issues from other rents hundreds of feet away, and even from parts of the criter cliffs high above our heads. Flocks of sheep and goats were grazing on the edge of this inferro, and the bamboo buts of the shepherds were erected within a few feet of the boiling springs. The whole of this distrut is dotted with ruined Roman buildings. many buried by the numerous volcanic dis-The ancient Temple in Pozzuoli, which is approached through a bath-house, shows the signs of submergence under the sea, and is now again sinking below sea level.

We spent a long day driving round the Bay of Bare, crawling into decorated, smoke blackened tembs scattered among vineyards looking down on the beautiful hav in which Agropp as was drowned, descending into the great variet water eistern on Cape Messina. from which the Roman Fleet was watered entering the mouth of the underground passage that connected Cumae with Lake Aver-The district is a museum of ancient remains, and appears to be in the hands of private owners. who use decorated vaults as stables and storehouses, and expect a few quers from visitors

Returning to Naples: The Castle Nuovo. Returning to Angles: The Cisic Asserts, with its har Isome carved entrance gateway as I be not doors, is approached through most any stores. Obtaining permission from the sentry, we passed into a vard amoug

\* A paper read of the Royal Victorian Institute of Arab functions by Mr. Percy Kerner A.—A fine display of Hilles Flustrating the paper were shownly Mr. C. A Cowjer Flu

piles of empty shells, transport wazgons, and other warlike stores, and had time to examine the carvings of the towers, representing scenes from the war with spain, while a small boy went in search of the guide. When he appeared, armed with an enormous key, he pointed out the panels of the bronze doors representing incidents in local history. The heavy bronze has in one place been broken by a round shot, which is still embedded in the door. The inner court of the castle is crowded with military waggons, arranged in a very haphazard manner. The guide, with his enormous key, unlocks the chapel door and conducts us round the various historical and family monuments. A very fine c.rcular, open, newelled staircase leads up to the private apartments; a narrow, steep stairway also leads down to the dungeons, which are reserved to the last. The guide shows the decapitated trunks, in their coffins, of two victims to the Spaniards' explains that they were preserved by being embalmed in sea water. He then lifted the hid of a third rough wooden coffin, in which is the munning of a strangled cardinal, still wearing his vestments. The awful look of horror, the gaping mouth and twisted hands and feet me as realistic as when the unfortuand feet he as realistic as when the unfortu-mate whetch perished hundreds of years ago. The guide, to relieve the situation, so fraught with horr or, gave the withered, leathery flank a playful slap as he closed the lid, and asks us if we are "Contento." We assured him of our complete satisfaction, and only longed for the agency rive which to force his due for the open air, in which to forget his dungeons and their horrors.

The Old Church of the Carmine, situated just belond the Porta Capuana, near the ancient harbour of Naples, is one of the most pictures me in the town. At the time of our visit a horse fair was being held at the very doors, and we had some difficulty in dodging the heels of the stallions which were being offered for sale. Outside, the church has an imposing tower of black and white marble. The greasy, heavy leathern curtain that hangs at all church doors in Italy in winter has to he pushed aside, and we are in a beautiful mellow interior. Barroque in style, glowing mellow interior. Barroque in style, glowing with dull gold. Long rays of wintry sunshine, heavy with dust motes, shine through the elerestory windows, lighting up shrine and statue. Here and there, amid the general gloom, the poor of Naples are here at their devotions. Matins are being sung, bells toll, the organ peels out, while we follow intricate passages into the chapel behind the altar, where, standing among a crowd of kneeling devotees, we are shown the miracle-working picture of Saint Bueno. We walk back from the Carmine, through some of the wonticularly pleased with the street of the artificial flower workers, whose wares are shown in the open street, giving it a most festive appearance. It was carnival time, derful streets of the old town, and are parfestive appearance. It was carnival time, and, meeting a crowd of students, our ladies were well sprinkled with confetti.

#### AMALFI AND RAVELLO.

One day we had a discussion as to the composition of the characteristic smell of Naples. some said wasting coffee and stable; others, humanity; all agreed that the predominating moise was the ceaseless braving of the humble donkey. From Naples, a rapid trip to Capri. Somento: thence by the famous roadway along the Gulf of Salemo to Amalfi. Here we rested at the monastery high on the cliff above the bay, celebrated in Longfellow's The old cells are converted into bedrooms, the refectory is used as a dining-hall. the chapel remains, and a portion of the cloister. The vine terraces and lemon or-chards, with the water distern and demented aqueducts, are maintained as of old. In the hanging woodland above the gardens we were pleased to find the first or hids, wild violets and daisies, and other signs of spring. It is hard for the visitor to realise that Amalfi was an important Mediaval republic, and a bostling commercial port at the time of the Crusades A present the town is crowled into a small space between two headlands, at the month of a mountain stream. The houses climb the cliffs on either band, and are approached by intricate, nneven passages.

The cathedral, backed against the chir. and | 1. approached by a high flight of steps, is an approached by the surrounding buildings fwo ancient castles dominate the headands, and the whole, as viewed from the city many is most picturesque. The ancient city hes submerged under the blue waters of the Gulf, and the fishermen still hear the church bells ring for matins and vespers as they float above the submerged towers. We elept well in our cells, notwithstanding the fact that We sleps a portion of the monastery has been carried away by a rock-fall from the chifts, the scar of which is plainly visible.

All who take this route should visit Ravelle from Amalfi As the road is very steep, some of our party walked up by the old mule track. The track follows through romantic scenery. a mountain stream, and passes through vine yards and chestnut woods; the banks were purple with croens. At one spot we saw how the immense labour of building the terraces for the vines was accomplished. The whole available population was at work—men, women, boys, and girls—all carrying stones of soil. Only by such a combined effort could such an amount of work be finished. Alont 10d. a day is a labourer's wage, I believe, these parts.

Ravello is superbly situated, over 1,500 it above sea-level, and overlooks miles of coast We felt we could almost throw the proverbial biscuit into the Gulf from the terms of the Hotel Belle Vue. The padronna, hearing we were from Melbourne, was delighted to show us a photograph of her uncle's house in "San Kild," Melliourne. The contrast of this photo with our surroundings was striking Rayello, stone built, ancient, deserted, side by side with St. Kilda's bijou villa. The cathe dral contains the well-known inland mosan pulpit, supported by polished shafts, on bases resting on the backs of lions and lionesses. Scriptural mosaics and also some curious Many of the palaces in Ravello have marble columns at their entrances removed from the ruins of Paestum. The Ruffalo Palace, the garden terrace of which is one of the sights of Italy, bears a tablet erected by the inhali tants of the district to the generosity of the Gibson-Carmichael family, who at one timeresided here. An incident of the road was characteristic. One of the ponies, beautiful little creatures from Sardinia, lost a shoe The driver produced a spare one and a handful of nails, and with a spanner as a hammer proceeded to make good the defect; and a botched job it was. But there being no option. we had to complete the journey in this uncomfortable manner.

#### Rome

Rome is too large a subject to touch in a discursive paper The huge Victor Emmanuel monument dominates the Capital. Time. alone," as an Italian gentleman explained "can pass a true criticism of such a stupendons work." Most lovers of the ancient explained. such a cient condemn this work as disappointing and in had taste; but Rome has survived many building periods, and its great charm is as au historical reference to great national movements; and the new memorial will pass into the future as one of these, built by the State to catch the eye of an emotional people, in competition with the great Church memorial on the Vatican Hill. It has failed to eclipse the work of Michael Angelo, both in utility and in grandeur.

Architects in Rome must have an interest ing time, as it is a rare thing to open founda tion trenches without finding evidence of earlier construction, and occasionally sculp-ture and jewelry of great value is unearthed. The authorities of Rome are waking up to the fact of the great value of the historic remains

to from or the control of the activation to trumer. The Marchae tystim and the Convenient of the Convenient of the stop of manifolding to the trumer. At trumer to the support of the supp ine shops cross from a wet three flys, a could metally in the constant of the flys, and the metally with the metally writers were first provided metally writers were first provided metally writers were first provided may write the fourists for heavy the flowers and compared for the form the rocks of double grands, and fly made between the first flowers, who are stopping all others tradice. From Rome, delightful day types were made by electric from across the Compagna to the towns of the slope of the Arban Hals. A good service of cans herves Rome from the vicinity of the Stazione de Termina ha a short time we find correctes trade of the vicinity of the Stazione de Termina ha a short time we find correctes to cersulg the undilating slopes of the Compagna, "so beaut ful as to fill one with medancholy," as an Italian friend remarked Mountments and runed aquedicts stand out growth the long hur on the outside, looking uncommonly like ancient satyrs, attended their flooks, their temporary huts of hamboo remanding us of Indian wrighting. The train like follows the root of the kinds of the childs of the follows the root of the kinds of the childs of the follows the root of the kinds of the childs. their hooks, their femporary limits of hamboo renimiding us of Indian wigwains. The train line follows the road to Frascatt, and the whostle has to be frequently sounded to wara the sleeping driver of a picturesque wine cart which has strayed between the rails. After some ten indes of this pourneying, the line leaves the open Compagnia and ascends be tween vineyards in which are mounted guns with wide hell mouths, for shaking up storm centres in the heavens before the hail can descend and rum the crops. The train divides. one branch going to Frascatt, famous for its villas, 2 ir leus, in l'wine. From Frascatt a delightful trip may be made to Tusculum, and I would advise good walkers to go on foot, as the views all the way up to the rains good distribution. are delightful. The right-hand branch of the train runs to Abano, where we get a fleeting glumpse of the be intiful crater-lake; and then gampse of the methorin cratter-rate; and then on to Genzano, some twenty miles from Rome. Genzano is described in "Baedeker" as a poverty stricken village, without attractions; but to sit in the central plazza, and watch the women carrying we'er in copper buckets to their homes, is worth the visit. Two types are very noticeable a fair haired, fair-com-plexioned type, supposed to show the northern blood of Churemigne's warriors, are mixed with the smaller, vivacious, dark skinned Italians

Our objective in Genzano is the Lake of Nemi. Climbing the steep street, accompenied by a crowd of urchins, each anxious to earn a soldo, we reach the gate of the Pulizzo Cesarin : but before admittance is granted, we must interview the lordly majorhome at the Palace adjoining. We enter our names in the visitors' book, the gates are unlocked, and we are is free of these beautiful gardens as if we owned them. This is a delightful feature of Italy, the way one is welcomed and shown over private property I' sometimes leads, however, to awkward It is sometimes leads, however, to lawkward moments, as when some over-zealous guardi in leads one into a dining-room in which the rightful owners are sitting down to dinner. Awkward for the visitors alone, as Italian manners seem equal to all occasions. The winding noths of the Palace Gurden lead through hanging woodlands down to the shirting levels of the lake, 400 ft Jelow. We spout hours windering in this sylvan solundering the first three of the lake and single specific transfer in the result of the control of the lake and the sylvan solundering in this sylvan solundering to the lake and the control of the lake and solve the lake and the sylvan solundering in the woods searching misu coessin by the lake and the color of the lake and the lake and the lake and the color of the lake and the lake an spent hours windering in this sylvan solutide and sturbed, picking wild violets and for clessus in the woods searching misuscessfully of the amount out ficial outlet built by the Romans, and still mountaining the loke at a four inform level. The nourney back to Rome in solution level. The nourney back to Rome in solution level and the evening light, with the floating dome of the Fietro growing ever larger and more discounted by the force other features are distinguishable, at least

protect them from injury. Unfortunately, in some cases this care has erred in taste. The beautiful little round Temple in the ancient cattle-market has been surrounded with rockeries somewhat after the St. Kilda Road nattern. Personally. I much preferred the litter of straw and picturesque groups of contradini which I knew of old.

Rome was indulging in the usual epidemic of strikes during our visit. The cahmen struck against the regulation fares, and received an increase. Still, even with this addition, we found it often more economical

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a drive of some three of feat moses from the station across a dusty as and then a steep climb up to the rosyping city chinging like a swallow's nest to the for will side of Mount Sibascio. The chief in terest here is, of course, the connection with St Francis, and the great church or, rather, churches for these are two—one super imposed mon the other—called after his name. The tresposes of the lower church, which reone back, again and again, to their study are the char attraction to tonists, but the rest of the town is well worth exploring, and the surrounding country is most beauting. We were amused hearing an American, who had just arrived, and "done" the churches. had just arrived, and "done" the churches, remark to his companion; "We can't get out et the place til to-morrow morning.

A hot walk or about four miles by mule track to t possible for motors, thank heaven! up to lour, glistening slopes of Mount Subas to brings us to the hermitage of the Careeri, 2.300 ft. above sea-level. It was St Fra a s. of Assisi's light to refine here for monitation, and prayer. A small monastery was bond on the edge of the rayme, and a small park enclosed. After the heat and fatigue of the climb it was delightful to rest in the shale. An aged brother drew cool water from the well, and provided refreshing wine for us as we sat on the parapet of the compand, enjoying the extensive view. bed of St. Francis is shown, also many of his personal relies. There is a most charmal modern statue in the park, under the free where St. Francis blessed the birds, of the saint and his feathered friends. We were sarry to leave Assisi, after a visit of a week: but Easter was approaching, and had energed to spend that season in Floren e; so, having a two-horsed carriage, drove with all our luggage some sixteen miles across country to Perugia, the towers of which, dire t'y in the line of the setting sun, had a girly be housed us during our stay in

#### Perugia

is a town of great interest, and most impor-tant to the student of pointing, as only here can Umbiran art be properly studied. Built on the top and slopes of a hill, the views over the surrounding country are impressive. Those interested in architecture should look up the Oratorio of San Bernardino, a magnincent palsel rome work, in which marble and terra atta are employed: to the right of the Orat is a descrated church, used as in ir two ks. The forges, seen in the dimit-digners light, and the smoke-blackened wa's are nest picturesque. A young mechan, has ted us in to see Grottos (Jottos) Fres. s. It was evidently a standing joke of his, who have minerally enjoyed; but we were not on these green, and we all laughed together.

The yearb of these hill towns of Italy have a pastime suited to their environment. Large lass a work about the size of a thereone are bowled down the curving roads who have a tree bowled down the curving roads who have most a flight of discs bounding down the slone. I tried my hand at throwing one. but it son end dies ourse in the gutter

#### PROBLEM F

at East is most interesting, not only the ceremone of the town itself, but those in the size of Light gradient are admitted but to all require an evening to them.

#### SHALL

is a storest agreentry for a long visit. The clumber is delightful, very different from Force of his omitty find energating. A toronomic to by modern improvements, desides the release electric curs that traverse the control streets, often pulling right along slue control fronts to pass a pair of the negative to the total T is an already to even, harmond to a word out, a wargon. The v wazgon. The lenting, with sharp sand, is done. Our stay

"were" was (a man in the form of a wolf) still haunts the streets at might, plunging into the Fountain of Fontebranda at the first streak of dawn, in the belief of the more ignorant of the citizens. The visitor receives nothing but kindness from the fine looking people The strong tower of Parazzo Pub-blico, over 300 ft. in height, one of the noblest in Italy seen from one of the dark and marrow streets in the full flush of sunset will never be forgotten. Sodoma's picture of "The Sconrging of Christ," in the Bella in the Bello A(t), impressed me more, I think, than any peture I have seen. The simple technique and use of the in this fragment is masterly, and the finest thing in the Accademia collection.

VIA REGGIO. We rested some weeks in Via Reggio, an Italian watering place on the Lagurian Sea. and enjoyed sea bathing and sand-baths. sands are strongly impregnated with iodine, and so are recommended for rheumatism.

At Mrt Reggio there is a prosperous shipbuilding business going on, most interesting to anyone connected with construction. The raw material for the ships is grown in the adjoining onk and pine torests; the logs are cirted to the docks, and there cut to timbers planks by sawyers, cutting the curved timoers from natural grown trees, the top sawyer following one line, the bottom sawyer another, thus getting the proper shear. pine planking is also siwn so as to follow the natural curves of the trees, and the curves all seem to come in somewhere in the onstruction. Of machinery there is little or none. Ropes, canvas, sails, boats, iron work, are all being made near the same spot. The Via Reggians are very proud of their ships, and well they may be, as they are beautitul specimens of naval architecture, sound and well built. As they say if a seaman is drowned: "If Antonio had only sailed in one of our ships he would not have been wrecked. From Via Reggio we visited THE FAMOUS CARRARA MARBLE QUARRIES. By the courtesy of the Marble Quarries Railway Co., a special carriage was attached to one of the trains leaving Carrara for the quarries, high on the mountains. The line ascends by a series of zigzags, and fine views of the plains are obtained as we rise higher and higher Below us it looks as if the whole population of the Carrara valley had their washing out to dry; but we are told by the courteons official who accompanies us that the white dots are blocks of marble waiting • he sawn into slabs. The sawing is largely done by witer-power, and the mills line the mountain torrents. After ascending some thou-ands of feet, the line enters a dark tunnel, and then we again emerge into daylight. What a change! Instead of the green squares of the cultivated plain, the white towns and villages, the di tant blue Ligurian Sea, there is a mountain villey of dazzling whiteness Large stacks of marble blocks line the rail way ready for transportation. The slopes and cliffs above us as far as we can see up to the vivid blue Italian sky are covered with glistering white spalls and chippings of marble, down which, on rough skids, large blocks are being lowered by crowds of men with hempen ropes. The spoil from one quarry overflows another, and endless are the law smits in consequence between the different There is a proposal to erect overhead transporters to convey the rubbish to the sea, there to be used in building a much required breakwater. But want of co-operation between the quarry-owners has so far stool in the way of realisation. Leaving this station, still ascending, we pass through a long tunnel into another and higher valley. where the same's one is reneated. While cur term of trucks is being lorded by overhead ni verenn e otal nedet ore av sellovert which a lunge nerss of stone has been blown down by powder and is ready to be cut up into blacks. The good stone in the cliffs is in irregular masses, surrounded by disinte-

crated state which is worthless. This would from the have accumulations of smalls

end robbesh. Flattric power is simplied from

renegating stations on the other side of the range, and a good deal of marrying by wire

in the valley is punctuated by warning blasts on horns, followed by heavy detonations, which reverberated from the cliffs. While the train is being loaded we adjourn to a little inn under the shelter of a projecting chif; it is plasant to retire from the heat and glare into this humble hostelry, where bisenits and a sweet fruity wine are served, while the padrone shows us his portrait by Sargent, who spent some weeks here fas-cinated by the scene. The railway company convey over 1,000 tons per day to the coast. and there is also a large trathe by ox waggon from the valleys not served by the railway. The company's representative told us that blocks of marble at present in Rome, conveved there in ancient times, are far beyond the capacity of the railway to handle. It is not known how they were removed from the quarries; but once on the sea beach the sand was dug away round them, and in the dock thus formed a ship was built outside the block of stone, which was then floated to sea. The blocks were Imperial property, and the ships were labelled A.U.F., and could demand assistance from any other vessel encountered on the voyage. This has passed into a local proverb, A.U.F. meaning "to get something for nothing."

These notes have covered some of the places visited during our journeyings in this most delightful land, where we received nothing but kindness and courtesy from the people, and which we left with regret and

the hope to visit again.

#### >000 PERSHORE ABBEY.

The vicar of Pershore (the Rev. F. R. Lawsont has issued a report on the work accomplished in connection with the reparation of

Pershore Abbey.
In 1912 the removal of ivy from the south transept disclosed serious michief, and further examination showed danger of settlement in the west wall, while the tower itself showed signs of giving to the west. A committee was formed and issued an urgent appeal, and the work of repair was begun. The transept wall reports) has been well repaired, the (the vicar larger and more ancient cracks being filled with fresh stone; the smaller, but newer and more perilons, ones by "grouting" with liquid coment. Iwo large flying buttresses now support the tower from its western side. and have given it stability. Before this work was completed, in July, 1913, an inspection Before this work was completed, in July, 1915, an inspection of the decorated vaulting of the presbytery was made from a platform, and from above under the roof. Very grave peril was discovered, some of the work being almost ready to tall. The great tie-beams of the roof had rotted at their ends, had slipped from the wall-plates, and were bringing a heavy bur-

den upon the stone vaulting.

By the architect's advice the church was closed for worship. His report, received later in July, showed that about £2,000 was required for absolutely necessary repair; further, that it might be found necessary to add additional flying buttresses to the presbytery, and to underpin the south wall of the transept: work requiring fully another £1.000.

A county committee was formed to organise funds, a contract was accepted, and work began in October upon the roof. The tiebeams were either renewed or spliced, and put back upon the wall-plates; the worn-out lead of the outer covering was replaced by re-inforced concrete. Early in January last year scaffolding was erected under the whole of the presbytery vaulting, and its careful repair was carried on No new stone was used, and except for some damage to one of the larger bosses, the whole of the beautiful work was found inharmed, made secure, and given a cleansing which has made its loveliness more apparent than before. Some minor repairs included the reglazing of the electory windows, which were in a bad condition, and better glass has brought a fuller light upon the vaulting. The repair of the vaulting was the vanlting. so thorough that it was not found necessary at present to add extra flying buttresses to the walls, and as the cracks in the south transept wall showed no signs of movement, the underpinning could also be postponed until danger threatened. On May 18, 1914, the Abbey Church was reopened, the Bishop of Worcester

dedicating the new works and the repairs to True, there was a duty drawback on Dat

the old.

The accounts of the Reparation Fund show that £3,459 9s. 11d. was raised in less than that 25,450 88. Id. was laised in less than two years, and that the work has cost £3,450 8s. 8d. The balance of £9 1s. 3d. will be applied to the replacing in the Abbey, near the west door, of a late Norman fout, which for centuries belonged to the Abbey. cast out some eighty years ago to make way for a larger and newer one, and given away to a gentleman at Kempsey. His descendant, Sir R. C. Temple, however, has given it back and it will shortly resume its proper place and sacred use.

#### ---THE GOLDEN AGE OF WAINSCOT OAK

The golden age of wainscot oak, remarks a writer in the Timber Trades Journal, may be pictured in its bud or bloom during the er half of the seventeenth and the first half of the eighteenth century, when its use was largely influenced by Sir Christopler Wren and King William III. (1689-1702). The former has left this impression with us in the interior of his London churches, and the latter, hand in hand with him. in Hamp-ton Court Palace. Here we have the opinion of a practical man who flourished in the City a century ago: "The wainscot oak in the old houses in the country was mostly English cak, there was not much Dutch or Riga wainscot before the reign of William the Third. I think Sir Christopher Wren introduced a great deal of it in this country in his time; he was building for a Datch king; therefore, it was natural he should use it (John Armstrong, before the Committee of Timber Duties, 1855).

"Dutch wainscot," which he placed first was the finest wood that Europe or the world has ever produced. It was obtained in the sawn or converted form, and quartered to 17 in. a century later than Wren and Wil liam's time, and, what appears to have been forgotten, had its natural floatage and outlet in the Rhine. Riga. Memel, and Dutch wainscot, in the log form only, were then rated as inferior. Here be it known that the word wainscot implies a board, not a log.

In the evidence of Henry Warburton, Esq. P. (who succeeded his father in 1808 as "wholesale foreign timber dealer" and "yard-keeper" in London, and conducted that business until 1831), we have the following: "Formerly most of the wainscot used in this country came from Holland or Ostend. It is cut from logs that are brought down the Rhine, and which grew principally, I believe, on the country ad joining the Moselle. The windmills by which it is cut are principally at Westzaam and Zaandam, near Amsterdam, but there are others near Rotterdam."

There was a "standard board," the unit

of the Dutch sawn wainscot trade, and every detail hung upon it. The length was 12 ft., its other dimensions about 11½ × 1 in., which possibly meant 12 super, feet of 1-in. wood in a newly cut board. In 1757 such a board, computed or otherwise, could be imported into London, all charges paid, for three shillings and three pence, which included barely 6d, duty (about  $3\frac{1}{4}$ d, per ft, superficial), a rate that obtained until 1785, when the duty was advanced to 10d. This, it have a protection in foreign of gelovial hitherto protective in favour of colonial woods, was then swelled for revenue purposes woods, was then swelled for revenue purposes. By 1803 the same wainscot board under like pressure cost 7s, 4½d, to import, out of which 2s. 11d, went for duty, bringing the price up to nearly 7½d, per ft. In 1814, nearing the end of the long war, the import cost stood at 11s 4½d, carrying a duty of 6s. 4d. From 1757 to 1814 the board costing 5s. 3d.

During all the above years there was not a penny duty imposed on wood from our colonies, or, indeed, not until 1821. European oak was thus strangled, and the hardwood trade was largely turned into mahogany, cedar, and American or Canadian oak. This handicap accounts for the solid mahogany doors we see in our old-fashioned houses, and the same wood in church and chapel fittings of our fathers

had increased two hundred and forty-five

per cent.

wantscot and other duty paying woods we used in Established churches, but not a porin other churches and chapels 

### ARCHITECTS AND THE NATIONAL WAR REGISTER.

The Executive and General Purposes Committee of the Architects War Committee have been considering in what way architects can most effectively promote the objects which the Government seek to obtain by the

which the tovernment seek to omain by the formation of the National Register.

They strongly recommend all architects, when filling up their registration forms, to insert information under the following heads in the control of the in answer to the questions asked under Clause 4 (1) (c. of the National Registration

State in what branches of construction

2 State in shall orangenes of construction you have specialised.
2. Give particulars, as briefly as possible, of the more important works on which you have been engaged as architect or otherwise. 3. Give particulars of any personal experience you may have had

(a) In the organisation of workers:

the in the control of workers.

4. State what you could do if given an opportunity of rendering professional service to the Government.

(a) Paid Work. - State whether you could

offer your entire services continuously, or, if not, what portions of your time you could offer (days or hours per

State whether you could go to any locality, or, if not, in what district you could work.

State whether you are prepared to go

away for short periods. State what scale of payment you would be willing to accept.

"Voluntary unpead) work. State what portions of your time you could ofter and in what district you could

Note (b) is merely a suggestion in case it is desired to ofter gratuitous service **→** 

#### FRESH AIR AND EATING.

The New York Commission on Ventilation has recently made a report on one more phase of the investigation which they have been carrying on with so much thoroughness for the past two years. Their earlier work shows that people can remain in an unventilated room for several hours without there being any direct effect upon the pulse, blood pressure. body temperature, respiration or metabolism. provided the temperature of the room is kept down. Their latest results, however, show that lack of ventilation very decidedly in-fluences us in a way in which most of us certainly do not want it to, namely, in our de sire to eat.

In order to carry on this part of the general study the commission divided the number of people on whom the experiments were con ducted into five groups, only one group being under investigation at a time. Those in the first three groups were young men and those intse three groups were young men and those in the last two, young women. Each group of these scientific aids remained in the room, which is used in all the ventilation experiments, for a period of several hours, five days a week, for several weeks. On half of the days the room was well ventilated. On the Оп. all other half there was no ventilation. occasions the temperature and humidity were controlled so that they were the same through

controlled so that they were the same through out the experiment.

After the people had been in the room for a period of from two to three hours each day a luncheon was served to them. How terms ing a most was placed before them the some mission fails to report. Neither do they record whether individual idiosynerasics were twowed, but without doubt the menu was record whether individual idiosyncrasics were favoured, but without doubt the menn was first cases. All food was weighed and its value in calories recorded before each meal. What was left over was again valuated. In all, something over 5% meals were eaten, one half of them in fresh air and the other half or vitiated air, with the result that on "univenity that days" has food was consumed than on "fresh air days." Furthermore, the records in Control of the effect of vitiated air upon the posterior is record the longer the experiment posterior.

VMERICAN BUILD MEEK PANAMA PACTEC 1 OR STOONAL

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Differential Set The investment of the analysis of the investment of the analysis of the fact that it is a proceeding the fact that it is a procedured by dependent upon the fact that it is and its society. Notice more to do within great the analysis of place of acases (1) the analysis of the analysis

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Actively identified as bould 1 for 1 given to the implimiting and dever proof of a cities and towns, these visitors 1 Such raciseo this year will have a town 1 Such raciseo this year will have a town 1 Such raciseo this year will have a town 1 Such raciseo this year will have a town 1 Such raciseo this year will have a town 1 Such raciseo town out doubt, the most up to the most modern city in the world.

modern city in the world.

From a mass of ashes, r fins, and conclusions which covered over 1 or some association which covered over 1 or some miles in April, 1900, a new city is also A new San Francisco, the "Quoce of t West," and she stands to day an except monament to her local landders, the test of are now cordiady inviting the robret can act all who build, to come and visit of the first of work, to share their hospitally, and to city but by their presence to the payor it is not American Builders' Week.

We learn that a strong general committee.

of American Builders' Week.

We learn that a strong general committeembracing representatives from a binanches of the building business in San Francisco, with numerous sub-committees, are actally engaged in making the recessing uring process to insure the success of this greatest control of builders. Invitations to agreed are set of builders. Invitations to agreed are set organisations in the country and to the line press.

ing press.

It may be mert on d that the Section builders are receiving the lord discrete for all of the Exposition authorities, who give may tending a special rivit don tool or lors to different the Exposition of during Americans.

tend the Exposition during Anory, Builders' week.

To may also be stated that the bodies over trade corrected with the Soc For building a dustry, the local building a dustry, the local building a continuous and some with local building a continuous and some with local building a dustry, the local building a dustry, the local building a dustry, the local building and a solid translate that the area as lead to state that formation in wheelth, to discuss the dustry that week, the toward dustry that week, the toward dustry that will be seen as a superfiction of the seen and the seen as a superfiction of the seen as a superfiction of

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#### BEAUTIFYING OUR STREETS BY PROF A A STOUGHTON.

In the legical development of a town the the logical development of a fown the measures of he first fixtures for lighting, standards for currying wates and signboards, mail and fire alarm boxes, receptacles for waste functions, shelters and waiting stations. dressing found ups for man and least, krosks for vending and advertising, public con-ventences, entrances for sub-surface struc-tures, bridges and elevated structures. Alof these at alres must, of course, be treated decoratively so as to be agreeable in form and to harmouse in scale and character with then surroundings. In many cases the criginal useful purpose is merged in the decorative, and certain of them as four tains, for instance, exist for the latter only In the next class may be put such conveniences as ramps and steps, returning walls, Ir dze approaches and waterside construc-tions zenerally, cuy zateways, park enclo-sures, towers for beacons or bells, clocks and sandrals, bandstands and pavilions, which present an even more natural appeal for artists treatment. Then there are all the resources of nature, the pluntation of mass and surface, the green of the tapis very with the zew of the parterre, and the sparkle and tinkle of water.

Then come the purely ornamental features, which art and sentiment join hands to add the highest touch of grace to the street poture, varying in a wide range between the boulder bearing an inscription and the trainipal arch or the many figured group. Finally, above all, there is the embellishment of the buildings, private or public, ment of the buildings, private or puone, which line the streets or evenly open spaces, and make or mar them. This phase of the subject is outside the scope of this paper, but I may say that if buildings are to enter into the decorative scheme of the streets they should at least be visible. It is sad to the decorative much of the possible effect of to think how much of the possible effect of fine buildings is never realised on account our long, narrow streets and the rigid adherence to the rectangular block For buildings, as for monuments, a short vista cained by cutting off or turning a street or broadening it into a decorative place is neces-I come from a place which glories the possession of several fine avenues 122 ft wide, giving unusual opportunities for architectural effect. One of them is notable as being the longest street in the world But although running nearly straight for 825 miles, it turns as it crosses another principal avenue, and is faced on the latter by a fine building, which therefore has its full effect. Perhaps I should add in another category those embellishments for which former times give no precedent, which are the most obtru-Eve no precedent, which are the most obtrusive and insistent of all, and from which he most enlightened society has so far been mable to protect itself—the advertisements. I will say only that the State which finds a remedy for this outrageous evil, which renders nugatory all beauty in our streets, deserves a reward equal to that of the man who can are some account to haid. who conquers cancer or typhoid.

There are no rules for designing street features except those applying to other works of art. The book of suggestion is within the aspect of foreign cities and towns, we find an astonish-The book of suggestion is wide open ing variety in the choice of motive, in treatment, and in placing. Every problem of treatment and adjustment has its own special conditions and its own best solution by which the object shall be related most agreeably tests purpose and site and surroundings give it individuality and distinction. To pass about the Grand Boulevards and along the great east-and-west axis of Paris-one of our most common mental promenadesgives a most complete exposition of the sub-ject. We see the monument, the column and obelisk, the architectural setting of and counts, the arentestural setting of setting the property of the fountain and pool, the triumphal arch and the city gate, the decorative avenue backing up to a monument or building, open places of various sorts, the splendid building cubancing and being enhanced by its sur-roudages, the cureful use of the green of autre, the colour of flowers and the flow of vater, the variety of effects of changing angles of view, the terraces and balustrades and ramps and bridges

Even without a culture and love of beauty for its own sake, and basing our plea on a lower plane, we should accomplish more if we could convince our authorities of the money value of civic art. Just as many foreign products command a high price purely for the element of beauty of design in them, so a beautiful street or square or bridge or building or monument raises the value of real estate in the vicinity, while a city which, as a whole, is organised on attractive lines draws people and business enterprises to itself, has its fame carried far and wide by every chance visitor, and recoups itself directly and indirectly for the ontlay many times over. Beauty as an asset convertible into real estate values and tax returns is recognised by most foreign cities not yet sufficiently by ours. As soon as our people realise this they will, of course, hasten to invest in public art.

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### BRITISH ART AND WAR.

We endoise entirely some very wise cautionary remarks offered by the Connoiseur, in its last issue, which should be We endorse entirely taken to heart by those who may not have seriously considered the possibilities refers to, the occurrence of which would be

disastrons: "Taking one thing with another, the artistic position occupied by England at the beginning of the present war is avalogous to that held by her at the end of the eighteenth century. Her art commands profound respect abroad as well as at home, and in several departments of it--engraving, architecture, and the production of furniture and ceramic ware—she leads the world. This position has been built up during a hundred vents of comparative peace; for though war has occurred, no echoes of the actual fighting have penetrated across the sea to England. Now, as in the great French war, the struggle is raging at our gates; it is straining the resources of the country to the ntmost, and personal as well as national economy is urgently demanded. Unfortunately, one of economies which impose the least selfdenial on the majority is the cessation of the purchase of objects of art. But this, far from conserving the resources of the country. tends in the long run only to diminish them The creation and the conservation of the beautiful together form a vast industry or which both the present and the future commercial success of the nation largely binges. The artists who create art, and the dealers and collectors who accumulate the treasures of the past, originate the artistic taste which governs the design of textiles, pottery and porcelain, metal-work, and the thousand and one wares which are not merely mechanical productions. Weaken and vitiate this source, and the future of half the in-dustries in the country is jeopardised. Something like this actually occurred during the French war, and art to a great extent became commercialised; its destinies fell from the control of the people who practised and understood it, into the hands of people who were more interested in making it a pecuniary success. One can see exemplified in the transfer of publishing from the hands of engravers to indivi-duals who had no technical knowledge of the art. The brothers Boydell, the brothers Ward, Green, Smith, and many other of the leading eighteenth-century printsellers, were all practical engravers. The close of the war saw their businesses either extinct The result was a or belonging to laymen. general decline in the art of engraving. A similar decline may be traced in almost every other bunch tof art and artistic industry

The taste of the country, which reached its nadir in the mid Victorian epoch, has gradually been restored to its former level, with immense benefit to the trade of the country.

Now, unless we are careful, there is every danger of another decline in English taste The people who lerve devoted their lives to adequate support, or else, as in the case of their predecessors, their effects will be brought to a standstill, and, when the war is over, a new generation arise ignorant ground was friable.

of artistic tradition and deficient in artistic

In some respects the situation is far more perilous than before, because, though the country was exhausted in the Napoleonic struggle. it was less affected than any other of the great nations. At the present time the wealthiest country in the world is not taking part in the struggle at all, and unless the British public can give support to art dealers, it seems likely that a large portion of the treasures they have accumulated will transferred to the other side of the Atlantic.

It must be remembered that money spent in British art is not money lost to the country, but remains here to the benefit of the whole nation. Artists and art dealers have more than borne their share in the great struggle, and many have already given their lives for their country, and it is the country's duty and for the country's profit to help those who remain in the task of upholding the cause of English culture.

THE DRITISH FIRE PREVENTION COM-MITTEE.

The activities of the British Fire Prevention

Committee during the first week of the war have naturally been redoubled, and the have naturally been redoubled, and the ordinary public, which it is only fair to admit has been praiseworthily vigilant, and prompt to suppress outbreaks, is perhaps hardly fully aware of the debt it owes to this voluntary association of willing workers

Specially, amongst much else, the Committee has devoted itself to:-

1. Fire Survey Force,-At the outbreak of war the Committee formed a special fire survey force of 100 surveyors to undertake at short notice any fire surveys required by the Government in an honorary capacity. Over 900 establishments taken over for war emergenev gancy work all over the country were surveyed by this force with a total of over 40,000 beds. Latterly re-surveys are made in cases of special fire risk.

2. Fire Warnings.—The Committee's warning service embraced the preparation and free issue of a large number of public "fire warnings" in connection with the war emergency, disseminated by the Committee in the form of posters, circular letters, or as notices. The special classes of risk under review, for which special notices were issued, embraced hospitals, convalescent homes, refugee hostels, schools, billets, factories, and farms, for each of which a separate form of warning was prepared, whilst air craft hazards were dealt with on general lines. The total issue of posters. on general lines. The total issue of posters, etc., exceeds 200,000.

3. Fire Service Force.—The Committee's

special fire service force, organised by the Committee at the outbreak of the war, and comprising ex-fire brigade officers and firemen, was originally brought into such a form as to make 300 firemen readily available for mobilisation in sections within forty-eight hours.

The Arabian lamp designed by the German Emperor for the tomb of Saladin, in Damascus, has been handed over by the German Consul with full ceremony. The Kaiser promised the lamp when he visited Syria in 1893.

Two recent acquisitions by the Trustees of the National Gallery are now on exhibition at Trafalgar Square. They are: (1) Winter at Dordrecht, by Aelbert Cuyp: (2) The Mouth of a River," by Simon de Vlieger, Both were purchased out of the fund bequeathed by Mr. C. E. Mackerell from the Huntingfields Col-

At Ayr Sheriff Court last week William Galloway, architect. Craigie Cottage. Troon, admitted failing to obscure an indoor light in his dwelling. He was only in temporary residence at Troon, and he pleaded ignorance of the regulations, as he had only recently returned from Africa. A fine of £5 was imposed posed.

In a paper by Mr. Marcel Gillieaux on Linung shafts with concrete Z-blocks," read-last Saturday before the Mining Institute of Scotland, it was urged that in addition to being cheap, this method saved a temporary lining, and enabled the shaft fittings to be placed in their permanent position as the sinking pro-ceeded. From a technical standpoint, the method gave a perfectly homogeneous lining, and was really essential in all cases where the

### Our Illustrations.

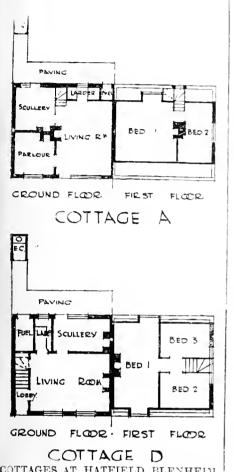
WORKMEN'S COTTAGES, BLENHEIM.
HATFIELD, AND CLANDON.
These cottages, of which we give plans and

views, were designed by Mr. Accord Mitchell, F.R.I.B.A. Those at Blenheim have been erected both in brick and tile and in stone

pair. In concrete, they have been put up at on all sides of the bath, . . at 6 it, wide a prime cost of £250.

CITY OF BIRMINGHAM BATHS FOR WOMEN, KENT STREET.

These buildings have been designed by Messrs, Cossins, Peacock, and Bewlay, architects, of Birmingham, with a view to harmonise as far as possible with the original



COTTAGES AT HATFIELD, BLENHEIM. AND CLANDON. Mr. ARNOLD MITCHELL, F.R.I.B.A.,

Architect.

and tile. In each case the cost was £220 per pair, the water supply, shared between eight cottages, costing about £40 additional. At Hatfield the pair of cottages were erected by a local builder at a total cost of £275, in brick and tile. The standard of accommodation exactly corresponds with that laid down brick and the. The standard of accommondation exactly corresponds with that laid down by the Departmental Committee. The brick and tile mansard-roof cottages in Surrey have similar accommodation, and cost £300 the

Separate de la Servicio del Servicio de la Servicio del Servicio de la Servicio del Servicio de la Servicio dela Servicio de la Servicio del Servicio de la Servicio de la Servicio del Servicio dela Servicio dela Servicio del Servicio dela Servicio SWIMMING BATH 75 PEET LONG BOFFET WIDE PLAN .

CITY OF BIRMINGHAM BATHS FOR WOMEN, KENT STREET Messrs, Cossins, Peacock, and Bewlay, Architects.

TLOOR

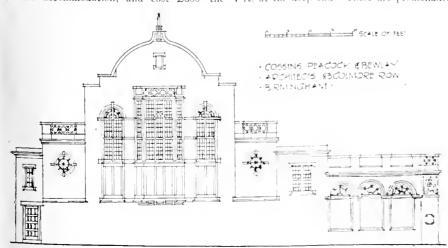
· GROUND

The external walls are faced with Black Country bricks set in white mortar, and the window dressings, cornices, and balustrades, etc., are carried out in Empire stone. The new buildings provide one large swimming bath, 75 ft. in length by 50 ft. in width, the floor of which is constructed with a gradient of 4 ft. 6 ins. at the shallow end and 7 ft. at the deep end. There are promenades

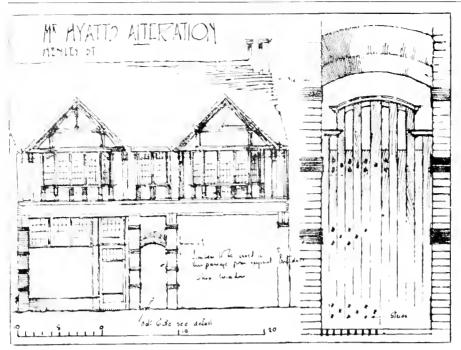
structure, of which they form an extension, and nine second-class private Laths are pro-The external walls are faced with Black vided on each side of the main entrance, with vided on each side of the main entrance, with ticket office and attendant's room between the two departments. The internal walls throughout are lined with glazed bricks, the scheme of colour being silver grey and white, with green Carrara for all moulded work, The floors of the slipper baths, passages, and the main entrance corridor are laid in terrazzo paving, and the floors of the dressing rooms, etc., of the swimming bath are treated in a similar manner. The walls and bottom of the swimming bath are constructed in con-erete, reinforced with steel bars and lined inside with white glazed bricks. The floor of the gallery is also constructed in reinfaced or the gamery is also constructed in reinfaced concrete and paved with terrazzo paving. We give a plan and elevation, as we<sup>55</sup> as a general photograph of the exterior of the buildings, and also an intercember the swimming bath.

#### RESTORATION OF PREMISES, WOOD STREET, STRATFORD ON AVON

This work has recently been executed for William Hyptt Are are many a photograph shows the front is topolograph shows the front is topolograph shows the front is topolograph screen of cement-rendered studding on the same plane as the projecting top story. Between this screen and the original tunber between this screen and the original Linber front (now exposed) was discovered another front of rough cost (probably dating back to beginning of the nineteenth century). Int following the gallery line of the original front. The new shop windows are arranged under positions of the original beams, which adds about 4 ft. 6 in.



· ELEVATION -0 KENT STREET CITY OF BIRMINGHAM BATHS FOR WOMEN.



known by the Museum authorities, who, therefore, can afford no account worth repeating here. Mr. Scott Lawson, who made this capital sheet of drawings reproduced today, also says he is unable to supply more information than that afforded by his measured details, which he has been good enough to place at our disposal for illustration in the BUILDING NEWS.

THE BUTCHERS' ROW.

"The Shambles" at York, also well known as "The Butchers' Row," forms one of the most antique and picturesque parts of of the most antique and picturesque parts of the city. Domesday records tell that the Earl of Morton had fourteen mansions (holdings) and two stalls in the Butchery and the Church of St Crux The latter stood at the south end of the Shambles, otherwise Butcher's Row. The fabric of this church was only removed for the widening of the Pavement some twenty years ago. Architecturally, however, the huilding was considered one of the facet churches in the city A small the finest churches in the city. A small mission-house has been built near the site of this ancient structure, and in this new building some few remains from St. Crux are preserved, including the tomb and helmet of the Duke of Northumberland, who was be-headed on the Pavement, August, 1572. Gordon Hemm.

to the width of the pavement. All the windows are new, but are placed as nearly as possible in the original window openings. The timbers, internally as well as externally, have been exposed, and present several fine ceilings, the timbers everywhere being found in an excellent state of preservation and of good scantlings. Very little timber was required for the restoration and replacements, and this, when needed, was provided from premises pulled down at the rear. The roof premises pulled down at the rear. The roof was stripped of modern tiles laid some years ago, and replaced by old tiles. Messis, John Harris and Sons, of Stratford-on-Avon, carried out the work, under the supervision of Mr. Francis W. B. Yorke, Licentiate R.I.B.A., 3. New Street, Birmingham, and Stratford-on-Avon. We give a plan and sketch sections, with elevation of the rear frontage in Henley Street, and detail of new timber gate. timber gate.

### WAREHOUSE AND WORKS FOR MESSRS. WEINBERG, CHEETHAM, MANCHESTER.

These works, which are for the manufacture of waterproof clothing, cover an area of about 6,000 sq. yards on the ground floor. The building has a basement under half this exbuilding has a basement under half this extent. The internor of the premises throughout is faced with glazed brick, the ceiling is covered with fibrous plaster slabs, and lighted with patent steel bar glazing. The construction of the roof is on the Warren girder principle and fireproof throughout. The external elevation will be faced with best red pressed brick and stone-faced Rnabou terra-cotta. The offices and showrooms on the ground and first flows in the control cont the ground and first floors in the central part the ground and first floors in the central part of the front of the building will be laborately treated in marble, wood-block floors, oak xoodwork, and patent cement panelling. The lighting is by electricity in every part, and the heating by low-pressure out water. The works will accommodate about 11.05 workpeople. Mr. Joseph Sunget, of St. Ann's Square, Manchester, is the architect

OLD FRENCH CABINET IN THE EDIN-BURGH ART MUSEUM.

The plaster replace of this fine 16th century French ask cabinet, shown in the architectural court of the Victoria and Albert Museum. South Kensington, gives but an indifferent idea of the heality of the original piece, which is to be seen at Edinburgh. This has been only is mishead or magnifications. Lor lon copy is misleading masmuch as it en-Let be copy is misleading instruct as it en-ticly fulls to do justice to the deleacy of the rife muship or to the texture of the calcut, ork, and the cast, of course, has non-fine charm pecular to the incised black to some attacka designs on the three cir-aryards on the upper part, consequently to effect is less. Fee part culars about the action of the calcut and refining is

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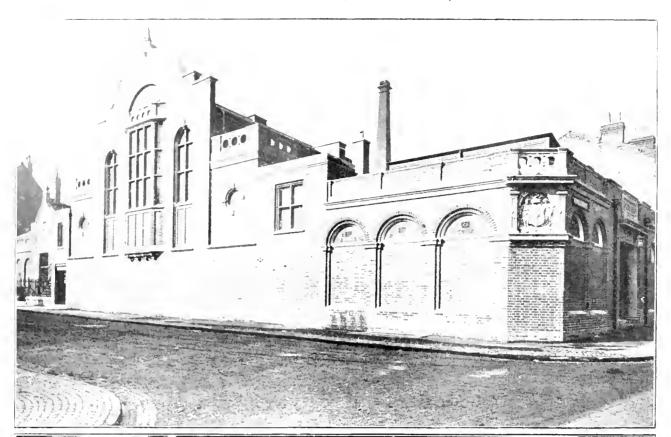
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THE BUILDING NEWS, AUGUST 11, 1915.

THE EDINBURGH ART MUSEUM.—Measured and Drawn by Mr. Scott Lawson. OLD FRENCH CABINET (16TH CENTURY), NOW IN

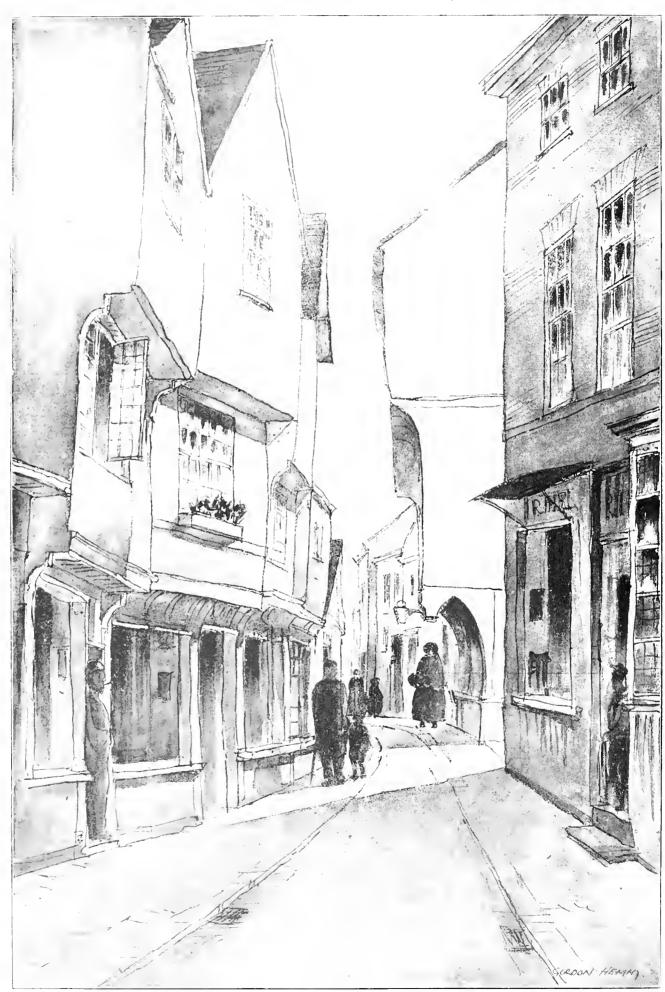
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11. OF BIRMINGHAM BATHS FOR WOMEN, KENT STREET, Messis, C. 1988, Process and Brwley, Architects.



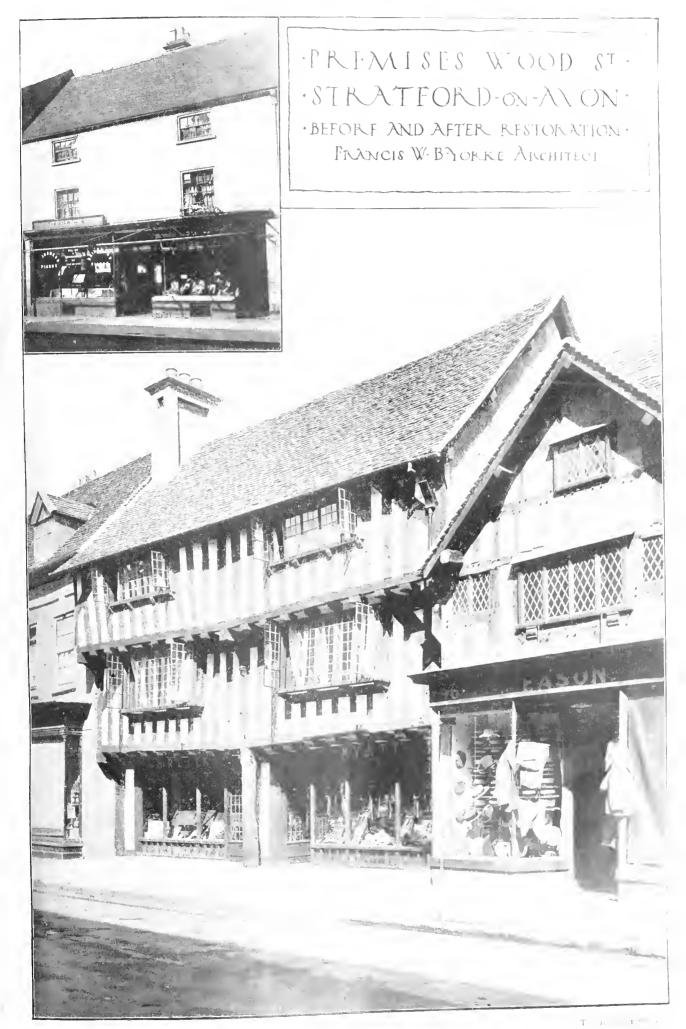


THE BUTCHERS ROW, YORK.-Sketched by Mr. Gordon Hemm.

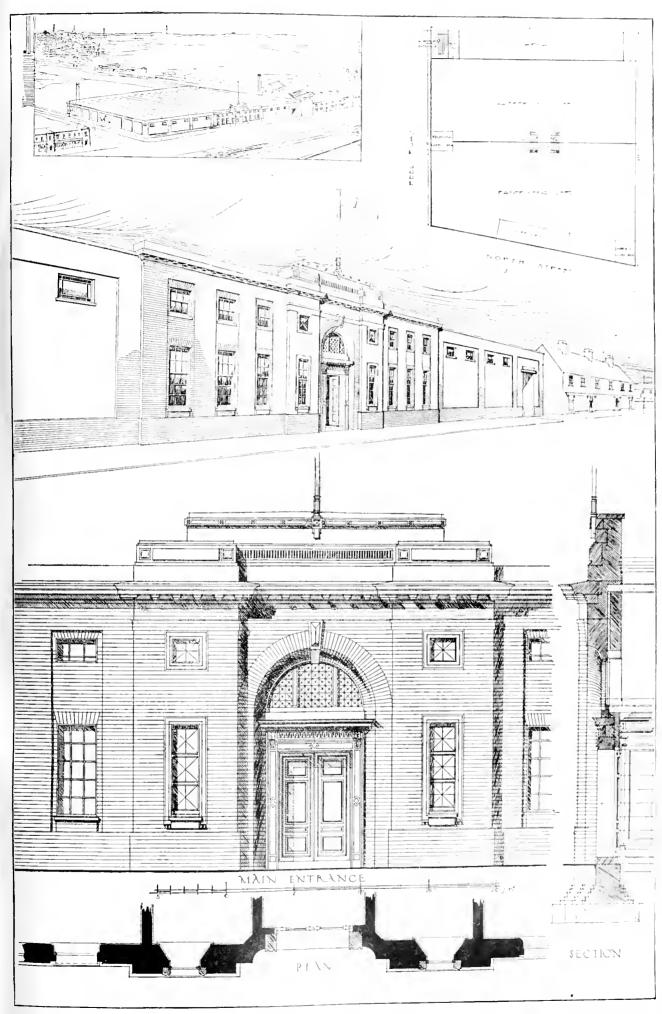


WORKMEN'S COTTAGES. THE HEIM, HATHHELD, AND CLANFON,  $Mr, (A, \gamma) = M + 1, (\gamma, \gamma) F.R.H.D.A., (A) Life to$ 





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WAREHOUSE AND WORKS, CHEETHAM. MANCHESTER, FOR MESSRS. WEINBERG. Mr. Joseph Sonlight, Architect.

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THE BUILDING NEWS, AUGUST 11, 1915.

THE RESERVED AND STREET HERMINISM TO THE STREET OF THE STREET

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#### Calamo. Currente

Sir Philip Burne-Jones calls attention- not. we think, without reason-to an incident which occurred last Sunday at Westminster Abhey. He says: "To-day is Sunday, and two American friends of mine, husband and wife, who are spending a very short time in England before going to the Continent, were anxious to see the Abbey and pass a few quiet moments of prayer beneath its roof They drove down to Westminster, arriving at the Abbey doors at 4.30. Here they were met by a crowd of people emerging from afternoon service, who were being literally driven forth by a verger, whose anxiety to clear the House of God of any possible human visitor or worshipper, unless they could make it convenient to arrive at some officially set hour, left a very painful impression upon my friends. They remarked, as they walked away from the closed gates, 'Well, this will not happen in France.' I am glad to think that it will not. There, as elsewhere throughout the whole world, the doors of the Sanctuary are open wide to ail men and at all hours for contemplation or silent prayer, but we in England forbid it. As an Englishman I felt bitterly ashamed that my guests, who had come 3,000 miles to worship quietly in our national church. should have been denied this privilege-the right of the humblest in any country but this -and my shame and indignation are my excuse for this letter."

Last Wednesday the Manchester City Council had yet another discussion on the question of the reinstatement of two of the three members of the City Surveyor's staff who were dismissed some time ago. At the previous meeting of the Council a report of the Town Hall Committee was referred back. Last Wednesday Mr. T Cook referred to a minute of the Town Hall Committee meeting of July 21, and asked for the full record of the proceedings to be read. This record included a letter from the City Surveyor, who stated that he had been considering how he could find employment for the two men. There was no work in his own department, but he proposed, with the sauction of the Rivers Committee, to employ them upon the completion of a survey of a culvert. This work would not last long, however, and at present he did not know what further work he could offer these two men. This was followed at the meeting of the committee by a resolution that the letter be entered on the minutes, and that the two men be retained in the service of the committee. Mr. Cook moved an amendment to the effect that notice should be given to the two men to terminate their service with the Corporation. He denied the truth of reports that the City Surveyor had engaged assistants for survey work since the beginming of the war, and said that if these men were reinstated the discipline of the department would be seriously affected. Alderman Wilson seconded the amendment, and Alderman Frowde said that the Rivers Commuttee did not desire the services of the men. After a speech from Mr. Ross Clyne in support of reinstatement, Mr. Cook's amendment was carried by a large majority.

The justices at Beaconsfield took a novel course in a private street, works case which came before them on Friday, July 30. By 1911 a building estate had been extensively developed in the district of the Beacons-

field Urban District Council, several of a roads needed making up, and a new servwas required for draining another part () the district. The compal laid a main sewer ! from 19 to 30 ft deep, along one of the roads through this estate, and subsequently verved notices on the Irontagers requiring them to make up and light and provide separate sur [40, 20] face water and soil sewers for the roals, in cluding the one with the deep level sewer under it. Certain frontagers served notices of objection under Section 7 of the Act of 1892 on the ground that the works proposed, which were estimated to cost 29s, per foot lineal, were unreasonable. The justices, after long deliberation in private, found that the scheme was unreasonably costly, and litimated that in their opinion the connect should exercise their power under Section 15. They adjourned the case sine die for the council to bring up an amended scheme, the cost of which to the frontagers was not to exceed 25s, per foot lineal.

The Westminster Guardians have set an excellent example to other local authorities. Recently they disposed of a workhouse, and they have decided to invest £15,000 of the amount obtained in the War Loan. In the metropolitan boroughs we know most about, the curious thing is that as pauperism decreases-as it has done all London over these three years past—the poor-rates go up and the salaries of the officials in the workhouses increase! At the moment able-bodied pauperism is next door to a criminal offence, and rigid and early inquiry into its prevalence is imperative.

It is understood, so says the Scotsman, that as a result of a meeting held on Tues day week of the Edinburgh Gladstone Memorial Committee (it now consists of the Lord Provost, Sir M. Mitchell Thomson, and Sir James Guthrie) a representation has been sent to the London Gladstone Committee, of which it is understood Lord Crewe is still chairman, recommending that the Scottish Gladstone Memorial should be placed in Saughton Park. So probably the statue will not go to Glasgow after all.

An examination of the stones set in the processional cross and the cross on the altar at St. Panl's Church, Worthing, according to the Daily Chronicle, has revealed them to be of German manufacture and imitation colouring. The fact that such stones at the present time should be allowed to remain in important ornaments of the church so storred the patriotic feelings of the worshippers, says the vicar, that he has obtained consent to replace the unitation stones with stones of British origin and natural colouring A good example, need for following which we for is not lacking elsewhere!

We have so often urged the newssay of the orientation of roads and buildings, if that primal necessity of health direct similarity is to be secured, that we have real with pleasure the paper by M. Rey in the last issue of the Lown Planning Review. which it is pointed out that the lat inde any given local ty same essent all factor of the problem, and on about which too iffle is known by many ord tests. M. Rey gives also have set a constraint. known by many collaters. M. Rey gives a soly, so the conservation of most useful table sheet githe duration of indicate the collater mosts.

| heights an embed to principal towns of The report for a December 1 of P. Europe at 1 A note. The basis of calculation is the right of the collater matter than A. Gar ext. Government prints, 4s a the location of the collater matter than A. Gar ext. Government prints, 4s a character part of the state for the

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Recognising that the discard are the macadam is passing away as at the lesser trafficked roads the lattice to be subject in degree to the destriction on the motor traffic, the Hornsey Bor uis erecting new works and mainteer at a cost of £5,800, a free loar of we be to be years is to be granted by the Road Board to utilise its refuse destructor clauker as a bitumastic road carpet, Mr. E. J. Lovezewe the borough engineer, having succeeded in producing a bitimastic road carpet from piepared refuse destructor clinker which has all the properties conducive to long life homogeneity, absence of brittleness, and resiliency. We are not sure, ourselves, that ordinary road clinker is an efficient subst; into for blast furnace slag, the merits of which, when properly prepared are undoubted; but the experience recorded in Mr Lovegrove's report to the Works and Estates Committee is encouraging, and his experience should justify the success of the experiment on which his conneil is embarki z

This week and next the usual except to of the Toynbee Art Club at the West approximation Art Galleties will be well wath a visit only to see the terror of only to see the beautiful picture of the Work only to see the headtrid puritie of Williams Asylvenice," lent by the prosession of the club, Mr. David Murray, R.A. Non 1992. the display is not as arge is 184 several of the most enthus astic members have poined the colours. There are, how per 175 pictures on the walks, the water colours for ing the strongest section, and all so notable architectural survivals. Mo. 1. But leigh Bruht, Mr. John H. Courte. Mr. S. H. Hancock, and Mr. Voert S. v. v. among the exhibiter who was

A pamphilet ssated by TeV. Lamite L emphasses "The C' is  $(-1)^{1/2}$ . Figure in the Reberta 2 of B  $(-1)^{1/2}$ . Firms in the Released 2 of have several times colored by that before the war Gotton minute trace in many trads of the place is a heatabet. By Bernell trace is a consequence of the place is a first of the place in the color of the place is a first of the place in the place is a first of the place in the

1514; a prompt saue partiz favor y with the time taken by similar to as The total expenditure was is partments in producing ±5.72, 54 % 71, railways and tramways abs rengal the over a million and chalf: er dags £497,484 9- 11d.; and the the spread over water supply and sender in a vertice that charges, had also and because dockyards etc. Among or ier or also oferred to in the Governor hate to report may be ment shed the sital, to be established at I consider of detached pay. Y = 1 and 2 have been to at Lattle Bay and wa it eas Th . a year to grouped in side of the linear two linears two linears two linears two linears linears. The linear linears is a glat in fer 3 54 th to 16 th to ermin a ward hit men, of affirm, and two ringle led to the sand off are two larges of 27 to be 15 ft high. of thenty leds of any each angle of the ends of the Photous sectory towers, containing bethroms, saik soms, and conveniences: extending ingreach side are verandalis 12 ft wile, with window and casements 12 if which with window and casements alternately between bels. The building will be instructed if his kwerk, with cavity walks, and the risks will be covered with slate. The leading has been designed by Mr. Gere M.R. et the Government architect. whise many of vites over a will held.

#### OBITEARY

The death is autounced of Mr. Gilbert A. Ramsay, supern terdent of the Glasgow Art Galleries and Museums, who was killed in action in the Dardanelles. Mr. Ramsay, who action in the Pardanelles. Mr. Ramsay, who was thirty-five years of age, was the youngest so not the late Mr. G. A. Ramsay, builder. Greeto & He studied architecture at the Glasgow S. h. d. d. Art, and was in 1907, appointed assisting to Mr. Charles Aitken, director of the Whitechapel Art Gallery. He director of the Whitechapel Art Gallery. He subsected Mr. Anken as director in 1911, and in May if last year he was appointed superintendent if the Glasgow Art Gallernes and Museums, and entered upon his daties on the first day of the war. Two multislates he entitled as a private in the feet Hudden Light Defautry, and at the 6th Highland Light D fantry, and at the time of his d at., had been promoted Lames

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### Onr Office Table.

A scheme or checking consumption among boot and shee workers is described in the first report of the Medical Research Committee, advance copies of which have been received at Northampton, which, with Leicester, had been made an area for special 1131111111 investigation. The committee suggest the provision of a new type of sanatorium, specially adapted to the needs of the operaspecially adapted to the needs of the opera-tives. The report discusses all the possible factors which may account for the high mor-tality at present existing in the trade, and core ades with a recommendation for a modified form of sanatorium treatment by where a contection with the ordinary form where it contraction with the ordinary form of treatment, work at trade union rate of wages may be provided for the consumptive mentative, both in the earliest stage of the disease and during the period of conversation. The report also deals with measures desirable in the interests of the factory, it is suggests the horough of Northampton as suitable for the interior of such a scheme.

The area of wood paying in the city of Pris the area of wood paying in the city of Eristed maintained by the Corporation, according to the Webrin Daily Pers, is 241,947 superficial yards, independent of the portion report idle by the Trainways Company. The length of wood paved carriage-way is 15, m les. During the summer season 1914 the water used for street watering was 51.255 bads or 24.554.900 gallons, as compared with 72.425 bads and 21.727.500 gallons distributed in 1915. The tatal length of macidam roads in 1915. The total length of microdan roads that do for the initiation of dust missince during the summer of 1914 was 1464 index. The same materials were employed as on former occasions, and the result, it is stated. ontinues to prove satisfactory. The total ength or streets planted with trees is 253 miles, and the total number of trees is 5.353. The amount of refuse destroyed at the two destructors was 55,508 tons, and the amount of cluker obtained was about 36 per cent., or a total of 19,330 tens. The quantity of material obtained from the Abbot's Leigh quarry during the twelve months was 32,376 tons, and the value of the material delivered at the waterside depots was £7,799. The number of cattle troughs in the city is twenty, and the consumption of water in the year amounted to 3.370,003 gallons.

Russia. according to the Paper-Maker. will be the world's timber-yard of the future. for no less than two-fifths of the empire is forest land. In European Russia the forests extend over an area of about 345,000,000 acres, of which 214,000,000 acres belong to the State. 58,000,000 acres to individuals, 26,000,000 ecres to peasants, and 11,000,000 acres to the Crown, leaving 6,000,000 acres under diverse ownerships. In Asiatic Russia most of the forest land belongs to the State. A conservative estimate puts it at 636,000,000 acres. a low figure when it is remembered that much of the land is as yet unexplored. Thus vast reaches of the timber belt in the Yakutsk Pro-Thus vast vince, bordering on the Arctic, which have never known the foot of civilised man, are roughly reckoned at 90,000,000 acres. The same is true of the vast forest areas in Eastern Siberia. It is safe to say that two-thirds of the timber land in the Russian Empire lies between the Urals and the Pacific. Of the total 636,000,000 acres owned by the State, 239,500,000 acres are being worked directly by the Government, with a yield of about 3 NOTICE cubic feet of timber, producing gress receipts of \$2,100,000.

To iscilitate the widening of Water Lane. the Old Mill House of the Society of Apothe-caries is about to be demolished. In anticipacaries is about to be demolished. In anticipa-tion of the change, the Society has already caused a building to be erected at the rear, and the contents of the doomed structure have been transferred. The Old Mill House is one been transferred. The Old Mill House is one of several buildings which, though belonging to the Society, and adjacent to the Holl, are not part of the Holl itself. Its removal, we are glad to learn from the City Press, will in no way inman the quaint beauty of Apothe caries' Holl. On the ground floor of the Old Mill House were to be seen until a few weeks ago three large mills for the grinding of behalf of the subscribers.

drugs, and they were worked by cogged wheels, such as were used before the era of steam power. Many of the windows contain the or ginal crown glass, with bull's eves; and the well from which the mill was supplied remains. The work of the Society in the preparation and manufacture of pure, reliable drugs will in no way be hindered by the de molition, for the transfer to the new factory is already complete, and it is really a case of pulling down a detelict building.

Wednesbury Town Council have been placed in an awkward predicament by the retusal of the Local Government Board to sanc tion a loan for the election of twenty-four workmen's dwellings, as proposed in a housthe election of twenty-four ing scheme adopted by the Corporation. Prior to the decision of the department having been received the work had been placed in hand. and an alternative application was accordingly made for the department to permit the Council to purchase eight houses which have been everted by the contractors. They have, however, now received a reply which is to the effect that the Board regret that, owing to the prevailing conditions, they are unable to sanc tion the application.

Many of our readers are beneficially familiar with the Handbook of Patent Law. by W. P. Thompson, F.C.S. M. F.M. E. (London: Stevens and Sons, Ltd., 113. Chancery Lane), of which a sixteenth edition is now issued. The author, who is the head of the well-known firm of patent agents of London, Liverpool, and Bradford. has had a wide and lengthy experience, and it is well utilised in this volume, which is it is well utilised in this volume, which is really a new book, and not a mere revision of former editions. It covers nearly 250 pages, and deads exhaustively with all a patentee should know, and the ignorance of which often sends him blindfold to the Patent Office, or leaves him in the hands of some of the inequalified and unchartered patent agents, and the result is an invalid or incomplete patent, or the missing of opportunities abroad which might have increased his returns a hundredfold. Many readers who are not inventors will do well to buy this book, especially manufacturers and others likely to have business dealings with inven-They not infrequently do as much as or more than the inventor to render the fruit of his brain and their help remunerative, and it is as much to their interest as his to know what a patent really is, and how its advantages may be best secured and

It has been decided to recruit a further 200 men for Imperial Service only in the 1st London (City of London) Sanitary Company. R.A.M.C., which belongs to the Territorial R.A.M.C. This company has recruited over 800 Force. men since the commencement of the war. Most of them are now on active service with the various Expeditionary Forces, and, according to Major Fremlin, have earned the approval of all who know their work. Applications for enlistment are invited from sanitary inspectors, surveyors, chemists, builders. carpenters, and plumbers, and others interested in sanitation, and should be made to the Commanding Officer, Room B 6, Duke of York's Headquarters, Chelsea, up to four o'clock in the afternoon, except on Saturdays, when the latest hour is one o'clock. Candidates should be between 19 and 38 years

The Trustees of the National Gailery have accepted for the nation the gift of M. Egide Rombany's great statue, the "Premier Rombaux's great statue, the "Premier Matin," offered by a body of subscribers This masterpiece, which is still on view at the Royal Academy, won general praise, and we expressed our hopes that it would remain in England. A committee was formed, with Sh W. Goscombe John, R.A., Mr. P. Y. Cameron, A.R.A., and Mr. H. Hughes-Stanton, A.R.A., as the executive, and an appeal was made to the public who speedily contributed the semigrodes of the semi-

In organising this year's Liverpool Angum, the same Exhibition of pictures, to be opened on October 9. Mr. Pibdin and his staff have had to make up six weeks' leaway consequent up on the delay arising through the Art Committee's original decision to abandon the exhibition, and the revival of the scheme under work is now well in hand. The response to invitations for important pictures has been good, and uninvited applications are as numerous as ever. A feature of special interest, in view of the war, will be the Belgian philanthropic auspices. section, representative of some of the best Flemish art of the nineteenth and twentieth centuries. The Art Union will again identify centuries. itself with the exhibition, and on this occasion the Board of Trade have agreed to the Umer giving 10 per cent. of the net proceeds to the Red Cross Fund, to which, in accordance with the offer made to the Corporation, the proceeds from admissions to the exhibition will also be devoted.

At the Newcastle Lit, and rum, and Monday night, Professor Louis W. Sambon, M.D., F.Z.S., of the London School of delivered a lecture out Tropical Medicine, delivered a lecture of "The part played by animals in the dissemination of epidemics." Professor Samhor semination of epidemics." Professor Sambon said if we compared the sanitary conditions of our time with those of the Mid-Be Age: we should find that the general death rate had declined considerably in many of our large towns, notwithstanding the great increas of the urban population. But this striking picture must not blind us to the fact that our sanitation is still very imperfect, and, as a rule, unpardonably neglected. Our sanitation was far behind that of the wonderful ancients. By references to classical authorities, the lecturer showed that most of the discoveries of modern times were anticipated by the ancients. The greatest anticipated by the ancients. The greatest advance ever achieved in medicine was the establishment of the parasitic theory of diseases. We know now that diseases are caused, either directly or indirectly, by living organisms that prey upon our tissues and disorganism them. That theory was surmised by the ancients. Professor Sumbon dwelt in detail on the terrible part the black rat plays in the dissemination of disease. He confessed that it was practically impossible to exterminate the rat, but he sug gested various measures by which the effect. of its mischievous activities might he avoided.

# PROFESSIONAL AND TRADE SOCIETIES.

BRITISH ARCH.EOLOGICAL ASSO. CIATHON.—After sixty years the British Archæologial Association will hold their annual congress in the Isle of Wight. It will extend over four days, from the 18th to the 21st inst., inclusive. On the Wednesday evening there will be a reception by the Mayor of Ryde, and the President. Mr. Charles E. Keyser, will deliver his presidential ARCH.EOLOGICAL Keyser, will deliver his presidential ress. On the following day the Associa-E. Keyser, will deriver his production will hold a joint meeting with the Hampshire Field Club and Archeological Society, and visit Carisbrooke Castle and Church, and at Newport the Grammar School and St. Thomas's Church, in the last of which Princes Fligalisth daughter of Charles I., is cess Elizabeth, daughter of Charles I., is buried. Friday will be spent first in visiting Brading Church and inspecting the Roman villa near by, and in motoring to different points of interest in the island; while on the last day the visits will include Quarr Abbey, Arreton Church, and Manor Heuse, and the church at Newchurch, portions of which date back to the twelith century.

KENT ARCHÆOLOGICAL SOCIETY.-There have been no excursions this year, but after the annual business meeting at Canterbury on July 29 the members, about fifty in number, adjourned to St. Angustine's College, where the Rev. R. U. Pouts explained the recent discoveries. They had found, he the recent discoveries. They had found, he made were removed to the recent discoveries. They had found, he said, the north aisle or portions of the original church which Ethelbert and St. Augustine built. This was the portions of St. Gregory, and presumably there was on the other side, beneath a building which served as the wash house of the Kent and Canterbury Hospital. Builders, of a mobil farm. The report was Corporation, whose service he paned in 1-95

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buried the first of wardhushops. Augustine to
Lawrence. Moll tus. Justus, Honor is, and to E.
Deusdedit. The original grave of St. Augustine was covered by the third pullar from the tool time was covered by the third pullar from the tool to be the first Norman of a color of the form of the central tower of the free Norman of a color of the town of the second of the central tower of the free Norman of the control to the second of the se that in 965 Danstan rededicated the chair it is to St. Peacr and St. Paul, and added the name of St. Augustine. There was no actual record of any rebuilding then, but Sir William Hope field that rededication always. meant extension, and therefore they thought meant extension, and there fore they thought that some work which they had discovered liter than the original, but earlier than Norman date, must be part of Dinistan's ex-tension. When the first six archbishops were buried in the portions of St. Gregory there (ments being executed) was no room left for the seventh. Theodore, Queen Spect 1 and the conclusion they had seen 1. and the conclusion they had arrived at was and the concurs on they had arrived at was that the portions was then enlarged by the addition of a sort of apse. In the reign of Canute the body of St. Mildred was trans-ated thither from Minster, in Thankt, but Cannote the body of St. vinery, and atted thither from Minster, in Themet, but the body, with those of other saints, was 55 ft., one of which a later removed from the original grave. In the time of Edward the Confessor, Abbot. Walfrie obtained the Pope's perimssion to carry out an enlargement of the Abbey church, his plan being to join this up with Eadbald's church of St. Mary, and so make one big church of St. Mary, and so make one big church of the two. Wulfrie's surccessor was Egilsine, who was a supporter of Harold, but immediately after the Conquest William the Computeror appointed Scotland as Abbot. Scotland considered that Wulfrie's 50 infants. If all goes well to the second the completed by May next. M. J. etc. 150 infants. If all goes well to the second the completed by May next. M. J. etc. 150 infants. If all goes well to the completed by May next. M. J. etc. 150 infants. If all goes well to the completed by May next. M. J. etc. 150 infants. If all goes well to the completed by May next. M. J. etc. 150 infants. If all goes well to the completed by May next. M. J. etc. 150 infants. down, also taking away the old chapel of the Blessed Virgin. In its place he began building the church of which the remains were now to be seen, his work consisting of a great crypt and over it an upper church with three arees. and ever it an upper church with three apsess. Having finished this, he built the transepts, and began the nave, but he died betwee coming actually to the most sacred place—the portions where St. Augustine and his successors had rested from the seventh century. The Abbot was buried in the middle of his own crypt, and his coffin was found there some twelve or fifteen years ago, the coffm plate being now in the College L brary, hearing his mane and the date of his death. Wido, who followed Scotland, went on with his work, removing the saints from their resting place in the portions to Scotland's new presbytery Gundulph, of Rochester, who was administering the see of Canterbury at the time, presided over the removal and Goscelin, the eleventh century chromeler, who was present at the ceremony, described to the bodies were disposed of with extraordinary detail, his record also enabling them to fix the exact whereabouts of St. Angustine's temb, as well as those of Law-rence, Adrian the Abbot, Mildred, Mellitus, Honorius, and Deusdedit. In conclusion, Mr. Potts mentioned that the Royal tombs at the time of the translation of the saints were removed to the chapel which was built at the end of the south aisle, and added that Wulfric's church was really very interesting because there was no other instance in England of a round church before the Crus ides.

NATIONAL FEDERATION OF BUILD NATIONAL FEDERATION OF BUILD NATIONAL FEDERATION OF BUILD IN THE BUILD horough, presiding. The sixty north ba't yearly report recorded a further decrease in membership, and deployed the continued bad membership, and deplored the continued bad state of trade and the poor prospect of betterment till the war was over. The communerities between the Federation and the RTBA and the Society of Architects with regard to the agreed form of sub-contract were referred to, the results of which have aneady been given by us, and also to the inquires made by the Northern Countes Federation in regard to forms of contract used to have antended protections and suggested prepara-

# Linilding Intelligence.

RAMSGAIL V 1.1) H Queen Street I date about egyty i The premises we consist 120 f. in a night, at 1 to 55 ft, one of which we con-

be completed by May next. M. A. Burton, of Norwich, is the accepted Messrs Joseph Springall and Sci. (1) ton

n, are the builders.
WELLINGBOROUGH T WELLINGBOROUGH I Peterborough, on Siturday in the channel, maye, and recombined the channel, maye the first church was consecrated in 12 thous now dedicated have for 1912, and consist of charge it with a western fower. The consecration of the con are under a continuous rarch, the division being not classical design, which it skeleton condition, and accust skeleten condition, and access or a richments in carving and or life incomment by a great rold with the right St. Many and St. Islandin, savvi is a figure of St. Many is need on it is tigure standing before two or its tront of Rheims Catledra. Mo. I. M. Ois the architect, and the receive Menson.

#### WATER SUPPLY AND SANITARY MATTERS.

WARWICK AND TISSEWARD POSAL. At the last most specific to the Council of War yells at a last specific way. communicative with the hard country was the first the result of the results of the res Th

#### COMPETITIONS.

LED ESTER - Mr. George H. Widdows, F.R.L.B.A. the assessor employed by the Education - ministee of the Leicester Corhas made his award as follows from porati i. yt ree sets of designs submitted cylitects for the Wyzgeston Boys in hawill be erected on land fronted the two y: h will be erected on land fronted ty Regert and Victoria Roads, Leicester: First pilze, Mr. Howard H. Thomson: se end pilze. Messrs, G. Lawton Brown and Percy C. Jeres: and third prize. Messrs, Stocklab Harrison and Sons. The Secondary Schools Subscommittee have recommended that Mr. Howard Thomson be instructed to proceed with the preparation f letailed plans and drawings with a view sarrying out his design with certain modiheath is suggested by the assessor.

MHLFORD, CONN -A recent competition solute at architect for the proposed Messes, Iray and Swartwort, 244, Fifth Avenue, New York City. The American A. A. A. Santa Swartwort, 244, Fifth Avenue, New York City. The American A. A. A. Santa Avenue. called typolotile Institution's rulings. The the Constraint Chapter of the Institute Six architects had been invited, all listing men. The first obstace to the competition was encuntered when it was discovered that the building committee had no power delegated to it by reason of which no power delegated to it by reason of which them inegally enter into a contract with the waiming an attention of the preparation of plans for, as a the supervision of the erection of the religious of the ballong. The Committee on Competitions of the Institute thereupon and made I that it would be obliged to within it is approved on the proposed competition. The call ommittee at this juncture given that stable in these calls in this juncture. field its and wal of the proposed competi-tion. The load committee at this juncture give unin stability indications of impatience at the leavy and all loope of conducting a proper competition seemed to be lost. Re-newed actuaty on the part of the Connecti-um to not to however, resulted in the delea necessary powers to the comm then before unfavourable action had been A second obstacle arose in the dis very that no actual appropriation had been total to supplet even a part of the proposal bullbur, and a hurried conference is build for and a hurried conference
left at which were present the chair
its Institute Committee, the chairits Local Committee, and the presiits Connecticut Chapter. Being
sured of the entire good faith of
committee and that the omission

PLYMOUTH. The date for sending in de-Signs for the toposed new premises for the Plane of Motoral Co-operative and Industrial Solition September 14, not December 14, as a recoil ed in our list of Competitions Open duling the rost three weeks by a clerical control latendary competitors who have applied for and to eved do it tiess noticed this. the Conditions have

amounted to merely an error of form, the Institute's assent was at length obtained, and the competition held with the result as an-

finally

PRIZE FOR A "HALL MARK At a convention held early in June the Canadian Manufacturers' DESIGN Torrat Association give much attention to the reade le Canada' mevement which received the learn's apar val of the convention, and it the hearth again val of the convention, and it is the set of the large anesgen embodying the three words are anomaly "copyrighted, with the rested in a committee of broad in the rested in the means of the Board should be marred against damage caused by aircraft was applying to the mean and anomaly as also was an amendment seeking to earth, at I a pure et out him red dellars has been fixed in the meaning of the Metropolitan Asyluma in the meaning of the Metropolitan Asyluman in the meaning of the Metropolitan in t

or V is a set wherever at V is a constant of the William of the Wilderight of the Constant of

### Intercommunication.

#### REPLIES.

REPLIES.

1.314. CONCRETE BRIDGE.—There is no single formula for calculating the strength of the grades shown in the sketch given on p. 2s to carry a scain roder. "Bombard" should employ an entirect for the job, as reinforced concrete works commercially to be very carefully calculated. For instance, the soads on each wheel and on the roller must be shown, also the tread of the wheels and he roller, the gauge of the wheels, and the whiel case, the soas of the beams must be assumed in deposition to the span to arrive at the weight of he leader. The bending movements and shearing stress for different positions of the steam roller will have to be found, allowances will have to be nade for shears on and defiction of the beams her moments of inertia must be calculated, and he stresses in compression and tension found. The matrix of the concrete will have to be considered, and considerable steal in a diagonal direction will be required in the beams to take the shear.

S. C. Bailey.

The question and others in need of similar in-

The queest and others in need of similar intermation may advantageously consult a very valuable series of "Notes and Pata," which was specially prepared for and given in "The Architects toorpendium and the Contractors' Compendium Publishing by the Compendium Publishing to the Architects toorpendium, 214-220, Bank Chambers, 329, High Hoborn, W.C., and from which the correspondent whose reply appeared on page \$1 of our issue of July 21 took his information without a word of July 21 took his information without a word of July 21 took his information without a word of sestic-widefinent. It is due to our-elves—but much more to the Compendium Publishing Company—to mention this, and to apologise for our own involution, we may add that of all the similar notion the subject we are familiar with this series is a many respects likely to be of the most service to be accepted to the P. N."]

#### ---TRADE NOTES.

The horough engineer of Plymouth has reported that on the flats over dressing-rooms at Plymouth Hoe swimming baths he adopted the powder Pudlo, and is very pleased with this results

Under the direction of Mr. F. W. Parser, architect. High West Street, Gateshead-on-Tyne, Boyle's latest patent "Air-Pump" ventilator has been applied to Gateshead secondary school.

The extensive cabinet-making works of Messis, Waring and Gillow at Liverpool were destroyed by hire early last Sunday morning.

Instead of renewing the wood paving in Holland Road, Kensington, on a new foundation an experimental weight distributing road crust to be land down.

Two stained-rlass windows are shortly to be placed in St. Nicholas's Church, Wallasey, in memory of the late Mr. Fred J. Harrison, the patron and benefactor of the church.

To perpende the memory of Colonel Sir William Carington, late Comptroller of the King's Household, faculties have been granted for the erection of memorials in the ancient Parish Church at Moulsoe, Buckinghamshire, the burial place of the family,

The Germans are creeting a monument in Gotha showing a Taube monoplane on a pedestal of red marble 6 ft, high. In front is seen a German siddler in fighting attitude, and the two sides of the pillar show Paris and Dover where Taubes have operated.

The New York Herald says that Mr. Rocke-feller has purchased for £18,750 the Linton Aphrodite. This statue, which is attributed to Praxiteles, was the subject of much controversy in 1390, when the Metropolitan Museum experts rejected it on the ground that it was not an antique work at all.

At the meeting of the Metropolitan Asylums Board last Siturday a recommendation to the effect that the offices of the Board should be insured against damage caused by aircraft was

Since the outbreak of the war the Star and Girter Hard, the famous hosteley on Richmond Hill, has been used as a barracks for the Army Service Corps. It is now about to be fitted up as a respital for disabled soldiers. The pile of buildings, which form a landmark for many males up the river, is being purchased, it is believed, by the auctioneers and house agents of this country with a view to handing them over to the Queen ready for the purpose indicated.

#### TO CORRESPONDENTS.

We do not hold ourselves responsible for the opinions of our correspondents. All communications should be drawn up as hriefly as possible, as there are many claimants upon the space allotted to correspondents.

It is particularly requested that all drawings and It is particularly requested that all drawings and all communications respecting illustrations or literary matter, books for review, etc., should be addressed to the Editor of the BUILDING NEWS, Effingham House, I, Arundel Street, Strand, W.C., and not to members of the staff by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributors' risks, and the Editor will not undertake to pay for, or be liable for unsought contributions. for, unsought contributions,

\*\*\*Drawings of selected competition designs, important public and private buildings, details of old and new work, and good sketches are always welcome, and for such no charge is made for insertion. Of more commorplace subjects, small churches, chapels, houses, etc.—we have usually far more sent than we can insert, but are glad to do so when space permits, on mutually advantageous terms, which may be ascertained on application.

When favouring us with drawings or photographs, architects are asked kindly to state how long the building has been erected. It does neither them nor us much good to illustrate buildings which have been some time executed, except under special circum-

Telephone: Gerrard 1291.

Telegrams: "Timeserver, Estrand, London."

#### NOTICE

NOTICE.

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T. R. J.-Thanks, phase send.

Effet.-We believe it still exists.

DISPLIE -The extra soems to us a reasonable one.

DIMPRIVATIONS—We incline to think the decision of the House of Lords on which we commented last week relieves you of any such obligation.

last week relieves you of any such obligation.

Post Ther to Yoth Door,—The interruption of regular and punctual transit and unavoidable shortage of lab air in the distributive facilities of the news trade is causing much disappointment to readers of our own and similar journals. Wherever this is so and difficulty is experienced in obtaining The Buthins News joincually on Wednesday morning, we will send a copy fost fift direct to any reader's address on receipt of 48, 4d., the amount of the quarterly subscription. Readers away in holiday, or in earny, can also have single copies sent them fost fifte to any address on receipt of four penny stamps.

Various Systems of Factory Building Hydrated Lime and Ordinary Lime Occidental Architecture in Japan ... Length of Portland Cement Kiln-The Longest Rack-Railroad in the World

Economy in Sanitation Deprecated Currente Calamo .....

Japanese Oak

Obituary

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

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## Strand, W.C.

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or works needs to give particular heed to instructions; for the whole building and occupants when complete constitute in truth a kind of machine, whereof the workers are the motile organs and the structure the framing wherein motion takes place. He should either very carefully study the particular methods of work or manufacture, or listen very attentively to the instructions of his clients. In work of this nature the planner is naturally very much under direct dictation by men having the special business "at their finger Rightly, workers are under careful protection of the State, and, consequently. special Acts greatly affect planning. The

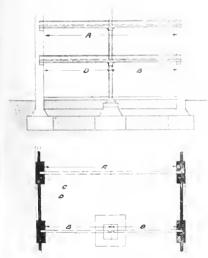


FIG. 1.

whole proposition in factory planning is commercial; generally the greatest floor area for the least money. It is not so much what will look well, architecturally, but what will work well, facilitating maximum will work well, facilitating maximum.

VARIOUS SYSTEMS OF FACTORY BUILDING.

The architect about to plan a factory or works needs to give narticular heed to plan a factory able difference in the cost of steelwork, in studied by building brick walls on the cost of steelwork, in studied by building brick walls on the cost of steelwork. the case of heavily loaded floors. As a viding steel roof trusses. The alcant rule, in factory planning, with multiple of reinforced concrete constructs it is an a floors to carry heavy loads, increase of total apparent in buildings of several states support area, within reason, reduces costs. since large spans involve great increase of method of factory structure is that weight of metal in girders. Moreover, we should, if engaged on work immediately to steel roofs and enclosure of sheet galvibe carried out, remember the trying times mised iron, such as has been often used in which we now live. The building trade for power houses and for miscellane is is depressed, business firms are, especially where engaged with constructional steelwork, operating under great difficulties, inpart owing to the enormous demand for steel for war purposes. Planily, we cannot bridge a great yord with any kind of chance girler, but we may, where spans are moderate, and well within the outside size of stock rolled joists, find it possible to get some quite suitable section other than that we might in preference select. Thus, by a judicious reduction of span, considerably a judicious reduction of span, considerably economising in first cost of the building, we not only save engineers' work at a time of extreme stress and pressure, but may get delivery of sections where others may be practically unobtainable. The designer of a building requiring mach steel must at the present time keep quite an open mind as to the sections he will use. Bearing, too, on this question, is the matter of type of support, for while cast columns need patterns, since we can seldem hope to find anything of this nature suitable in stock, stanchion construction permits of cutting from stock lengths; and here, again, we may, in what is practically a famine time for steelwork, find, if not exactly the sec tion preferred, something that will well answer the purpose. In architects' work at the present time the brightest field is perhaps factory and works construction and addition, so that it may be useful to point out how a little revision of details of proposed construction may facilitate progress

with the work.

The choice of general type of building

The cheapest and most quickly elected light steel sections for vertico posts. The industries, and this type is suitable where there is some argency but not great enough to demand temporary wood framing. Various inciproof substitutes have of late years been produced as sur-stitutes for galvanised iron which, under the best conditions, is very short ived. Steel joists for posts spaced in bir each

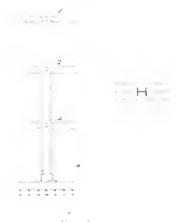


Fig. 2.

roof truss, with a fs f so farth lighted, and with suitable a f so the gard walling enel street ffer the cost and cheapest method where despated in a first cheapest method. tion is important.

Taking the relinary substitute is steen

but what will work well, facilitating maximum production at least cost, after duly satisfying all demands of central and local authorities and by-laws.

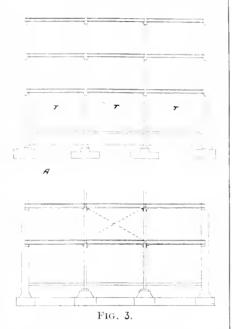
The factory planning which is demanded of the architect is a maximum of works accommodation for money outlaid; the greatest area for practical work with the least obstruction; but the cutting down of total area of supports is not always in harmony with economy in first cost. Large spans add to expense of construction. To economise we need moderate spans and more supports, so that although the general demand is for as much unobstructed floor space as possible, unless it is considered worth while to secure floor-area free from obstructing pillars, the centre supports must be provided in harmony with basic

tem of onlying that gives a "tree. T, not present in the case of mixed construction. An i it cannot be said that ferro-concrete is a suitable for very many storys, if there are many pasts, for the deduction from fl : dreas at the lower storys be-c nos a scrious matter. It is not yet shown that ferr concrete is a nostrum - a remove for all shortcomings in older leading construction methods. The truth seems to be that for ferre-concrete the work regumes to be suitable. For certain special constructions, as for certain in derate-steried factories, where no d ubt nothing is more satisfactory; and it seems certain that a plain shell of reinforced concrete may be put up in the neighbourhood of 4d, per cubic foot, even lower figures having been suggested. What the immediate future of in block ferro-concrete for works, factories, and wareh uses may be is not easy to forecast. all is self in that an innovation, apparently superseding all types, actually does so, but it takes its fitting place, competitive and older methods surviving. Neither the ancient bricks and-mortar method, nor the modern steel structure, has been yet swept away. Rushed-up jobs and factories are often required in a fever of haste, and for such ferro-concrete is not suitable, for its ultimate strength s a matter of time, whereas we may load up girlers and steel joists as soon as they are bolted in position and all ready below for taking up the load. There is always this obvious benefit in pure steel construction. Again, it should in fairness be noted that to compare the area required by a reinforced concrete pillar with a rolled steel stanchion of. say. If section, the area taken up by this latter is not the net metal or its cross section in square inches, but the rectangle cf its flange by web and flange depth. Viewing matters in this light, the solid steel column is the greatest saver of valuable floor area.

For the attachment of brackets carrying power shafting, undoubted advantages and great convenience attend genuine steel-frame building. Where the factory is heavily equipped with machines and new ones frequently added the girders and stanchious may be anywhere drilled for new brackets. In the immediate future there would appear opportunity for all varieties of factory construction. Although we may not adopt ferro-concrete en bloc. yet the roofs, bressnmmers, stairs, and landings are often most suitably made of concrete, reinforced, and the success of the system of reinforcing has stimulated ingenuity in detail, and a stratum of steel netting, or a few steel rods, is now good practice where not long since we should have put an array of relatively heavy steel joisting. For fire-resisting warehouse and factory construction, simple steel reinforced concrete is highly suitable.

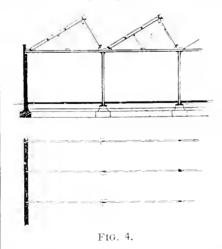
In London, the substantial building is an affair of brick-and-mortar exteriors and steel interiors, steel struc-ture preferably being used as isolated peints of support. In this class of work economy results from careful repetition, planning in equal bays, and equal spans, the work of construction required in the shops, and the work of the erection on the job being the roby considerably simplified; again, as tending to reduce the first cost of fatery building, by using as many equal-sizel equal-section, similarly connected structions and joists as possible thois securing expeditions machining and drilling one reterection. Further, in the matter of standhion design, the use of a single setting such as a 10 in, by 6 in, R > J = esistently from the upper floor downways with extra rivetel plates to

give increased power as the load increases in the lower floors, as in Fig. 2, simplifies lesign and tends to keep down costs. At the present time, it may be that this prac-tice, which has often been carried from basement through many stories, may not be so conveniently practical as some diversity in sizes and sections. We had best take what we can get. Timber is dear, and steel-construction is hindered by the war. Those having immediate concern with works and factory buildings might



do worse than first carefully ascertain how the war has affected steel constructional engineering, and find how, before designing and calculating, what are the most available sections.

The work of the designer of factory or warehouse for heavy loads, to be construct-1 with all regard to first cost, whether in concrete, steel, or of ordinary building construction, commences, or early nocessitates, calculations for stresses and loads. The simplest procedure is to start



from the roof and work downwards, bringing out the net weight of superimposed mass at the several points of support, as 1, 2, 3 m Fig. 2, at each floor level, finding the ultimate stress on the lowest stanchions (at 4), piers or columns, and so the pressure upon foundations at 5. In genuine steel framing tied throughout and having all independent of brick and stone walling, the total load is the sum of that upon each lowermost stanchion, and for calculations such construction is the simplest. The whole load is the construction itself plus the legally imposed, or the "superimposed" load—as so many cwt

per super. foot-all as detailed in the Building Acts, where is allotted a certain ratio of slenderness for steel stanchions. Economy is promoted by getting evenly-distribatel loads upon stanchions and pillars. Very manderably more metal is required in steel props, not having balanced loading, or, in other words, not having equal stresses all round the axis of the prop. Not many architects to able themselves with the details of steelwork in these days of close specialisation; but there accrues a certain advantage in making a careful estimate of loads and stresses whilst plans are in embryo; for, if such plans be made finished drawings, the sizes of girders, joists, and stanchions or pillars will be e creetly drawn from the first, and in the dispatch and urgency with which such buildings will be erected, the draughtscreetly drawn from the first, and in the man's work will be facilitated.

The weight calculations when brought to ground level give the load on brick piers or on stanchion base-plates (4, Fig. 2) and knowing, or assuming, the nature of the soil and its nower to sustain weight, the area of concrete or grillage foundations (as Fig. 2) can be determined. Unless, therefore, we start away and determine all stresses from the time when the plans are settled and right for completion, we cannot do more than hazard suitable foundation design. In genuine steel-framed buildings a special importance attaches to stanchion foundations. The whole stability of such structures is based on unyielding points of support. If any point sinks, a series of eccentric stressing occurs which may be disastrous. The whole theory of homogeneous steel building construction is based on efficient "tie." We, and our is based on efficient "tie." We, and our forefathers, have so long in ordinary building construction completely ignored this that we may be apt to miss its importance where a great array of joists and stanchions is concerned.

If we have drawn out a works plan with sections, showing all accessory features, and have decided the thickness of walls in error lance with by-laws, the work of making these calculations may be commenced. and this needs reference to the controlling building Acts. The correct time for mak these calculations is when the general plans are wholly approved by the client.

>000< HYDRATED LIME AND ORDINARY LIME.

By E. W. LAZELL, Ph.D.\*

Everyone is familiar with the fact that when quicklime is treated with water a violent action takes place, the lumps of lime break up, heat is generated, steam is given off, and after the action is completed a paste or putty remains—the ordinary lime putty used for mortar. The fact that quicklime has changed its form from dry lumps to a wet paste and that heat has been generated prove that a chemical reaction has taken place, or that quicklime has combined chemically with that quicklime has combined chemical, water. It is a scientific fact that when any chemical change or reaction occurs exact arounds of the material are involved. In the chemical change which takes place when lime is quenched with water definite amounts of lime and water are involved; in slaking lime an exact amount of lime unites with an exact quantity of water, forming an exact amount of hydrated lime, and it differs from the original quicklime, and if water is present to satisfy the calcium oxide (lime), then a dry powder will remain. This powder is hydrated lime, and it differs from the original quicklime and from pulverised lime in its behaviour towards water. When water is added to hydrated lime no heat is generated, nor does When water is added to the material slake, thus indicating that water has no further chemical action on the hydrate.

What is Hydrated Lime?-Hydrated lime of commerce is the dry powder resulting from \* Chemical Engineer, Portland, Ore. From Concrete-Cement Age.

and Water. - In the foregoing, emphasis has been laid upon the fact that precise amounts of lime and water react chemically. In other words, 1 lb. of lime requires a certain definite amount of water to form a perfect hydrate If too little water is used in quenching the lime in the process of manufacture, the lime will be burned in slaking, and free lime, or lime which is not combined with water, will the present in the hydrate, rendering the material unsound. Plaster made from such hydrated lime will later pop and pit, due to the gradual slaking of the free lime; the mortar made from such unsound hydrate generally works tough and non-plastic. The free, uncombined lime when present to any considerable extent will dry out the mortar, rapidly decreasing its strength and causing it to crumble. Free lime in hydrated lime is a dangerous ingredient, and one which will always give trouble.

If too much water is used in the preparation of hydrate the material will be damp and wet, rendering it difficult to handle.

Obsolete Methods of Manufacture.-In the past three methods were used to produce

hydrated lime :-

(1) Small pieces of lime were placed in a basket and immersed in water for a few minutes, until slaking began, when they were withdrawn and placed in a heap in order to conserve the heat and prevent the vapour; the material swelled, cracked, and became reduced to a dry powder.

(2) Lumps of lime were placed in a heap and wetted at intervals until the mass was equally moistened throughout. The slaking

proceeded as in the first instance.

(3) Small pieces of lime were exposed to the air for a number of months, and the lime absorbed both water and carbon dioxide from the atmosphere, falling to a dry powder. powder consisted of dry sub-carbonate of lime containing about 10 per cent, to 11 per cent of water.

These three methods of dry-slaking lime were crude, and unless the greatest care was exercised the resulting product contained particles of unslaked lime. The hydrate pro-duced by these methods was generally short and possessed poor sand-carrying capacity; in fact, hydrated lime made by any of the above methods was suitable for use in agriculture only, and such hydrate should not be confounded with hydrated lime manufactured by modern methods.

Modern Methods of Manufacture.-The modern method of manufacturing hydrate de pends upon the addition of a definite amount of water to a predetermined amount of lime By no other method is it possible to produce hydrate which will contain sufficient combined water to satisfy the demands of the calcium oxide (lime) present. It is of the utmost importance that all the calcium oxide be in combination with water, otherwise the hydrate will be unsound and unsuitable for building uses. That all the lime be satisfied with water will be insisted upon in any specification which may be drawn for hydrated line to be used in the building trade, and it vital for each manufacturer to recognise that the formation of hydrated lime involves a chemical change requiring the presence of exact amounts of lime and water. Since the process is chemical, it requires the same careful supervision as any other chemical process -such as the manufacture of Portland cement. The production and use of hydrated lime have been more retarded by the manufacture of only partly hydrated lime than from all other causes. Any method of manufacturing hydrated lime continually to produce a perfect product must be based upon weighing the lime used and measuring the

amount of water added.

Advantages of Hydrated Lime from the Standpoint of the Manufacturer. One of the great difficulties in connection with the manufacture of lime is the perishable quality of the Lump lime cannot be stored for any length of time without deteriorations, thus making the operation of the plant dependent upon the season and the whims of direct their energies of g this line.

the treatment of lime with sufficient water to satisfy the chemical requirements of all the calcium oxide.

Necessity for Exact Proportions of Lame

The uneventues of operation results in a high unit cost. Since hydrated line can be stored in bins in a mainer similar to cement, it is possible to anke the operation of the plant more nearly continuous, thereby introducing economies in the manufacture and reducing the cost. The manufacture of hydrate also means a more extended market, as hydrated lime can be used for a number of purposes for which quicklime is not suitable.

Advantages to the Dealer. Three principal advantages to the dealer are the case handling, less deterioration of the product and the freedom from hire risk. These three facts alone should convince the dealer that it is more economical to handle hydrated lime.

Use of Hydrated Lime In general it may be stated that hydrated lime is suitable for any use in the building trade to which lump lime can be put, and it would appear that as soon as the material comes into general use, its advantages will be found to far out weigh any disadvantages. The use of hydrated lime does away with the necessity of slaking lime to a paste, thus saying the space required for the slaking bed as well as the labour of slakmg. By the use of hydrate it is possible to proportion the mortar so as to have exact quantities present, since this form of lime comes into the market in convenient packages of known weight. This point is always appreciated by the architect and engineer, as is a well-known fact when lump lime is used as much sand as possible is added, with the result that the mortar is lean and possesses little strength.

Mortar Made from Hydrate Stronger than that Made from Slaked Lime.-In June, 1910 the writer presented the results obtained from an extended series of tests on mortars made from both hydrated lime and lump lime to the American Society for Testing Materials. One of the most important conclusions drawn from these investigations was that the mortar produced from hydrated lime was stronger than that produced from the corresponding lump lime slaked to a paste. This conclusion was to be expected, since it is possible to manufacture hydrated lime by mechanical means under good chemical control which is more thoroughly slaked than it is possible to slake lump lime on the job.

Practically all those who have investigated the strength of lime mortars have recom-mended the use of hydrated lime in place of hmp line In Bulletin No. 50 of the U.S. Bureau of Standards the following statement "The proportion of impurities in s made: hydrated lime is generally less than in the lime from which it is made. In building operations hydrated lime may be used for any purpose in place of lump lime, with precisely purpose in place of rump time, with precisely similar results. The consumer must pay the freight on a large amount of water, but the time and labour required for the slaking are eliminated, and there is no danger of spoiling it with the labour requirement of spoiling it either by burning or incomplete slaking For all building purposes hydrated lime is to be preferred to lump lime. By its use the time and labour involved in slaking may be saved, and the experience of the labourer is eliminated as a factor in the problem.

If the use of hydrated lime in the building trade is to be increased, this can be broug'st about only by the manufacturers of hydrate preparing and marketing only such material a is sound and contains no free lime. an increasing demand for hydrate for use v concrete to render the material more plastic and dense. Hydrated lime can be advantage only used in all cement plaster and stuce to make them work smoothly and give a mericle plaster and stuces. pleasing colour. In all these uses the sound pleasing corour. In an these uses the sound-ness of the hydrate is the paramount require-ment. No one would think of using unsound-cement—why, then, should they expect to use unseuml hydrate?

The market for hydrated lime is present, and a concerted action in the part of the lime manufacturers to exercise the care necessary manufacturers to exercise the care necessary to make a flor newly hydrated lime will re-sult in a more extended use of the material lit is to be laped that the manufacturers will

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If the following x = x = x period  $(x_0, x_1, \dots, x_n)$  of which  $x_1, x_2, \dots, x_n = x$ adoption of Wester Specific adoption of We fell type of the major, for type of the stree best produced as the fell and the stree the cap tangle of the destroyer in this respect of the destroyer are to see the foreign beginners at 8 % and as they were forist specially to the foreign beginners and the latest content of the foreign the capital special produced and the factories. foreigners they cannot be taken important sense as represent. This is further emphalised by the Japanese never latter jets?

The construction of hinld, as style did not commen e until di toration. One of the first of some two was the First Bank, which has costed 1872; and this was blowed by the cost of the new House of Assembly 1875, since burnt down; and Affairs Department bunding was in 1875. These were built of architects and for the Japanese. therefore, he taken as typical of the firsperiod of Western architecture. Japan covering the first lifteen years. The Menj period.

Other hindings were erected at about the same time under the direction of foreign experts, one of which was Shimbosh, station, completed in 1871; while other is 16th 2s in toreign style arose along the Guiza, which is the main thoroughfare of Ton. These were after plans by an architect hand Wordsworth, who also constructed the British Embassy, erected in 1875. The Russian Embassy, planned by a Mr. Modov, was built in 1874, and the German Embassy in 1877 and the Naval Academy in 164. The hunding for the Tokyo Foreign Office was erected in 1879 and the Peers Change Lie Conder. Most of the foreign in hite as employed in constructing fore great and again Tokyo were not ready architects, being for the most part engineering experts who turned Other haddings were erected at also it the the most part engineering experts who turned the most part engineering experts who turned their hand to the planning of buildings, with the exception of Dr. Conder at it a Freich architect named Boinville. Dr. Conder amount to Japan in 1875 as a teacher in the Imperial University, which possition he led until 1895. The Imperial Miscam at the Navy Departmental building are the will, of his brain. He has educated many Japane e ar hitects, and is still a treffess remeitus of the Imperial University

During this first period of Western are During thes first period of the tecture in Japan there were very to the tecture in Japan there were very to the strike tecture in Japan there were very to if a native experts in the art of scribble foreign buildings. But during the second period, which lasted from about 1, 2 to 100, the pupils of Dr. Conder legal to making and had a decided frest of the six last of The styles meet pupil or with their monochart Gothic and the Records property. The styles mest peper or with too to the tender and the Renaissance, these types they had studied at so was no attempt at organishing to samply following the designs through those to draw. Many farchitects, it vever, devices a architects. I vever develoantheatres and experts architecture Some fitter.

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The materials used varied a good deal. For mst once, the Innerval II tells of wood plastered on the outside, with some portions of brick, the ar latesture being in Renais-

sai e style. The Department of Agriculture and Commerce is the same style and finish, in three steries, but is of brick covered with plaster. The Tokyo Prefectural Building is of brick faced with stone. The Bank of Japan, one of the finest buildings in Tokyo, is all of granite, the style being Italian Renaissance. The Tokyo Engineering Codege is in Gothic style and constructed of brick with grey stone facings. These two buildings are regarded as masterpieces of Japanese architecture during the Meiji cra.

The third period of foreign architecture in Japan may be said to extend from the year 1895 to the year 1905. During this period there was a marked development of skill among native architects, with a tendency to independence and originality.  $-\Theta_{\Pi\Theta}$  et most typical buildings of this time is the Mitsui Bank, which was planned by Dr. Yokokawa in 1902, and the Imperial Crown Prince's Palace at Akasaka by Dr. Katayama The Mitsui Bank building is of in 1807. The Mitsui Bank building is of yellow brick on a steel frame, the first steel frame in Japan, Dr. Yokokawa being one of the first Japanese architects to go and make a study of steel in architecture.
It is in Renaissance style. The Akasaka
Palace is in the style of Lonis XIV., with steel frame, filled with brick, and stone outside. The design was t famous palace at Versailles. taken from the

From the year 1905 onwards a new period be said to have begun in Japanese use Western architecture. From this time our native architects began to display some degree of self-consciousness. They had by this time taken in and dirested the achievements of the great architects of the world, and telt a freedom that enabled them to go on without restraint to produce something of their own. They were no longer beholden The development of resources to models. for building materials also had something to do with the improvement in architectura designs, especially the employment of reinforced concrete in wall construction. Most of the new buildings of this period are frames filled with reinforced concrete. There seems to be no special thought given to new styles or designs, the weight of consideration being confined to new materials of construc-Styles of architecture in this period are marked by Austrian and German influence, mixed with Japanese ideas. The new gate in front of the Imperial University, which was completed in 1912, marks this period of conflicting ideals. It is a mixture of iron, stone and brick; foreign materials worked up into Japanese style, the design being by a Japanese architect named Yama guchi, the suggestion coming from Baron guchi, the suggestion contained the institution. It will long stand as a monument to those who made desperate efforts to depart from established models. The Metropolitan Police Burean, built after plans drawn by Drs. Tatsuna and Fuknoka in 1911, as well as the Red Cross Society building by Dr. Tsumaki in 1912, not to mention the beautiful Mitsun building by Dr. Yokogawa in 1911, are all representative of the fourth period of Western architecture in Japan.

The Metropolitan Police Bureau is a modified Renaissance style, revealing many native ideas. It is 270 it, by 258 ft., with a central dome and tower rising 100 ft. The Red Cross Society's building near Shiba Park is in German Renaissance style, of brown brick faced with stone, the frame being steel. The new Mitsni building is also in Renaissance style with steel frame, but the design shows American influence. It is a six-storied office building, the first one after the American manner.

It will be inferred from what has been said that the Meiji era was one of initation and study of Western architecture; while the Ta sho era promises to be a period of originality and remarkable development, combining the best in various western comprises with designs of purely Japanese evolution. Every year sees large new buildings being erected in Tokyo for business purposes, their forests of steel, with men like mites of above over them, reminding one of what is distantly seen in any progressive Western cuty. Jopan Magazine

## LENGTH OF PORTLAND CEMENT KHINS

Edison Paient 802.631 Held Void.

A report of an appeal to the U.S. Carcuit Court of Appeals from the District Court of the United States for the Southern District of New York is reported in the Optical carcitic of the United States Patent Office of August 5. It is of some interest this side, as dealing with what is or what is not novel in the construction of Portland cement kilns. The action was brought by Edison et al. against the American Portland Cement Works. The following is the text of the pudgment delivered by Judge Coxe, the Circuit Judge:

At the time application was filed, December 5, 1902, Portland cement was produced by burning a mixture of cement, rock, and linestone in long rotary kilns lined with firebrick and maintained at a slight angle, the heat being produced by the combustion of pulverised coal. A stack was connected at the upper end of the kiln to permit the escape of smoke. These kilns for some years prior to 1902 had been of the standard length of about sixty feet with an internal diameter of about five feet. The patentee admits that longer kilns had been suggested for the dry process, but he asserts:—

"I am not aware that such kilns have been practically utilised or any advantages discovered therewith over the standard sixtyfoot kilns"

The specification contains seven pages of description, but it is thought that the only important improvement suggested or claimed is the lengthening of the kiln without proportionately increasing its diameter. This is the idea which is constantly asserting itself in the specification and the claims.

Claim 2 will sufficiently describe the allege I

nvention. It is as follows :-

"A cement burning apparatus for dry material, comprising a tubular kiln, upward of one hundred feet in length and more than twelve times the internal diameter thereof, means for rotating the same, means for creating a combustion zone within the kiln near its lower end, and means for introducing cement material into the kiln at its upper and substantially as set footh."

end, substantially as set forth."

The kiln must be upwards of one hundred feet in length, and, as Judge Holt points out, a kiln half an inch more than one hundred feet would infringe and a kiln half an inch less than one hundred feet would not infringe. The record shows kilns in the prior art over one hundred feet in length, and, as before stated, the patentee admits that kilns over sixty feet have been suggested, though he is "not aware that such kilns have been practically utilised."

There is a dispute on the facts regarding these prior kilns, and therefore we find it immecessary to discuss them, for, in the view we take of the situation, it may be conceded that Edison was the first to make a kiln over one hundred feet in length. The question s. Did it require an exercise of the inventive faculties to do this? Was it not rather an n provement due to the natural evolution of the art? It was not an improvement which a poor man could attempt. The experiments and the structures necessary to make the experiments successfully would involve a considerable outlay of money which would make t impossible for him to test his theories, no matter how implicitly he might believe in them. The skilled mechanic, with years of experience and unlimited resources at his command, could make the experiments and ularge the kiln to meet the increasing de nand for Portland cement.

The great demand for this product in recent years, which has steadily increased, rented the necessity for larger kilns. As this demand grew, the kilns were increased in length from fifteen feet by progressive additions until at the date of the patent here were many kilns sixty feet in length No one pretended that it required invention to do this. It was a mere matter of construction. In the same way the stone-crushers were made larger as the demand for good roads became insistent, the oil-tanks increased in size with the increase of petroleum,

and elevator-bins bins grew larger with the increased traffic in corn and wheat. We are not at all convinced that any better or different result is reached by the long kiln than by the short kiln. They both produce equally good cement, and the only real difference is the one whileh occurs as a matter of courseviz., that a large machine will produce more product than a small one. But it did not require invention to make the machine longer or larger so long as the only result is to produce a larger output. As pointed ont by the trial judge, if mere elongation be patentable. then each builder as he added an additional foot to the original fifteen-foot machine would have been entitled to a patent. But it is argued that a better result is obtained by the patented kiln because the increased from the upper end of the kiln down to the point of the combustion enabled the mixture in the calcining zone to be subjected to a longer application of heat, thus driving out the carbon dioxid before the combustion zone is reached. We agree with Judge Holt in thinking that the relative operation of these zones depends largely upon the method adopted by the operator. Judge Holt says :-

"The evidence satisfies me that in kilns of all sizes whether the action in the calcining zone overlaps the action in the combustion zone depends very largely upon the operation of the kiln. The operator can introduce at will a longer or shorter blast; he can revolve the kiln more slowly or more rapidly; he can feed into the kiln a larger or smaller amount of cement material; and it depends largely upon the manner in which the kiln is operated whether the calcining process is substantially completed before the material is subjected to the heat in the combustion zone, and the best results obtained

nerally."

It is true that Edison made a longer step than any one person before him, but others were bound to reach the advanced position, although more time might have elapsed before

that consummation was reached.

In short, we are convinced that the enlargement of the kiln was sure to come sooner or later, as the growth of the business demanded. With the increase in length would come the proper increase in diameter and the other necessary changes which any skilled mechanic would know how to make. We find it unnecessary to add further to the opinion of the district judge.

The decree is affirmed with costs.

# THE LONGEST RACK-RAILROAD IN THE WORLD.

A prime favourite among American tourists this year is the ascent of Pike's Peak, in Colorado. One train leaves the lower terminus late in the afternoon and reaches the summit in time to witness the gorgeous spectacle of the setting sun, and, spending the night at the Summit Hotel, one is able to view the equally enthralling dawn of another day. One of the most popular trips is the Sunrise Excursion, which, leaving the lower terminus at midnight, lands the travellers at the crest in time to see the sun creep over the eastern horizon. This special service has developed to such a degree that the entire equipment of the railway has to be impressed to cope with the crowds.

The road is only opened early in June, and its continuous depends on the severe snows which set in early in the fall. On the upper five miles there is frequently snow falling in July, and the road is occasionally blocked, as the snow packs very hard in the upper exposed regions. Clearing out the snow is a difficult operation, as there is no mechanical uppliance which can cope with the frozen layers of snow and ice. Trenches are cut in the solid mass and blocks about nine feet square are transferred to a flat car. The train with a load of blocks runs back along the line until a ravine is reached. The blocks are then slid off the car and sent tumbling down the mountain side.

The rack-rail system in use comprises a rack made of Bessemer steel, with the teeth cut from the solid mass of metal. It is built up in lengths of 80 inches. The rack-track comprises two of these rails laid side by side

centrally between the outer metals, and set about 12 inches apart. The rack-rails are so laid that the joints of each length do not come in line, while the teeth of one is brought opposite the space between two teeth of the other. This secures an even bearing at all times, and is conducive to smooth travelling.

The railway measures a little over 30 miles in length, and the gradient is 844.8 feet per mile, the highest grade being 25 in 100. The sharpest curves are 16 degrees, that is, of a radius of 358 feet. A large portion of the rails and rack are anchored to the solid rock; 146 of these anchors are used throughout its entire length. The highest point on the mountain is 14,147 feet above sea level. The railroad is the longest rack-railroad in the -

### JAPANESE OAK.

Considerable projudice seems to exist in some quarters against Japanese oak on the alleged ground that it shrinks and swells when exposed to rain and sun. The matter has occupied considerable space recently in the Timber Trades Journal. One writer in the last issue says the prejudice is produced not by consumers but by timber mer chants who do not hold stocks of the wood However that may be, we do not know, but the opinion expressed in the columns of our contemporary by Professor Percy Groom. M.A., D.Sc., B.Sc., F.L.S., of the Imperial College of Science and Technology, is probably that which will carry most weight, and we therefore reproduce it. Prof. Groom says :- "Being engaged on an investigation concerning the structure and swelling or shrinkage of timbers, I was interested in the allegation, quoted by your correspondent 'Quercus,' in reference to Japanese oak, that, 'owing to its porous character, it is very liable to swell and shrink when exposed to rain and sun.' On the Continent the view largely prevails that increased porosity decreases swelling and shrinkage. This view is not justified when applied to utterly different kinds of woods, but is generally, if not always, correct when applied to different samples of the same kind. It would, therefore, be of interest to know of any case what soever in opposition to this last statement. It is to be presumed that the idea promulgated in the letter of 'Quercus' is that the numerous pores allow the easy entrance and exit of water, and thus readily lead to considerable changes of volume. Such an assumption would be entirely premature, as the 'nores' (vessels) of the only heart would (vessels) of the oak heart wood pores are plugged with obstructive bodies, which oppose powerful resistance to the pa-sage of water through the wood. Quite another matter is the tacit assumption that Japanese oak has greater porosity than other commer-cial oaks. This character is gauged by the dry weight of the wood, and in the absence of numerous weighings I can only express a doubt as to whether the average porosity of Japanese exceeds that of other commercial

The last "News Sheet" of the Bribery and The last "News Sheet" of the Bribery and Secret Commissions Prevention Lengue, Incorporated, obtainable at 9, Queen Street Place, E.C., contains, among other interesting matter, a report of the recent Military Court of Inquiry into the conduct of the British Empire Committee and its relations with Mr. Devereux and his Hutting Contract.

Devereux and his Hutting Contract.

The Public Health Committee reported to the last meeting of the Aberdeen Town Council that they had before them a letter from the Local Government Board in regard to the erection of a tuberculosis sanatorium, stating that if the local authority had not already acquired a site, they should postpone proceedings for that purpose. If the local authority had acquired a site, but had not accepted any contract for the erection of the buildings on the site, they should not enter into any undertaking that would commit them to further capital expenditure, and should postpone building operations. Where, however, contracts had been entered into for the whole or part of the work, the above restrictions would not apply. work, the above restrictions would not apply. It was stated that the council had not made any arrangements for acquiring a site or erecting a sanatorium.

### ZOITAHZAES DEPRECALED,

Discretion at the annual general meet of the North Eastern Centre of the Sandar. Inspectors Association, in Leeds last Saturday, revealed a wide divergence of opinion day, revealed a wide divergence of opinion day to the atomic of the Local Government Floard, which emphisised the necessity for account.

economy.

Mr. Anderson, Muldleshrough expressed the open on that in the immediate raturathere would not be much progress in the stamping out of tracerculosis. For one thing, he said, the flower of our manhood was away at the front, whist another disadvantage was that the Government had talen all the sanatoria they could by their hands upon for the use of wounded soldiers, and those who required treatment in such institutions were Laving to go back to the dark hovels and in

santary areas.

Then, too, there was a wave of economy with country, "We are told, passing over the country, "We are told, said the speaker, "to do nothing but what is absolutely necessary; not to repair dilapi as absorately necessary; but to repair duaph dated property, nor to put the owners to this and that expense. The Local Government Board tell you that perhaps not in so many words, but local committées de not neglect

to impress that upon you.

Mr. Cass, of Hull, deprecated the Local Government Board supporting that idea. "I dread to think." he said, "what the result will be when our men, strained in nerve and muscle, come back from the front to insani tary homes.

Some of the speakers expressed surprise Some of the speakers expressed so page that the Local Government Board circular should have been interpreted in this way. Mr. Hailstones, of Birstall, declared that the Board stated distinctly that in the matter

of musances and for purposes of health ex-

penditure should go on.

Mr. J. C. Dawes (chief sanitary inspector at Keighley), who read a paper on the inflat ence of applied sanitary science on the incredence of tuberculosis, remarked that what ever else might be said about the Germans they knew how to treat the class of people who were balatually dirty and a danger to the community. These people were sen-tenced to do servenging work for a short period, and the scavenging badge was the hadge of disgrace. As it was a German method, there might be some difficulty in obtaining its establishment in this country. but he thought it might be adopted, perhaps some modified form, with advantage. Mr. T. Pridgin Teale, of Leeds, who pre-

solid over the meeting, was re-elected presi-dent of the Centre --

The Vienna Town Council has decided to

The Vienna Town Council has decided to employ women as city scavengers. About three fourths of the men employed on this work have been drafted into the ranks, and a further depletion of their ranks is impending. The foundation work has been started for the new theatre which the St. Denis Theatre Co., Limited, are going to erect on St. Denis Street, Montreal, at a cost of 300,000 dols. The archivests at Mesrs, Barett, Blackader, red Wichster, of Montreal, and the contractors Mesrs. Necross Bros. Co., Limited, Montreal. The building is to be 205 ft, by 110 ft. in dimensions, of brick and steel construction. At the last meeting of the Uppingham

In dimensions, of brick and steel construction.

At the last meeting of the Uppingham Rural District Council it was reported that notices served from 1912 to the end of 1914 in respect to improvements being made to some sixty properties under the Housing Act had not been complied with. Several of the houses were alsolutely past repair, and there were in signs whatever that the owners would, whether in a position to do so or not, carry out the extensive alterations or reconstruction of these cost uses.

The Damharton Building Society intend to

## Correspondence,

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In Yorkshire we have generation before the hypercongeneration before the hysician present ephemera is an in the economise and save our noticy for it in the house we live in. The is that more people in feeds in Borral covin their own houses—the test in hetter critizens than no any the test the size in the Empire. Our built. the size in the Empire. Our built, will lend money at 4 per cert, at 1 and will build now to let at less that 5 reads to a building society for your own because to a week in any other way. It works revolution that has occurred a burst or remained and have taught as the result of remained and have taught as the result of remained and have taught as the result of the Bolgian refugees teach us to make their which building trade which will depute the visit of from present prices. Many refugees with remain in this country, and will require loss of accommodation. accommodation.

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On the other articles in the cold trace I am not so competent to precious one accepts to But it is difficult to ascertain what accepts gardeness by eating your dinner a traceds a stood of in a dinner packet; and I districtly show to the proposal to contentie a washing a doubt some saving would be effected by a doubt some saving would be effected by a secure that is by passing some Day' it is ing Bill.

What is required for the practice of traceopomy, is some temporary relaxation of

What is required for the practice of tracecomony is some temporary relaxation of legislative laws and trade union by a sawhich press so one only on our televial labour, especially on the employment of only or female refugees, who should be unless the earn their own living in the rock to earn advantage of the rock to the rock to arms, but it is not be add the rock living to arms, but it is not be add the rock living to arms, but it is not be add the rock living lam, etc.

W. H. Weens, Queen Schare, H. isc., be 4s. Versit [1]

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At the Red Crass Art Fyllonia by M. T. C. Gorde, R. L. K. K. Gallery, and the control of the Con

out the extensive alterations or reconstruction of these collages.

The Damharton Building Society intend to go on with a building scheme which will inclined eighteen terrace cottages similar to those already erected at Silvertown, and four blocks of tenoments similar to Beechwood Terrace of tenoments similar to Beechwood Terrace of the area to be erected on the Overroun estate between Silvertown and Dumbatton East Station. There is a big demand at present to the state of these types, and many local working nation accounting their subscriptions to the Building Securey, as they will everywhere, we have a recognising that a man's own house is a bottom resistant than most.

\*\*Example of the control of the

### PROFESSIONAL AND TRADE SOCIETIES.

EAST RIDING ANTIQUARIAN SOCIETY The second excursion of the sammer session of the East Riding Antiquation Society was held on Tuesday week. Landesborough Londesborough was first visited. The Rev Arthur A R Gill, addressing the members, said he did not intend to enter into the opestion whether Londesborough was the ancient Delgovitia, but certainly a portion of a Roman road was visible at the bottom of the lake in Londesborough Park when the cater was drained off some twenty years ago. This was probably part of the road from Malton to the Humber. Londesborough may also have been the site of the summer palace of the Kings of Northumbria and the scene the preaching of St. Paulinus to King win in the beginning of the 7th century. Lendesborough came into the possess on of the Clifford family by the marriage of Margaret Bromflete, the daughter and hencess of Lord Vesey, to Lord Clifford, generally known as "Butcher Clifford." to have slain the Duke of Rutland after the battle of Wakefield in 1460. The interesting brass to this Lady Margaret Clifford, who after the death of her first hushand married Sir Lancelot Threlkeld, and was buried in Londesborough Church, shown. She was the mother of the Shepherd Earl, though it is not known where he is buried, but his wanderings had given us per-haps the finest lyric that Wordsworth ever Londesborough remained in the Clifford family till the failure of the male line by the death of Henry, fifth Earl of Cumberland, in 1645, when it passed to the second Earl of Cork and first of Burlington by the marriage of a daughter. From the Boyles it passed by the marriage of a daughter in 1748 to the Cavendishes, till it was sold by the sixth Duke of Devonshire to George Hudson, the railway king, and was finally purchased by Lord Londesborough. The park was laid out by Richard Boyle, the third Earl of Burlington, the patron and friend of Pope. The old Hall was pulled down in 1819, and only some vaults remain. The two lower stages of the western tower of the church are Early English. On the whole the church may be said to be Early English with later additions and alterations The chancel, the burial-place of the Burlingtons, was visited. There are hung four funeral banners of the Burlingtons and two funeral helmets. The very fine Norman south nave door, with its sundial and Saxon cross, was admired. Tea was kindly provided by the rector, the Rev. A. G. and Mrs. Bazshaw, and afterwards Burnby was visited, where Mr. Gill spoke on the history of the par sh and church, in which he said he had in belief that Burnby was the site of the great battle of Brunaburgh. The west door of the church is Norman, and the little bell turnet has apparently some genuine old Norman work recast in modern form. There are three very large and fine sedilia, which are said to have come from the neighbouring Augustinian Priory of Warter. The plain circular Norman font, with its later inscription, was admired. On the floor of the sanctuary is a stone dated 1676, to the memory oi Major Ralph Waterhouse: non potuit mors peremit " Death with his dart took him away

Whom sword nor cannon could once slay. Would any know the reason why? Both one and other all must die."

by a window on the north side of the chancel is a bit of old glass, evidently a crest,

NATIONAL FEDERATION OF BUILD ING TRADE EMPLOYERS -In our report last week, on page 167, it was stupidly stated that the 69th half-yearly report recorded a further decrease in membership. It is some consolation for having to correct this error

to interest them when they made an excur-August 11. Mr. Harry Gill said that the earliest written reference to the church was in the Taxation Roll of Pope Nicholas IV., but there was unmistakable architectural evidence that part of the present work was executed at least 100 years earlier. This evidence was to be found in the lower part of the rubble walling, which was of skerry or water-stone, obtained most probably from the Mapperley hills. Windows indicated 13th Century work or as early even as the reigns of Richard I. or John. During the reign of Edward III. (1327-1377), village churches throughout the land were enlarged or rebuilt to meet the needs of the more elaborate ritual then in vogue. Bridgford Church was not pulled down, but was transformed by the addition of larger windows and the introduction of a rood screen and loft and other internal stone altar, built into the The adornments. eastern wall and destroyed at the Reforma tion, was replaced in Elizabeth's reign by an oak Communion table. This was still in use in the side chapel, and the church also possessed a paten bearing the hall mark of 1564 5. The crudeness of the figures on the screen set up about 1380 suggested that the work was that of the village carpenter or This was what made the church mason. particularly interesting-that it was not built under monastic influence or by a trained band of itinerant craftsmen, but by village workmen under the direction of the squire. Speaking of the effigy known as the "stone man," which has now found a resting-place in the new morning chapel, Mr. Gill said that beyond the fact that at the close of the 18th century the figure was set upright to mark the boundary of the manor, near the junction of Melton Road and Loughborough Road, its history was unknown. There was strong presumptive evidence that it was intended to represent Sir Robert Luterell. lord of the manor early in the 14th century whose widow was known to have presented an acolyte to the rectory in 1315. Exter-nally, the charm of the old church was now somewhat overshadowed, but interest might still be aroused by the tracery of the eastern windows, the grotesque gargoyles, the carved ctone in the south face of the tower, and a collection of 18th-century headstones in the graveyard, obtained from the Swithland slate quarries in Leicestershire. After tea the company proceeded to St. Peter's Church, where Mr. Robert Evans, F.R.I.B.A., said it was disappointing to find no mention of the building in Domesday Book, foundation deed of Lenton Priory was the first record we had, in 1100. The south arcade was the oldest portion, and was a fine example of the Early English period, probably about 1100. bably about 1180. There were no signs Norman work, and in the various phases of restoration no Norman remains had been The original stone staircase to the found. old rood loft was one of the most interest-ing features. The north arcade was a much mutilated example of Early English work— probably about the end of the 14th century. The chief damage was caused to it by the erection of galleries, which were removed in 1887. Touching upon the work of restoration, for the completion of which funds are much needed, Mr. Evans remarked that five cenexposure to rain and sun had left its mark upon the tower and spire, but fortunately the men who selected the stone of which it was built did so wisely, and if succeeding generations were alive to their trust we might expect it to remain a landmark for many years to come. Originally the spire was crocketed, but ninety years ago the crockets were sawn off by a mason named Philip Wooten. The apex of the last week, on page 167, it was stupidly stated that the 69th half-yearly report recorded a further decrease in membership. It is some consolation for having to correct this error that in spite of our had times the membership of the Federation is still increasing, as well as the beneficial scope of its activities. NOTTINGHAM AND DERBY ARCHITECTURAL SOCIETY.—The Thorotom is silly at the top of his ladders, including heating a drum and drinking a bottle of alc in the sight of thousands of people on an I Derby Architectural Society, found much in the elder part of the parish church.

In 1825 the cock fell on to the nave roof, K.C., M.A.

the stonework having perished. The presentworks of repair and renewal were long over-due. There was no mortar in the joints of the spire masonry within two inches of the face, and a great many of the joints without any mortar, the rain driving through, with the result that the joints had become very wide through the perishing of the stone. The stonework at the apex, which was cracked and badly weathered, had now been entirely removed and rebuilt in Derbyshire stone of a colour and com-position more closely resembling the original The walls of the tower were about stone. 35 ft. thick at the ringing chamber level, and stones as large as 3 ft. 8 ins. long were used in their construction. The four pinnacles crowning the four angles of the tower evibecame badly decayed a long time ago and were restored, but these in turn became daugerous, and the remains were taken down and placed in the churchyard. The pinnacles that had now been placed in position followed the lines of the and were  $7\frac{1}{2}$  ft. in height. In the tower there was a well-constructed groined ceiling, In the tower and in the centre was a covering on which were depicted the emblems of St. Peter.

ROYAL PHOTOGRAPHIC SOCIETY.-The sixtieth annual exhibition of this society will be held at the Gallery of the Royal Society of British Artists, Suffolk Street, Haymarket, from Monday next, the 23rd inst., till October 2. The exhibition, which is international in character, will be open duly from II a.m. till 6 p.m., and on Tuesdays, Thursdays, and Saturdays till 10 p.m. As in former years, an attractive programme of lantern lectures is arranged to be given Tuesdays, Thursdays, and Saturdays, at 8.30 p.m., as follows:-

Tuesday, August 24.—"Romanesque and othic Doorways," by C. H. Dedman. Chair-

Gothic Doorways," by C. H. Dedman. Chairman—A. Herbett Lisett.
Thursday, August 26.—"A Ramble Round Hampstead, with Historical Notes on the Old Town," illustrated by Paget colour slides, by H. Hardwick. Chairman—F. Martin-Duncan, EDMS

F.R.M.S.
Saturday, August 28.—"A Northern Cathedral." by E. W. Harvey Piper, Hon.M.S.A. Chairman—G. Lamley, F.R.G.S.
Tuesday, August 31.—"How Animals Express Their Feelings," by F. B. Kirkman, Chairman—F. F. Renwick, A.C.G.I., F.C.S.
Thur-day, September 2.—"The Attractions of the London Suburbs," by A. H. Blake, M.A. (All the slides for this lecture will be supplied by the School of London Photography.) Chairman—F. F. Renwick, A.C.G.I., F.C.S.
Saturday, September 4.—"The Romance of

man—F. F. Renwick, A.C.G.I., F.C.S.
Saturday, September 4.—"The Romance of High-speed Photography," by Lieutenant Adolphe Abrahums, R.A.M.C. (Fellowl, B.A., M.D., B.C., M.R.C.S., M.R.C.P. Chairman—W. L. F. Wastell.
Tuesday, September 7.—"Some Ground-nesting Birds." by E. J. Bedford. Chairman—Chas. H. Oakden, F.R.S.A.I.
Thursday, September 9.—"Canterbury Cathedral," by R. P. Howgrave Graham. Chairman—Alvin Langdon Coburn.
Saturday, September 11.—"Huns of the Insect World." by F. Martin-Duncan, F.R.M.S. Chairman—A. Herbert Lisett.

F.R.M.S. Ca.

Insect World." by F. Martin-Duncan, F.R.M.S. Chairman—A. Herbert Lisett. Tuesday, September 14.—"Through the Dolemites to Venice." by Chas. H. E. West. F.S. I. Chairman—Ernest Marriage.
Thursday. September 16.—"Bird-watching with Field Glass and Camera," by Oliver G. Pike, F.Z.S. Chairman—W. L. F. Wastell. Saturday September 18.—"A Loon in London." by W. L. F. Wastell. Chairman—F. T.

by W. L. F. Wastell, Chairman-F. Hollver.

Tuesday, September 21.—"An Hour with the Microscope," by Dr. Geo. H. Rodman, Chair-

man—Alvin Langdon Coburn.

Thursday, Sentember 23.—"Notes from my Indian Diary," by Miss H. R. Levy. Chairman

—D. Cumeron Swan, F.S.A. Scot.
—Saturday, September 25.—"Some Village
Homes and Cots" illustrated with Colour Slides,
by Arthur E. Moyten, Chairman—H. Essenlish Coole, F.B.B.S.

### Calamo. Unrrente

A somewhat curious situation, remailed Irish Builder, has arisen in connection wat the advertisement of the Kingstown Urb Council to architects inviting them to submit their names for appointment in connection with a scheme of working-class dwellings. The temuneration offered was 21 per cent, upon the outlay, no payment whatever to be made in the event of the work being abandoned. The Royal Institute of Architects asked the Council to receive a deputation, who laid their views before the Housing Committee. The Urban Council subsequently revised their terms, offering 5 per cent, upon the first house of a scheme and only 2 per cent, upon the remainder, and promising very vaguely to consider a claim for money expended by the architect, should the scheme be abandoned. The Institute thereupon asked its members not to apply for the position, or if application had already been made to withdraw it. Nevertheless, at the last meeting of the Council it was announced that eleven Irish and eight English applications had been received. At the meeting it was argued that there had been a technical error in connection with the matter by reason of the terms having been decided by the committee and not by the Council. It was therefore decided to adjourn the appointment. It is extremely regrettable that the Council of Kingstown should go out of then way to cut down architects' modest remuneration to such an extent as to debar qualified members of the Institute from submitting their names. It can hardly be supposed that this is likely ultimately to be to the advantage of the ratepayers.

We are now able to confirm the statement we published last week with regard to the acquisition of the Star and Garter Hotel as a permanent home for disabled soldiers and sailors. The Queen has accepted the offer of the Auctioneers' and Estate Agents' Institute, and proposes to hand the gift over to the Red Cross Society if the committee of that society will equip and maintain the building. The property, which cost over £80,000, is being purchased for £21,500. The hotel at present contains about 100 bedrooms and magnificent reception rooms. A feature of the estate is its beautiful terraces, gardens and grounds, facing south-west, and the building is eminently suitable for a permanent home for paralysed and totally disabled soldiers and sailors. The moneys collected will be devoted to the purchase of the property. The necessary alterations, equipment and maintenance, on the handing over of the building by the Queen, will be under taken by the British Red Cross Society, and any sum received in excess of the purchasemoney required will be given to the British Red Cross Society for the above purposes. The annexe will be opened in about three months, but extensive alterations are neces sary to the main building.

The ground floor will accommodate about 135 beds, and it is proposed that these beds (and these beds alone) should be occupied by the absolutely helpless. The reasons for this arrangement are obvious. By means of a series of special exits all the beds can be moved rapidly into the open in the event of fire. Each bed will be provided with large wheels on ball-bearing joints so that a nurse. single-handed, can with ease draw a bed out of the building. By a like arrangement the beds can be taken into the garden over the Thames so that on every suitable occasion the patient can spend some hours in the open The first floor will be given up to dis-

the copy of proceedings of the conflict of the object of the type of orner from a distance their visits will of ne essity be short, unless they seek lodgings in the town. It is proposed that each mai shad have the privilege of neviting a relative r trief. I to stay with him for a week end or | c | | Refer | | C | a | 11 for two or three days. The garden, as s well known, is superbly placed on the steep crest of Petersham Common. It is proposed to make here a Garden City for paralysed so diers. There will be a little street with cottages and bungalows, each with one good room capable of accommodating some four heds. The houses will be warmed and will be occupied by patients the whole year through. The Soldiers' Garden City will accommodate some fifty patients, so that the total number of helpless men who can find a home, either in their hotel or in their village will be about 155. Gifts in money or kind are solicited. The latter, for sale within the London area, may be forwarded direct to Knightsbridge Hall, No. 217, Knightsbridge, which Mr. J. Charlton Humphreys has lent to the Institute for the purpose of warehousing and selling such. Notice of despatch should also be sent to the secretary of the Institute at 34. Russell Square, W.C.

The announcement of the removal of Toynbee Hall from Whitechapel to Poplar is followed by the news that the Passmore Ed ords Settlement in Northern Bloomsbury has become a women's institution. Mrs. Humphrey Ward, the hon, secretary, who an nounces the change, explains that it is due to the urgent demand for the whole-time help if educated women in many social fields. The settlement was a product of the social for es of the early 'nineties, and in the purpose of its founders stood as a concrete symbol of enthusiasm for humanity independent of the support and sanction of orthodoxy. The building was given by our Chair man, the late Mr. J. Passmore Edwards, and was opened in 1897. It stands in Tavistock Place, and the playground covers part of the garden of Tavistock House, the last London residence of Charles Dickens. It was illustrated by us in our issues of August 9, 1895, July 3, 1896, and October 19, 1900, and the architects were Messrs. A. Dunbar Smith and Cecil Brewer, whose designs were selected by Mr. R. Norman Shaw. There Mrs. Ward started her vacation schools for the children of the neighbourhood, which, with the classes for defective children and the play evenings, may be regarded as one of the distinctive contributions made by this the benefit of the artism class settlement to the common stock of the common stock of the artism class service.

The contributions made by this the benefit of the artism class settlement to the common stock of the common of the artism class service.

alleged to be that of the south drowny at would got far that carage builders to set up Ticklad Charles Yorks, which has been en houses suitable for artisans.

are some some of the first state of the following the following the first state of the following the f get the trade unions and the process societies of the town to ons air the quest. of the formation of a "Palo Ut ty Society" for Rochdie, to build assists the workers, using their surplus for is for the purpose and claiming from the Govern ment, as they may do, an alvan e of the thirds of the capital required : r av al proved scheme. The further large i oft in the supply of new Lorses in Ro-olale during the last tweeve mout is emplayers the need of a move in this direction, and we ongratulate Rochdale on the activities of the association. The formation of similar vigilance councils in many other towns is greatly to be desired.

In his annual report on the hearth of the burgh of Greenock for 1914, Dr. Will im S. Cook, the medical officer of lealth, states, with regard to the death of houses in the burgh suitable for the left ming and art son classes, and the consequent correwed to and the difficulty and delay in effecting the proper remedies under the Housing Acts, that there has been attle appreciable suprovenent during the year. Dr. Cook mether ren area that it is a great misferture of it the pro-posed scheme for building two apartment houses and a small proport; a of one quertment houses on a central site was de cont during the spring and similar owing to the Local Government Board P 46 by till the sect of the European War, as the Lis left to a serious delay and Landmap , the s of the most urgent part of the bousing problem in Greenack namely, the provision of shelter for families at present occupying houses scheduled under the Housing Acts These houses are atterly unfit to live it and the occupants are placed in condities such as to be dangerous to themselves and the community. The corporate somition if proper houses for the pooter (1888) if the same time do everyth (g. 1884) (18 The Guardian complains that a conspicue only bad example of absolutely unnecessary interference with old work has recently taken place at Charlton Kings. Glonester shire, where the old similar termination of the Churchyard Cress has been removed and placed on a new base further away, while the old shart has been surmounted by a new property of the constraint and placed on a new base further away, while the old shart has been surmounted by a new property of the property of the constraint of the imitation Gother annal. Another case is prescribing for more economical development

## Gur Illustrations.

CHURCH OF ST BARNABAS, NORTH FINCHLEY.

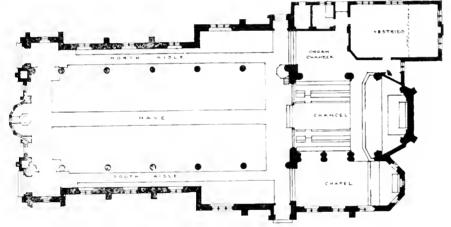
This new church consists of a nave, 94 ft ng and 57 ft, wide; aisles, partly 12 ft are the same corrects of a nave, 94 ft. ag and 37 ft. wide; aisles, partly 12 ft. ale and foartly be ft wide, and of same length of the tive, chancel, of apsulal form at east ad, 43 ft. long and 26 ft. wide; morning hap, 1 40 ft. long and 16 ft. wide; organ see, as a clergy and choir vestries, with adding setest between, so that the two can be made into one large room, for parish meetings, etc. The nave and chancel are of lotty proportions, with tracened elerestory win dow's and open timbered and panelled roofs of archol term, and there are handsome areades with stone preis and richly moulded arches dividing the nave and chancel from the is es and morning chapel. A projecting bartistery and angle turrets, with lorty tracerred windows between, and gabled porches, form the principal features at the west end of church, facing Holden Road. The aisles are more than usually lofty, the wide portions being covered with leaded roots, carried by arched timber principals. The general style of the church follows that known as the "Decorated" period of Mediaval work. The windows and other dressings externally are of Welsian stone, and the walls generally. These dwellings have been erected on are faced with red brick, relieved by stone an island site in Rodney Road, Walbands and gable copangs, and the roofs, where worth, S.E., for persons of the working

Son, contractors, of Dulwich, from the designs of Mr. W. H. Wood, F.R.I.B.A., successor to the late Mr. C. Hodgson Fowler, SA, of Durham and Newcastle-on-Tyne. The plan shows the general lay-out of the building.

### "SEFTON," WEYBRIDGE.

The perspective by Mr. B. A. Poulter shows this house which has recently been erected for W. Shakspeare at Weybridge. building is finished with rough-cast, and the roofs are of dark tiles made by Mr. Warner, of Twyford The external woodwork is of oak. On the west front there is a large balcony and verandah with a fine view over the flat country near Chobham. The windows have iron casements and are filled with leaded lights. Internally the work is very simply treated, the best rooms having stone fireplaces and beamed ceilings. A little decorated plaster work has been introduced. which was executed by Mr. G. P. Bankart. The house is heated throughout by radiators, in addition to fires. The work, including the gardens, has been carried out by Mr. W. G. Tarrant, of Byfleet. Messrs, Tubbs, Messer, and Poulter, of Charing Cross House, Craig Court, Whitehall, S.W., are the architects.

## PEABODY BUILDINGS, RODNEY ROAD, WALWORTH.



CHURCH OF ST. BARNABAS NORTH FINCHLEY. Mr. J. S. ALDER, Architect.

not of lead, are covered with rough red handmade tiles. The inside stonework is of Bath stone. The accommodation provides for 750 persons. The cost has been about £3,600. The architect is Mr. J. S. Alder, of 1, Arundel Street, Strand: and the builders are Messrs. Street, Strand: and the builders are Messrs John Bentley and Sons, of Waltham Abbey We have chosen two photographs of the building showing the interior, and one of these we reproduce to-day. A series of similar views of the church were taken by Mr. Richard Moreland con amore, and as the work of an accomplished amateur photographer his prints are of unusual interest, particularly as no attempt has been made by the artist to tamper with the limitations of the camera, depending instead upon the legitimate 1150 unton hed photography and to the ability of selecting well-composed pictures in the points of view of each particular subject. This pudgment is of the greatest importance, and Mr. Moreland, as a water-colour painter, is singularly successful in this respect, in striking contlast with more pretentions work of the professional photographer.

## ST BARNABAS VICARAGE, DUEWICH

The Lord Bishop of Southwark conducted the office for the benediction of this house, just completed. The building is of red sand faced bricks, with red hand-made tiles on the reof. The doors, window frames, and large boards are of oak. The vicarage is connected to the church by a cloister formed f oak framing filled in with concrete panels of coal, portable washing copper, and gas in I with flat asphalte roof. The work has cooking stove. The living-rooms have the teer arried out by Messrs. Mitchell and latest pattern portable ranges and hot water

The dwellings consist of ten blocks. and are five stories in height. The blocks at the rear of the site are similar in their arrangements to those forming frontage group, as shown on the plan below the view on our double-page plate. The elevations are built of red sand-faced bricks with Luton brick base, artificial stone diessings, and slated roofs. The gates and railings are of wrought iron. Accommodation has been provided for 179 self-contained one-, two-, three-, and four-roomed tenements, each tenement having in addition its own entrance lobby, scullery, and w.c. There has been lobby, scullery, and w.c. There has been provided, free of charge, for the use of the tenants, a detached building, comprising a steam-heated laundry, bath-house, and shelter, occupying the centre of the site. Coal stores are also provided in this detached building where tenants can obtain coal from the Fund at a low rate all the year round. The charge of 1d per week is made for the sheds. All the staircases, w.c.'s, bath-house, and laundry have the walls tiled. Each living from has a dresser and venti-lated meat larder and cupboard as a com-bined fitting, and all the bedrooms have a wardrobe cupbeard. The one-room tenements the provided with both these fittings. Hangspace is provided in addition in a recess ie entrance lobby. In each scullery there in the entrance lobby. is a deep white glazed fireclay sink with teak draining board, coal bunker to take 3 cwt. of coal, portable washing copper, and gas cooking stove. The living rooms have the

supply to scullery sink. The tenants can obtain a constant supply of hot water from a tap arranged in a convenient position in the courtyard. There is store and workshop accommodation for the use of the superin accommonation for the use of the superintendent and porters for doing any small immediate repairs. The buildings are of fire-resisting construction throughout. The lighting is by gas supplied to the tenants through the part of the construction of lighting is by gas supplied to the cenarics through slot meters. Cas is also used for the courtyard lighting. The buildings were designed by Mr. Victor Wilkins, surveyor to the Peabody Donation Fund. The general the Peabody Donation Fund The genera contractors were Messes, W. Cubut and Co 258, Gray's Inn Road, W.C.

## ---OBITUARY

Mr. Frank Bramley, R.A., died on Tuesday, at Hope House, Chalford Hill, aged fifty eight. He was one of the best-known members of the group of artists known as "the Newlyn School." Born near Boston, "the Newtyn School. Born hear boston, he studied at Lincoln and in Antwerp, and began exhibiting at the Academy in 1884. It was four years later that he produced "A Hopeless Dawn," his first popular success. The canvas was bought under the terms of the Chantrey Bequest, and now hangs in the Tate Gallery. From 1885 to 1895 Mr. Bramley worked at Newlyn, near Penzance. In 1900 he settled at Grasmere. Among his best known pictures were "For of Such is the Kingdom of Heaven" (1891) and "While there is Life there is Hope" (1896). He was there is Life there is Hope" elected an Associate of the Royal Academy in 1894 and R.A. in 1911. He was a gold medallist of the French Salon, where he frequently exhibited.

Alfred Usher Soord, the well-known portrait painter, died at his residence, "Cranmere, New Bushey, Herts, on the 10th inst., following an attack of pneumonia.
Born at Sunderland in 1868, Mr. Soord received his early training at the York Institute School of Art, and later studied under Sir H. V. Herkomer at Bushey. He exhibited Academy, the Paris Salon, and in the provinces. The Lost Sheep, perhaps his most popular work, has been reproduced in thousands, both in this country and in America. The reredos in the private chapel at Oxford House, Bethnal Green, was also the work of Mr. Soord.

The Sanitary Inspectors Association will hold its next meeting at Lichfield on Saturday, August 28.

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Renovations are being carried out at the Presbyterian Church, Ballyclare, under Messrs. Watt, Tulloch, and Fitzsimons, architects, Belfast. The church is to be reopened on Septemfast. ber 5.

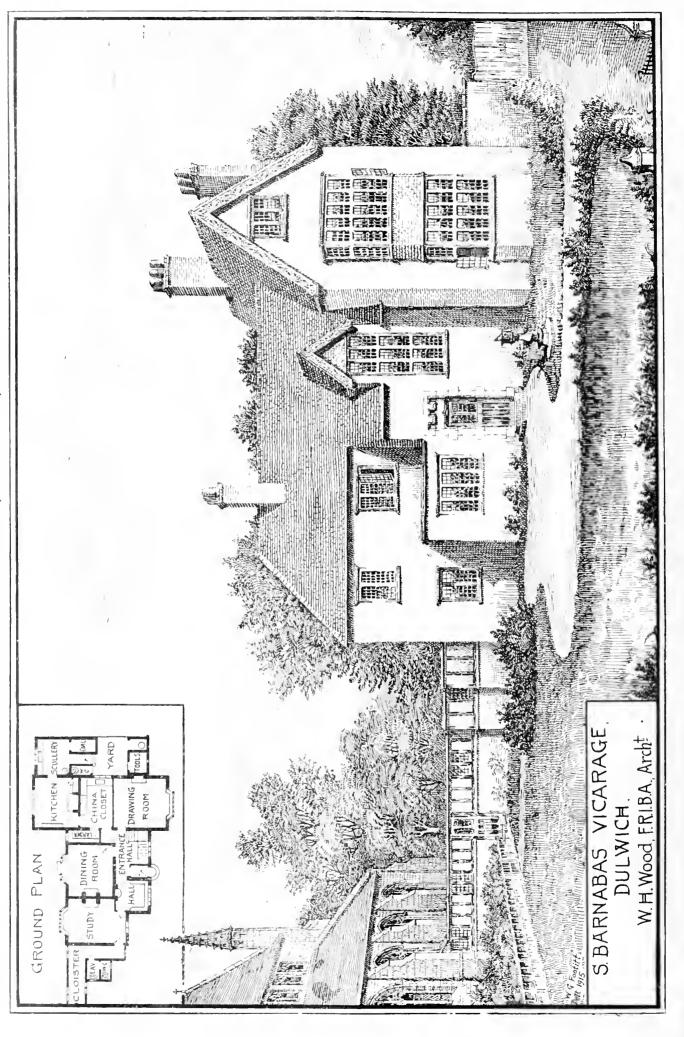
The death is announced of Mr. T. Ellott, borough surveyor of Enniskillen, at the advanced age of eighty-two. Mr. Elliott had been many years connected with Enniskillen. He was a member of the Architectural Association of Ireland since its revival, and was its oldest member.

By request of Coonel Cradock, now at the front, brother to the late Admiral Sir Christopher Cradock, friends and relatives of those who went down with him on H.M.S. "Good who went down with him on H.M.S. "Good Hope" in the battle off Coronel, Chile, are myited to inspect the memorial tablet, designed by Mr. W.S. Weatherby, F.R.I.B.A., which is to be exceeded in the family parish church, in Vorkshire, at 74, Baker Street, W.

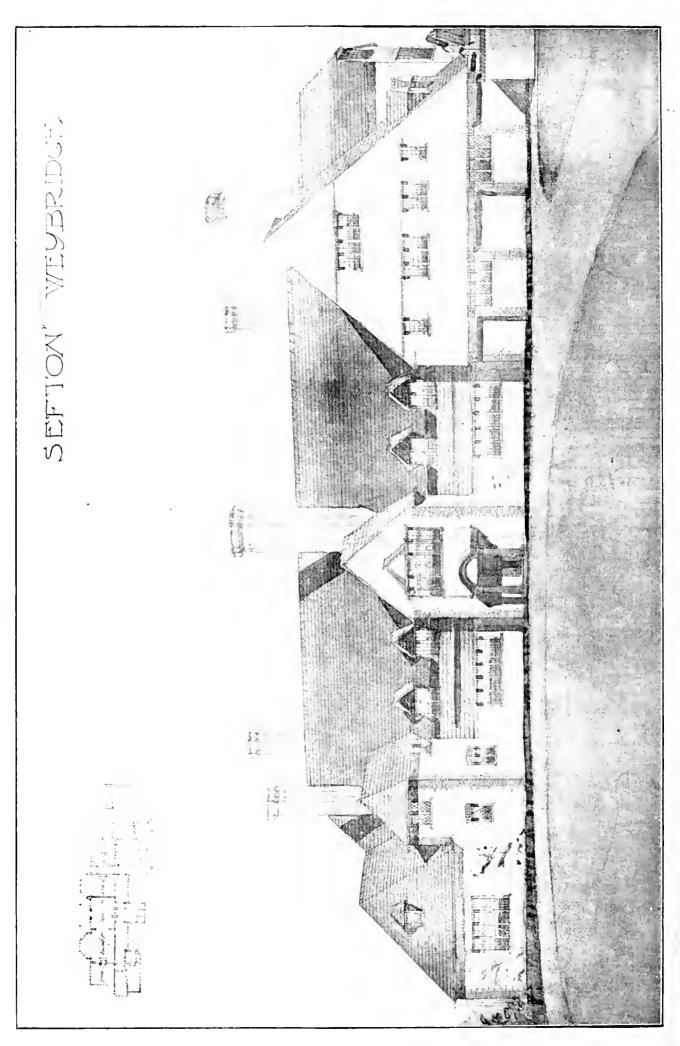
The British Fire Prevention Committee has issued a special Farmers' Fire "Warning," pointing out certain precautions that should be taken by farmers or estate owners, more pointing out certain precautions that should be taken by farmers or estate owners, more narrienlarly in the matter of nicks and stacks. The "Fire Warning" has been published as a small free poster, and may be obtained on written application (with large-size stamped and addressed envelope enclosed) from the Registrar, the British Fire Prevention Committee, 8, Waterloo Place, Pall Mall, London.

mittee, 8. Waterloo Place, Pall Mall. London. The Lord Mayor, aldermen, and catizens of Manchester were fined £3 last Wednesday, on a charge of "neglecting to comply with an order made upon them on September 13, 1899, to abate a nuisance caused by the emission of black smoke from a chimney on their premises," the chimney referred to being at the Mayfield Baths. Store Street. The proceedings were taken by the Sanitary Department of the Corporation.







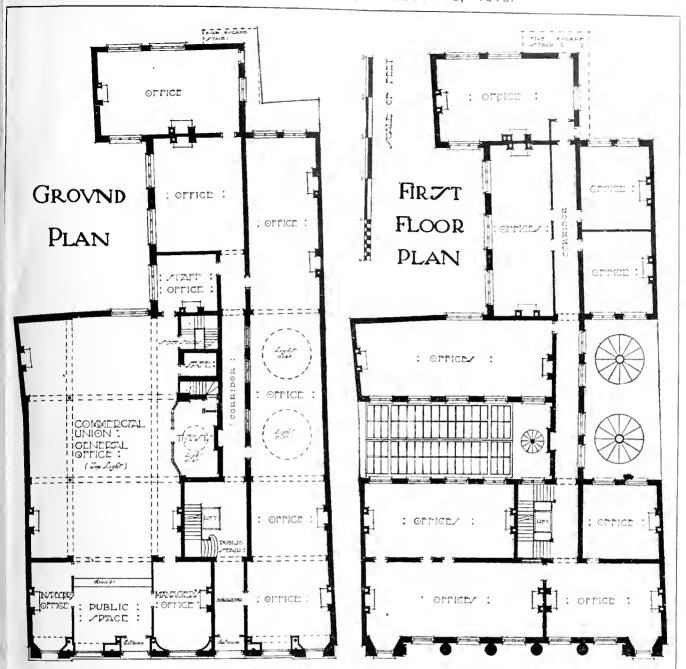


WIEW OF FNTRANCE FRONT.-Messrs, Tubbs, Messer, and Poulter, Architects.



BRANCH OFFICE FOR THE COMMERCIAL UNION ASSURANCE COMPANY, PILGRIM STREET, NEWCASTLE-ON-TYNE. Messis. Marshall and Tweedy, Architects.





THE COMMERCIAL UNION ASSURANCE COMPANY, PILGRIM STREET, 3RANCH OFFICE. NEWCASTLE-ON-TYNE.-Messrs. Marshall and Tweedy, Architects.

CO., LTD.'S NEW BRANCH, PIL-GRIM STREET, NEWCASTLE-ON TYNE.

The new branch office for the Commercial nion Assurance Company, which is in course f erection in Pilgrim Street, Newcastle, has een designed by Messrs. Marshall and weedy, architects, 17, Eldon Square, Newastle. The elevation to Pilgrim Street will e Darnley Quarry stone; the base up to round floor sills will be of Aberdeen red ranite. The whole of the facings in areas nd basement are of Lumley white glazed est quality bricks, the rear walls and bles being of white unglazed bricks. The hole of the floors will be of ferro-concrete, nd the surface of same covered with Jarrah ood blocks, the corridors and staircases with arble and terrazzo. An express passenger it, installed by Messrs Waygood, Otis and o., communicates with each floor. The Comercial Union will occupy part of the ground | £100 to £150 a year.

OMMERCIAL UNION ASSURANCE ! floce, and they will have a separate entrance from the street. Their offices will be fitted with oak panelling and handsomely decorated fibrous ceilings. The staff lavatories and cloak rooms are in the basement; owing to the slope of the site from front to back these will be entirely out of the ground, thus avoiding areas. The contract for the foundations has been carried out by Mr. Thos. Lumsden, Jarrow, and the superstructure is now being proceeded with by Mr. Alex. Pringle, of Gates. head. All contracts for steel windows and all interior fittings have been placed. The clerk of works is Mr. Bourn.

> At a meeting of the Downham Urban District Council on Thesday week, it was decided after much discussion to raise the salary of the surveyor (Mr. J. M. Jackson) from £50 to £65 per annum.

> per annum.
>
> The Penzance Town Council have resolved that £51 should be spent in converting the old Guidhall in the market house into a public hall, which it is reckened will bring in from

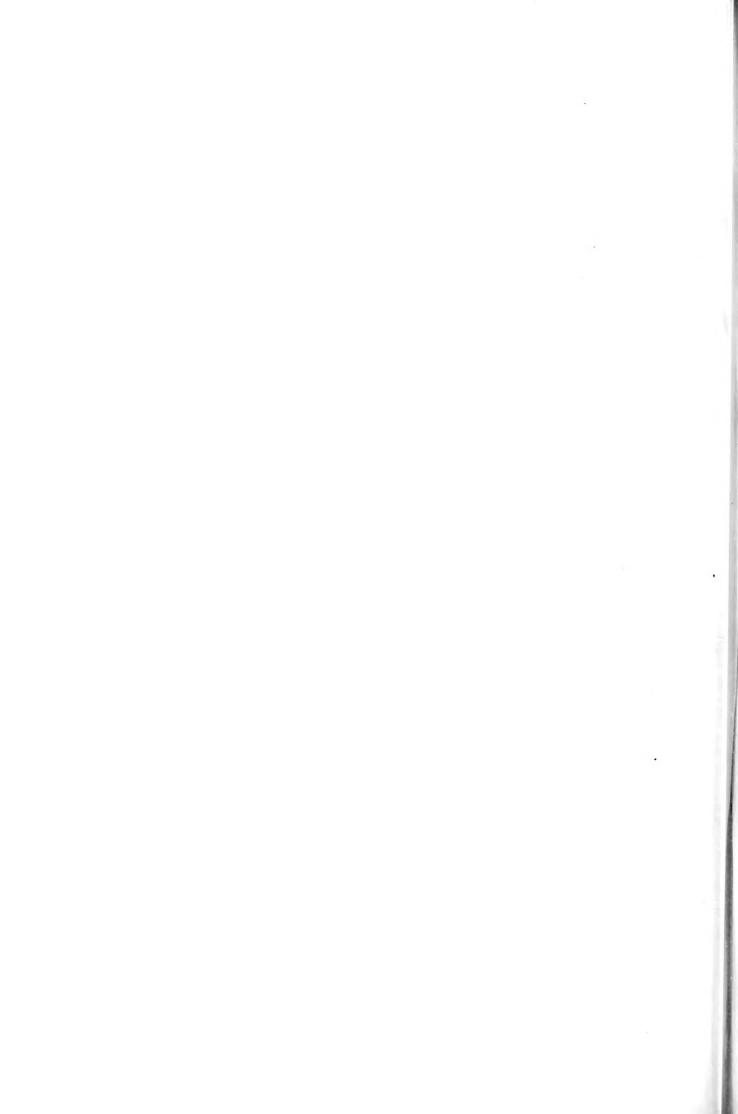
Wages advances are announced by the Execu-Wages advances are announced by the Executive of the Amalgamated Society of Carpenters and Joiners to have been conceded at Chester-le-Street, Omagh, Elgin, Birtley, Greenock, Glengarnock, Kilbirnie, Glossop, Timbridge Wells, Nantwich, Worthing, and Sandbech.

The condition of Monksilver Church has given rise to anxiety in consequence of a report by Mr. Bligh Bond that immediate steps involving considerable expense most be taken to save the fubric from collapse. A sum representing of about £80 has been raised, repless than a third of what is required

The Bishop of Bangor is urging his clergy not to spend money on new buildings at the present time, or on "what might be called church laxuries." For instance, no one had a right to order an organ for his church during the war, and nothing should be spent in church decorations.

decorations.

A housing scheme promoted by the Briton Ferry Urban District Council has been siccessfully completed at a cost of £16,000. In spite of abnormal conditions, the original estimate was only exceeded by £14, and the surveyor (Mr. H. Alex Clarke) has been congratulated by the council on his successful carrying out of the scheme.





THE BUILDING NEWS, AUGUST 18, 1915.

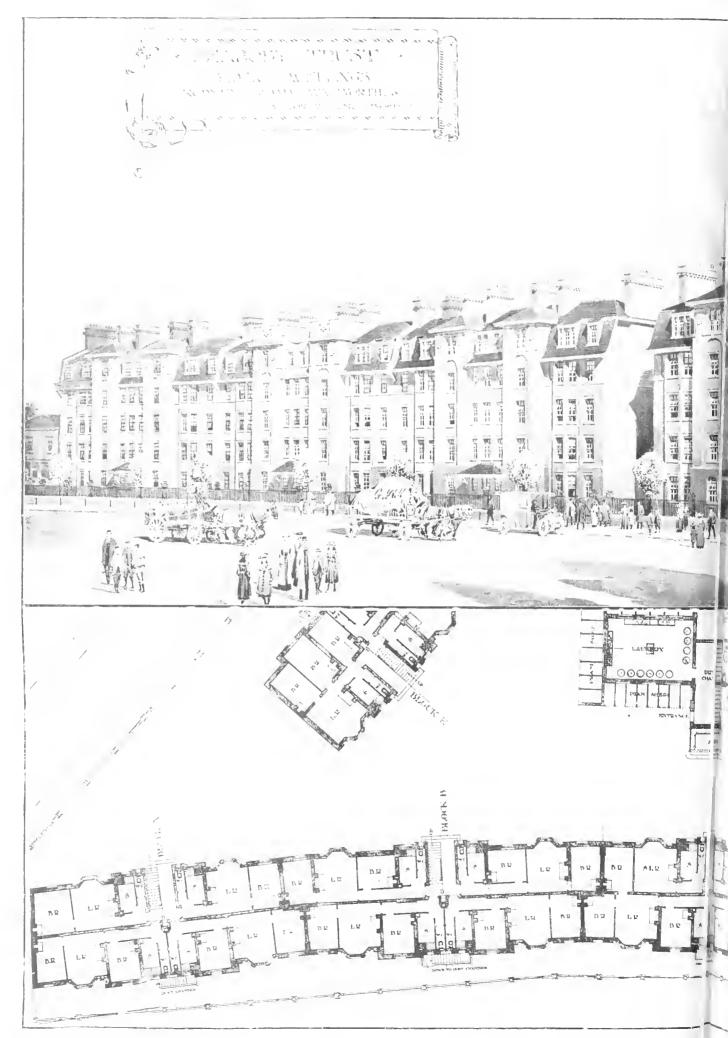


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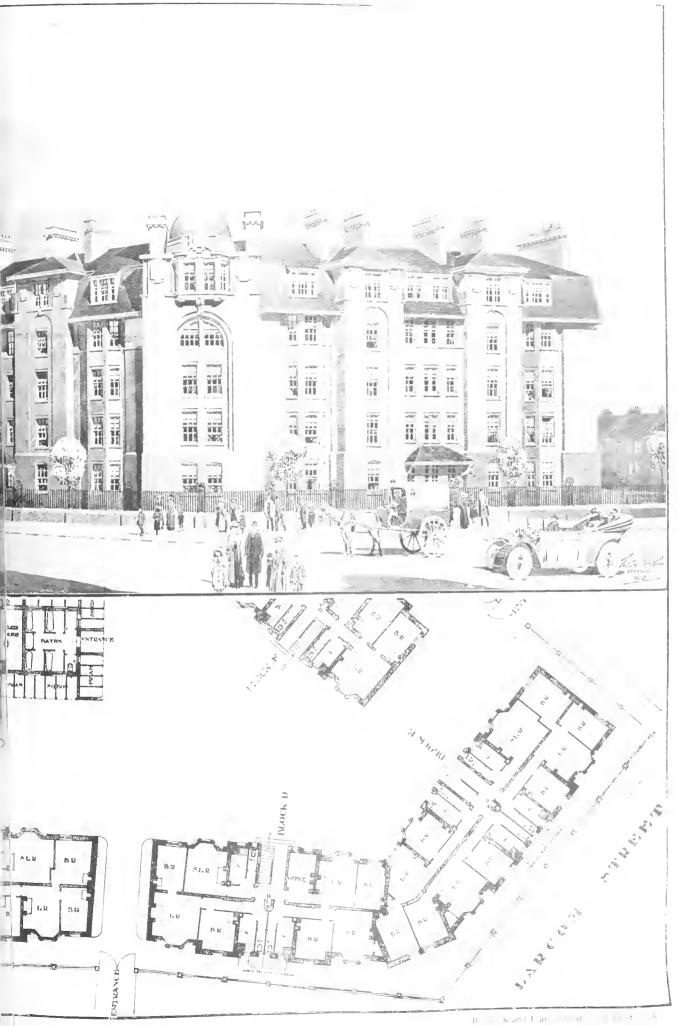
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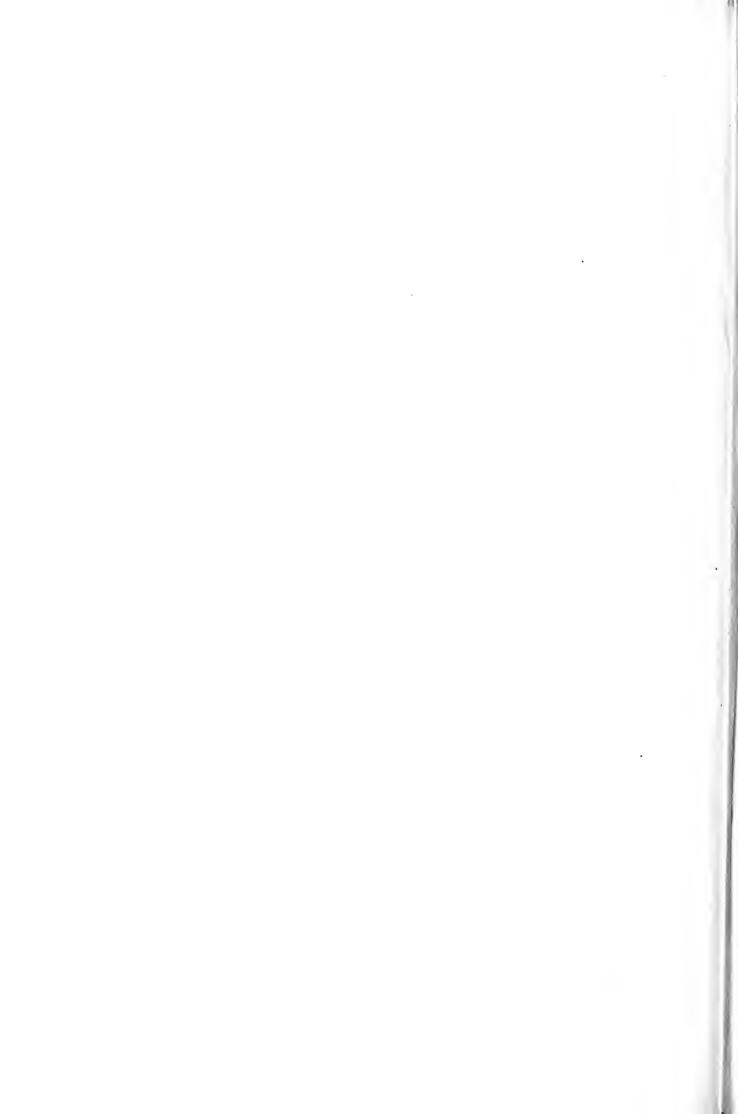
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Way was to



PEABODY TRUST BLOCK BUILDINGS, RODNE





## Our Office Table.

Poynter ed M. E Edward er last Thursday Egide Rombaux's tin," to the trustees formally presented M. Estatue. "Le Premier Matin, formally presented at. Egicle combana's statue, "Le Premier Matin," to the trustees of the National Gallery on behalf of the subscribers to the fund in the Sculpture Gallery of the Royal Academy. The gift was accepted on behalf of the trustees of the National Gallery by Lord Plymouth, who announced that it is to be placed in the Tate Gallery M. Rombany was mable to be Gallery. M. Rombanx was unable to be present as he is in Brussels. Sir Edward Poynter said that £865 5s, had been collected for the purchase of the statue in three weeks from 265 subscribers, of whom 150 were artists, and the remainder art lovers and writers on art subjects of all shades of opinion. M. Rombaux had put on his splendid work the modest price of £800, and the remainder of the money subscribed would be given to the fund for the relief of distressed Belgian artists. Sir Edward paid a high tribute to the Belgian school of sculpture and Rombaux in particular. Of "Lee to M. Rombaux in particular. Of "Le Premier Matin" he said:—"It is a work magnificent not only in design and expression, but in that profound and masterly knowledge of the human figure and its capabilities beauty, which is the characteristic of the great masters of the great schools of Greece and Italy; and these qualities it displays in the highest degree, the sense of form being as refined as it is colossal in conception." M. Paul Lambotte, the Belgian Director of Fine Arts, said the gift assumed the character of a symbolic act of homage paid by British artists to Belgian art.

In the spring of 1917 a "Palace of Induswill be opened in which to hold two fares, every spring and autumn, in which will be exhibited the main industries of the Empire. The site chosen is Willesden Green. Forty-four acres of land have been taken, and the buildings will be three times the size of Olympia. There will also be extensive pleasure grounds attached. Only wholesale manufacturers and their agents will be allowed to show their products, and admission to see them will be limited to traders and other possible customers by ticket. Each "Industries of the Empire Fair" will be run on the same lines and for the same object the pushing of trade—as the Leipzig Fair. It will last three weeks, and invitations to visit it will be sent broadcast throughout the Allied and neutral countries. In the summer months it is proposed to hold a show of a more popular kind illustrating the scenery and natural advantages of all the countries in the Empire.

The principal Bavarian Art Societies have issued a joint appeal to the public to sacrifice nartistic copper, brass, and nickel objects for the Fatherland. The circular says: "Intelthe Fatherland. The circular says: interigent public bodies can doubtless find monunents unworthy of the personage or event commemorated, which would yield great quantities of metal which the Army now so reatly needs; and further, cemeteries might acrifice a large number of monuments to uch a sacred purpose." We could very well pare a few here for similar use!

Mr. H. T. Chapman, the county surveyor of Kent, has just published his annual report, rom which it appears that the total length f main roads in Kent under the direct constitution of the control rol of the county council is just over 600 niles. The actual cost of maintenance, tarainting, and improvement work carried out uring the year ended May 31 last. Mr. hapman says, was £158,202 13s. 11d., an in rease in outlay on the previous twelve tonths of £248 8s. Towards this exenditure £38,756 was received in the count year from the Road Board. A total f £54,636 17s. 10d. was expended upon tar ainting, widenings, kerbing, channelling, aving and drainage works, and represented aving and drainage works, and represented 1.0 per mile. The total cost of tar-painting carriageways amounted to £27,053 s. 11d., 942,480 gallons of tar being used, the area treated being approximately 53 milens uperficial yards. There was also 20,224 lilons of tar peed in the receiping of feet. be area treated being approximately  $5\frac{3}{2}$  millons of tar used in the repairing of fooths. The payments for tar alone represented £11,365 7s. 11d., the average price

paid per gallon being 2.7d. The total quanpand per ganon being 2.10. The Boar quantity of material used upon the roads under direct control was 143,404 tons or yards. The direct control was 145,404 tons or yards. The average price per ton for granite macadam, exclusive of haulage, was 11s, 5,47d., as compared with 10s, 11.54d. in the previous year, being an increase of 6.13d. Of the material used 50,962 tons consisted of granite macadam and 26,766 tons of Kentish rag tarred macadam. The cost of supervision, in cluding county surveyor's and clerks salaries, and maintenance of motor cars, was £3,499 13s. 11d., being equal to 2.3 per cent, upon the expenditure of £149,413 4s. 6d. Expenditure on improvements during the year amounted to £27,583 10s, 11d. The total Road Board grants received during the year amounted to £51,316. Mr. Chapman refers to the damage caused to macadam roads by the constant watering carried out by urban authorities, which is most destructive and seriously increases the cost of main-

The Daily Telegraph comments pertinently on some of the complaints about false economy it is receiving. The effect of the war on the building trade is the subject of one correspondent's letter. He recalls the recommendations of the Par liamentary War Savings Committee, mentions in particular the recommendation that "No one should build a house to reside in for himself or herself," "Inferentially," he comments, "it may be assumed that it is quite right to build a house for your friend's occupation, but not for yourself. Be that as it may, the folly of putting forward any suggestion tending to discourage the general public from investing in house-building, when fully appreciated, cannot be too strongly condemned. The building trade employs as many hands as any other trade in the country. Seventy-five per cent. of the money spent on a house is paid for labour. It cannot be suggested that money so spent goes out of the country, and the increased production of dwelling-houses is admittedly one of the great needs of the present day. It is added that if the economy doctrines no doctrines now being inculcated are carried out in their entirety, the result in the building trade will be that "all over the country numbers of men who have been in regular employment for many years will be suddenly thrown out of work."

In their fifth annual report, the Road Board state that during the year ended March 31 last applications were made for £2,001,264, of which £1.541,684, or 77 per cent., was for improvements of road crusts, and £208.190, or 10.4 per cent., for widendiversions, and improvement gradients, curves, and corners. The decrease of £592,541 in the amount applied for was probably due to an intimation given to the highway authorities that the Board were not prepared to continue making grants during the war to the same extent or on the same basis of distribution as in previous years. The receipts credited to the Road Improve-Fund during the year amounted £1.620,974, and the net payments after deducting £93.266 for loans repaid were £1.386.173. Grants amounting to £1.698.884 and loans amounting to £482,418 were made. After the outbreak of war the Board under took at the request of the Army Council to arrange for the construction at the cost of the Council of certain new roads, and to arrange with highway authorities for im provements in public roads, mainly at the cost of the Council, which were required for military purposes. The total estimated cost last-mentioned works was £475,669. of the to which the Army Council contributed £385,070, the Highway Authorities £30.591. and the Road Board £62,008

As one of the useful series of pamphlets entitled "Indication of Houses of Historical Interest in London" the County Council have published a handbook relating to Holywell Priory and the site of the Theatre in Shoreditch, and giving the results of careful in

hatherto been determined with register As a result of Mr. Briches appeales to Records and Mareins Committee may arrived at the conclusion that the tenth was situated within what was foundly the Precinct of the ancient Priory of Holy cell In due course a farnet will be erect to the spot to commemorate this first for the mores to of restricting the profiles. the necessity of restricting a perlition nothing will be done in the rather and present

present

The London County Con, it is partially issued, at 5s net, through Messas P 8 King and Son, Ltd., Vol. 1 of Comparative Municipal Statistics, for 1912-15, giving full particulars regarding the municipal life of sixteen great toxics in the United Kingdom during the years dear tray? The resident of London, Birmingham Liver pool, Manchester, Sheffield, Leeds, Bristo, Newcastle, Cardiff, Swansen, Glagger, Rolfant, or Newcastle, Cardiff, Swansea, Glasger Edinburgh, Dundee, Aberdeen, Belfast, or Dublin can find out just how his city stand-in relation to the others, in the matter of area, population, occupations of the people pamperism, drainage, wages, reta, process paid by the working classes, paras crime education, transvays, gas, water and electricity supplies. An illuminating introduction is contributed by Sir Laurence Gomme tion is contributed by Sir Laurence Gommetill recently elerk to the council. Taking the year under survey, London had to pay 66s, 11.9d, per head for her general municipal services. The six next greatest English towns escaped with an average of about 47s, each. Education cost 8s, 6d, a head more in London that the average for the other six towns: police done by the other six towns: London that the average for the other six towns; police about 4s, 6d, 4 head more. It is shown that there is a slight general increase in the cost of any given service per head as the size of the town increases. There is a tendency for the cost of nearly all services to reach a inimmum in towns of about 90,000 population, though the cost of gas and water services tends to decrease as population increases even above that figure. The cost per head in towns of 250,000 and over considerably exceeds that in towns of fewer than 250,000. The increase of the cost of administration, owing to the size of the towns, is found to be affected by the question of site values

It is stated that the action of the Birker head Corporation in serving notices on the owners and occupiers of Oxton and Caughter respecting a town planning scheme for those areas is not in any way a breach of the policy of "municipal economy during the war. The serving of the notices involved crost of only about £5, but the process served the put pose of preventing a pre-war expenditure cosme £200 being rendered useless. The effect of what has been done is to avoid the possbility of any part of the districts being spoiled by the whim of individual owners pending the making of the contemplated order question at the forthcoming Local Government Board inquiry will be whether or not the Board will allow the Corporation to prepare a scheme of town planning, and no further expense is likely to be incurred until long after the end of the war.

In consequence of the restriction of building th consequence of the restriction of building work by public bodies and the refusal of loans for housing purposes by the Public Works Loans Board, a statistical report has been issued by the National Associated Building Trades Council showing, approximately, the number of men of military and non-military age still likely to be affected by any general stoppage of employment in the building trade. Men nineteen years and overtotal 1,148,869, of whom there are eligible by age for service 865,098. Not eligible by by age for service 865,098, age, 283,771.

The hearing of the charge of mandaighter against Mr. Alexander Montagn Pykemanaging director of the Cambudge Cr. Kinematograph Theatre, Ltd., Chacket Cros-Road, and Mr. Lionel Grant, the backet gineer, was concluded last Friday, at Morborough Street. The charge are so at of fire at the theatre in which a workman named James Powley was burnt to death. It was stated that there was stored at the theatre a ton of old films which had been obtained by Mr. Grant and Mr. Pyke, who were going to supply them to Pathé Frères. At the pre

\_ ven as to the hans to Urant for Los to. Mr Frampt is submitted evidence to justify Mr., d for trial. The Mags state of the first the case is the general against Grant than such that the case is the general against Fyke was a general allowing the film to state. He thought there was a doubt, discipling inder the direction of a judge a\_mst Pa and a joy more the direction or a judge soluble is to whether negligent stering was sufficient to an out-to-ministaughter. Be foodules, the reserved their defence, were committed in  $\tau$  to all bail being allowed as

heigh. before.

P offer of the war has been felt at the R yell Acceptage, as chewhere, but the at tendatices at the summer exhibition, which closed on Saturday night, have, it is said.

A expectations. The customary the customary excessed expectations. The customary I moved adars since, which in normal times mark the opening of the exhibition, were these year abundanced, and the only public function has been the formal presentation to the trustees of the National Gallery of M. Rombany's statue, "Premier Main," for the the trustees of the National Gamery of M. Rombaux's statue, "Prenner Matin," for the nation, which took place on Thursday last in the scrapture gailery. In all 1,926 pictures have been on view this year, compared with rather more than 2,000 last summer. No decision has at present being arrived at as to

se holding at a winter exhibition. The tower of Woolworth Building, New Mak, the highest "sky-scraper" in exist ence, is now seen by night as well as by day in exist An installation of electric projectors renders every architectural detail visible from the roof of the main building to the crow's nest, or lantern, which forms the sixtieth storey. For this purpose 600 lamps, each of 250 watts similar to those used on motor-cars, are used They are of the new gas-filled type, and while some throw their rays upwards from the cables of the roof on to the sides of the tower, others shine down from the tower top itself, these being hidden by an ingenious system of screens. The surmounting lantern system of screens. ontains twenty large lamps giving together 45,000 cand, r power, and by means of diffusing glass and an automatic dimmer, the intensity is constantly varied from a dazzling brilliance to deep red glow.

The all st bel, in the diocese of Liverpool is said by the Liverpeal Daily Post to hang in Roby Couch. The bell is the tenor in Roby Clarch. The bell is the tenor of the old ray of four in Huyton Church, and when the Huyton peal was increased to six, as the bell in question was money with the new hells, the vicar and monise with the new bells." the vicar and churchwardens presented it to Roby, where a tower was built for its accommodation. This was in 1846. The present church dates from 1875. The hell is believed to be the only pro-Refermation bell in the diocese. There is a local tradition that it is affected. There is a lead tradition that it is of Spanish maturia tay but this is erroneous, for it is certainly of Nottingham make, probably by Richard Selvoke. It is 40 in in diameter. It hears the inscription: "See-Bedicte. I S.P., A.D. 1512." The lettering is Gothic, but the numerals are Arabic, a very early use of such there is a realist a very early use of such there is on bells, only two earlier being known to exist in England. The 5 in the date is in the shape of the letter the This form of the numeral was first used by Caxt : in 1480, or thirty-two years before the hell was cast at Nottingham. The 5 induction a number of archaic taste, for the present form of the numeral came into general .- in 1500, and has been commonly employed ever since

In corns to swith a factory building which has just been elected at Windsor, Out., the has jist the discrete at Windsor, Out, the method of floor construction is of more than passing atterest. The walls of the structure are of his at while the floor is of concrete, the fo melata water and the gravel strinkled with it. The height was rused in this manner 1 ft, over the entire area of the hillding, and the opera gravel a very hard fill was secured. On top of this is a covering of maple flooring fastened to sleepers embedded in the concrete.

The suggestion has often been made that steer should be painted before being embedded an concrete, with the idea of protecting the metal from corresion. An investigation this proposal has been conducted by H. A. Gardner, of the Institution of I H. A. Gardner, of the Institution of Indus-trial Research at Washington. One of the resu'ts brought out was the statement that painting may have a distinctly prejudical effect. One serious objection to the use of paint in reinforced-concrete is its interference with the natural adhesion bond between the steel and the concrete. It is true that painted surfaces may be improved by being coated with crushed quartz or fine sand, but even then the presence of the paint is objection able because it is interposed between two materials capable of entering into chemical combination, resulting in the formation of a rust resisting compound which adds very greatly in the efficiency of the hond,

A process of rust-proofing steel and iron is being promoted by Henry C. Baines, engineer and metallurgical chemist of Baines' Metallurgical-Chemical Laboratories, 411, gineer and metallurgical chemist of Baines' Metallurgical-Chemical Laboratories, 411, First Street, Jackson, Mich, The process was developed in 1903, and several English factories were equipped for treating metal parts by it. The treatment consists of boiling the parts to be rust-proofed in a combination of chemicals for from fifty combination of chemicals for from fifty minutes to two hours, depending on the depth of rust-proof coating required and the size and bulk of the articles to be treated. The equipment required consists of an iron tank of a size necessary to accommodate products to be treated, and a few utensils. The tank may be heated by steam or by any other heat. The cost of the treatment, inother heat. The cost of the feeting cluding chemicals, heat and labour, is less than one cent a pound for small articles. averaging five to the pound, and the cost decreases in proportion to the increase of weight and bulk of the material treated. is claimed that iron and steel, both wrought and cast, can be rendered permanently rust resisting. and that it imparts a black matt finish to the metal, thus providing an attractive colouring and rust-proofing in one protive colouring and rust-proofing in one pro-cess. The treatment is well suited for articles to be painted, as it furnishes a ground im-pervious to rust and chemical action, and effectually prevents peeling of paint due to these causes -

The restoration of the North Luffenham parish church tower is entrusted to Mr. S. F. Halliday, of Stamford, and the summit of the spite has been removed preparatory to relauding. building

At the quarterly meeting of the Hants County Conneil, held at Winchester, it was reported by the Education Committee that only five out of thirty-two recommendations for school repairs would be carried out owing to the war, whilst the contracts on painting and re-decorating the schools had been cut down from £3.500 to £1.700. It was, however, decided to build a school for girls and infants in Station fload, Sholing, at an estimated cost of £9.540. £9,540

At Avonmouth the dockers' canteen which has been erected close to the dock gates was opened on Saturday by Lord d'Abernon. The premises, which have cost £5,000 to bui'd, are ramework supporting the walls light steel framework supporting the walls light steel work is fixed, and this is clothed with cement. Work is fixed, and this is couned with semena. The lower part of the wall is covered with steel plates, painted green, to form a dado, waile the upper part and the ceiling are white. The floor is of concrete, and electric light is provided for artificial illumination. The canteen eas been put up in four weeks by Messrs. Perry and Co., Ltd., of Bow, E.

While engaged in making an opening in the wall of Abbotsdene, adjoining Old Friars, Richmond Green, which has been used as a Red mond Green, which has been used as a Red Cross hospital for some mouths, the workmen discovered an old plaster wall, which appears to be part of the interior wall of the Convent to be part of the interior wall of the Convent to be part of the interior wall of the Convent of Observant Friars, which was built in 1499, and this area was flooded with the gravel strinkled with it. The trained in this manner 1 ft. over a repeated until the desired 5.tt. mpl.s ed. The point is made to the freedom of the freedom preservation. A section of the freedom submitted to experts by the local librarian, Mr. Barkas. The convent which was occupied by the Franciscus of the Grey Friars, covered a large are cadicining the old phase, on the site of which Maid of Honour Row and other residences now stand

# Building Intelligence.

BELFAST.- Operations have been commenced in connection with the demolition of the Theatre Royal, the site of which is to be utilised for the erection of a picture house on a large scale. Messrs. Warden, Ltd., the owners of the Theatre Royal, intend to erect a building which will bear comparison with any other structure of the kind in the United Kingdom. The plans have been pre-pared by Mr. Crewe, who designed the Royal Hippodrome, and the contract has been let to Messrs. II. and J. Martin, Ltd., of Belfast. The whole of the ground floor will be devoted to stalls, with upholstered chairs, and there will be a large and well-equipped circle. Accommodation will be provided for an audience of about 1.500. It is expected that the building will be ready about Christmas.

DUBLIN.—Artisans' dwellings for the corporation of Dublin on the Church Street and Beresford Street area are shortly to be commenced by the contractors, Messrs. commenced by the contractors, Messrs. Fraser and Co., Gloucester Street, This scheme involves the clearing away of nearly four acres of slums, which portion of the work has just been finished by the corporation them-The total number of houses to be erected on this area is I46, made up as follows :-24 four-roomed, 94 three-roomed, and 28 two-roomed, the respective frontages being 15 ft., 14 ft. 4 in., and 15 ft. All the streets bounding this scheme are to be considerably widened, and provision has been made for the laying out of a playground, an ornamental shrubbery with fountain in front of the church, sand pits, seats, etc.

GIANTS' CAUSEWAY.—New schools were opened on the 4th inst. at Giants' Cause-The building was designed by Mr. Cluff Williams Ellis, of London. The body of the hall can be divided into two sections, and the gallery can be utilised for social functions. The exterior is enhanced by a spire with a bell, and in the entrance there a marble tablet, and in front of the gallery a bust of the late Lord Macnaghten. The building contract was carried out by Mr. John Carson, Ballymena, and the heating by Messrs. J. McCandless. Ltd., Coleraine,

PLATT BRIDGE,-The new Moss Lane Council School is opened to-day. The arrangement of the schools is on the pavilion principle, the central hall being placed in the centre, with the classrooms radiating therefrom. No classroom has direct access to the central hall. The exterior has been kept severely plain, as, apart from the site suggesting a plain structure, it was considered wise by the committee, in place of useless external ornament, to have an up-to-date interior, with the latest and best sanitary and other fittings. The buildings are faced with "grey" bricks, relieved with red quoins, "grey" bricks, relieved with rea quoing string courses, and bases. The roofs are covered with slates, and the stonework hall is a lofty and well-proportioned room 40 ft. long and 22 ft. 6 in. wide. The school is divided into two departments-mixed and The mixed department provides acinfants. commodation for 250 children, and contains five classrooms—one for 60, three for 50, and one for 40 children. The infants' department provides accommodation for 200 children. The department contains four classrooms one for 60, two for 50, and one for 40 children. In addition, there are head teachers' rooms on the ground floor, and on the upper floor two assistant teachers' rooms. store rooms, and lavatory accommodation. Messrs, Massey Bros., of Enfield Street, Wigan, were the contractors, their sub-contractors were the contractors, their sub-contractors for the work being:—Masonry, Mr. E. Orrell; plumbing, Mr. E. Poppleston; plastering, Messrs, W. and I. Moorby; decorating, Messrs, Dawber and Cheetham, Mr. A. Platt, of Hindley, acted as clerk of works. The schools, the builder's contract for which amounted to £6.050, have been erected from plans and quantities prepared by Mr. Herbert Wade, of Birley Street Blackpool, who, a few years ago, designed the Argyle Street Schools for the council.

COMPETITIONS.

ROYALROYAL SOCIETY OF ARTS.—Mr. Reginald Le Neve Foster has presented the society with a donation of £140 for the pur-ARTS.—Vir pose of founding a prize in commemoration of his father. Mr. Peter Le Neve Foster, who was secretary of the society from 1853 to 1879. The Council have determined to offer the prize for a paper on "Zinc, its Production and Industrial Applications." The prize will The prize will consist of a sun of £10 and the society's silver medal. The paper for which the prizis awarded will be read at one of the ordinary meetings of the society. It is expected that some account will be given of the history of the metal, the sources of its supply, its metal-Inrgy, and the various uses to which it has been, or may be, applied. Intending com-petitors should send in their papers not later than December 31, 1915, to the secretary of the Royal Society of Arts, Adelphi, London, W.C. The paper must be type-written. It may be sent in under the author's name, or under a motto, accompanied by a sealed envelope enclosing the name, as preferred. The judges will be appointed by the Council. The Council reserve the right of withholding the prize or of awarding a smaller prize or smaller prizes, if in the opinion of the judges nothing deserving the full award is sent in.

SCHENLEY PARK, PITTSBURGH. The competition held by the City of Pittsburgh, Pennsylvania, for a design snitable for an entrance to Schenley Park has Leen decided. The first prize (\$500) was awarded decided. The first prize (\$500) was awarded to Messrs. Horace Wells Sellers and H. Bartol Register, architects, Philadelphia; the second prize (\$500), to Mr. Raymond M. Hood, architect, New York; and the third prize (\$100) to Mr. A. F. Brinckerhoff, land-scape architect, New York. There were forty-five separate competitors. The jury of award, was composed as follows. We award was composed as follows:—Mr. Henry Hornbostel, architect; Mr. George S. Davison, civil engineer: and Mr. and Mr. itect. The Berthold Frosch, landscape architect. The jury in their report stated that they regarded the results of this competition as eminently satisfactory, and that the execution of any of the premiated designs would add an artistic civic monument to the deadd an artistic civic monument to the development of Pittsburgh. The submitted designs were generally of two types—one being the more formal, or "plaza" scheme, the other being informal.

WELSH NATIONAL EISTEDDFOD In the competition arranged by the Welsh Eisteddfod for plans for a garden city on a Welsh site for 5,000 inhabitants, with facand railway communications. Henry T. Hare, the assessor, gave first place to Mr. George M'Lean, of Portmadoc. For a design for a chimney-piece, the first place was given to Mr. D. Wynne Thomas, of Bolton.

## WATER SUPPLY AND SANITARY MATTERS.

MATTERS.

MIDSOMER NORTON.—At the last meeting of the Midsomer Norton Rural District Council the Welton Sewage Disposal Works Committee reported that the sewage disposal works at Bath, Warmley, Frome, and Shepton Mallet had been inspected, and after full consideration they recommended that as the site of the recommended that as the site of the recommended. of the present works at Welton was too limited for extension, too near the town, and not readily accessible, the surveyor be instructed readily accessible, the surveyor be instructed to prepare the necessary plans and specifications for a new sewage disposal scheme on the septic system proposed to be constructed on the irrigation land at Old Welton, providing for a population of 6,000 (this being an increase of 50 per cent. of the population now drained to the present works); also to carry out inexpensive appropriate in Glyntian and to obtain pensive experiments in filtration, and to obtain all such particulars and analyses as may required when the period arrives for an application for a loan to be made to the Local Government Board for carrying out the con-struction of the scheme. The report was adopted.

## TRADE NOTES.

The "Boyle" system of ventilation, embracing Boyle's latest patent "air-pump" ventilator and air inlets, has been applied to the Scaorth Palladium Picture Palace, Seaforth, iear Liverpool

### CHIPS.

M. Henry H.  $(x, y) + \lambda = (V_1, y)$  Oxford Road, Bourtenen in a contraction of Germanian Harding, modden and contractors, who and on May 15.  $(x, y) + \lambda = 110_{h}$ 

The death is a nace yord, on the 11th instruct 115. Wallowed Rock, Leytonstone, of M: Wildiam Dawson, WICE, agod seventy live, for turry years engaged to the Leyton Urgan District Council

Active progress is being made with the wick of restoring the massive tower of Northeor Parish Church, Fintune. The tower dates back to 1571, and it is estimated that the restoration will east £1,500

The Sewage Committee of the Bradford Corporation recommend the leasing et 2,000 squaryards of land at Frizinghad for five years to a company specially formed to carry out was contracts. It is pulposed to error temporary buildings on the site.

Messrs, Parker, Thomas, and Ree, architects, of Union Triso Binding, Bastimory, are completing plans for the rew eighteen story Gas Company building to be greefed at the corner of Lexington and Liverty Streets, Pastimore, at a cost of about \$15 (1990).

At the last meeting of the urban distriction of Margam the surveyor reported on the proposed new waterworks at Cilygovid, Duffryn Valley, and it was diedded that before prove dury with the scheme the clerk should communicate with the Margam Estate, with a view of ascertaining if a lease of the site and water rights could be obtained.

Lieut, Arthur Wallace May, of the 2nd Bat-Lieut, Arthur Wallace May, of the 2nd Battalion Durham Light Infantry, and only son of Mr. and Mrs. F. Morley May, recently of Brendon, Westonsuper-Mare, but now of 4, Arlington Mansions, Clefton, has been killed in action. Mr. May, who was only twenty-one years of age, was a member of the firm of May and Hassell, Ltd., timber merchants, Bristol, and was a well-known amateur golfer.

Mr. J. E. Rowlands, assistant architect in Air, J. r., Kowianes, assistant arenited in the Liverpeol city surveyor's office, has de-signed and executed a "roll of honour" on which are the names of the members of the surveyor's staff now serving with the colours. At the top is a Union Jack, and in the centre, as a motive, is the city's coat-of-arms, with a liver at the base. There is an ornamental border of oak leaves.

border of oak brayes.

The late Mrs. Milne, wife of Dr. Thomas Milne, Aberdeen, has bequeathed the following pictures and panels to the Aberdeen Art Gallery, the bequest being subject to the lifers in of Dr. Mi'ne:—"La Serenata," oil painting, by Dauglis Strachan: St. Mark's," oil painting, by Charles Mackie: Angels in Adoration," two gesso panels, by P. Anning Bell; St. John the Baptist," reprediction in sone, after Donatello; an amount wooden panel of the Arms of Aberdeen, from the East Church.

the Arms of Aberdeen, from the East Church.

A stained-glass window has been placed in the west front of St. Mary's Church, Hu'me, by a bequest of the late Mr. William Powell, collector, of Manchester. The theme of the window, which is one of five lights, is based into a very old treatment of the descent of Jesus Christ from Jesse, of which, perhaps, the finest example is that of the east window in Curlis's Cuthedral. There was another in Selbs Abbey before the late disastens fire, and a third example, though nost of the work is modern, is to be found in the east window of Bristol Cathedral. The window at St. Mary's Hulme, has been carried out by Messrs. Warr and Hughes, of London from lengths of M. Thom's Curtis.

At Ram-gite on Samiday Lord Google

Thomas Curtis.

At Ram-gate on Sannday Lord George Hamilton opened the new war hespath. It wounded soldiers. It is situated at Net is Court, and is compaced utily of Net is Court House, and partly of an entire view building, which comprises the main ward, san tary block, opening the transfer singery, and offices. The two building is reasonable with a two building are connected by means of covered passages. The main ward is 120 ft. in length, and add in nature two side wards, each of 35 ft. to whole accommodating fifty beds. Other words accommodating fifty beds. Other words accommodating fifty beds of the convalences. If the stransfer daing is timber framed in linear englishers is with asbestes coment.

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At a re-At a suppose to the form of Grand Corollary H. Work, for the H. Witchen Co. York, for the Lac ording the ex-Se ook and Sec-

At the las west a such a such for Local award of the arboral differences between Lytham Courcle war agreement for a s by St. Anne's to Lying on I that it in I are res-ment between the two

## TO ARMS!

## 4th Battalion "Architects" Central London Regiment Volunteers.

Recruit: (c. (2004) model f. (...)
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which any new tool shared.

ORDERS FOR THE WEEK BY LITTER 2. A. W. WARDEN.

Officer for the week, A. C. 16.

Next for duty, G. H. Parker.

Saturday, 21st mst. o join. Particol.
Saturday, 21st mst. o join. Pate Hampton Court. Sanday. II
10.10 a.m. Waterloo. Particol. at 1.2.

AMP.
Members desiring to shore should notify to Members design to deep meen should notify the Question istem is than first post on the liberary. These men should be port their six Officer on arrival in comp.

SCHOOL OF ARMS, DRILLS AND IMAMBEL AND IMAMBEL RECREIT DRILLS

Are as usual.

"A" Coy., Dean's Yard, 'Al' and days and Fridays. If we, there is at Millbank 8 book.

"B" Coy., Dulwich Colean, Mark pinn, Thursdays too spin.

"C" Coy., new being the red for a minimum range. Central Latter services from the range. Central Latter services to nerating station, Ladge Rand Station, N.W.

"D" Coy., Mark Description.

N.W., and D.W. Coya, Memory's Second of Harvey 6.47, p.m.

COERTSPONDING

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IS, THE ROY STREET, WES MAN. **→••••** 

## MEETINGS FOR THE ENSUING WEEK

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From the WA Harry S. Property of the B. B. Art. sts. S. M. M. B. S. W. S. C. T. P. S. W. S. W. S. C. T. P. S. W. S. W. S. C. T. P. S. W. S San tary Ins Inspector.

## LATEST PRICES.

N.E.-All prices must be regarded as erely approximate for the present, as our usual sources of information are in many cases failing us.

### TIMBER

eaving to steppage of supplies all prices

hat advanced considerably.	13
	25
IRON.	
Per ton.   Per ton.	33
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Bunders' Hoop Iron, for bonding, £12 5s. to £12 15s. Dirto—galvansed, £19 to £19 10s. per ton. Galvansed Corrugated Sheet Iron—	Α-
No. 18 to 20. No. 22 to 24.  6ft. to 8ft. long, inclusive Perton. Perton.  2aage	A
Cast-Iron Columns   Ferton.   Perton.   Est ton.   State   Est   Cast-Iron Stanchious   C	
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7 in to 24 in. (all sizes) 6 17 6 7 2 6 Coated with composition, 5s. 0d. per ton extra.	Q
Turned and bored joints, 5s. per ton extra.]  Irch—  Per ton	D
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Wrought-Iron Tubes and Fittings-Discount off Standard Lists f.o.b. (plus 21 per cent.)-	0:
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Galvanised Gas-Tubes         55           Galvanised Water-Tubes         511           Galvanised Steam-Tubes         45	P
OTHER METALS	

## OTHER METALS.

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Tin. English Ingots	162 0		163 0	0
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Sheet Lead, Town	23 0	0 ,,	24 0	0
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## BRICKS.

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## GLAZED BRICKS.

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£12 7 6 £10 1	7 6	£13 17	6	£17	17	6	£12	7	6
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Quoins, Bullnose,									
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	MOUL	DED 1	RICI	š.					
Stretchers and Hea	ders								
9d done 9d o			ch	8.3	69.	232	8.3	0.04	o h

8d each 8d.each 8d.each 8d.each 8d.each
Internal and External Angles-
1 2 each 1 2 each 1/2 each 1/2 each Sill Bullnose, Stretchers, and Headers—
5d. each 4d. each 6d each 6d. each 5d, each
Majolica or Soft Glazed S retchers and Per 1,000
Headers £22 17 6
., , Quoins and Bullnose 27 17 6
Compass bricks, circular and arch bricks of 1 Not
single radius £6 per 1,000 over above list exceed
for their respective kinds and colours ing 9 in
Camber arch bricks, any kind or colour, by 4½ in. 1s. 2d. each by 2½ in
Stretchers cut for Closers and Nicked Double Headers, £1 per 1,000 extra.
* These prices are carriage paid in full truck loads.
to London Stations. s. d.
Tbannes Sand         7         6 per yard, delivered.           Pit Sand         7         0         "           Thames Ballast         6         0         "
Thomas Rollant 6.0
s. d. s. d. Perton.
Best Portland Cement 36 0 to 41 0 delivered,
Ground Blue Lias Lime 21 0 per ton delivered.
Exclusive of charge for sacks.
s. d. s. d. Per yard.
Grey Stone Lime 13 6 to 14 0 delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rail.
way station.
STONE *

	STONE.			
	Red Mansfield, in blocks per foot cube	£0	2	
	Darley Date, ditto	0	2	3
	Red Corsehill, ditto	0	2	2
	Closeburn Red Freestone, ditto ,,			0
	Ancaster, ditto			10
	Greenshill, ditto			10
	Beer, ditto	0	1	6
	Chilmark, ditto (in truck at			
	Nine Elmsi			10%
	Hard York, ditto	0	2	0
	Do. do. 6 m. sawn both sides,			
	landings, random sizes per foot sup.	0	2	8
	Do do. 3 m. slab sawn two			
J	sides, random sizes	0	1	3
Į	All F.O.R. London.			

	Bath Stone-Delivered in railway trucks at Westbourne Park, Paddington (G.W.R.),		£	s.	d.
	or South Lambeth (G.W.R ) per foot cu	ıbe	0	1	7
	Delivered in railway trucks at Nine Elms (L. & S. W.R.)		Ó	1	83
	Delivered on road waggons at Nine Elms Depot		a	1	
	Portland Stone-Brown Whit-		Ų	1	91
	bed in random blocks of 20 ft. average, delivered in railway				
	trucks at Westbourne Park (G.W.R.). South Lambeth				
	(G W.R.), or Nine Elms				
i	(L. & S.W.R.)		0	2	51/2
	Punlico Wharf or Nine Elms Depot		٥	2	61
	White Basebed-2d, per foot cube extra	١.	U	۵	Og
	TILES.				
	s. d. Plain red roofing tiles 42 0 per			vrd	
Į	Hip and Valley tiles 3 7 per			2.	0440
l	Broseley tiles 50 0 per			9.0	
	Ornamental tiles 52 6	3.7		9.9	
	Hip and Valley tiles	doz.		31	
i	ditto (Edwards) 57 b per	1,000		1.0	
1	Ornamental ditto 60 0	3.5		1.9	
ĺ	Hip tiles			11	
l	Selected "Perfecta" roofing	F 1		9.1	
l	tiles Plain tiles (Peake's) 46 0 per	1,000		71	
l	Ornamental ditto	doz.		*1	
ĺ	Valley tiles .,	11		21	
ŀ	"Rosemary" brand plain tiles . 48 0 per	1,000		9.1	
ı	Ornamental tiles	44		11	
ŀ	Hip tiles			11	
١	Staffordshire (Hanley) Reds or	**		**	
	brindled tiles			<b># 9</b>	
l	Hand-made sand-faced 45 0 Hip tiles 4 0 per	doz.		11	
1	Valley tiles 3 6	11		11	
1	"Hartshill" brand plain tiles,	1 000			
	sand-faced			5.0	
	Ornamental ditto	11		11	
I	Hip tiles 4 0 per			11	
l	Valley tiles 3 6	11		17	

Rapeseed, English pale, Putto, brown Cottonseed, refined Olive, Spanish Seal pale Cocoanut, Cochin Intto, Ceylon Ditto, Mauritius Palm, Lagos Ditto, Nut Kernel Oleine Sperm Lubricating, U.S. Petroleum, refined Tar, Stockholm Palito, Archangel Linseed Oil Baltie Oil	per gal.	26 29 39 21 46 42 42 32 35 17 30 0 0	15 0 10 0 10 10 5 0 7 0 6 19 2 2	0 to 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	£29 5 27 5 30 0 40 0 21 10 46 10 43 0 43 0 33 5 35 10 19 5 31 0 0 8 0 0 1 10	000000000000000000000000000000000000000
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"Stority" Brand	11	0	9	Ο,,	_	

OILS.

### GLASS (IN CRATES). 21 07

English Sheet Glass: 15 oz. 2  Fourths 4½d  Thirds  Fluted Sheet 5½d	5½d	5≩d. 6≟d.		610	1.
Hartley's English Rolled 1 in Plate	in	弘 in. 4 <b>1</b> d		1 i	d.
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VARNISHES, Etc.		Per	g	llo	۵.
Fine Pale Oak Varnish			03	8	6
ale Copal Oak			0	10	0
Omnilae Copal Oak			0	9	6

VARNISHES, Etc.	Pe	r g	allo	D.
Fine Pale Oak Varnish		£0	8	6
ale Copal Oak		0	10	0
Omnilae Copal Oak			9	6
Superfine Pa e Elastic Oak			12	0
Fine Extra Hard Church Oak		0	10	0
Superfine Hard-drying Oak, for seats				
churches			14	6
Fine Elastic Carriage			12	
Superfine Pale Elastic Carriage			16	0
Fine Pale Maple	• • •		10	
Finest Pale Durable Copal			18	0
Extra Fine French Oil	• • •		1	9
Eggshell Flatting Varnish			18	9
White Copal Enamel		-	12	0
Extra Pale Paper			10	ă
Best Japan Gold Size				3
Best Black Japan			16	č
Oak and Mahogany Stain		0	8	Õ
Brunswick Plack				0
Berlin Black			16	
Knotting			10	č
French and Brush Polish		U	10	0

A memorial stone has been placed in Hawarden Churchyard on the grave of the late Licent. W. G. Gladstone, Lord Licentension of Flintshire, and M.P. for Kilmarnock Boroughs, who was killed in action in April last. The inscription consists of a scriptural text and the following quotation from the last letter Licent, Gladstone wrote to his mother, the Hon, Mrs. W. H. Gladstone:—"It is not the length of existence that counts, but what is achieved during that existence, however short."

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

## Effingham House,

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# Strand, W.C.

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Juhé, Diximide, Belgium, XV. Century, (Demolished by the Germans.)

Contemporary As Intecture in India Agricultural College Students Hostel, Posina; Mr. 6. Wittert, Architect. Science Institute, Gugrat College, Ahmedabad; Mr. 6. Wittert, Architect. Civil Court House, Jubbulgore, Mr. H. A. Crouch, F.R. L. B. A., Architect. Post Office, Agra, Mr. John, Begg, F.R. I. B. A., Architect. Mount Abu Residency-Staircase in Hall; Mr. John, Begg, F.R. B. A., Architect Dumblane Cathedral, Details of West Front, Measured and drawn by Mr. J. Scott Lawson. Selected Design, Small-pox Hospital White Laven, Plans, Elevations, Sections, and View, Mr. H. Irving Graham, Architect.

Weeksend Cottage, Gower, near Swansca, Views and plans. Mr. Glendinning Moxham, F.E. I. B. A., Architect.

## FACTORY CONSTRUCTION. — LOADS ON STANCHIONS AND GIRDERS.

Part IV. of the London County Council (General Powers) Act, 1909,\* contains regulations controlling the structural design of framed steelwork, such as required in modern factory and workshop construction. The Act enforces roofs and floors of certain minimum strength. So-styled "superimposed" loads must be provided for: thus the total load is that of the structural parts them-selves plus the superimposed loads, as in the case of a warehouse type floor of, say, 2,500 superficial feet, divided by girders into 10 ft. bays. The superimposed load allowance is here 2 cwt. per foot super., so that 5,000 cwt. is to be provided for in addition to the actual weight of flooring itself, which, if it weight 3 cwt. per foot super., adds 1,875 cwt.; or dead and super-imposed load = 6,875 cwt. These rules obviously do not affect ground or one-story buildings which have directly earthborne loads on floor. Load calculations are most conveniently commenced from the roof. The pressures being accumulative, floor below floor, this is the natural way to perform the operation of estimating the stresses put upon and sections necessary for girders, joists, and stanchions.

For roofs, those of greater inclination than 20 degrees with the horizontal are required to be suitable for a superimposed load. "which for this purpose shall be deemed to include wind pressure" of 28 lb. per foot super, measured over the sloping surface, while flat roofs come under the low-pitched rule of 56 lb. per square foot "measured over a horizontal plane."

Roof calculations are thus simple for straightforward plans. Our assumed building of 100 ft. × 25 ft. must allow for dead load-the roof structure itself-and 56 lb. per super, foot. Assuming the roof to weigh the same as a floor, the total load to be carried by the roof girders is 56 + 84 lb., or 140 lb. per foot super. and on each intermediate bay  $\frac{140 \times 2,500}{10}$ 

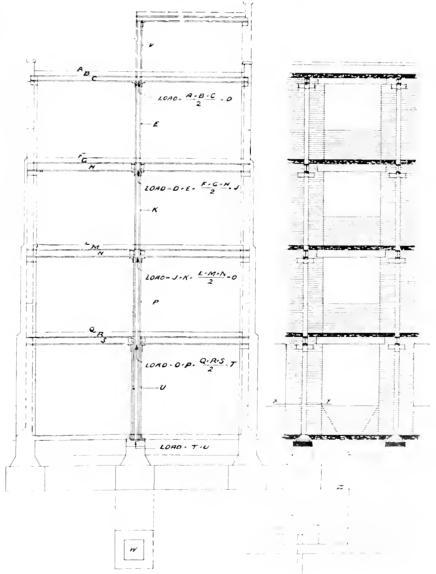
10 =over 312 cwt., say 15½ tons, which is a great deal less than a warehouse type floor load; and on this account the uppermost stanchions in all steel-framed buildings require, by comparison with the appermost floor stanchion, a very light steel section. For practical convenience

We have had in mind a construction free of stanchions, the girders spanning maximum stresses allowed by the by-laws the void of 25 ft. This is a very simple it becomes obvious that the window areas

the scantlings of timber roof trusses, a

larger section than satisfies theory may be

piers. The pressure of numerous ware-house type floors soon accumulates, so that to provide a suitable area of cross section of brick pier to be within the maximum stresses allowed by the by-laws



in making attachment, as in the case of \*Readers will hear in mind, of course, that the new regulations of the London County Council with regard to Reinforced Concrete were passed by the Council on July 6 last and that the Local Government Board is about to fix a date for their coming into operation. They affect nothing stated in this article, but should be carefully studied by all interested. They have been given in our issues of July 14, 21, 28, and August 4.

proposition, for if all doors carry equal on ground floor level must be in some loads the sizes of beauty and their weights part cuitailed, unless we arrange piers per foot ran are similar. So far, thereper root ran are same. On the different sections are required, one for roof and one for all floors. The accumulation of pressures is in the brick wall-

buttress fashion, which might not be con-

se i brokwirk of the piers, etc. or den a case without span-As we have them a case without spans-diving a starche has, the whole load at intermed to have no, where end walls in not a part of the lead is concentrated to the piers, and the stress in the power with a grant will be greatest at the even of the grant flow will be greatest at the even of the grant flow wills, as at X-Y in the diagram. Below this the sitess of the brickwork naturally decreases, as indicated, if there is solid walling to tween the piers, but if, as shown with 9 inch screen walls, the practical method would be to consider the stress decreases only below floor-line. In any case, it is easy to distribute lead on fundations at Z, with economy in con-crete. The Act quoted regulates these pressures as five, eight, and twelve tons er sq. f. t respectively on ordinary, on hard, and on blue brick, all in cement in ctar. Having arranged the wall to be in due accord with regulations as to thick ness in 4,-inch multiples, for height and length, we must cut out the window space, leaving sufficient area to meet the requiremeros : the Act As there are few buildings in which window area is not important, the indications here are plainly for the auxiliary steel stanchions and genuine framed steelwork through-In some cases it might be a fine matter between, say, blue brick and steel, and we need to weigh pros and cons. The "tie of consistent steel construction would appear an attraction in favour of such method of building. There may be something more of mere sentiment often in this than of hard matter of fact. The supplete steel framing is plainly first in respect to tie, but as we endea first in respect to the, but as we emically used to point out in our diagram B. Lig. 5. In our article on "Various Methods of Factory Building," where there are, ranging axially with pier control, two or more stanchious properly v nuected to girders, the tie here is good still, and the auto-stability, as it might be termed. I sound, solid vertical brick walls satisfies all demands merely by providing it carrying dead weight, i.e., omitting, as superfluous, "tie" as it is I by the steel framer; but there understa is obviously a point where we must revert to complete steel designing, basing our reason in the argument that, without such, sky-scripers would be impossible. In other words, where large window area is demanded below, a point is reached in lofty baillings where integral steelwork, with a injecte tie by plate, rivet, and Fin\_, is a necessity.

In the case assumed, and considering

int me is to have where crosswalling describing affects with the calculations. tal of 1,390 tons brings, say, 1330 say 70 tons on each 2 so, begin it. f brickwork to 12'

1 in a property of the laws. The world of the mode and are scheduled in the vertical assume their ling is 100 ft. In grand.

1 in assume their ling is 100 ft. In grand.

1 in the second of the lower section is the lower most assume a land on the lower most assume a land on the lower most assume a land on the lower most is the second of the lower most line assume a land on the lower most line as the lower most line a 12:

that a stot wing ways. I need press 3 ft. wide, allowing 7 ft. wind way ds. which, for our assumed ssame a case of four flows four stry warehouse type building, sug The total pressures gosts blue brick as satisfactory, with no pures are hare (1) special call for external small countries. 2) the terst, second, and third Let us double the height. We may then a to the girders, and (3) the use 2 ft. 7, in, piers of total length not seed backwork of the piers, etc. less than one-quirter the length of wall. We may, for these approximations, call the load at level of ground floor sill-line (VV) double our former figure, or 140 tons on each pier, neglecting girders. we are compelled to make at least 25 ft. of pier in 100 ft. walls, we get an area of 2 ft. 75 ms. x 2 ft. 6 ins., which will be unsuffered for 2.10 ft. be insufficient for 140 tons, which needs 140 cm, say, 12 super, ft. We shall need, in blue brick, some 5 ft, in length of pier on ground story, which leaves 5 ft. winlows, suggesting that for so many stories steel will allow much better lighting of the ground floor premises. Light is the girr by use of steel, and it is plainly all important in factory planning. Light too, may be gained by the not generally economical recourse of increasing the bay dimension. It appears demonstrated that, in modern practice, any such many storied warehouse-type floored building would, so far as the important point of light on lower floors is concerned, be more advantageously constructed of homogeneons steelwork with complete tie.

We will take one bay of a building, as in the diagram on previous page, and consider the loads in part carried by an intermediate stanchion dividing the span from back to front walls into two. load upon the stanchion, E, is plainly one-half that of the sum of the dead and superimposed roof loads plus the joist carrying the concrete; while the load upon each third floor pier head is this latter amount halved. The load is transmitted by the stanchion and piers to the third floor level. We add to the load on the stanchion its own weight. When we say that the load is on the stanchion, it is well to explain that the prop has to be arranged to carry such load, with a suitable factor of safety; for the load,  $\Lambda$ , in diagram, is the legal "superimposed" load of 56 lbs. per foot super., and is nonexistent, excepting when, as in a heavy fall of snow, some portion of the potential load is placed actually on the root. The stanchion, E, however, must be of such strength as is suited to withstand the whole load, as stipulated, together with the fabric of the roof. In the same way the "superimposed" floor loads, F. L. and Q. togother with the "dead" loads. must be adequately sustained by the series of stanchions. To arrive, finally, at the pressure upon the template under the lowermost stanchion, we take into account the loading as set out on the diagram. It is plainly the sum of onehalf the total weight of dead and super imposed floor and roof loads, and of stanchions of an intermediate bay. The result is a structure suited to carry the full superimpised floor loads of 2 cwt. per square feet which is required for buildings of the wirehouse class. In buildings not of this class, where of more than two stories in height, certain reductions may

the bard, poer. In practice one would be set of the bard, poer. In practice one would be set of channel and flange plate. The bard, poer 2 ft 3 ins by 2 ft, 3 ors to be set, this would add, say, overs, and must spread the footings and one of the five state of the second success of the second success of the second second second second second success of the second se

certain pressures upon certain earths, and this is a point which in reality needs a knowledge of the site and subsoil before any decision can be made. The scheduled list allows, per square foot, one ton on soft clay or wet, loose sand, two tons on natural clay or confined sand, and four tons on compact gravel, blue clay, or chalk. According to the Act, therefore, from one to four tons per square foot may be placed upon earth, according to its nature as judged, if need be, by the authorities. If we were building on the poorest soil, the best recourse is a raftlike steel-and-concrete grillage; on a thoroughly sound bottom, ordinary cement concrete. In the former case our foundation must spread to an area in feet equivalent to the tons of pressure—the load, or fifty-five tons above estimated; and even the two-ton basis needs a considerable spread of concrete, or 271 saper. ft., and the footings must swell out in number in suitable accord, in practice say, 5 ft. 6 ins. square of concrete of a suitable depth.

It should be noted that there is a further advantage in reducing span, because less load coming on the external girderends, the area of the piers may be reduced. From this results easy gain in window space. Our calculations and estimates have been exceedingly rough and approximate, but the general trend shows the kind of work required by the designer of quite plain many-storied warehouses and factories. And it cannot be said to be anything but simple and elementary until complicated and irregular plans are encountered with irregular stressing of steel stauchions and unbalanced loads. In the simple illustration given we have a balanced loading of the stanchions. If we introduce stanchions into walls, or as V. in the diagram, all such are unequally loaded, and under such conditions the strength of the stanchion must be increased from two to two and a-half times that required for balanced leading. it is plain that stanchions well pinned into solid brick walls receive support from such walls. Stanchions in exterior walls are placed with their plane of maximum radius of gyration across the wall in simple English, the flanges are parallel with the wall. Hence the steel prop is strengthened in the direction of its greatest weakness.

Unless we are building in a country of potential earthquake shocks there is no reason for hastily deciding to provide a complete steel framing even for comparatively large buildings. Given sound, adequate walling, a design embracing central or interior framing tied with rivet, bolt, and plate, with exterior girder-ends on felt and stone templates, would even seem to present certain advantages. It is a real saving in cost where, whether steel wall-stanchion or not, a wall of certain specified thickness relative to height and length has to be provided. Interior girders, joists, and stanchions, if, as said, more than two in line, form with cleats and plates ample tie, such that allowing in imagination the exterior girders to project unsupported—except as cantilevers all conditions of equilibrium are met by rearing plumb walls to catch up the ends of the beams. They give a practically direct downward thrust by virtue of the elastic packing above the templates. There is no irrogalar stressing. This is not the case where the girders are secured to exterior free-standing stanchions, which are then the subject of unbalanced forces. With scientific steel design interiorly, such a

tied structure of twenty-five years back, with its east-iron columns and joists and girders on brackets bolted, in country blacksmith's fashion, with one or two inefficient bolts. The argument assumes sound, plumb walls upon enduring foundations. If we miss this, then, when a length of walling subsides, irregular stresses are communicated throughout the series of tied stanchions and girders of the interior construction.

## CONTEMPORARY ARCHITECTURE IN INDIA.

(WITH ILLUSTRATIONS.)

The Agricultural College Students' Hostel at Poona, erected from the designs of Mr. G. Wittet, consulting architect to the Government of Bombay, accommodates 120 inmates connected with the college with which it is associated. The main building contains the students' rooms, while the dining-rooms, cook rooms, bathrooms, and the like form detached blocks at the rear. The work was carried out in local grey trap and the roof covered with red Mangalore tiles, The total cost was Rs. 1,60,181, giving a rate of annas 5.92 per cubic foot.

The Science Institute Gujrat College, Ahmedabad, comprises on the ground floor the physics and natural history de-partments, while the upper floor is occu-pied by chemistry. Two well-equipped lecture theatres are located at the back. Local red brick is used for the walling, with dressings of white Hemnagar stone, Mangalore tiles being employed for the roof covering. Adjoining this block of buildings is the Sir George Clarke Library, since undertaken, as well as a new bungalow for the principal of the college in the same compound. Mr. G. Wittet is the architect of the institute.

The Civil Courthouse, Jubbulpore, in brick and stone, has a carriage porch leading to a cloistered verandah on the front side, the treatment of its arcade being similar to that shown in the photograph here given of the back view. The treatment is very English in style, with the mullioned windows. Mr. Henry A. Crouch, F.R.I.B.A., Consulting Architect to the Government of Bengal, is the architect.

The Post Office, Agra, is also completed, and its designer, the Architect-in-Chief to the Indian Government, Mr. John Begg, reports his satisfaction with the way in which the building work has been carried out from his designs. It is his opinion that in general appearance the building realises his intentions as being "successful in grouping and mass and in scale of detail." Some modifications in the lower part of the central dome have been carried out with good results prior to its final finishing.

We have also to-day chosen the photograph of another of Mr. John Begg's works in order to illustrate the stairca-e in the hall of the Mount Abn Residency. We have, however, no particulars of the building, which certainly serves to illustrate the versatility of the architect.

These undertakings figure among some thirty-two plates, chiefly reproduced from photographs, and forming the illustra-tions of the official annual report issued by the Office of Public Works in India for the year ending with 1914. The letterpress is written mainly by Mr. Begg, as architect to the Indian Government. Our choice of subjects is to be taken as fairly representative of the type of architectural adoption now in vogue in India under his supervision, aided by the provincial architects at the present time. Certainly these samples are among the best in point of design produced during the twelve months covered by the limits of this architectural review of the year's doings. The average ment of the majority of these Indian buildings is comparable with similar enterprises at home. They are certain y diversified, and this quality, of course, is largely due to the particular purposes for which the designs were made. The collection does not include any big undertakings of outstanding interest. We look, however, in vain for an evidence of any concerted scheme for the evolution of modern building on fresh lines under local conditions following upon historic traditions or as marking the employment of new or

mere and a Characay Post only . perhaps in a be said some tack fundy of idea and imperiability of lesson is she win by the burning. The mem real church at Maymyo, by the life II. Seaten Merris, F.R.I B A . is represented by an interior having semi-circular are es in a brick areade, with piers to may it and bold cushic inshiped cappings. Thus yendine of an official architectimes essastical building is marked by solliness and a brealth of macron expressed in a mod rately suitable and modern way on envil-bunding lines. The extener pe haps is less in accord with a place of waship as



MOUNT ABU RESIDENCY STAIRCASE IN HALL. Mr. J. BEGG, F.R.I.B.A., Architect.

from long distances may account for the likeness of character seen in not a few of these public buildings, in which the architect employed appears to be able to Europeanise most things, though now and again we remark in table exceptions to this tendency. For instance, Mr. John Begg has made a good attempt in the Agra Post Office to illustrate a combination of Eastern forms with European precedents, the whole purpose being con-trolled by a determination to meet con-

lecal materials, in different districts, Possibly such an ideal is not now possible, and facility of transporting building materials from long distances may account for the England, built largely for the Council. in India. He favoure the reconstruction style in a manner familiar to the reconstruction. member his constitutable into the state of this kind as Probar West Land during a long period of years. He We call College Hespital, Lucking a long remaining the spiral content of the spiral content car conege tresparat, thicks in a recreatings and tarress relations with Indian detail, is one of the 1st of his designs. The new Law College, Allahabad, also from his hand, is large and imposing, and Sir Swint in Jacob des gued temporary requirements in a practical and the King Edward Memorial, Vimer. The architectural manner. This also is observe Gwaiior Residency, if hardly conceived on the same precedents, exhibits an attempt to assimilate types of that combine, and successfully scores in making an advance on the contemplated adaptation line towards developments. This last-named londing differs essentially from ideals worked for by the younger generation of architects. We do not say which is preferable, and a comparison would be invitious. In our personal judgment, a dead style can never be brought into line with living aspirations and as a provision in the future. Mr. John Begg has done much in that direction, and much more remains to be accomplished.

# THE ROYAL PHOTOGRAPHIC SOUTHTY'S EXHIBITION.

The sixtieth annual exhibition of the Royal Photographic Society, which opened on Monday at the Suffolk Street Galleries, Pall Mall, suffers from the absence of Continental work, but is a representative display of British camera art of the present day. The collection is arranged in sections embracing pictorial, scientific, technical, colour, professional, and trade work, the last class having found re-admittance, possibly owing to the stress of war conditions, after an absence extending over several years.

As usual, the largest room, the lecture hall, is devoted to the pictorial section, numbering over 170 exhibits, and here the latest impressionist efforts are hung side by side with untouched work. Yos 1 and 2, bromoils by George Brown, have both been taken in Durham City, the first being a view in Framwellgate Street, with the central tower of the cathedral peering d wn upon the pantiled roofs and yellow, rough-cast walls of the low cottages in the left, and the second shows the Abbey Mill on the wooded bank of the River Wear, with the south-west tower if the cathedral above. Two admirable, straightforward representations of Rheims Cathedral before its bombardment are contributed by the veteran artist, Frederick H. Evans. No. 5 depicts the richly carved west portals surmounted by the huge rose window, and No. 8 is an interior view, the point selected being athwart the nave and south aisle, so as to emphasise the deep band of figure carving in the capital of the arcade sup-port. No. 11. Through the Centuries, a bromide by R. H. Lawton, is a peep into the south-west transept of Ely Cathedral. Close by is a fine bromoil by RPerkins. Old Amsterdam," a view along Perkins. Old Amsterdam," a view along a canal to a signed church. Studies in which the problem of introducing the nude trans into idyllic landscape is solved with fair success are submitted by H. Y Summons (No. 19 to 24); one of the best of these is the first.

Amortion, showing a male figure reaching to a wreath just beyond his 2000 Northern His 2028) No 29, "A Northern Height," by k. W. Jackson, is a elever selection of a point where dark fir trees and a sandy rathway combine in an effective and well-contrasted landscape. In  $N \in 32$ . Evening on Derwentwater," by F. Humpherson, on the other hand, the charge of seen on this beautiful lake might easily have been bettered by the inclusion of one of the islands, or some of the bolder mountains. The time and labour expended in deciding upon the happest or most characteristic viewpoint are well utilised by the pictorial artist Of a very different character to the last is "Hamilton, Bermuda, by Moonlight, by Karl Strauss, No. 40, where the dark waters of the harbour throw up the bril-

"The Knife Grinder," by H. W. Fincham.

Among the eccentric studies of still life, demonstrating the catholicity of the hanging committee which accepted them, must be noted Nos. 48, 49, and 50 mere collections of cellos, warning pans, and other miscellaneous and incompatible odds and ends, devoid of arrangement or selection. No. 99, looking across the nave of "S. Pierre, Chartres." is a noteworthy photogravure, and of another type but equally attractive is a forest scene in bromide, No. 103, by A. G. Buckham. Whitby always yields picturesque bits to the camerist, and in No. 104, a bromide, G. B. Clifton has scored by going down to the river's brink at low tide overhung by steep tiers of fishermen's cottages. Two bromides, interiors of St. Bartholomew the Great, attract attention, Nos. 112 and 148, by William II, Collins and R. II. Lawton respectively; the former taken in the ambulatory, and giving a fine effect of shadow and sunlight, is the better picture. II. Essenhigh Corke has this year forsaken his flowers in natural colours, and gives two crowded London scenes in Nos. 123 and 124, "Lower Thames Street" and "Covent Garden," One always looks for the bold and impressionist work of Alvin L. Coburn, and this year he has Alvin L. Coburn, and this year he has three brilliant portraits, an interior of "Munition Works," No. 131, and large prints entitled "Peace"—sheep under cumula clouds—and "War." a battle-ship half-obscured by smoke. Dr. E Stevens gives us in No. 133, "Santa Maria Della Pace, Lago di Como." characteristic scene on that beautiful lake; and near by are two other North Italian scenes, also in oil pigment, John II Gear, Nos. 137 and 138. Fred Judge is not so felicitous as usual in his selection of aspect in his bromoil transfer. "Peterborough," No. 144, showing the north-west tower and pinnacles from the entrance to the Deanery. An attractive bromide is No. 164, "A Westmorland Landscape," by W. L. Shand, and this section is brought to an excellent close with the platinotype "Sunlight on with the platinotype "Sunlight on Lincoln Minster," No. 172, by Victor E. Morris.

Few exhibitions are complete without a view of the unfinished fourteenth century church tower of Dordrecht, as seen across the harbour, and this item, well portrayed, is supplied in G. B. Chiton's contribution, No. 136. Among the portraits the best is the only exhibit by Furley Lewis, No. 165, "A Polish Patriot," a striking and sympathetically treated character study of Ignace Paderewski, in platinotype. Among the transparencies in other rooms in Sections H. and HI. are some fine exhibits, notably No. 411, are some fine exhibits, notably No. 411, are some fine exhibits, notably No. 411, B. Smith; some dexterous copies of water-colour drawings by W. L. F. Wastell, Nos. 490 and 491; and the autochrome slide, No. 502, "The River in Autumn," for which the medal has been awarded by the council to J. Walton Lee, of Dilston-on-Tyne

## TRAINING IN THE METHODS OF TEACHING BUILDING SUBJECTS

inclusion of one of the islands, or some of the bolder mountains. The time and labour expended in deciding upon the happaest or most characteristic viewpoints are well utilised by the pictorial artist. Of a very different character to the last is 'Hamult in Bermuda, by Moonlight,' by Kul Straiss, No. 40, where the dark waters of the harbour throw up the brillant': I glited houses beyond and the trees as aftenettes against a murky sky, A. 2. I character study is the bromide,

were enrolled and completed the course, these gentlemen being selected from a list of applicants from all parts of the country.

Until recent years, isolated class instruc-tion in any selected subject was common, with the result that students did not have time or opportunity to obtain a sufficient time or opportunity to obtain a sufficient grounding in scientific principles to enable them to bring their knowledge to bear directly on problems arising in their advanced studies. The method of grouping classes in recent years has partially overcome this difficulty by enabling teachers to frame "courses" of instruction specially method to the modes of variously groups of suited to the needs of particular groups of students, one of the more important of these being the "building trades group." Accepting the principle of grouped courses as fundamentalty good, the present need is to make these courses efficient in the selection of subject matter, the treatment of such matter to bear directly on the main subject of the group without diminishing the prospect of obtaining fundamental knowledge, and to correlate the work of grouped classes intimately with each other, and with the processes, practice, and professional work of the industry.

The method of dividing the grouped course instruction for convenience of handling and of approaching the problems selected for consideration at this special course may prove interesting

To ensure thoroughness of treatment in the short time available, it was decided to restrict the series of lectures and demonstrations in this case, to work suitable for a student of building entering upon a first-year course of study in a technical school, or the assumption that his preparatory education was sufficient to equip him for the work. This preparatory education for evening students has for some time been receiving cireful attention throughout the country, and in the near future should cease to hamper the introduction of this particular technical

The subject matter of the course was conveniently treated under three heads, viz.:—Building Construction and Drawing, Building Mathematics and Geometry, and Building Science. Particular emphasis was placed throughout on the necessity for and opportunities of correlating these sections. In addition, the careful planning of the course at this stage was thoroughly considered, in order to prepare the student for more advanced work at a later stage.

Generally, the assumption was made that the subject-matter of the course lectures was known to the teachers in attendance, and it was thus possible to deal with the selection and arrangement of class examples and with the problems of class instruction presenting themselves constantly to the teacher.

In considering building construction and drawing the lecturer impressed the necessity for most careful training in draughtsmanship in the early stages, for an acknowledgment of drawing as the best means of communication between the designer and the craftsman or construction, for the elimination of the false from constructional detail, and a consideration of design in order to avoid the ugly or undestrable. He showed the need for a study of the properties of materials, and of the principles of mechanics, in order to appreciate, as the work developed, the principles involved in the selection of materials and in truthful construction.

The lecturer on mathematics and geometry of building attacked the problem of providing a really suitable course of work for building students erected on a sound basis, yet treating the subject in an atmosphere of its own. The lectures were developed from this point of view, and the treatment of the combined subjects everywhere bearing closely upon practical builders' problems was much appreciated. Free use was made of numerous demonstration models, many of which were quite original, and thus, by appeal to the eve, the common difficulties due to the more abstract methods of approach were largely overcome.

In building science the lecturer in charge had considerable difficulties to face, because experienced teachers are only beginning to realise the possibilities and importance of his branch of study. The general impression felt by all concerned was that an excel lent start had been effected in the development of a real "science of building." While the chief concern at this stage was the preparation of a student for work in later years, a close connection between elementary science and the builders' problems was noticeably maintained throughout the course, and much interesting experimental work was accom-

It is felt that this course—the first of its kind-has been a distinct success; the enthusiasm of the student teachers was obvious and it is hoped that the measure of success of this experiment in providing training for building teachers will be continued and deve-loped in future years. It would appear to foreshadow the reorganisation and improvement of technical teaching in this branch of work, and should go far to prove the value of and necessity for special training in order to produce a body of capable men, ready and able to attack the problems of builders' edu-cation thoroughly and scientifically.

The conduct of the course was supervised by Mr. Hugh Davies, H.M. Inspector of

Building Subjects.

The lecturers in charge of the three divisions of the subject were:—Building Construction and Drawing: Mr. W. R. Jaggard, F.R.I.B.A., lecturer in building and architecture at the Northern Polytechnic Insti-Geometry: Mr. F. E. Drury, F.I.S.E.,
M.C.I., head of the Department of Building and Civil Engineering, Royal Technical
Institute, Salford, Building Science: Mr. J. Leask Manson, B.Sc.Eng.(Lond.), M.R.S.L., A.M.C.I., head of the Building Trades Department, Municipal Technical School. Leicester. Mr. W. Munn Rankin, M.Sc., headmaster of the Department of Science and Technology at the Municipal College, Bournemouth, acted as local secretary for the ·course.

## THE EFFICIENT CONTROL OF REIN FORCED CONCRETE CONSTRUCTION.\*

A number of casualties have attended construction in concrete. A sudden collapse of a portion of a reinforced concrete building in a large city, attended with loss of life of workmen, generates in the public mind a fear of concrete construction; and a prospective builder is likely to resort to a less per-manent and less fitting style of building because of the uncertainty. He knows that a concrete building is serviceable and permanent after the cement has set, but he fears the risk arising during construction.

Structural engineers, on the other hand, know that the percentage of failures is small, and the accidents to be avoidable.

Dangerous conditions in reinforced concrete construction arise from (1) inadequate dessigns; (2) defective materials, and (3) unfavourable weather conditions and lack of care under those conditions.

All of these elements may be, and are, controlled in the larger cities by building codes and active inspection. For instance, in the city of Chicago, which has an unusually efficient and watchful building department, there have been no serious failures of reinforced concrete buildings under construction. In this city designs are checked over very carefully to see that they conform with the conservative practice established by the building code of that city.

It is in the smaller cities, that are not large enough to demand permanent buildings, but without building codes, that the most dan-

gerous conditions obtain.

The building codes are thought to be too conservative by some designing engineers of companies interested in the sale of materials. For instance, while these codes generally permit 16,000 lb. stress per sq. in. upon ordinary reinforcing steel, some designers will increase this to 20,000 lb. where the code does not prevent, and under circumstances where the sale of the material depends upon a low total

Many buildings have been erected under designs that are not conservative and yet have given good service. Their construction has been under taxourable conditions with reference to coment, sand, weather condi-tions, and shill of workmen; and the lack of factor of safety in design has been counterbalanced by the increased factor of safety in

Codes, however, must recognise average conditions. The architect or structural engineer or commercial firm supplying material who has drawn upon the factor of safety in design, and then has met unexpected conditions in the materials weather conditions,

etc., and has a follore on his hands, is cer-tainly in a weak position.

The larger number of failures of concrete buildings occur during the late tall when the low temperature and wet weather prevent the cement from hardening properly, At this time, too, the owner is anxious to get into the building. Every one is in haste; forms are struck before the concrete is hard enough to support the floor, above; the roof, which is often the weakest part of the design, is being covered with conders into which the rain seeps. Instead of weighing 45 lb per cubic ft., the weight of these cinders may run up to 100 lb. per cubic ft. Then, too, the plumber may seriously overload a portion of the floor with piles of pipes, may even remove a form support. Under these conditions it is no wonder that failures occur. In the presence of these unfortunate failures a designe" who has furmshed a conservative de sign is in a strong position.

The writer has investigated and made reports upon several failures in which it has been necessary to criticise the design. some of these cases the architect has originally made a conservative design with sufficient materials and proper connections. The sales engineer of a company supplying steel has afterwards prevailed upon the architect and owner to allow a substitute design, latter is shaved down to the lowest limit, inyolving high stress in steel, short laps bond, and defective continuity. While the substitute design will save in the cost of steel, the per cent. saved on the cost of the entire building is usually small, and will not justify the risk of the entire structure.

While recognising the fact that methods of construction and dimensions of structures proceed partly upon experience and the desire for economy, the writer urges that, in the case of reinforced concrete, designs should follow building codes and the report of the conservative practice as fixed by the joint committee on concrete and reinforced concrete which has recently been adopted by the American Society of Civil Engineers and the American Society for Testing Materials.

The standard designs of some of the constructing companies are also reliable and conservative.  $\Lambda$  special mention might be conservative. A special mention might be given to the Kahn standards of the Trussed Concrete Steel Co., Detroit, and those of the Corrugated Bar Co., Buffalo, for the dimensions of beams and girders of ordinary floors and roofs.

The codes, however, are naturally behindhand in respect to the newer forms of con-struction, such as the so-called "flat slab" design.

In construction with new materials the tendency is to follow forms that have been developed for old materials. Thus the first reinforced concrete building used the old wooden construction of girders, floor beams, and slabs between the latter.

In another line the first railway coaches were patterned after stage coaches.

Reinforced concrete, however, is continuous, like the old constructions.

The flat slah designs ount girders and floor beams. There is a continuous slab over the entire floor, and it rests upon and is monolithic with the expanded heads of the

columns. The steel is disposed in either a four way

dem or a two-way system.

These constructions are usually patented. Advantages are: (1) the better lighting of the room, (2) the increased head room, (3) decreased story height, (4) more simple stallation of surinkling systems, (5) simpler form work, and (6) a construction more keeping with the material.

columns passes up to 24 ft. loads and lider spacing. V than for larger When the panel becomes rectangular instead of square, the long side should not exceed the short side more than 3 part

The depth or slab should be at least 1 30

The depart of the expanded lead of the column needs attention. It should be stiff, The steel is in the bottom of the slab at the

centre of the panel, and passes up to the top of the slab near the quarter point of the span.

The steel that passes from one panel another should ap well over into the rext span at least 60 diameters beyond the edge of the column cap. And where both bars are counted upon as reinforcing over the column, they should keep well up in the top of the slab over the column, and run 60 diameters heyond the quarter point of the span.

The amount of steel should be about the

same in the various patented arrangements

for given loads and spans.

Over the column head, the amount of steel should be sufficient to resist an external bending moment equal to 1.15 W.L. f.r. a-terior square panel); where W. total load, live and dead, on panel; L. spin centre to centre of column along direct line.

## ---TOWN PLANNING IN SOUTH AUSTRALIA.

Considerable attention has in recent years heen given to the question of town planning. both by the Government and municipal authorities in South Australia. The opening up of all parts of the State for agriculture has had the effect of stimulating secondary in dustries in and around the metropolis, with the consequent development of the areas; and the need for the systematic arrangement of the suburbs, with the provision of open spaces, has become in reasingly pressing. Definite steps have previously been taken by the Government, and a conference of representatives of suburban corporations and district councils was convened to consider the subject. This resulted in the forma-tion of a committee for the purpose of having some co-ordination in the action to be take: by the municipalities.

Besides the proposal to submit a fill in the coming session of Parliament, the Government have purchased a 300-acre block of land. so that a scheme for the formation of a model settlement may be carried out as an example to those concerned. The area secured is about four miles from Adelaide, and can be served by an extension of the existing railway It is at present being used by the Common

wealth Defence Department.

The Attorney-General 'the Hon. J. H. Vanghan), who is also Minister for Pleasure Resorts, made the following statement in regard to the matter :---

"Careful consideration will be given to the basis of allotment, and we shall endeavour to adopt the system of tenants' co partnership. which has proved so successful in England In the past it has been the practice to throw In the past it has been the practice to throw a reserve into the centre of a community, and say that a town has been planned. Thus, only those whose residences abut on the reserve enjoy its benefits. That will not be done in the case of the new model. Areas will be set apart in different localities, so if it the number who will derive it are in the number who will derive it are I having their homes on the borders of receives will be greatly increased. I have will be greatly increased. I had so to 2 a practical demonstration of sold down a plan which differs from that upon which our suburbs have been begind a fixed a monetory of straight to do not 2 to another at right angles. I have to 3 to 3 it is possible to introduce converse in level which will lend beauty to the restaurching come my of space. It y will aim, not simply to attract one less of results of the straight and simply to attract one less of results. aim, not simply to attract one dent, for we hope to see hope as a few hundred pounds alongside the exhibit run into four figures. At present the military authorities are in possession of the land, and they will be some they will, of course, remain until they have no further use for it. In the meantime surveys will be made; but until the Defence Department is no longer in need of the area, The construction is generally considered nothing further can be done in connection more suitable in leads up to 500 lbs., and with the scheme of settlement."

\*By W. K. Hatt, in the Ohio Architect.

# DEVELOPMENTS IN THE MANUFACULTER AND USE OF BRICK.

By W. D. Alsip,\*

In the very early ages of mankind, burned cary has use vered and was used to house and serve man. It is attended to go into the history of the development of the craft of the K making. We will take burned clay wate that we find on the present market for construction purposes, and see if we can eradicate some of the abuses and create a center apprehension of some of the causes and effects that tend to curtail the use of this best of all fireproof material.

Under the heading "Brick" w

we have a great variety, which I will divide as follows: First, common building brick; second, face bries; third, paving brick; fourth, fire brick.

Common brick are made by several pro cesses. Viz., (a) slop or water-slipped soft mud brick: (b) sand mould, soft mud brick; (c "Auger," plunger machine," wi or st.ft mud brick; (d) dry pressed " plunger machine," ware cut,

(c) hammer machine, semi-dry day brick, a. Slop or water-slipped brick are only manufactured in a small way, and therefore

acred not be considered.

(b Sand mould brick are manufactured by hand, either by a striker or monlder. The clay is prepared (tempered with plenty of water) and delivered on a table. The striker cuts a wedge-shaped slice off, large enough to fill a little more than the mould, and casts it into the mould with force enough to fill the corners and edges. The clay must strike the bottom of the mould first, then spread and n'll from bottom to top to avoid wiping off the sand which has been deposited on mould before coming to the striker, otherwise it will not be possible to get the brick out of the mould, which usually holds six bricks. After the moulds have been filled, the caps or clauds are struck off with a strike-stick, which is taken from a water trough and thrown back to be added to the next mould or brick. The sand mould brick are also manufactured "by hand" a monlder This process is used when clay is fat or sticky and does not leave the mould The moulder cuts off enough clay to equal about a brick and a half, and rolls it in sand forming a pointed claud, which is cast the same as described above, except that the cups are cut off by a wire bow. Sand mould brick to-day are nearly all ma hine-made, and they are an improvement on the hand-made product. Clay used is usually taken from the surface deposits. The brick when burned weigh from 4 to 4½ lb., and are of a more or less porous nature. Canadian standard brick weigh less than most of the American manufacture, owing to the parel or trog which is moulded into the flat or bottom side of the brick. Sewer face, common and fire brick are manufac tured by this process.

(c. Auger machine or wire-cut brick are manufactured from plastic clay with just enough moisture to cause the clay to work into shape. Some machines mould the clay stiff enough to pack or pile eight high with out losing their shape. Shales and surface lay are used. The far clays take much less power. The brick are very dense, and weigh from 5 to 6 lb. Paving, sewer, face and common building brick are manufactured

by this process.

d Dry pressed by a are made of surface and stale clays. The clay must usually be worked and dried and then ground into a fine state. This ground clay or dust contains about seven comes of water per brick. and is fed into the machine, where it is subperted to enormous pressure. In some dis-tricts common banding bro, are manufa-1: this process. Hammer made have brick are made by a

e Hammer mastene ones are made by a mastene the tamps the clay into the mound, in near the same manner as a quartz stamp mill. These machines are only used, I be I even in the St. Leuis, Moor, district, and doubtless they will soon, disappear.

## THE USES OF BRICK.

We have some to the uses of brick. Most uses of ir a have sufficient strength to correctly each required of them in ordinately.

Plestient As I Br. & Tile and Lumber Company.

nary bunding. Your local engineer will letermine and pass on all questions of this Your local engineer will There is little room to doubt the strength of a brick which has been built into a twelve or lifteen story skyscraper, and found not wanting. Such a brick will or should be accepted for stores, warehouses. dwellings and structures requiring less pres where concentrated loads are to be carried on piers, or at enus of steel beams, clinker brick or paving brick should be used. Brick laid up in lime mortar make a good wall, but when laid in mortar cement, a wall is produced that is nearly indestructable and will stand for generations. In cold climates, such as prevail in Western Canada. the architect and builder must keep in mind the power of the various kinds of brick to resist cold. A porous body will absorb and conduct much less cold or heat than a solid or dense body; therefore in selecting brick for building a wall for a dwe for a dwelling where the walls are only 9 in, and 13 in, thick a porons brick will make a much warmer house. The same applies to blocks, stores and apartments, where steel or remforced concrete are used. The curtain walls are light, and therefore must be built with brick that will be as nearly non-conductive as possible. The old-fashioned stone house, the new concrete house, and the wall built of vitrified street pavers are all the best old conductors it is possible to select, and if these materials must be adopted, then the best backing or lining should be used to ensure a warm building. A stone or con-A stone or concrete wall should be lined on the inside with porous hollow brick, to which at least 25 per ent, sawdust has been added, and burned out, producing a fireproof body much like The cork. plastering may be directly on these brick, and no bad effects will be produced in the coldest weather Walls finished with water-coloured kalsomine have stood season after season in kitchens and laundries when this method of construction has been adopted.

The old method of furring or strapping the walls and lath and plastering is not as effective, as it is found nearly impossible to keep the air in the room from coming into contact with the wall and forming frost or dampness, which in turn forms mould or must, which, when dried out, forms dust, which permeates the rooms and is the cause Many cases of hay fever, of much sickness. tuberculosis, rheumatism, and kindred ailments can be traced to damp houses. Damp, cold houses are not caused—as many believe—by the moisture passing through the walls. by the walls becoming cold or hot, and then having hot or cold air coming in contact with them, causing the moisture in the air to condense and deposit drops of water, unch as a glass pitcher will do when filled with cold water on a humid day. In building a block, warehouse, or home, as much and more care should be exercised in selecting the brick for the different parts of the work as is used in selecting material for any other part of the building.

A freight depôt or warehouse might require vitrified paying brick to stand the hard knocks, and keep clean of soot and dirt in a down town district. A stable would have to be built better and with more care—as to the ability of the structure to keep drythan perhaps any other building. The large amount of moisture thrown off by a stable full or horses, just in from heavy work, will condense on the walls of a concrete, stone or solid brick wall, but when lined up with porous, hollow brick or tile this is almost it not entirely—overcome. For a dwelling he use a faced brick, more or less porous, that will keep clean and ripen in appearance by age, is preferable to a more dense or water-proof brack, and when backed up with a potous hollow brack or block it will produce a dry, warm house that will save fuel, do away with draughts, and be a joy to the owner all his life. Speaking of draughts, often in a house where windows and doors are arright there is a constant draught in cold weather, caused by the heated air of the room coming in contact with the cold, solid wall. The cool air settles to the floor and is drawn toward. and is drawn towards it, causing a draught

that is very disagreeable and apt to cause colds and ill-health to the occupants.

In conclusion, this slogan should be adopted by all builders: "The best is not too good. -Canadaan Contract Record.

## ---Currente Calamo.

Mr. Tennant, the Under-Secretary for War, is seldom happy in his replies to queries about his department. The instance given by Mr Stanley Peach in his letter on another page is, however, one of the most flagrant. Mr. Tennant recently stated that the offer of the Royal Institute of British Architects to assist the department "was not received until May, 1915, when the greater part of the work of creeting wooden huts for the troops had been finished; hence comparatively little advantage could be gained by the War Department availing itself of the offer." Our own readers have, of course, already concluded that this statement was untrue, knowing, as they do, that the offer was made on September 11, 1914. They have possibly imagined that, maintaining its reputation as a branch of the Circumlocution Office, it forgot or neglected to accept the offer till the need was past. This is not so, as Mr. Peach's letter makes clear. On September 23, 1914, a letter was received from the War Office acknowledging the receipt of the letter and stating that "the Army Council much appreciates the patriotism which has prompted the offer, which has been noted for future use." Why was the offer not utilised? Will somebody ask Mr. Tennant that when Parliament reassembles, if only to elicit another of his informative replies?

Mr. Ernest Newton, P.R.I.B.A., emphasises in a letter to the Times the disastrous' idiotey of the Parliamentary War Savings Committee's recommendation that "No one should build a house for himself at this time,' and that "Decorations and enlargements should be cut down as much as possible." he points out :--

he points out:—

"To stop all but absolutely necessary building would no doubt keep money in the pockets of those able perhaps to antord a modest and prudent expenditure in house building, decorating, and furnishing, but it would entirely deprive of all means of livelihood a very large number of people beyond military age and with no aptitude for munition making or other definite war work, even if it could be tound for them. These men must inevitably become a burden on the community, and, consequently, what is saved in one direction is lost in another. Almost everyone connected, directly or indirectly, with building work already finds his income greatly reduced; mdeed, in some cases the vanishing point is almost in sight, and it work of this nature excess entirely complete rum is mevitable."

That matters little, possibly, to well-salaried

That matters little, possibly, to well-salaried placemen who seem to have little to do but indite these fatuous recommendations to "economy" which is no economy, but really penny-wise and pound-foolish blindness. Nocalling has sent more men to the colours than that of architecture proportionately to its numbers, and no great group of industries adds more remuneratively to the solid wealth of the nation than those connected with building. On all sides the need for our work is urgent-more so than for many years pastand to stop it and turn hundreds of thousands of willing workers into panpers, and thus increase the heavy burdens borne by the rest of the community, is egregious folly. Even half bankrupt Austria—so a Vienna telegram stated not many days since—is raising money to keep architects and sculptors at work on the public buildings and monuments of the capital, while our own "economists" are doing their best to penalise an industry which at the beginning of the war it was distinctly promised should be encouraged wherever possible.

Most of the disputes in the building trade-1 - 1 and those fought out with the greatest new local bity have alls non-the question as to that work should be executed by men in branches to the of affiliated intons, such as the bricklayers plot of and carper ters and joiners, and work by mer the in ontside branches, including the plumbers that the land plasterers. For a considerable period Halling to the land plasterers. efforts have been made by the National Collins efforts have been made by the National variable ciliation. Board to frame regulations which seeking shall be mutually acceptable to building that have shall be mutually acceptable to building that have some trade innered building. employers and to the various trade unicity settling the lites of demonstration between the settling the lines of demonstron between the particle of the solutions, which have the particle of the National Country of the Support of the Support of the National Country of the Support crowned with success that the dualt proposals the proposals of the second to the condition of the workers and the unions for their consideration. It they are mutually agreed upon they will be brought to the present place to take the proof of the present place. The authorities to the present place to take the proof of the present place the proof of the present place to take the proof of the present place the proof of the proof of the proof of the present place the proof of the pro of the proposed regulations has appeared in some of the daily papers this week, but it is incomplete, and, without its context, buildly provided. These double being not nature of tree, 5d.—It incomplete, and, without its context, hardly comprehensible. For the present, and probably till after October 11, the full details are not likely to be published at any rate. authoritatively.

A case of some interest to the lon dang trades, which in many ways seem the scapegoats of law and order just now, has just oeen decided in the Court of Crim nal Appeal The appellant, a bricklayer, was sentenced as the Middlesex Sessions to nine months' hard labour for having, as was alleged, housebreaking implements in his possess in at night. He was, it seems, found in possession of a large chisel and a screw-driver, and he complained on appeal that the onus was thrown on him at the trial not only to prove that he was in lawful possession of the tools. but that he did not intend to use them un lawfully. The Court quashed the conviction: holding that the onus could not and should not have been thrown on the appellant. Mr Justice Bailhache very sensibly remarked that if a bricklayer going home late at night with his tools could be called upon to are out for his possession of them, the tride was one to be avoided, for every bricklayer in such a position was liable to be locked up.

While discouraging work at home, the Gov ernment, moreover, seems to be sending a good deal abroad. The Canadian Contract Record, in its issue of August 4, says the report is that the British Government has been negotiating for the purchase of all kinds of portable structures to be taken to Northern France and Belgium to replace temporarily the dwellings, churches and schools which have been laid low in that ravaged territory A large Brooklyn firm has been ment oned in connection with one of the most important contracts which are to be awarded; but the requirements are on such a huge scale that Canada cannot fail to receive a share of the business and a considerably greater share of subsequent orders of the kind. It is said that the contracts now pending include one for the construction of 20,000 portable houses -the largest single contract ever given for buildings of this type. Entire cities and towns are being created from them to house the refugees made homeless by the high tide of the German advance into France. The buildings are to be so constructed that they can be set up quickly upon their arrival in France. Shipment is to begin early in the lines. Market if the contract goes through. fall it the contract goes through.

P 10 to as the background. Under these conditions the sale of it to courts would go down at hist a turnover of £120,000,000. It is suggested Exchequer, which - more than the amount received by the State before the war, and that the balance £42,000,000 per year go to a National and Municipal Development Fund tor the following purposes. People's pulaces should ultimately take the place of the present public houses, and should be built and mountimed out of the profits of the higher triffic. In these a special reature should be heverages. Ample to evis on should be made for recreation and issument and instruction, with lecture half, withter garden, reading and writing from, reference library, and rooms for friendly and other societies and private par tres. Music should be provided, and all sorts of games rateral for, both under cover and in the open or. The people's palaces should be maniged by a committee composed of memhers of the local authorities, with one third co-opted from trade union and other organisations. Under the heading of amusements, the author advocates that all theatres, musichalls, and emenatographs should be national used, and curried on by the State to meet in terest and sinking fund therges, and not to make a profit. He tay ours also hosp tals, in firmaties, and convalescent homes hemz taken over by the State, as well as institutions for the hore the blind, deaf and damb, cripples, and for hor.

The solution of Harastitian W thing Classes as correlated to the post of long It a bears in a particulate South to be left point of a particular to the South One of a south over the trace of a total to the south of the south o

## Our Illustrations.

CONTEMPORARY ARCHITECTURE IN

INDIA.

A description of the boundaries in this sheet we be for 100 and article to slave.

WEEK END COTTAGE, GOWER NEAR

WEEK END COTTAGE, GOWLE NEAR SWANSEA.

This drawing draws the experience for terror of a small week and it traced good to be built at Green read and the property of the plans explain the account of the property of the The materials to be read upon the form of a faced tiles for roof and white and the state of the all external will. The interest of the Gleichian in Movement FRIBA Scales and SMALL DOWN TOSKILENE WILLIAM.

# SMALLPOX HOSPITAL, WHITE HAVEN.

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The accompanying spect of them The accommy news as training the chosen design is a training out that it is nightly to easily to 2 so the control of the contr out that it is nurshly to easily to 2 or 1, by way of description. The arrive to Mr. II. Iriving Grammo, it E by Bay. II. it rington, Cumberland. The circlette defor tachye beds, equally dividently. The circlette defor tachye beds, equally dividently. The circlette and female patients. The circlette irivalence of the surface and female patients. The circlette irivalence of the surface and the circlette irivalence of the surface surface. Each patient the circlette was slates. Each patient the circlette and the circlette irivalence of the circlette irivalenc rom contras (1984), small uplos that i free in the wirls (1984), which was Aug ets.

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tht hand ower corner of our plate. The stimate for this part of the premises is set a sn at £101, but if reinforced concrete considerable saving would be effected in the cost of the scheme as a whole

## DUNBLANE CATHEDRAL, PERTH SHIRE, SCOTLAND, MEASURED DRAWING OF THE W. FRONT.

Our last illustrations, in our issue of De-ember 1c. 1914, of this famous Scotch (at ledia), comprising double and single page hatographic plates, were of the new and mater oak stalls, "altar" screen and ornate wak stalls, "altar" screen and organ case, carried out from the designs of Sir Robert Lorimer, A.R.S.A. Our earliest grawings of the church, specially worth reference, appeared on May 20 and in October, 187c, from the masterly pen of the late Edward Francis C. Clarke, showing the west grade and produced at the characteristic of the late of the produced at the characteristic of the late. mate link tagade and south aisle, recording the work as a then stood in comparative run. Mr. J. 8 G/bson, F.R.I.B.A., also lent us a view from his sketch-book representing the interior of the nave of Dunblane looking west, in the BUILDING NEWS for July 24, 1885, which, of ourse, was long prior also to the restoration, course, was long prior also to the restoration. Mr. William Ferguson, of Glasgow, published in oar pages an exterior view of the west front on December 13, 1878. Sir R Rowand Anderson, LL.D., re-roofed the nave and testored the cathedall about twenty years since, and furnished us with a most interest. mg account of the history and description of the building when we devoted a double page to the accurate plan which the architect had to the accurate plan which the architect had made and a general view of the church as tenistated by him see Building News for December I. 1893). The Mural Memorial erected to the Stirlings of Keir on the east wall of the north aisle of the nave was designed by the same vectorial Science has been declared. signed by the same veteran Scottish architect in 1912, when we reproduced a photograph of the work on March 22 that year. To-day we are able to give a double page of measured drawings of the elegant frontispicce of Dimblane Cathedral delineated by Mr. Scott Lawson, of the Royal College of Arts Daublane Cathedral occupies the site which Durblane Cathedral occupies the site which is a timately associated with the introduction of Christianity into Scotland when Blaan visited the North of Great Britain from Iroland at the end of the sixth or beginning of the seventh century. The monastery of the the seventh entury. The monastery of the Caldees was founded by him, and he became their abbot and bishop. Four centuries later Bishop Clement has left a record of the sadly decayed condition of this very early Scotch church at Danblane, which had then for some while suffered in competition with the Culdee's newer mourstic foundation at Muthill and thus the ancient mother church stor verger on the brink of rum. Clement was a Dominican, and in 1233 he became Bishop of the Diocese, and from that time the turn-only point in the history of Dumblane was reached. It is his building which still is more or less preserved for the edification of all stadents of architecture. The see had all stadents of architecture. The see had much to contend with in those days; at last the church authorities acknowledged the Earls of Stratherne and their feudal claims, into its records testify to many phases of political trouble and also neglect of the atloded, while contests raged now and again tetween the rival factions of Ecclesias. then order, and then came Protestant inroads, though the Popish roof "remained on the walls of the choir. The nave for ages was walls of the choir. The nave for ages was left open to the weather and the sky, having the roof whatever. The church, as we have the building consists of a choir, 80 ft. ong lev 23 ft in declinating on the north wide of a long, as lelike apartment of two flours, the loner one being vanited, and a same the corth and a large the corth of south aisless, 129 ft, long by 55 ft broad, and divided into eight bays. A tower rises on the south side opposite the fifth tower rises on the south side apposite the fifth bar, coincired from the west, 22 ft. square and 27 ft. 1/2h. surmounted by a slate spire over 2) ft soil. The hulding is, with the except of a tracker two thirds of the tower. and 97 ft. Fight, surmounted by a slate spire over 2.1 ft. full. The hulding is, with the except of the Unit worther is if the tower discrete of the term chancel, implying a screened-in place or sanctuary. The ciborium or half discrete full and is the structure creeted darbin generally met with in the churches by Brokep Comert, who ruled over the Discrete full to the full formal in such the sanctuary. The ciborium or half darbin generally met with in the churches of Italy over altars, and having richly embroadered langings suspended either as doson to the fact to add ton. It may belong to the sanctuary of the sanctuary. The sanctuary of the reservation of the sacrament. The Jubb at Distingle ranked among the most remarkable of its kind and was exception.

no relation to any part of the cathedral, and no structural indications exist to show what position it occupied relatively to the early building of which it formed a part. The top part of the tower belongs to the end of the fifteenth century The west end has always been greatly admired. The vesica window in the apex has been made famous by a poetical, but most in-accurate, description of it by Ruskin, in his accurate, description of it by Ruskin, if his Edinburgh lecture. There being no vaulting to the aisles, there is no triforaum. The clerestory comes immediately above the nave arches. There is a passage in the thickness of the wall, and the inside face consists of a series of moulded arches two to each bay of the nave areade and richly moulded, but only about half of the series being filled with aroun nam of the series being filled with tracery. The outside or west window face corresponds with the internal treatment of the design, but the mullions and tracery are quite plant. The aisle windows are all alike scept the end ones and the east, which are divided into four lights, the others having five. There can be no doubt that every care was taken by Dr. Rowand Anderson to carefully repair and retain all that could be preserved of the old fabric, and his restoration has most certainly saved the cathedral from becoming a heap of ruins, for it might well have collapsed at any moment, owing to its neglected state when he took up the repairs Lawson sends us the following notes as to the subject of his excellent drawing, which, of course, shows one of the finest parts of the cathedral: On the ground floor the western doorway is deeply recessed with a series of shafts and arch mouldings of the first pointed period of design flanked by an first pointed period of design flanked by an acutely pointed blind arch on each side with trefoiled head within it. This lower stage is surmounted by three lofty, pointed windows all of equal height, and each divided with two lights by a central mullion, and having the arched head filled in this central window by a cinquefoil, the side lights being finished with quatrefoils. These windows are enclosed with a label moulding having carved terminals, which have weathered badly. jambs and arches have plain triple splays and the opening in the arched heads are cut out like the windows of the clerestory. A passage similar to the clerestory one runs round at the west end with an inner areade of clustered shafts and mouldings all corresponding. In the internal areade the three gable is occupied by an elegant vesica piscis to which Ruskin directs particular attention m the reprint of his Edinburgh lectures.

## JUBE, DIXMUDE, BELGIUM. (DEVOLISHED BY THE GERMANS

This exquisite and highly ornate 15th Century screen, one of the most beautiful in Belgium among Flemish masterpieces of applied design and Gothic workmanship, has been destroyed by the German vandals during their wanton devastation in Flanders. We are indebted to the Rev. Ernest Geldart of Dorking, for the loan of the accompanying photographic illustration now reproduced. Much less open in its design than our Eng-hsh Rood screens, and in this respect also differing from examples of the more usual Jubé, such as that in Limoges Cathedral, it has rather more the character of the Greek Iconostasis so familiar in Eastern churches. The custom of drawing a veil round Christian altars crystallised during the Middle Ages into the very general practice of setting up structural screens, built of stom or timber, while in Spain, particularly, wrought iron and metal formed the material largely employed. This Jubé at Dixmude in righty employed. This affice at Prixinois is not without Spanish influence, judging by its elaborate Pateresque character and mannerism. The use of enclosures and screens in churches naturally led to grand the property of the property and imposing erections, and from them arose

ally rich in its detail. The rood, however, had for a long time been absent. The central figure in the screen itself represents the Majesty of the Godhead of the Risen Lord, majesty of the Gomean of the Risen Lord, who is depicted in the midst supported by adoring angels. The choir organ, which was added later, rose, as the photograph shows, above the Jube, and it had a wooden gallery of still later date, extending right and left of the organ. The word Jubé and left of the organ. primarily meant a pulpit or ambon or a reading desk or place, more commonly designated the rood loft, in some instances taking the form of a narrow gallery, positioned for the greater part in the usually accepted situation between the nave and the choir. France the term became to be applied in this wider sense from the first words uttered by the Gospeller, be he abbot, bishop, or merely the celebrating priest—"Jubé Domine bene-ducere." The reason why the Gospel was read from so elevated a position was definitely given by Pope Innocent III: it is that the ministers who proclaim the Evangel of the Gospels should go up on high, as said the prophet Isaiah, "Super montem excelsum ascende tu, qui Evangelizas Sion, exalta in fortitudine vocem tuam." The screen when complete, therefore, had a platform usually about 6 or 8 ft. wide, from whence the laity were addressed, and for the most part it was here the Gospel was recited, at least on Festivals during the celebration of the High Mass, this signification being participated in Mass, this signification being participated in and understood by the entire congregation worshipping in the nave. "The Lenten veil," suspended on the Western face of chancel screens, shut off the choir of the building for a different purpose when the veil separated the priests from the people thus temporarily. The Anglo-Saxon pontife the procedure of the choir of the choir of the separated the priests from the people thus temporarily. thus temporarily. The Anglo-Saxon ponti-fical provided for this, and in their small churches in those days a curtain was stretched across the commonly quite narrow chancel, and so the draperies were easily there exists the adjusted. At Salisbury there exists the remains of a winch, used to haul up a much bigger veil, which indicates the position adopted in that fine 13th Century cathedral. and we fancy there is also a similar record. existing in Durham Cathedral. This Jube at Dixmude stood, till the Germans smashed it up, in a perfect condition, unaltered since its erection in the time of the Spanish occupation of the Low Countries, except that the organ had taken the place of the Rood itself, and this accounts really for the absence of that usually essential feature as mentioned in the earlier paragraph of these few descriptive notes.

While exervations were being made on the With exercitors were being hade on the north side of the Abbey Churchyard at Dunfermline there has been discovered the foundations of an old wall, about 2 ft. in depth and of equal thickness, faced with hewn stones, about 50 ft. in length.

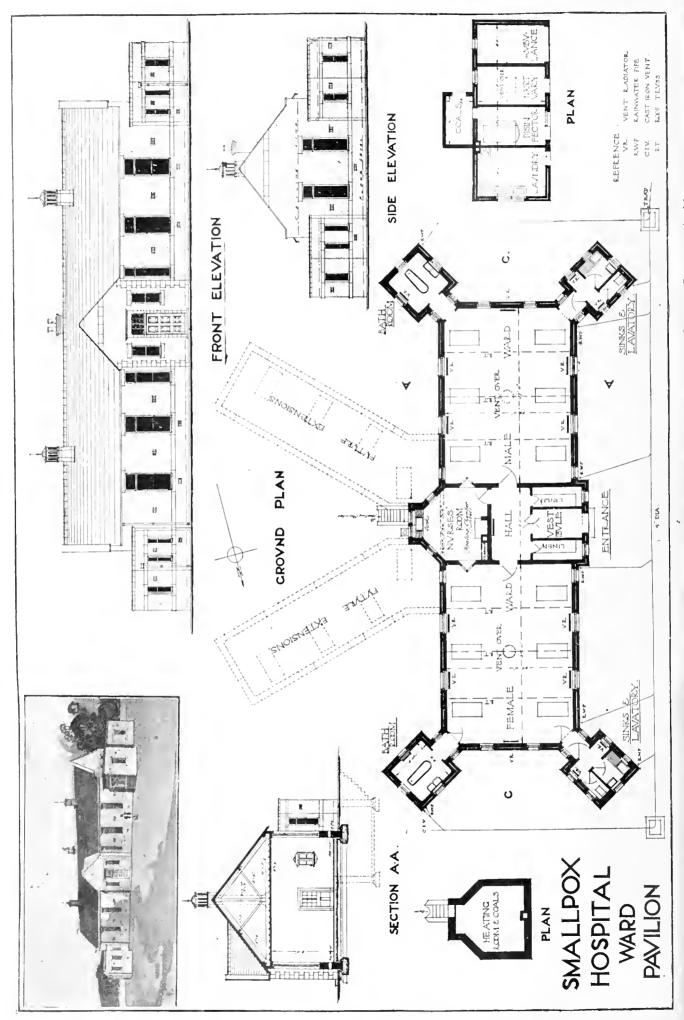
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A Carnaryonshire correspondent points out A Carnaryonshire correspondent points out that while galvanised iron has gone up to about double its price before the war, slate can be bought to-day at the same rate as twenty years ago. He suggests that slate cisterns are now more economical than those constructed of galvanised iron.

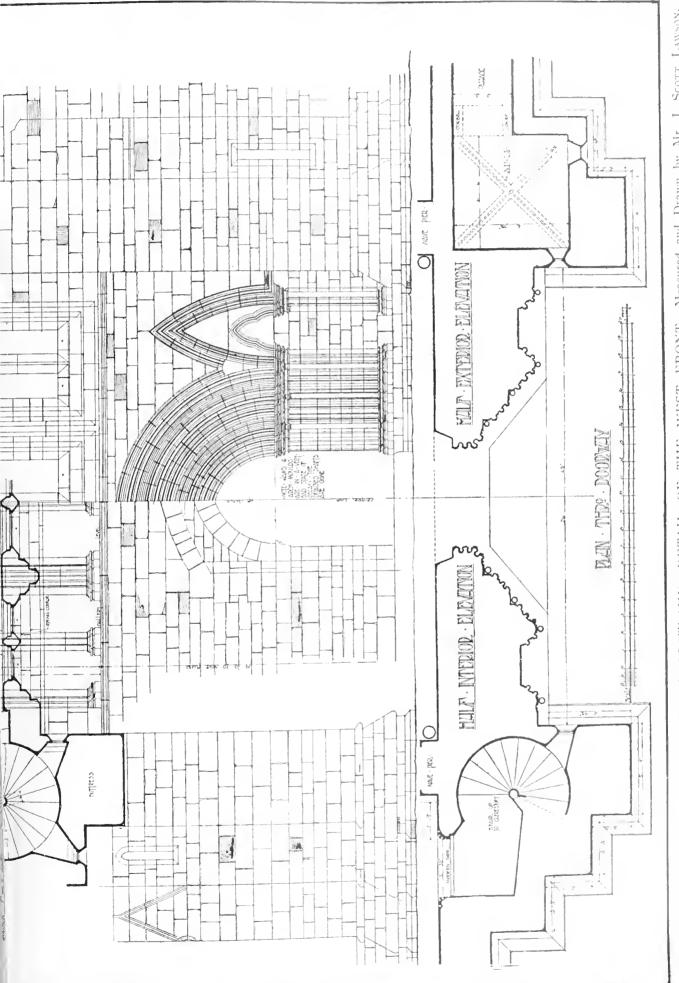
The Secretary of State for India has appointed the undermentioned gentlemen to be pointed the undermentioned gentlemen to be assistant engineers in the Indian Public Works and State Railway Departments: G. F. Bal-four, Datt Dev, N. N. Farrell, F. H. Hogshaw, H. G. Jackson, Mian Muhammad Khan, J. L. Rey, L. St. Clare Rundlett, and J. Woodside.

The council of the Union Jack Club have purchased, for £9,500, land on the north side of their premises in Waterloo Road, S.E., on which an extension of the club for soldiers and sailors will be built. The existing institution was erected in 1907 from plans by Mr. H. B. Measures, F.R.I.B.A. and this cost £85.000.

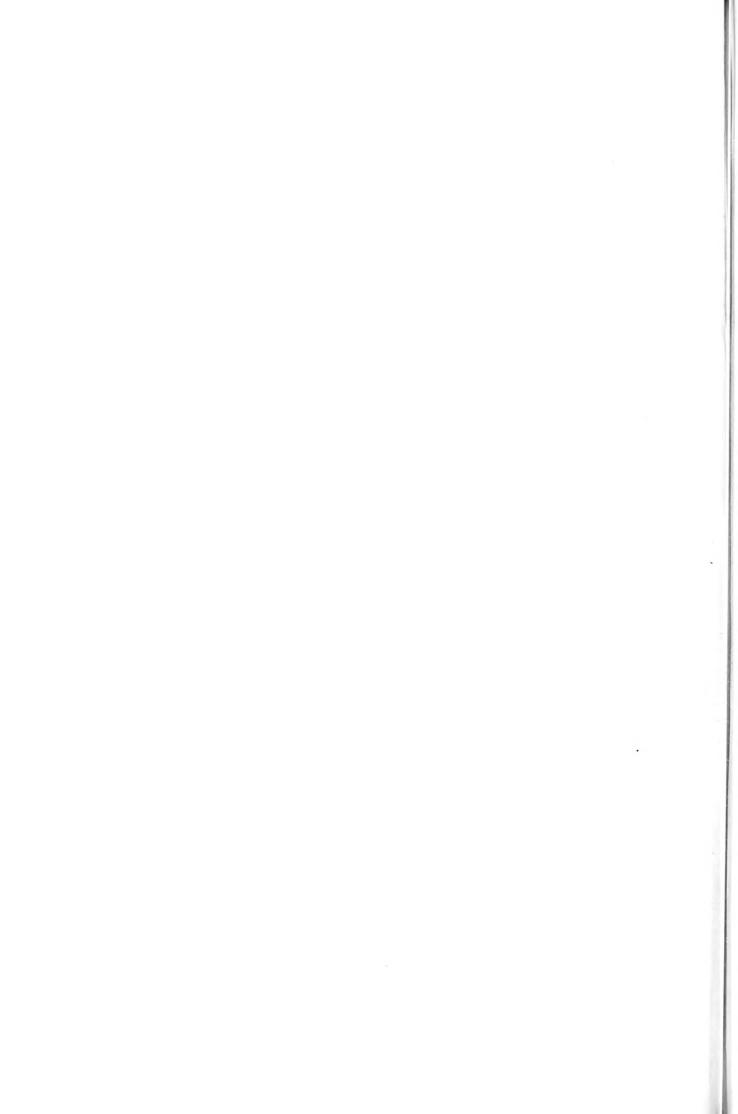
Second Lieutenant William Stewart Collen, 6th Royal Inniskilling Fusiliers, who was officially reported on Monday to have been killed while serving with the Mediterranean Expeditionary Force, was a son of Mr. Joseph Collen, of Homestead, Dundrum, Dublin He was educated at the Methedist College, Belfist, and Cambrilge University, and was in business with his father in the firm of Collen Brothers, builders. He was twenty six years of age. Second Lieutenant William Stewart Collen,



SELECTED DESIGN -Mr H IRVING GRAHAM Architect WHITEHAVEN SMAII POY HOSPITAL



SCOTT LAWSON. DUNBLANE CATHEDRAL, PERTHSHIRE, SCOTLAND, DETAIL OF THE WEST FRONT,-Measured and Drawn by Mr. J.



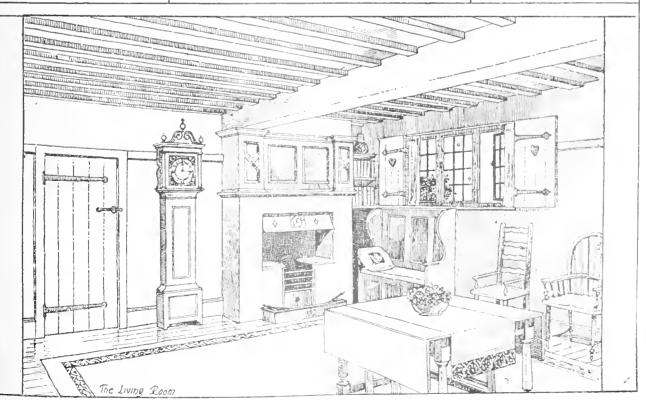




# WEEKEND · COTTAGE AT GOWER NR SWANSEA

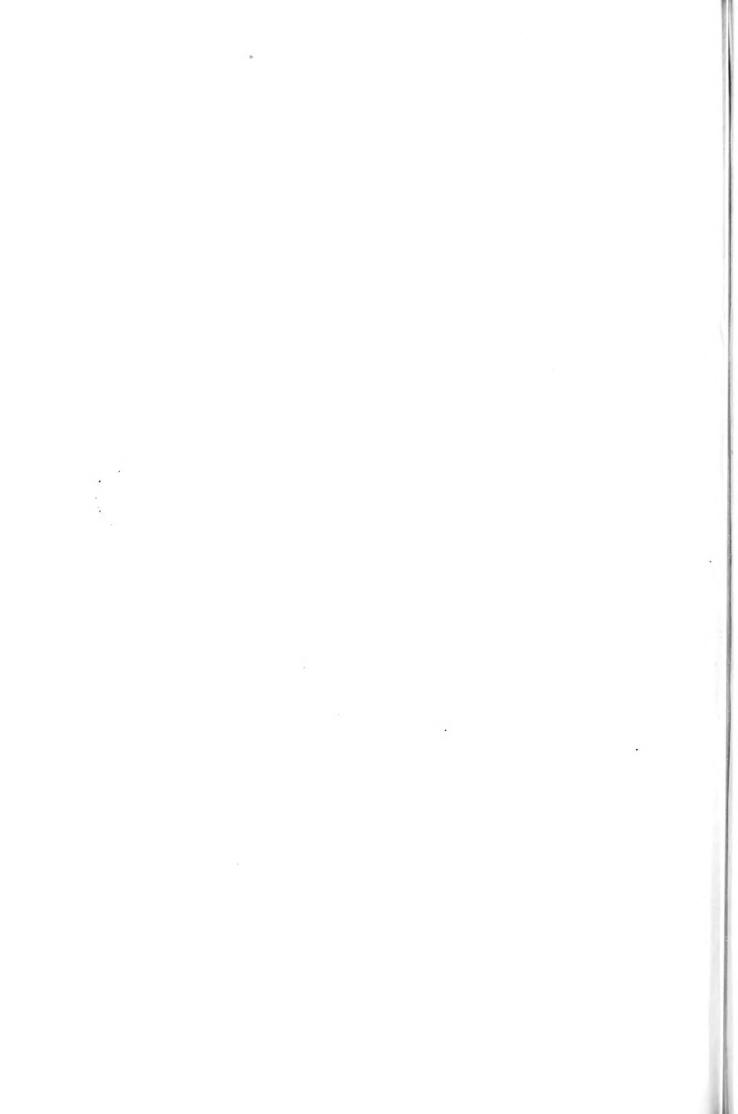
· Glendinning · Moxham · FRIBA · Architect · Swanses ·





WEEK-END COTTAGE, GOWER, NEAR SWANSEA.

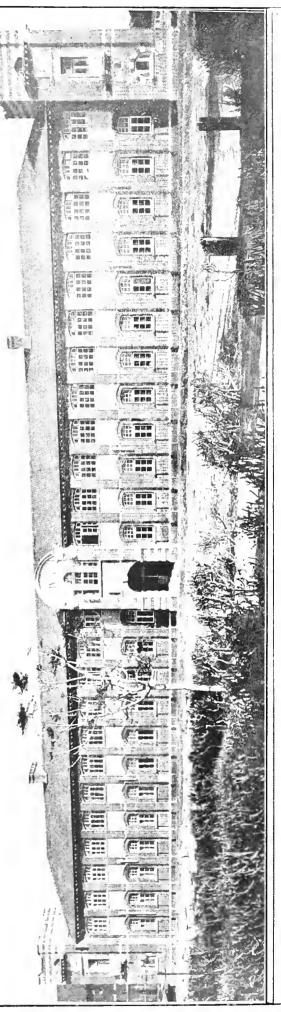
Mr. Glendinning Modellan, F.R.I.B.A., Architect.



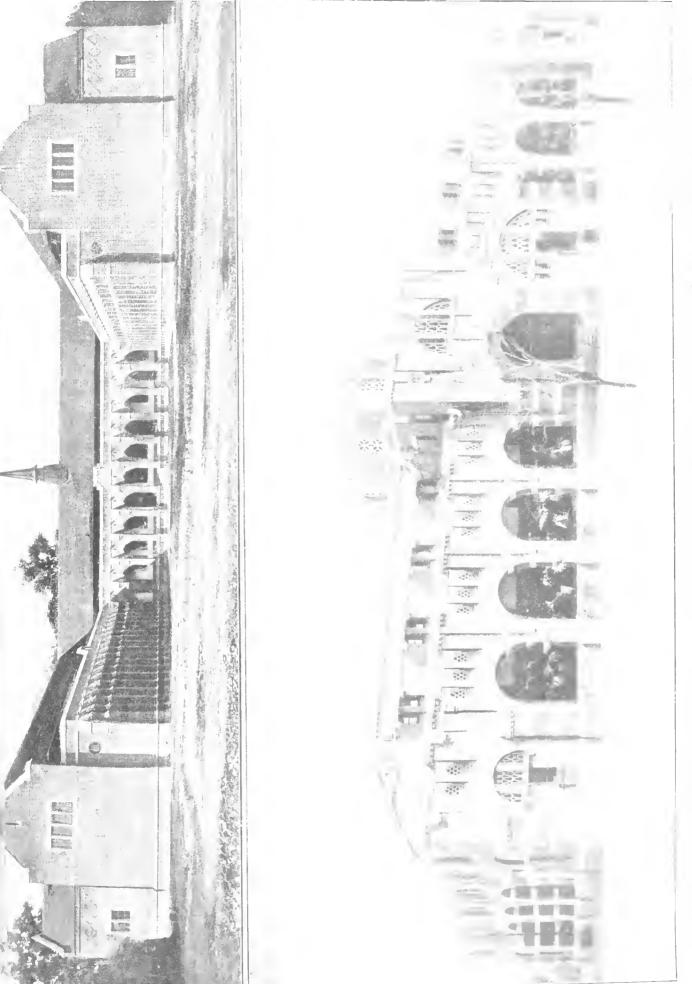


POONA. STUDENTS' HOSTEL, AGRICULTURAL COLLEGE 11 Mrs.

SCIENCE INSTITUTE, GUJRAT COLLEGE, AHMEDABAD.

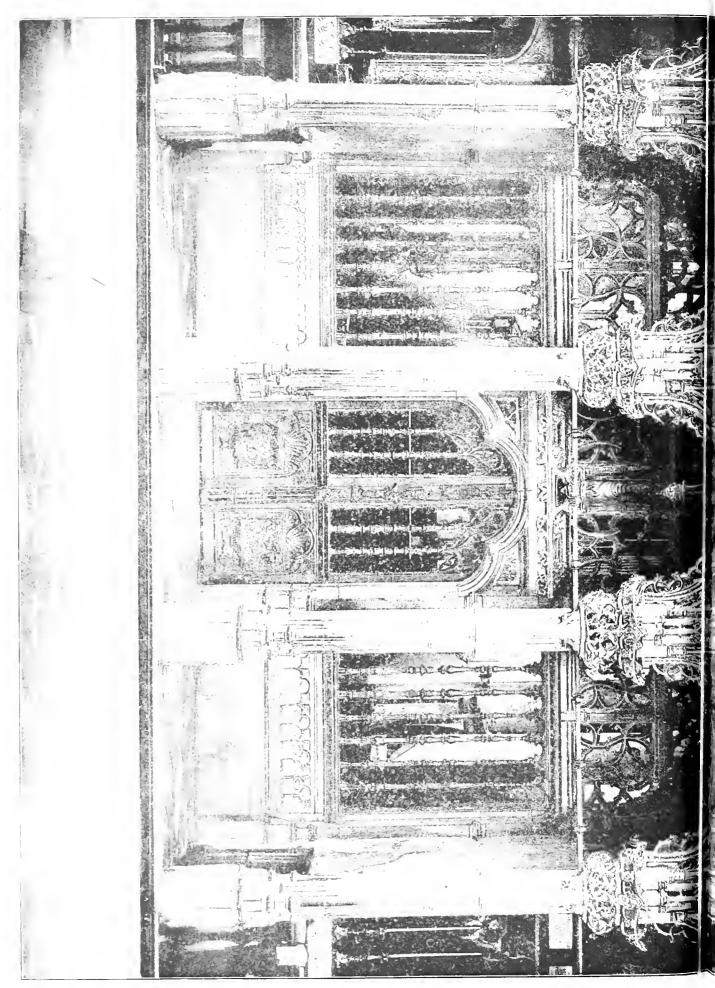


CIVIL COURT HOUSE, JUBBULPORE.











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# Our Office Table.

Professional men who have practical experi ence in various branches and grades of the engineering trades and are anxious at the present time to place their services at the disposal of the Government are invited by the Board of Trade to consider the possibility of undertaking manual work in connection with the production of munitions of war. The great need of the moment, an announce ment issued by the Board states, is for skilled mechanics (turners, fitters, millskilled mechanics (unriers, inters, inters, minimizers, etc.). Men whose training has included engineering workshop experience can now do valuable service by offering to do manual work at the usual rates of payment for such work. They will not displace any skilled workman who is already employed or significant the control of the contr is capable of being employed upon the production of munitions. They will simply increase the army of those who, by work at home, help the Armies abroad. Professional men who wish to offer their services to this end should send full particulars of their qualifica-tions to the "Engineers' War Service Re-gister," Queen Anne's Chambers, West-

The contract for the extension and improvement of Freemasons' Hall, in accordance with the resolution of Grand Lodge of December 3, 1913, was signed with Messrs. John Greenwood, Limited, on April 19, 1915, and the works were started within a few days. Owing greatly, however, to a difficulty with owners of adjoining property over party wall questions and agreements respecting infringements of ancient light rights—two of which, lacanse of delays which the board has striven of ancient to avoid, remain uncompleted—the works have proceeded slowly; but the site has been excavated, the foundations of most of the walls are in, and in parts the walls have been carried up to above ground-floor level, while the necessary works to party walls and under-pinning are in hand, as well as the prepara-tory work for the erection of stanchions Another cause of delay has been the difficulty which exists in obtaining an adequate supply of labour because of the war: but, though this is likely to continue, much more progress is to be anticipated in the immediate uturs

Attention is directed to the architecture and construction classes held at the London County Council Camberwell School of Arts and Crafts, Peckham Road, S.E. (principal, W. B. Dalton). Architectural of Arts and Crafts, Feekham Moon, Scholicetural Design, Monday and Wednesday, 7-9-30 p.m.; teacher, Mr. W. T. Benslyn, A.R.L.B.A., A.R.C.A. (architect). Architectural Draw-A.R.C.A. (architect). Architectural Drawing, Thursday, 7-9.30 p.m.; teachers, Mr. F. A. Llewellyn and Mr. W. S. Owen, M.A., A.R.I.B.A. Architectural History, Friday, 7.30-9.30 p.m.; teacher, Mr. E. A. Young, A.R.I.B.A. Building Construction, Tuesday, 7-9.30 p.m.; teachers, Mr. F. E. Webster, A.R.I.B.A., P.A.S.I., and Mr. F. A. Llewellyn, A.R.I.B.A., P.A. Llewellyn, A.R.I.B.A., P.A.S.I., and Mr. F. A. Llewellyn, A.R.I.B.A., P.A.S.I., and A.R.I.B.A., P.A.S.I., and A.R.I.B.A., P.A.B.I., and A.R.I.B.A., A.R.I.B.A., A.R.I.B.A., A.R.I.B.A., A.R.I.B.A., A.R.I.B.A., A.R.I.B.A., A.R.I.B.A., lyn. A class for the study of the history of decoration is conducted on Tuesday evenings by Mr. H. Davis Richter, R.B.A. Fees for those engaged in the profession or a kindred occupation and qualified for admission to the school:—Free if under 21 years of age: 4s. 6d. the session if not earning over 30s. a week: 10s. the session if earning over 30s, a week Further particulars may be obtained on appli cation to the Secretary at the school.

At the last meeting of the town council of Aberdeen a discussion took place on the ques-tion of filling up the vacancy in the appointment of burgh surveyor. The Finance mittee, by a majority, reported that, having regard to the present and prospective charac-ter of the duties devolving on the water engineer in connection with the city water supply, they were of oninion that it would be inexpedient to adopt the proposal to amalgamate the offices of burgh surveyor and water engineer, and recommended that the filling up of the appointment should, in the meantime, he delayed, and the existing arrangements for carrying on the work of the burgh sur-veyor's department continued. An amendment moved by Treasurer Stewart that the offices of burgh surveyor and water engineer be amalgamated, and that the present water engineer (Mr. Cocil II. Roberts) be

appears (1.1) the contenest office at a smar of £7% october a state spected. The Treat smer maintained that the adopt not the proposal would effect a average of between £1,500 and £1,400 a year. By 19 votes to 11 a further amendment was adopted. This resolved—"(1) That a special committee be appointed, along with the City Chamberlain, to prepare a statement, financial and other wise, supplying details of the number of officials in the employing of the lamph sur officials in the employment of the burgh sur omeras in the empayment of the single surveyor's department, their respective duties and salaries, and all other expenditure of the department, this statement to furnish particulars of the saving to be effected by amalgamating the water department with the burgh surveyor's department, and report: (2) that the appointment of burgh surveyor be in the meantime deferred, and the work of the department carried on by the assistant burgh surveyor, with such staff as may be neces-sary. Up to five years ago the two offices were conjoined

Mr. William Burton, M.A., F.C.S., the well-known pottery expert, has recently re-tired from the position of manager and direc-tor of Pilkington's Tile and Pottery Company, Lunited, Cluton Junctica, with which he has been connected for upwards of twenty three years. The occasion has been marked by a presentation from the employees of the firm. During Mr. Barton's connection with Pdkington's Tile and Pottery Company associated himself with, and has taken an active part in, all matters pertaining to the pottery industry. He has assisted on various Tovernment Commissions for the investigation of the working conditions of the trade, and has delivered lectures on and is the author of has delivered fectures on and is the history and several books dealing with the history and I advantage of the commic industry. The development of the ceramic industry. The presentation took the form of an address, written and illuminated by Mr. Edward Juhnston and bound in book form by Mr. Donglas Cockrell, accompanied with a silver bowl, chased and enamelled, with lapis-lazul jewels inset, designed and made by Mr. J. P. Barraelough.

The Cleveland Chapter of the American Institute of Architects has reached a joint agreement with the Cleveland Builders Exchange calculated to correct certain abuse which have grown up in the State of Oha in the furnishing and using of drawings and specifications. It is agreed that invited bidders will be furnished free use of one copy of plans and specifications, subject to such conditions as the architect may impose the architect may require a deposit for copie of drawings and specifications taken from office, the money to be refunded when they are returned in good condition, and prospec tive hidders may obtain drawings for exclusive use at the net root of reproduction. These and other regulations well be printed in order hat they may be generally observed. Messrs Benjamin S Hubbell, Charles S. Schneider and G. B. Bolin represented the Chapter and G. B. Boum represented the Chapter and Messrs Henry Watterson, Eb. Allen, and R. R. Wills the Exchange in the nego-tiations now brought to a satisfactory fer

At a meeting held on Wednesday of the At a meeting neid on Weshesday of the Corporation Special Committee of the Glasgow Town Council, it was reported that the Ameient Monuments Board for Scotland have expressed the opinion to ILM Board of Works that the Talhooth Steeple ought to be a ball to be a minute woman as the contract of the contract woman contraction. Works that the Tollooth Steeple ought to be scheduled as an ancient monument under the Ancient Monuments. Vet of 1913.—From a letter received by the Town Clerk, it appeared that the Board of Works had not yet definitely decided to include the steeple in the schedule the effect of which would be to place it under the jurisdation of the Commissioners of Works, the would negative to be ceive intimation of any proposal to demod slavence on after the structure. These statements are to day a with the owners as to the treatment of any arcient monument, and the uncertained to superintend the work of treatment to superintend the work of treatment to superintend the work of treatment of the Corporation should invite the first clark of the end ded that the Toyn stated that the large decided to help a considered to help and the large decided to help and the state of the commissioners of Public Clerk the first that are not selected in the Catskell Montales end in Brooklyn, and the route the set of the Short.

Consider the Landon Street

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At a recommendate point a Leiber when Chip
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Mr. Bendon B. David and leiber and Armonic to
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A flat long special to a says a writer in the 8 staty of the 2 state and during the past year even to Arc B.

Often, Switzerland - Its space 2 state and its use 50 ft 5 mount 2 state from to rise of 8 8. The bidge state of a marrow, being only 26 ft whe necessary ings. The 16 ft rockwey of 2 state 77 lb, per square ft and a wi2 weight, while the fortways are higher the pressure line. The walth of the formal transfer in 19 ft 8 in ; the ring thickness state of a transfer in 19 ft 8 in ; the ring thickness state and an armount of the control of the pressure in the concrete state of the way, and 52 in, at skew books. To maximum stress in the concrete state of the way, a 6 in, slab, is carried by few strings supported directly on columns restricted. A flat long spet supported directly on columns resting in the arch. The slab cantilevers out hey rd to outer line of stringers to form the field ways Expansion joints in the roadway are provided expansion joints in the realized with the over the springing line and at the test where the readway merges up the test barrel. Load tests in der a 16 to 1 star roller gave deflections of a n

The official returns for the undirect directive issued by the Ferestry Brench at Victoria. British Column is shown to the total amount of lumber scaled in saw bas in total amount of funder scaled in saw 5.28 M British Columbia during the right was 73,584,000 ft., of which 3.750,000 ft. of export. In addition to the sign of the feet of poles and piles were scaled to the about half were exported, and bits of railway they and shing a lotter sign of timber on a basis estimated to the first sign of the same piles to the different transfer on the same sign of the timber on a basis estimated to verify \$11,79 were made to ten different purchasers. The largest sale was one of 9,29, by the sits object to the property of the strong of the Port Nelson tomber to the body of new being limit by the Donner of Green ment, has saided as a High with the British Columbia. This steamer is Doney of Green British Columbia. This steamer, by Doney Claims, which left Vincolor, Best of Computational Columbia and the control of the property have expected in a very color of port Nelson, which is colored to the Nelson whi Nelson, which seeds to a Nanconver as the seed of the seeds

Vancouver as the coveres According to a covered to the Hellmonner (10) Read Science (10) Proceedings according to the covered to the covered

1 witerway, the Narr ws, 1 per and Lower New York 200 from shore to shore is. of about 10,000 it, and car is being hard in a trench vater beit. This submaring satate the use of approxi-ts of 56 n cast arm tops then usly designed series of their usly designed series of their usly designed the unit assembled above water and apen the harbour bed. In aying operation a flexure Bed for, and the engineers - . Hed for, and the engineers,
- f experimenting, evolved a
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d article describing the whole
sleven in the last issue of the
this well worth perusal by all

# OBITUARY

We regret to amounce the decease of Mr. to age Herry Hand, F R LB A , of Raymond Bachugs, Grays Inn. W.C., and Evesham, M. Harr, who ded at his residence, Avon Von H es. Evesham, on Tuesday, the 17th St. after a cortaght's illness, was 6d years of age. He was a son of Mr. George Hand, at latect a a surveyor, of Evesham, a former Mayor as i. A lemman of that borough, who is still at a mass a bachelor, formerly had offices at Berriad Row, and for many years. collar rated authorigh not in actual partners to the Mr. Thomas Verity, who died in May, 1 of Trey produced many designs in degrate 1 type of Classic, and among their executed with where the Nottingham Manier of B. 14 28 1654 and the Spi at Scar-toroig! In the competition for the Admiralty Offers in 1634, the design of Messi-Verity and Hant was placed second of was istrated in our issues of August 3 and 15, in Oct. - 3, 1884, and they were also among to the selected competitors for the new War Office. There design for the Municipal Bullings at Redmend, Surrey, was placed so with August, 1689. Mr. Hunt had been a Fellow of the Royal Institute of British A tests since 1891

Mr. Scales, E. J. Pritchard, only son of Mr. Jesepe, E. S. Pritchard, M.S.A., of Kolderminster, was found dead in hell at his father sites here. The Kuell, Comberton, on Friday in 19112. Decessed, who was thirtyfelt gente unential ige, was known to have a heart affect of the was staying with his father at the time, and was in quite his usual health on Thursday night. He was a narmer with his fither to the firm of Pritchard, and Prit word, as I teets, and was well known throughout Workestershire. He was a member of the Vernon Ledge of Freemasons, and lately had undertaken the duties of a special constable. He married the ellest daughter 11. : Danley, of K delerminster, and of Carr

Miss Arna Pendleten Schenck, of the firm Schene and Mead, women architects, of a Y and its work who last month were awarded New Y . the test prize effected by the City Cino of Charge in the best architectural plans for the glib of all centre, has died in the New Yers Hessia. Mass Schenck was among the Lordana's trem Column So the Mass Schemek was among the the sective diplomas from Colum-issity and the firm of which she was the first firm of women archi-tectures bed on New York City, stacting her wirk at Columbia Uri-Mass Schmidt glied architecture in Mass Schmidt glied architecture in and Proposed and March 1944 and a 11 to Die Bort Miles

iff health for the past few months, and had lately been entimed to his hed. He was the eldest son of the late Mr. John Thompson, a Peterborough, and was the head of the well stown from of church build its of John Hon pson and Co., who have restored most of the cathedrals in England, and many send a works in other countries as well. He leaves a widow and three children, his only son being at present at Rugby School. He represented the West Ward in the City of Perentonough Council Chamber for many Mr. Walter Thompson, who is a ment at I the firm, is his surviving brother.

The death occurred on Friday might at his residence, Castelsted, Montrose, of Dean of Guild Ford. Deceased, who was sixty seven years of age, was a native of the burgh, and the only son of the late Barke James Ford tounder of the well known him of Messrs J. Ford and Sons, lunders and Govern m at contractors. Deceased had been sole partner of the firm for about twenty years. and during his business career had undertaken many large and important Government and private contracts. For many years he played a prominent part in public life. He was for a long perioda member of the School Board, and charman from 1911 to 1914. He entered the Town Council in 1899, and for a term was a Magistrate, while at the time of his death he was Denn of Gnild. He was also a Gov-ernor of the Educational Trust, a representa-tive of the Town Council on the Harbon Trust, and a life trustee of Dorward's House of Retuge. He was predeceased by his wife of Retuge. He was preureeased by mis with three months ago, and is survived by four daughters, one of whom. Miss Mand Ford, returned list week from Serbia, having been a first W. man, Hamital attached to the Scottish Women's Hospital

### STATUES AND MEMORIALS.

STATUES AND MEMORIALS.
CAPTAIN SCOTT MEMORIAL.— The
Mansion House Committee of the Captain
Scott Manorial Find are, with the permission of the Dean and Chapter, about to erect
a bronze basercleff in St. Pan's Cathedral in
memory of the explorers. The scalptor is Mr.
8 Nicholson Babb. The model was recently
exhibited at the Royal Academy. Earl Cur-S. Nicholson Babb. The model was recently exhibited at the Royal Academy. Earl Curzen composed the merription, which runs:—
"In manory of Captain Robert Falcon Scott, C.V.O., R.N., Dr. Edward Adrian Wilson, Cuptain Lawrence E. G. Oates, Lieutenam Hemry R. Bowers, and Petry Officer Edward Evans, who died on their return journey from the South Pole in February and March, 1912. Fuffeyible of improves steadfast in courage. the South Fole in reoritary and March Adde-Luflevible of purpose, steadfast in courage, resolute in endurance in the face of un-paralleled misfortune. Their hodies are lost in the Antarchic ice. But the memory of their deeds in an everlasting monument,

A new fire station has been built at Darmlet at a cost of £5,000. Messrs, Robert Ewan and Sons, St. Vincent Street, Glasgow, were the architects

the architects

Sir Arthur Herbert Church, of Shelsley, Kew Gardens, Lite Professor of Chemistry at the Hoval Academy, who died on May 31, aged eighty one years, leaving £12,267, requested his wife to give to the Ashmolean Museum, Oxford, his collection of Japanese sword guards, of slide or bends, and of Chinese and Japanese bronzes, five Indian bue glass sprinklers, an Fahrn orange majohea drug pot, a German stoneware par, his smifthoxes and mimatures, and other articles; and to the Victoria and Albert Museum a framed panel of Persian cunbrodery, a frame of four pieces of red lik Palian embrodery and certain water-coons me uding a "Vow above Montreux," by J. W. Inciahold.

As the demand for storage space at the docks

As the demand for storage space at the docks of London is still unsatisfied the Port of London Authority Face decided to put in hand imme-Arthority has a decided to put in hand immediately, the provision of further accommodation. Additional sheds of an area of 43,600 square feet will be provided at Millwall Dock, where 108,650 square free feet of fresh shedding were recently complied. At the Royal Victoria Dock it has area resolted to recreat a shed with an area of 450 or square feet which formerly occupied the situation of the start of the growth of the gro Visibles of stress of the stress of the new cold storage sorting shed forms of the Boyal Albert Dock. In order to deal at the Boyal Albert Dock. In order to deal critical the subcormal conditions created by the war of Mr. an expansion of storage accommodation representing to senting a total area of about 440,000 square feet. The conditions created by the way of the Port A about the previously undertaken are 22 fee 1 shorts, of Mr. The Jacobs and of Line by senting a total area of about 400,000 square feet to cook at the comparatively. The further works now decided upon will institute the decised had been in clease this figure to nearly 501,006 square feet.

# Correspondence,

### MORE WAR DEPARTMENT INACCURACIES.

To the Editor of the Building News,

Sir, My attention has been called to a reply given by Mr. Tennant, Under-Secretary of State for War, to a question concerning the use which the War Office has made of archi-

Mr. Tennant is reported to have said that "the ofter of service by the Royal Institute of British Architects to assist in any work carried out by the War Department was not received until May, 1915, when the greater part of the work of erecting wooden huts for the troops had been finished, hence comparatively little advantage could be gained by the War Department availing itself of the offer."

As this statement is incorrect, and I find has already given rise to considerable misunderstanding. I beg to make the following statement of the facts:

A complete offer of the services of all members of the Royal Institute of British Architexts and of other members of the architectural profession, was made to His Majesty's Covernment on September 11, 1914, in a letter from the Architects' War Committee addressed Right Hon. J. A. Pease, P.C., M.P. Minister authorised to deal with offers. It was acknowledged by Mr. Pease, on September 14, 1914, and the War Committee was informed that the letter was being forwarded to other Government Departments and that if an opportunity of utilising the help offered arose, a further communication would be sent.

On September 23 a letter was received from the War Office, F.W.4, dated September 23, 1914, in which it is stated that the writer is commanded by the Army Council to acknowledge the receipt of the letter of the 11th contaning the offer of service of members of the Royal Institute of British Architects and other gentlemen of the architectural profession and stating that the Army Council much appreciates the patriotism which has prompted the offer which has been noted for future consideration.

From these letters it is manifest that the offer was in the hands of the Department which Mr. Tennant represents in September. 1914, at a time when the work of the huts had hardly been commenced, and not in May, 1915, when the greater part of the work had been completed as stated by Mr. Tennant.— Yours faithfully,

C. STANLEY PEACH. Honorary Secretary, Architects' War Committee.

9. Conduit Street, W., August 20, 1915.

Mr. W. T. Morgan, who was lately chief assistant surveyor for the Eastern Division of Carmartheoshire, has been appointed divisional county surveyor for the Northern Division of West Suffolk.

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At Raunds on Friday Mr. F. H. Tulloch, an inspector under the Local Government Board held an inquiry into an application by the urban district council for sanction to horrow £1,500 for providing and laying out the new

The samtary officials in Leeds have lost one of their number in the person of Mr. James Edward Amsworth, assistant sanitary inspector, who has succumbed to dysentery at Alexandria. The late inspector had been connected with the department for about three years. He insued the Smitrry Corps of the Royal Army Medical Corps on its formation a few months a to and had only been in Egypt about a fortner of the disk. n gut wher, he died,

The Board of Trade state that in the trades compulsorily insured against unemployment, namely, building works of construction, engineering, ship building, vehicle making, the percentage of unemployment at August o was 1.03, as compared with 0.96 a month ago and 3.95 a as compared with 0.26 a month ago and 5.95 a vear ago. These figures relate to the whole of the United Kingdom, and include all unemployed workmen in the insured trades. It will be seen that the rate of unemployment in these trades remains less than a third the rate of a year ago.

# Building Intelligence.

HASTINGS. — The church at Burton Hastings, near Nuneaton, is to be restored. The educe, which is in the Early English style, acciently belonged to the Monastery of Nuncaton. It is proposed to put all the stonework into good order, to execute repairs to the windows, to strengthen the tower and porch, to take off the present roof of the chancel, and substitute a new barrel roof, and to effect many other necessary alterations and additions. The work will probably cost £921. It is hoped eventually to put the bells in order, to erect a chancel screen and a new pulpit at a cost of £240, thus making the total outlay about £1,160. It is further proposed to reseat the church, either with chairs or with benches.

LLANDUDNO.—The police headquarters at Llandadno were removed on Wednesday to the new Police-building and Petty Sessions House which has been erected in Oxford Road, near the railway station. It contains Road, near the railway station. a charge-room, parade-room, and other ac-commodation for the police, and cells for prisoners, with two courtrooms on the first floor, a large room for petty sessions, and a smaller room for occasional courts. There also a residence for the police inspector. The cost of a little extra land in order to plan the police inspector's house to face Vaughan Street, which some day will be an important thoroughfare, where it would face westwards, would have been about £100. By a majority of one or two the committee refused to sanction this additional expenditure of £100, and so the occupants of the inspector's house, probably for hundreds of years to come, have been condemned to live in sunless rooms with an ugly ontlook.

### -TRADE NOTES.

Messrs. Robert Hammond and Son, 64, Vic toria Street, Westminster, regret to announce the death of their senior partner, Mr. Robert Hammond, on the 5th inst. It is the intention Hammond, on the 5th inst. It is the intention of the firm to carry on the practice under the old name and at the above address. Pending the return to civil life of the junior partner, Captain R. W. Hammond, now on active service, Messrs. Preece, Cardew, Snell and Roder have kindly undertaken to execute, on behalf of the firm, all work now in hand and any future work which may be entrusted to the firm. Messrs. C. Jennings and Co., timber and plywood importers, get eral woodworkers, 952. Pennywell Road, Bristol, draw our attention to the fact that they have boats just arrived with spruce, birch, r.d and white timber. They will be pleased to answer inquiries in regard to timber, plywood, or woodwork of any kind, either manufactured or otherwise.

either manufactured or otherwise.

Boyle's latest patent "air-pump" ventilators have been adopted for the swimming bath at St. Paul's Schools. Hammersmith, London, W.

The roofs and floors at the Faringdon police

station have been given a waterproofed cement treatment. We understand that the result of the Pudloed work was very satisfactory

The death is announced of Mr. John Ritchie,

The death is announced of Mr. John Michae, builder and contractor, Dunblane.

The corporation of Colchester have appointed Mr. A. G. Wheeler as assistant surveyor and Mr. A. G. Andrews to the position of draughtsman and building surveyor.

of draughtsman and building surveyor.

The Bishop of Peterborough has dedicated the Lady Jane Grey memorial window, a new vestry, and other alterations and additions to the parish church of Newtown Linford, near Leicester. The cost of the new window has been borne by Mrs. Grey, and that of the new communion rails, reredos, carved oak panels, and screen at the west end by Mr. T. W. Everard. The vicar raised funds for the restoration of the organ.

At the last meeting of the Clydebank Dean

At the last meeting of the Clydebank Dean of Guild Court, John Brown and Co., Limited shipbuilders and engineers, applied for permission to form a new street off Clyde Street, and also to erect seven tenements in Clyde streets and the new street, at an estimated cost of £12,000. The plans were passed. These tenements form part of a comprehensive scheme of housing which Messrs. Brown have undertaken for the accommodation of their workmen. Eight tenements are at present in course of construction in Clyde Street.

LEGAL INTELLIGENCE.

LEGAL INTELLIGENCE.

ACTION BETWLEN BUILDER AND SUB-CONTRACTORS. At Newcasse on Tyle County Count, before ats Honour Judge Green well, in Wester day, to easy to reach for an actual emission to a region to the form a sub-Sons, at General to the form the form the analysis of the emission of the form the form the form of the sum of the sub-cover the same of the second to the cover the same of the second to the cover the same of the second to the cover the same of the second to the form of the for of the Stella Coal Company. Plaintiff was sub-contractor to the defendant, and a dispute arcsi contractor to the defendant, and a dispute are shetween them as to putring up in ings and putring in from of the honses. Plaintiff declined to do this work because it was not in the defendant's specifications, on which he had contracted, and as a result of the dispute defendant took the contract out of Greener's hands. Greener now canned £47.7s, 8d, for timber which he left on the defendant's site, and which had been used by limit and also £50 for timber which had been used by limit and also £50 for timber which had been specially prepared for the houses. Defendant's counter-claim alleged that the plaintiff had overpaid £19 bs., that £192 had already been expended toward-the completion of the contract which the plaintiff had not fulfilled; that the sum of £76 was estimated to finish the work, and that £43 had the find not fulfilled; that the sum of £76 was estimated to finish the work, and that £48 had been deducted from the price of the houses because of the plaintiff's failure to comply with the specifications. Defendant also counterbeen dealt test from the price of the houses because of the plaintiff's failure to comply with the specifications. Defendant also counter-claimed for £15, which appeared to be outside the contract in dispute. Greener gave evidence in support of his claim, and declared that any deviation he had made from specifications was made with the consent of Charlton. Mr. Municularly and the defendant was quite willing to pay for whatever timber he had used that was the property of the plaintiff, but defendant had by no means the quantity alleged by the plaintiff. He admitted owing the sum of £29 13s, 6d, on that item. With regard to the material in plaintiff's workshop at appeared to be largely of ensurable measurements for the work, and, in any event, should be the subject of nominal damages only. Mr. Municularly stated that defendant's counter claim are selectance the plaintiff would not complete the contract. Judgment was given for £55 ps. 13d on the claim, and for £51 12s, 2d, on the counter claim. Each side undertook to pay its own costs.

counter claim. Each side undertook to pay its own costs.

AN INSECURELY FASTENED GIRDER. At Nuncaton the North Warwickshire coroner (Dr. C. W. Hiffe) hold an inquest on the 17th irist, on the body of William Carr (30) crestor's labaticer. Lenester who was farally injured on July 10 by a falling girder at a new needle factory in course of erection at Nuncaton. Alfred James Russell said he warm charge of the creetion of ironwork in connection with the factory toof, and deceased was working with him. Some girders had been put in position, and they were apainting them. These girlers were supported by stanchious. In order to do the painting sprays had to be nemoved and afterwards replaced. While deceased was removing a sprag he accadentally pulled the girder from its position with his other hand, and two girders knocked witness and Carr from the platform. Witness was fast beneath the girder, but deceased was not; his injuries, however were such that he could not move without assistance. Watness helicved the accident would have been avoided for the girder had been fastened. The Coroner: Did you work to the plan of the architect. Witness Yes. Eather extra support or the fasten of tagether of the girder, with ish relates would probable a have prevented the accident. The Coroner's and that in the absence of the architect, he was not gode? to say whether he westight or when. These was smoothing left unlone which should have been in their work. The cither should have been increasing sets or the girders frastered together with fish plates. To jury returned, we still III, PING BY LAWS CONTRAVENED. Mr. Day of Connel, W.S.

INFRINGI (ENI LAWS, A' Ra — Ps inst., George Rawart over was samin oct 4 1 1 Rugby Rural Detroits permitting a text Two without a rect with 1 to was a without a rect without a rect without a rect with a fendant's explant to the state of carmed cave to the state as he had nownere to steep is he had nownered steep to possession during defection disence from the tewn, and a DOSSESSION disence from the tawn, a 1 x ledge or yoursent. The roc of 3 s. There was a further coming the house to be occupied we certificate but the was withd, a of 14s costs.

### TRADE MOVEMENT.

LEEDS There was a stoke of the builders' abounces in Leeds of the builders' aboutes in Leasest Mesa. The men demand the payment of a war to grant, which the masters to are

The County Council of Bedford appropried Mr. F. W. Smart as legger

The Hertford Ranal District Community approved the scheme submitted by Mossis Balfour and Sons for a water supply for Brainfield at an estimated cost of £1.76

The corporation of Chelmstern acquired the local gasworks under using about to build a new gasholder (7.4) (1) capacity, and estimated to cost £10.0

Additions made to the isolation respiral Billionary, Essex, at a cost of £7. 1. as been formally opened. M. Hago R. B. (with architect and Messas, Hai is B.), we

Mr. J. F. Hawkins, county seed, Berkshire, has received a commession to Royal Engineers as temporary of the staff of General Gibbon, R.E., at a proceed to the Mediterranear

New buildings, to cost above 25 to be erected for Dolaware Co. 2 to New State Delaware. These buildings to might of Mr. Pierre S. du Pout, press to the du Pout P and r Company.

du Pont P owl r Company.

Mr. Joseph Malatt, of Gole Yet its liss been appointed waterworks of 2 for root to Wivenhoe Urhan District Colors of Some for Mr. R. W. Marfarlade who has token up a similar aspecialment of B services of Colors of St. John to Discovery of Colors of C

Consideracy is the second Darkson M. John A. W. Stewart, and T. W. Stewart, and T. Stewart, and the results of the second property of the on of Durbaise Visite of Mass

The State of Management of the National State of the Stat a appear Mr. b.

COMPETITIONS.

THE AMERICAN PRIZE OF ROME.

1. C. Grant Li Farge, Secretary of the American Academy in Rome, has aunounced the fillowing twinds in the annual competi-tion for the Rome prizes:-The Fellowship the first of the former places, The Fellowship T 8 th sates the ewas awarded to Philip T 8 th self Columbia University and Georgia 2 th self Technology. The Fellowship in Painting was awarded to Russell Cowles, Na Painting was awarded to Russell Cowles, Na Vow York, The rainting was awarded to Russell Cowles, Natural Academy of Design, New York. The Followship in Sculpture was awarded to Joseph El Renier, National Academy of Design, New York. The Fellowship in Landscape Architecture was awarded to Edward G. Lawson, Cornell University. ->-

> PROFESSIONAL AND TRADE SOCIETIES.

BRITISH ARCHIEOLOGICAL ASSOCIA TION IN THE ISLE OF WIGHT.—The seventy-second annual Congress of the British Archeological Association was held in the Isle of Wight during last week, with the Isle of Wight during last week, with headquarters at Ryde. A reception was given by the Mayor of the borough Mt. John I. Barton on We hesday evening at the Royal Pier Hetel as an inaugmal function, Royal Piec II tel as an manginal function, and among the guests were the President of the Association Mr. Charles E. Keyser, M.A. F.S.A., and the hon, secretaries (Mr. G. W. Celenutt and Mr. A. W. Coke). The Mayor, in welcoming the guests, said the last visit to the island of the Association was a strange coincidence they were at war with Ross'a .- On Thursday about fifty mainbers of the Association, in conjunc-tion with the Hampshire Field Club and Archeological Society, visited Carisbrooke Castle, the official residence of the Governor, Protocos Helry of Battenberg, with Mr. Percy G. St. ne. F.S. A., F.R. L.B.A., as guide. They afterwards proceeded to rwards proceeded to the ancient St. Mary's, where Mr. Stone explained the leading features to them. The Reman villa in the Vicarage grounds was shown by Mr. J. H. Greenfield. Afterwards shown by Mr. J. H. Greenfield. Afterwards they proceeded to Newport, where they were well emel by the Deputy Mayor at the Guild-hall. Here the Newport Corporation char-ters, duting back to the reign of Hemy H., and other records and enriceities were in spected, after which the party visited New Special, after which the party visited New-port parish chinch, the foundation-stone of which was laid by Prince Albert. In the evening, after dather at Ryde, the Presi-dential address was delivered by Mr. C. E. Keyser, Mr. G. W. Celesutt, F.G.S., ex-Keyser, Mr. G. W Celevatt, F.G.S., exhibited some of the most interesting speci mens of Island flint implements from his collection, including the Tribrachiate implement, which is probably unique.—On Friday the members proceeded by motor from Ryde to the "Kyng's Towne" of Brading, with its ancient stocks and whiteping-post, its bull ring and its historical church, rich bull ring and its historical church, rich in monuments. The Roman villa near by, with its well-preserved mesaic pavement, described by the custodian, Mr. George Cox, was a source of considerable interest to members, who afterwards proceeded via members, who afterwards proceeded via Shank'in a.d Ventror and through the romattle in herelifit to Blackgang, with its remarkable chine, and thence on to Wolver-Latert one of the many fine namer coses of the sided visiting on the way back houses of the soled visiting on the way back Kingston and Solary III Churches and North-court, the heart fit residence of Mrs. Disney Lett — the Saturday morning the members went to Quarr Abley where Mr. C. W. Cole ratt gave a solet heart of the units as slown by the evenuations which took place Shown by the everyarous which took place in Ic21. A pleasant drive over the downs then to be the party to Arietan Church, which, although test red in 1836, is still full of intensity archaeologists, its interior heing archite turally the firest in the island. The Jacobean mater house near by was also in-spected, and the Courses terminated with a visit. Neighborth Church, an edifice of

Mesers i or poll Laid and Co. of Sheffield. detail to erect extensive works, costing over 222 to read on the ving 400 men. The Corning vine of Normalian have agreed to base a state of the formalian have agreed to base a transition of the least one for war.

### CHIPS

Mr. T Thomas, chief assistant to the city engineer of Hull, has been appointed deputy city engineer.

The urban district council of Cannock have rider consideration a proposal for the widen-ing of Uxbridge Street.

The urban district council of Llantarman, Mon., have approved of the plan and esti-mates for sewering the district of Cwinhran prepared by Mr. A. Gordon Jones, their sur-

The Sewers Commissioners, Sessions House, artford, have appointed Mr. William Scott Willton, assistant engineer, as engineer to the Commissioners, in succession to the late Mr. Huntzig.

The chairman of the Ilkley Urban District Council has formally opened the electricity generating station erected to supply Ilkley urban district and the Middleton township, the scheme having cost £21,000.

The sanitary department of the Corporation of Oldham are vigorously conducting an inspection of houses, and so far have found 210 m a daily condition, ten overgrowded, and 680 structurally defective out of 2,769 inspected.

The death has taken place at Carmarthen of Mr. Damel Phillips, Picton Villa, who was for twenty-five years road surveyor for the west an division under the Carmarthenshire County Council. He retired lifteen years ago.

A Wesleyan soldiers' hall was opened at A Weseyan soldiers hall was opened at East Boldon on Wednesday. It has been creeted, at a net cost of £475, by Mr. David-son, builder, of Boldon, who undertook to execute the contract without profit to himself.

The Greenock Corporation Electricity Conmitte recommend an increase of £100 to the smary of the engineer. Mr. Frank H. Whysall. Mr. Whysall was appointed a year ago, and his first financial report shows a surplus of about £10,000.

Mr. Henry David Davis, F.R.I.B.A., ared 75, of Portsdown Road, Maida Vale, W., formedly a senter partner in the firm of Messy. Davis and Emanuel, architects, of 2, Finsbry Circus, E.C., left net personalty £11556, and a gross sum of £18,647.

Mr. W. J. Goode, for the past two years surveyor and sanitary inspector at Buckfast-leigh, and one of the sanitary inspectors under the Totnes Rural District Council, has been appendied surveyor and sanitary inspector to the urban district council of Street, Somerset

Further constructional work, the Age General for the Province of Quebec states, the Agentpromised at the Port of Montreal, such as the Mension of the harbour, the improvement of the waterway, and the construction of dry locks, dockyards, and of a branch line to link of Montreal with the National Tran-continental Railway

The Treasury intimates that during the no loans can be granted under the Dwellings Acquisition Act to enable workmen to buy their own hones, declaring that loans for such purposes cannot in existing circumstances be considered to be in the public interest. The Act has practically become a

The R sail Board have informed county councils that while they propose to make grants towards the cost of road crust improvements which are immediately required, unless special cucumstances can be shown the grants will be on a considerably reduced scale, and will only be made in the case of important roads the improvement of which cannot properly be protomed.

At Prince Rupert, British Columbia, and dock has been built, and will be ready for business this month. It has cost £300,000, part of which will be borne by the Dominion the greater share, however, of which win of Greater share, however being paid by the Grand Trunk Railway Combeng paid by the Grand Trunk Railway Combeng paid by the Grand Trunk Railway Trans Company, the terminal port of whose new Trans continental line is Prince Rupert. The dock consists of three units, with a total capacity of 20,000 tons. All of them are interchange able, and when necessary they will be joined to held a boat of about 600 ft. in length. The dock with a total capacity

To alleviate the great distress the war has for an evalue the great distress the war has brought to architects, designers, sculptors, and other professional men, the Vienna City Council have resolved to carry out work which will formsh them with mederate remoneration and at the same time add to the attractiveness of the city. As a beginning, artistic drinking fembatis will be creeted in the grounds of the test senses and in the children's playing spaces in the public parks and gardens. For the first of these, in the Schubert school, the council has appropriated a sum equivalent to £250.

# TO ARMS! 4th Battalion 'Architects" Central London Regiment Volunteers.

Recruits are urgently needed for the Regulars, Territorials, and Volunteers. Intending recruits should apply to Battalton Headquarters, where they will be advised as to the branch of the service for which they are best suited. which they are best suited.

ORDERS FOR THE WEEK, BY LIEUT, COL, A. W.

WARDEN. Sk. G. H. Parker.

WARDEN.
Other for the week, G. II. Parker.
NOTE.
The attention of all members is drawn to Routine
Orders 14 to 17. Any member not receiving a copy
ts requested to notify the Adjutant's Office.
GENERAL PARADES.

GENERAL PARADES.
Saturday, 28th inst., 3 p.m., at Hampton Court.
Train 2.2 Waterloo.
Sunday, 29th inst., 10.20 a.m., at Boreham Wood.
Frain 8t. Paiaras 9.30.

COMMITTEE WESSELE

COMMITTEE MEETING.

A meeting of the Civil and Military Committees is called for 7.15 p.m. this evening (Wednesday), at Bartahon Headquarters. A full attendance is re-

SCHOOL OF ARMS, DRILLS AND PARADES, All as usual

All as usual.

"A" Coy., Dean's Yard, 5.15 and 6.15 Wednesdays and Fridays. If wet, these drills will be held at Milliamk School.

"B" Coy., Dulwich College, Mondays, S to 10 p.m., Thursdays, 6 to 8 p.m., C" Coy., Borcham Wood and Elstree District, Headquarters, A.A., Athletic Ground, Borcham Wood, For full particulars, apply to Alan Potter, Esq., Grey Gables, Borcham Wood, Herts, "D" Coy., Mercers' School, Tuesdays and Thursdays, 6.45 p.m.

CORRESPONDENCE.

Enrolment forms of new members and all correspondence, not referring to recruiting for the Army or to mameral matters, must be addressed to the Valuation of the Army to the Recruiting Officer, at Rattalion Headquarters, and regarding accounts and subscriptions to the Paymaster, W. R. Hughes, 15, Dashwood House, E.C.

Ey order,

L. R. GUTHRIE, Adjutant,

BATTALION HEADQUARTERS,

15, TUFTON STREET, WESTMINSTER, S.W.

# MEETINGS FOR THE ENSUING WEEK.

Intestry.—Royal Photographic Society's Exhibition. "A Ramble Round Hampstead, with Historical Notes on the Old Town," by H. Hardwick. Suffolk Street Galleries, Pall Mall, S.W. 8.30

p.m.
yal Photographic Society's Exhibition. "A Northern Minster," by
E. W. Harvey Piper, Hon.M.S.A.,
Gallery of the Royal Society of
British Artists, Suffolk Street, Pail
Mall, S.W. 5.30 p.m.
Sanitary Inspectors' Association,
Meeting at Lichfield. a vitable. - Royal.

Mr. M. A. Robinson, city surveyor of Londonhas had his salary increased by £200

The death is announced of Mr. Thomas Elliott, for over a quarter of a century borough surveyor of Enniskillen.

The Marquis of Bute proposes to expend £250,000 in additional siding accommodation and in further hydraulic plant and other equipment at the Bute Docks, Card ff.

The foundation stone of the new physiologi-The foundation stone of the new physiological building of the Welsh National School of Medicine has been formally laid in Newport Road, Cardiff. Sir Wm. James Thomas, of Ynyshir, has given over £60,000 to the school

Mr. Herbert C. Snewin, Hampstead Hill Gardens, N.W., eldest son of the late C. B. N. Snewin, timber merchant, Back Hill, Hatton Garden, and Putney Hill, died on the 17th inst, at a nursing home in Mandeville Street, W.

The wedding rook place at St. Mary's Church, Frome, on Tuesday in last week, of Mr. Henry George Blomfield, L.C.S., elder son of Mr. Regmald Blomfield, R.A. ex P.R.I.B.A., of 51. Frognal, Hampstead, and Point Hill, Rye, and Miss Frances Blomfield Crintwell, elder daughter of Mr. Percy Wilson Cruttwell, of Northests France. of Northcote, Frome. The ceremony was per-formed by the vicar (the Rev. C. G. Glynne-Jones) in the presence of a crowded congrega-tion. The wedding was of a quiet character, owing to the war, and there was no reception.

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

CONTENTS.

ctory Constr	uction	: Sta	arcases	and	Louis	hole	
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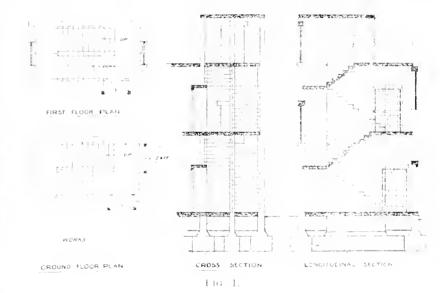
staircase is an important feature, as subordinate is the fire-escape stairway. The Building Acts lay down certain rules. The main fireproof stairs are required to be enclosed in fireproof material, all com-munication to the works being by doors opening outwards, with special bolts and fittings. The exterior fire-escape stairs are constructed throughout of iron and steel, and escape doors or special windows are arranged. It may be required, both as to the internal and external stairs, that escape, in emergency, can be made on to the roof. In the internal staircase all communication doors must be so arranged each scheme on its own morts. The that no obstruction is caused in passages architect the eferadors well to submit his and on landings. The ceiling and side enclosures of fire lobbies must be of fireproof material.

In the accompanying drawing are shown the details of a fireproof staircaso suitable for factories, and arranged in accordance with the regulations. The L.C.C. rules recognise (1) (a) internal incombustible staircases and (b) internal fire-resisting staircases; and (2) external iron staircases. The sketches show a staircase of the "incombustible" type, planned on the 3 ft. 6 in. basis. The general requirements for internal factory staircases demand a 3 ft. 6 in. staircase where the stairs are to be used as escape by not more than 200 persons, and 4 ft. 6 in. for more than 200 total, or more than 100 on any one floor. The door openings are required to be of similar width, and this when opened: and being required to be not less than 13 in. thick, and, say, in practice 2 in., the net width between rebates needs to be either 3 ft. 10 in. or 4 ft. 10 in. All door frames are required to be bedded solid against the fire-lobbies, such as are shown in the drawing, with incombustible material in scheme. In some cases two incomposition walls and ceiling, which may therefore be of brick, concrete, or slabs as indicated. The doors open towards the exit, and are required to be fitted with automatic fittings, and must be in hard wood—such as oak, teak, jurrah, karri, and the like. When the doors of a fireproof staircase are to be used as a means of scape from both sides they should swing both ways. and it is suggested in the regulations, and is obviously desirable, that the upper parts of these doors should be glazed with clear glass, at such height as will enable persons to observe others approaching from the opposite direction. The use and purpose of the fire-lobbies is to prevent the open doors from encroaching upon and obstructing stairways and landings. It is required by the regulations that the stairs of the incombistible type staircase and is obviously desirable, that the upper

FACTORY CONSTRUCTION: STAIR should be supported on brickwork at either on the enember of CASES AND LOOPHOLE DOORS. end, which is effected by the newel wall, the authorities of in In many-storied factories the fireproof carried up, as shown, in part, to the root a full configuration of the configuration over the states. The spandrel steps contrequired (1) the interest to regulations, having a minimum external contributes thickness of 3 m., and have square ends "fire resisting" states. where pinned into walls and newel wall, to be a constraction, and Steps moulded in fig. concrete, reinforced, or conc. to, low form, a torm suitable thights, which must be those above in in the estraight, and are hore in maximum numbers, twelve to the flight, although the pleyed. There exem for her

set regulations, the authorities may just comb scheme on its own morns. The

straight, and are here in maximum number, twelve to the flight, although the pleyed. The essential regulations permit fiften. The landings necessity for this site rate of another knowledge of the treads and risers case is that it may be as a naterecommunicating between It is understood in the matter of fit workers' layar its. The volume of the protection in factories than, whatever the less than 13 m, thick, a few workers' layar its second, making all strength and second making all strength and second making all strength and second making all strength making a pr 4-111for such hardworkst and incombustible mateins 3 in, thick, and must



sary, or an incombustible and a "fire resisting" stairs. The regulations generally lay down for factories that at least one ends sed firepart factories will be required, with in addition some furth a means of energiney escape from all flows. Given a stairs of the type shown, which the Aas doesn "incombustible," in all average scheme an exterior more field. type starcases ma, be considered nonaverage scheme an extener non fire-escap stairs will be no lol. The Act stipulat's

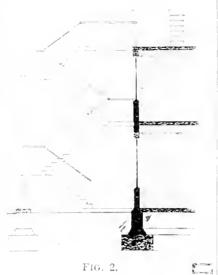
eases in fer ty hit is as should be proported to the property of the standard standard to the standard 
as the stains of the reach of the process of a neach relative value of the reach of the process of a neach relative value of the stairs planning may so appear to general works aroung in in that a whole scheme may be now ekalohe. The process is when the plans are timpencial."

The move of the Art is the insurance riser; (3) a brick newel-wall supporting to the safety of the worker. All plans steps; (4) handrailing inset at newel wall of the effective in section with this ultrapends; (5) fire-lobbies of fireproof materials in yew. It is but part of a menticular to down opening outwards, scheme that the requisite fireproof or instruction is freely that the requisite fireproof or instruction. It is farther, lighted and ventilated, as a resistant of the results are provided, every as the authorities consider each new the last of the mass in the results. or street the rein fi cescape, and the tre resisting stats are provided, by have to be an satisfied part, as, Or as provided and the position of the separate on plan, but tend to the separate on plan, but tend to the separate on plan, but tend to the provided parallel state of the provided and area general as a stances of the tend and one about the provided the full large. In this case the sociality, in hardword, enclosed dains 1 by section of the provided contract, and in the past section in any serve the layareness. the period in may serve the lavateries. it from the fire-escape may take a notice position, since the natural trend it plantage is for layatory accomm da-ton to 2r dp t wards me end, having regard to the convenience of dramage. Whatever the general arrangement, the I mapple is to fairly listribute the stairways about the premises, affording as 2-cat in 14 runnity as possible for all workers in emergency. It is essential in planning to contember that the regu-lations are, in a sense, tentative. Although certain requirements are scheduled and details, as of stairs construction, with the planner's with the planner's wirk is hable to be set aside; hence the wislom of as estaining, at the earliest P saible in ment, whether his plans are

s cusines ry The plea in the minds of the framers of the Act, as to safety against fire in factories, evidently centred about a fireproof stancase. They certainly had in the way as the first consideration, an "inmbustible" staircase. This, therefore, should receive the architect's first consi lerati in. What there may be demanded in addition to this depends chiefly on the individual character of the proposed building and its surraindings. An easy and obvious way of escape on to neighlairing premises is generally viewed by the authorities as a great advantage, and the existence of such greatly modifies the matter of factory staircase provision Nowadays, however, the exterior fire-scape stairs are very generally required If no third staircase is needed, the fac-tive floors will have an escape at either end—by the solid brickwork fireproof stairs and by the exterior iron staircase Where the external fire-escape staircase is used for intercommunication—i.e., in addition to being merely an emergency fitting—the regulations demand non-slipping treads. It may be required that both, and in some cases all, staircases ran up to the roof. We show this arrangement in our sketch, as an example, although in a building having but one upper floor it is not likely that such will be required. Where the plan is needed, a bulkhead of the kind indicated, usually having, for economy's sake, the roof cut away, merely leaving sufficient head room ever the list flight, is general practice. It is shown of fireproof construction, having concrete flat roof with steel remiorces ment. As to this, the regulations set out that standards should have an iron and concrete colling where they are not carried up above the roof, or where, being carried up above the roof, they are hable attack by fire in an adjoining structure. In the sketches there is provided an emergency door (pening out to the flat connected with the main roof over

Such a stainter as our drawings show So his standage as our drawing show the action and first hoor is a structure enforming to regulations. So are (1) the walls are of brickwork; (2) the stars are of incombistible required, we show the arrangement as material within the limit as to maximum trainer in flight and having 3 in, minimized for a many-storied building. In constructing the staircase the main trainers at junction of tread and

or good in tory as an individual scheme, nd pulse all points on merits, all de tals of emergency fire arrangements for



istories are best submitted. The pracis will save time and delay in re-arranging details to suit the experts, since, as we have said, to rearrange stairas - in industrial buildings may sericasly affect the whole planning.

Fig. 2 is a diagram of a fire-escape starcase. It is provided by the Act that such shall rest on "dead bearings, i.e., must be supported direct from earth as by walls or stanchions. The sketch

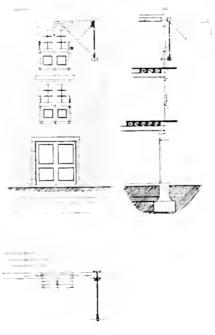


FIG. 3.

shows a stanchion upon stone template with suitable foundation. It carries one end of the steel cranked strings, the other ands being pinned into the factory walls The building has ground and first floor and flat roof; and although the escape to

not more than 2-in, perforations, and a close type of riser is required. The iron handhard must be supported by balusters not more than 6 in, apart. Doors off the landings must open outwards, and not, when open, obstruct the stairway. The drawing shows an emergency escape labler from factory roof to adjoining premises, a way of escape from fire to which the authorities attach considerable value when considering proposed arrange-

### LOOPHOLE DOORS

are a necessary feature in many-storied factories and warehouses. They must be lesigned with reference to the most ready manner of hauling and delivering material. Fig. 3 is a sketch plan, elevation and section of a factory with first and second floor loophole doors and a jiberanc. The hinged flaps are 2 in, thick with strong wrought-iron straps and chains, and are hooked back to door frames, which should be strongly attached to walls by wrought-iron straps built in.
I. ag bar handles, bolted to the door
frames afford hold for men supervising the hauling. A wooden cleat is often provided for ropes, and, in the case of many stories, a wood friction-roller to prevent the chain chafing the window head. The doors are hung in two parts, and have a water-bar to the sash-framed portions. The jib-crane is supported and swings in two bearing blocks bolted to the wall, the chain passes through into the building. and the haulage may be by hand or power, hydraulic gear being the most suitable.

### THE A.B.C. OF HERALDRY.

The close connection of Heraldry with architecture has always been evident to the cultured, and no competent architect will fail to acknowledge the debt of his own art to the Noble Science as a means of architectural enrichment. Not always, perhaps, has he used his opportunities wisely, or rightly understood them, as some of the treaks of the Gothic revivalists perpetrated half a century since bear witness; but these extravagances after all were few, and in some cas s due to the fact that the archit et responsible was content to instruct the various art-workmen that such and such a shield was to be placed in this or that position, or that so and so's badge, cognizance, or metto was to be blazoned or carved here or there, when he ought to have known and made clear exactly the Heraldry he wanted displayed. In other cases doubtless he overdid it, utterly ignoring the elder Pugin's caution, "Don't work it to death!" Again some of us were so certain that Heraldry was part and parcel of Gothic architecture that when the Classic revival set in something like a settled conviction that Heraldry was out of place in Classic buildings led to neglect of the Science and its resources. There was surely no justification for that. If Heraldry is really of use—to put it on the lowest ground-to express facts in connection with the art and life of our modern times, it is as safe and wise to use it now as ever, if only we abide by the sound principles of the heralds of the golden age of Heraldry, and ignore the vain conceits of the formalists who during the decadence which lasted from the sixteenth century down to the middle of the nineteenth. There is no lack of good examples left to us, and the architect who will study them and familiarise himself with the alphabet of the Science will find it well worth his while. If he desires to give historic character to his public buildings Heraldry will enable him to associate with his work the benefactors, statesmen, potentates, and

citizens connected therewith. In metal

citizens connected therewith. In metal work, sculpture, glass, decoration, mosaic, and other accessories Heraldry will help all good designs. But it will not excuss the failure of rash or ignorant experiments. We do not care, for instance, to see Heraldry apphed externally in colour by means of encaustic tiles let into a portion of a façade faced with rubbed ashlar. Even internally colour is undesirable unless this can be kept up and balanced in There its many beaks on Heraldry some so recondite that only enthusiasts



ARMORIAL CHIMNEY PIECE, TATTERSHALL CASTLE



ARMORIAL LEAD CISTERN.

Above all, if possible, avoid the fanciful and absurd armorial insignia of some of the new rich. They may tickle the fancy of the vulgar, but they are never decorative, and they are always unworthy of good architecture.

the surroundings. Again, we dislike to see bald blank shields alternating with the many illustrations, lorgely selected with rest—intended to be garnished some day with the bearings of unborn celebrities.

The desired to show the diversity in time day with the bearings of unborn celebrities.

The desired to show the diversity in time day with the process of the said of the sa covers 350 pages, and includes nearly as many illustrations. Togely selected with the desire to show the diversity in time and place. Mr. R there is subject, while his appression page for mainly artistic and historical. The whole subject is treated exhaustively and in intelligent corder. After a short introduction dealing with the right and fundamentals of the delightful harmonies of page colours, institutions and fundamentals of the delightful harmonies of page colours, institutions and subject is subject is treated exhaustively and in intelligent sold on the power introduction dealing.

graved effects which give to the temperature to the temperature. While appearing to the temperature the temperature that the temperature the symbolism. In order to appreciate the symbolism. In order to appreciate the symbolism. In order to have the symbolism. In order to have the symbolism of the time, whether ecclesiastical or domestic. whether ecclesiastical or domestic

it is to be observed that the more More we it is to be observed that the more the painter conventionalises the lion, the letter the decorative effect. Whenever an attempt is made to draw a symbolical or heraldic ion true to nature failure results. It is quite impossible to do justice to the real animal in the limited space and under the restricted conditions imposed upon the artists to head the animal animal animal animal animal true transcause. a, heraldry, and consequently strong conven-tionalising is necessary.

That there should be a revival in many directions-in leadwork, plaster, and carved work-in the decorative use of Heraldry, we, of course, agree with Mr. Rothery, and we are sure his book will help. By the courtesy of the publishers we reproduce three of the illustrations. one showing an Armorial chimney-piece at Heraldry became an integral part of the Tattershall Castle; another an Armorial design, structural in value as well as purely astern, and another an Armorial plaster Tattershall Castle; another an Armorial

ARMORIAL PLASTER CEILING, SIZERGH CASTLE, WESTMORLAND.

de ....... for it springs out of the design and appears resential to it. This secret of good design also characterises much of the Renaissanco work of the early and middle periods; and it was pessessed to quite a remarkable degree by our own masters of carving and plastering chaftmanship.

degree by our own masters of carving and plastering claffmanship.

"In earl heraldic work, whether seen in carving or illumination, there is a boldness of toten in design, an elasticity in the treatment of totan, which makes for diversity and artistic effectiveness. At one unfortunate period of armornal evolution this conventionalisation was regarded as an error, and an attempt was node it erectum to mature, while conforming the east iron rules of the 17th Century heralds. This failure of the inhebental setting is well inastrated by the inhebental setting is well instructed by the none upon a time out old country coach painter visiting I, hid in was taken to see the most after visiting I, and in was taken to see the most after the Tever, and penalty regarded the tawns better the interest of arms of the office of the interest of arms of the result of the penalty of the penalty of the control of the penalty of

ceiling at Sizergh Castle, Westmorland. There are a good many others which will equally interest the architect and the artworker.

A NORTHERN CATHEDRAL

At the exhibition of the Royal Photograp'ac Society, in the gallery of the Royal Society of British Artists, Suffolk Street, Haymarket, S.W., a lantern lecture on "A Northern Cithedral" was given by Mr. E. W. Harvey Piper, Hon.M.S.A., on Saturday evening last, Mr. G. Lamley, F.R.G.S., F.R.P.S., occupied the chair, and in introducing the lecturer remarked that for at least fourteen or fitten years past Mr. Harvey Piper had given them at the Society's Exhibition a discourse on the architectural characteristics and historical characteristics. Society, in the gillery of the Royal Society of on the architectural characteristics and histori

 if needents of some great English cathedral.
The op a ng sentence of the address, which
was illustrated by between eighty and ninety photographic slides, showed that the differ to be described would be Durham. " Beauti ful for stratum the joy of the whole earth, is, the scaturer remarked, the Banedictine Master Church of Christ, the Virgin Mary, and Saint Cuthbert. Its position is unrivalled in England for stern splendour and

magnificence of effect, seated, as it is, on the rising point of a sandstone rock at the apex peninsula formed by the of a narrow ings of the River Wear. The masses of grey masonry are flat and austere in outline, but i crown of three broad and beautifully incerproportioned towers, together with a cluster of steep pinnacles flanking the gables of the wide eastern chapel, impart to the edifice a regal and unmistakably English aspect, Immediately to the north of the cathedral church, but separated by a broad open space, the duge keep and long level line of lofty bastioned parapets of a castle frown npon the rapid and shallow stream beneath, contrasting in their bare severity with the rugged and well-wooded cliffs in the foreground. As we gaze upon the group, a veritable union of Church and State, from the railway line upon the opposite bank of the river we realise that here has been a frontier settlement on an important military position.

As cathodrals go, the history of Durham s a short one, extending over but 920 years, out the cathedral is in the line of succession of a much more ancient and extensive see, arst of Northumbria and then of Bernicia. The present church is the third built on Dunholme, and was begun by Bishop William de St. Carileph in 1095. At his death, six the St. Carrieph in 1099. At his death, six years later, the choir, with its three apses, the transepts and eastern bays of the nave had been built. The choir was completed by 1104, the walls of the nave had been erected by 1128, and five years later the stone are the stone of the nave had been erected by 128. vault had been added to it. Between 1170 and 1175 Bishop Hugh Pudsey, foiled in his attempt to build an eastern Lady-chapel beyond the apses by the occurrence of fissures in the walls and foundations, constructed the unique Galilee chapel between the west front and the cliff verge, and more than sixty years later, between 1242 and 1278, the eastern apses were removed and replaced by the noble eastern transept known as the Chapel of the Nine Altars. The western towers, raised to roof level in the lays of Stephen, were carried to the present height early in Henry the Third's reign, and the central tower was several times recased or reconstructed, the lower story to the ringers gallery having been repaired, if not rebuilt, about 1470, and the upper story added twenty years later. Just a century Lefore that work of completion in 1390, Bishop Skirlaw began the rebuilding of the Norman clossters, a work which was Norman closters, a work warm was not finished for eight-and-twenty years. Few other important changes were made in the athedral till the time of the Restoration. From the first, all the vaults had been of stone, and the chief alterations were to stone, and the chief alterations were to secure better lighting and at the same time to bring the tracery of the windows into the fashion of the day. To Bishop Cosin, appointed by Charles H, we were inbted for the magnificent font cover and the stalls, and to his dean, Dr. Sudbury, for the conversion of the monks' dormitory into a blurary. Cromwell had utilised the choir in 1650 for the housing of Scottish soldiers taken at Dunbar, with the result that the or smashed by the interned men, and seven years later the wooden spires which added so greatly to the picturesqueness and imposing character of the western steeples were demolished, never to be re-

\* The following illustrations of Durham Cathedral have appeared during recent years in the BUILDING News —Plan of minister and monastic buildings (by late Rev. Mackenzie E. C. Walcot), March 3, 1876; plan of cathedral, May 16, 1884; photographic view from W.N.W., October 24, 1890; in the close, looking towards central tower (from a water colour by Charles Divon). September 1, 1893; nave, looking cast, photograph, March 4, 1887; south areade of nave (measured drawing by John H. Taylor under appervision of James Bevan), December 20, 1907; devation, one have of nave (by 8, T. H. Parkes). October 23, 1885; in Gulber Chapel to 8 W., (photograph of George Bankarti, Jamuriv 29, 1895; areade, west side of north transept (photograph by Henry W. Bennett), Dicember 20, 1907; in the sancturary to cast, from photograph, August 3, 1888; Bishop Hatheld's throne and tomb (sketch by Joseph Pennell). February 10, 1888; double page of measured drawings (by Bry of Watson), February 8, 1907; Chapel of the Nine Mars (Mars (measured drawings of castern wall by 8 W. Milburn, of Sunderland), February 28, 1913; double treery in north window of the Nine Altars (Chapel, December 29, 1905. The following illustrations of Durham Cathedral

placed. The evil genius of Durham was the placed. The evil genus of Durham was the blatant and ignorant self-styled "architect," James Wyatt, who, after he had wrought irreparable mischief at Salisbury, Heretord, and Lichfield, was called in here to advise Bishop Shute Barrington. Wyatt pared down the external masonry, obliterating its original ways and ing its original vigour and ornamentation, removed tracery and stained glass from most of the windows, and rebuilt doorways and pinnacles in a debased form of Church-wardens' Gothic. He devised, and his successor Morpeth carried out, the mutilation of the incomparable chapter-house, and only by the protests of John Carter was Wyatt pre-vented from removing the Galilee chapel in order to provide a drive for the bishop from the Castle to the western doorway. Anthony Salvin, who rebuilt the keep of and restored the cathedral choir in the late and restored the cathedral cloth in the late forties of the last century, was but little better informed than Wyatt, and the earlier work by the late Hodgson Fowler, say the dozen years from his appointment in 1864 until his restoration and refitting of the edifice, completed in the summer of 1876. was by no means free from blame. But Fowler grew in grace, in taste, and in discretion with the widening of his archæological and ecclesiological knowledge, and during the last four-and-thirty years of his long career as architect to the fabric proved a zealous and well-informed conservator of its that Mr. Edward R. Robson, who preceded Mr. Fowler as architect to the Dean and Chapter, resigning in 1864 on his removal to Liverpool, and subsequently acting for many years as architect to the London School Board, was still living in retirement, having attained an advanced age.

Looking at the plan, it appeared at first sight one of the donble-transepted patriarchal cruciform type of English cathedral, such as we possessed at Canterbury Lincoln, Salisbury, and Worcester, but lack ing the eastern projection of a Lady-chapel, which seemed to be tacked on to the western front. The choir was of the usual four bays of the larger English Benedictine churches, such as we see at Ely. Norwich. Peterborough, St. Albans, and Winchester: there were short transepts with eastern aisles, as in the last-named cathedral, and an all-inadequate nave of eight narrow bays, with cloisters and the buildings of a Benedictine monastery in the usual position, south of the nave. In dimensions, Durham ranks sixth among English churches, being a little less in area than Ely or Westminster Abbey, and considerably more spacious than Salisbury.

Mr. Harvey Piper then proceeded to conduct the audience on a tour around and through the cathedral, elucidating the various features described by throwing simul-taneously upon the lantern screen behind the taneously upon the lantern screen behind the platform drawings by John Carter, 1785: G. F. Robson, 1828; John W. Billings, 1832; and C. Clement Hodges, and photographs by Messrs. Edwin R. Bull, W. Ellison, T. W. Freshwater, J. Patterson Gibson, W. H. Hirst, J. W. Hodges, Mark Holloway, T. M. Cargo Lland. Grose Lloyd. Newton and Co., Photochrome Co., James Valentine, G. W. Wilson, and other experts in architectural camera work. The cathedral and castle, as depicted from the opposite bank of the Wear were shown from various standpoints, and it was remarked that the view from the south-west, with the abbey mill and weir in the foreground, had, perhaps, been more often sketched, painted, and photographed than any other combination of buildings and land-scape scenery in the United Kingdom. Another excellent prospect, but lacking the river, is that from the south-east gained from St. Oswald's Churchyard, and a third. from St. Oswald's Churchyard, and a unita, of which advantage had been taken by Mr. George Brown in a beautiful bronnoil print No. 1) on view in the lecture-hall, was halfway down Framwellgate Street. From the pppsite bank of the river looking W.N.W. a comprehensive idea of the general grouning

behind the 2 beautiful bea height among the services of the cathedrals, was disfigured, the services of St. Albans, by a casing of plaster, are the services temporal in 1859, under the arive of St. Gilbert Scott. boss differ the arry ce of sixtenery seem who, by the way, was react with: a to the Dean and Chapter, is is erroneously stated in most guidebooks. The fecturer surposted that if the lower part on of the central lower of the restriction of the central lower of the surpost of t were opened out it would possibly be revealed, as Mr. W. D. Carochad found during the repairs to the Bell Harry tower of Cancerbury, that much Norman or Early English with it. hsh worked masonry existed beneath the outer shell. The broad vestern towers are, inke those of Wells, although not to the same extent, boldly projected beyond the assle walls, and a piquant contrast is pro-vided by the arcaded surfaces of the Early Thirteenth Century upper stories to the massive treatment of the Norman bases. Pudsey's Galilee Chapel is kept so low as not to obscure the lighting of Carileph's nave through the elegant although incongrnous window cut through the west wall by Abbot Fosser.

Passing round to the south side, the Monks' (or, as it is now called, the Dean's) Kitchen, built by Abbot Fosser in 1579, is seen to be ount by Amor Fissar in 1 10. Is seen to be im perfect preservation; it is an octagonal building of stone with central chimney, and greatly resembles the equally well known one at Glastonbury, also constructed for a Beneat Clastonbury, also constructed for a Benedictine abbot, some four or five years earlier. Passing into the cloister garth, it was remarked that it was the third built on the site, the work of Bishops Skirlaw and Langley, in the thirty years 1390-1420. The agnoble tracery in the unglazed panes was one of the numerous local memorials to Wyatt's meddling. In the centre is the stump of a former lavatory of marble, which curried before the Dissolution a number of brass spouts discharging water and overhead a dovecote tower. Excavations made be-tween this fountain and the north walk of walk of the cloisters in 1905, by the late Mr. Hody son Fowler, disclosed the foundations of a Norman closter of smaller dimensions. Normal by, and apparently extending under the south aisle of the nave were other foundations, which were not followed up, but which were conjectured to be those of the White Church of Aldhun. On the west side of the Clearch of Aldhun, On the west side of the clois-ters is the mouks' dormitory, reconstructed and refitted in Charles II,'s reign by Dean Sudbmy, under Bishop Cosin, as a Dean Suddiny, under Bishop Cosin, as a library. Among the objects preserved here, and clown on the screen, were a panel containing Early English carved figures, the richly carved head of a twelfth-century cross, both in stone and a Saxon carved capital, probably from the White Church, discovered during recent as a vertices. Both discovered during recent excuvations. Beneath the dormitory is a crypt, or, rather, undercroft, having righty ribbed vaulting carried on short cylindrical shafts, of the same period as the more extensive one at Fountains. The east walk of the cloisters opens into the reconstructed Chapter House originally the largest in this country. was built by Bishop Rufus in 1140, but in 1799 the Dean and Chapter employed one Morpeth to demolish the apsidal east end Morpeth to demolish the apsidal east end, throw the space this gave into the Dean's garden, and build up lath-and plaster walls to afford a more comfortable meeting room for the chapter. Fortunately, John Carter had made in 1785 careful drawings of the house, and under the direction of Hodgson Fowler it was robult on the old foundations in 1890-5, as a memorial to Bishop Lightnoot, the cost help £5,600. On digging over the site sufficient fragments of arcading. the site, sufficient fragments of areading, window jambs, corbels, vaniting ribs, and keystones were found for a reproduction of Carter's shatches. This rations of which, together with the truncated room and Fowler's way down Framwellgate Street. From the ppposite bank of the river looking W.N.W. a comprehensive idea of the general grouping of the building, its towers and chapels, is obtained. The central tower owes much of its ffectiveness and power to dominate the land-cape to the addition made in 1490 of the general groups in the truncated room and Fowler's new work, were an existing the street in the east end, in which every bishop from Pulsey to Barrington had been enthroused, and which was be acceeded that the architecture cape to the addition made in 1490 of the

Capation ( die all Be no object 14 to turesque at 1 to the bistorical footback.

ought to me Entering the company of the drew attention to the large that harmonic as treatment of the face to most complete and faces Norman one process. most complete and facest X mean one p England, although a tree transfer or large its lack of length. Cosmisting over the loftiest, largest, and most mage cone; example of its class, and, how the exten-porary stalls in the chear, exhibits a tra-design a delightful (bend of Perpendic at and Jacobean details. For thirty years it was relegated to an observed on the resi-tation of the resistance of the rightful resistance of the its rightful resistance of the restrator. its rightful position at 1876. It houses a tawdry pseudo Ninex, font, executed fifty years also, and it lecturer suggested that it would be well, it he Dean and Chapter could persuade the Vicar of Pittington, near Durham, to return Cosin's marble chalice, with shallow fluted bowl, t the minster from whence it was ejected forty years ago. The areades of Durham nate are years ago. The areades of Durbam nate an supported by clustered piers and massive on cular columns alternating; the latter are variously ornamented with deeply increed patterns of vertical flutings, chevrons, and lozenges, each opposite pair being treated alike, and in the choir and transepte a spira device similar to that on a pair of columns in Norwich have was to be found. As to the channelling here and at Waltham Abbey and Lindisfarme, it had been hotly debated by archaeologists and practical masons as to whether they were incised before or after the shafts were erected. So far as Darham was concerned, the point might be regarded as settled, for close inspection had denot, strated that the deep grooves were cut through the stonework irrespective of the masonry joints, rendering it certain that the curvers wrought upon them after the masomy was set up. The triforium and obrestory are was set up. The triredum and decresory are kept comparatively low in relation to the nave, and thus contribute to the good proportioning. One of the most interesting features of Durham nave is its quadric ritie vault, erected between 1128 and 1133, and the earliest of these high stone roofs of great span (with the exception of the transepts here. It is evident that the original proposal was to cover in the nave with a wooden ceiling, sac as we see in the contemporary B-nedictine churches of Ely, Peterborough, and St. Albans, for the corbels on which the vaulting shafts are carried are clearly inserted in the shafts are carried are clearly inserted in the wall as afterthoughts. The transverse arches over the nave are slightly pointed, an early example of the use of this form; but the diagonal ribs are segments of circles. In the nave triforium passage arches of masonry in the roof being employed to uphold the outside wall at a high level and tengenit the threat the night result of the control of th level and transmit the thrust to a pier against the external wall at the triforium floor level the external wall at the triforium floor level A later development was to carry the ard from the pier to the outer wall as the flying buttress so familiar in Canterbury, Westminster, Norwich, and elsewhere. Turning back to the Galilee, it was seen that the masons employed by Cardinal Logby is strengthening the four arcades with two additional columns to each pier so closely followed the mouldings of 175 that it was not easy to defeat the row work except by the different texture and line of the fresh stones. Bishop Cesin's return stalls at the choir screen, carrying the case of Febber Schmidt's organ, which replaced a nech example of the first stalls and the first stalls are the first screen. screen, were lestroyed in 1845 by Schin. The choir screen was replaced in 1876 by the present one by Hodgson Fowler, which profe ably looked effective as an architect's design, and has but three faults unfitting it for its position-the style, Advanced Decorated, an exotic at Durham; the material, shining alabaster, equally exotic; and the clumsy

proportious. The pulpit erected at the same period is also a terrible example of inharmonious style, materials, and proportions. Looking along the transepts from south to north, Abbot Fosser's elegant six-light win-dow of 1505 in the north wall, and Chantrey's kneeling figure of Bishop Shute Barrington, 1826, the patron of Wyatt, were rington, 1826, the patron of noted, and the scene shifted into the choir. Here, again, the problem of the vaulting had aroused long and bitter controversy aroused long and bitter controversy, but examination of the masonry would demonstrate without possibility of disjute that when the Chapel of the Nine Altars was added the eastern bay of the choir and parts of the choir aisles were remodelled in the new fashion, the beautiful blend of Early English merging with and into the Decorated style, and that a new vault of this character was constructed over the entire thoir and the eastern chapel, new chapel and the reconstruction This involved were in progress between 1242 and 1278. In the four or five years ending in 1380 two important additions to the finish ing and ornamentation of the choir. had added greatly to its interest and beauty were in progress, the ponderous episcopal throne or tribune, with tabernacle work and tretoil cusped canopy, built by Bishop Thomas de Hatfield, who fought at the siege of Calais and the Battle of Neville's Cross, and which had recessed within it the prelate-warrior's own altar tomb, constructed in his lifetime; and the rather wiry open screen between the high altar and St. Cuthscreen between the high altar and St. Cuth-bert's tomb, built at the cost of John Lord Neville of Ruby, of Bedfordshire clunch stone, worked in London and transported thence by sea and rivers. Opposite the Hat-field throne and tomb, just east of the northern choir stalls, there has been erected a cenotaph altar tomb and effigy to Dr. J. B Lightfoot, commentator and divine; the memorial of black and white marble is similar in style to that to Hatfield, but is more elaborate in character, Designed by the late Sir Boehm. it was completed after his death by Mr. Alfred Gilbert. Bishop Cosin's beautiful choir stalls and organ case, con-structed in 1632-70 by James Clement, of Darham, in a blending of Tudor and Jaco-bean detail, were exhibited on the screen from a drawing by J. W. Billings as they appeared before Anthony Salvin destroyed the return stalls and Father Schmidt's organ case and threw the choir open to the nave. and as they now appear after being restored and set back by Hodgson Fowler, who also designed the new divided organ cases.

Turning eastward, the audience were vited in the imaginary perambulation of the edifice to descend a couple of steps behind Neville's altar screen into the elegant and spacious Chapel of the Nine Altars. The only other extension of like character (except the much later one at Peterborough) is the like mond chaper at Fountains Abbey. built by Abbet John of Kent between 1220 and 1247, and therefore in course of completion during the first four or five years the Durham chapel was being constructed. view into the roofless ruins of the Fountains chapel showed a similar plan, with in each case wide lancets in the walls above an elaborate to foiled and moulded areade, and in the eastern wall three bays each containing three windows, beneath each of which was formerly an altar; but whereas in the earlier Cistercian example lofty circular columns. centrally placed, once supported the vault here at Durham the sexpartite vault is carried over the chapel without intermediate piers. The great height of the Hurham chapel, the abundant lighting, the slenderness of the freestone and Frosterley marble window shafts and vaulting ribs, and the elegant hell-necked foliage capitals all conelegant in the necked to large capitals all contribute to the refinement and beauty of effect of Thomas de Moises' work. The huge rose window in the esstern gable, although deprived of its original tracery and stained glass by the detested Wyatt, still added by its fine proportions much to the magnificence

\* See measured drawings of the Nine Altars Chapel at Fountains Abbey and plan of entire establishment, by Friest Woolhouse, in the Bulling News for September 16, 1898.

The most interesting feature of the interior. at the interior was the great feretory of St. on the interior was compled a great part of the aestern wall. Unfortunately the Jacobean screens creeted around it, replacing the scre as erected around it, replacing the gorgeous shrine destroyed after the Reforma gorgeous sarine destroyed after the Kelorma from, were swept away by Salvin, leaving a bare rectangular tomb. The relies of St. Cuthbert removed from the innermost coffin of the saint in 1827, including his stoles and a gir-fle, his bracelet, pastoral cross of gold. oaken and silver altar tablet, and ivory comb, were now exhibited in the Library Museum The outer coffin of oak, constructed in 1542 and of which a photograph was shown on the screen, was transferred at the time of the exhumation to the kitchen of Durham Castle where it still remained. The lecturer suggested that it would be a gracious act on the part of the custodians of the coffin, probably he council of Durham University, to restore this valuable relic to the Dean and Chapter. since its most appropriate resting place would be on the saint's tomb. Below the elegant north window of this church is the statue of Bishop William van Mildert, the last of the earl-bishops( and the benefactor to the university, who is shown by the sculp John Gibson, as attired in bob-wig and lawn shoes, and seated with a closed book in his hand. The concluding views showed details of the arcading, a capital. the rose window, and vaulting, and the lec-turer quoted from Marmion, Scott's eulogy turer quoted from Marmion, on the Grey Towers of Durham now carved on a panel upon the Prebends' Bridge in the

Yet well I love thy mixed and massive piles, Half church of God, half castle 'gainst the Scot: And long to roam those venerable aisles With records stored of deeds long since forgot.

# -0-PAINTS DESIGNED TO PREVENT ELECTROLYSIS IN CONCRETE.\*

The use of a paint as a protective covering steel against damage by elcc reinforcing trolysis has often been proposed, but the writer is not aware of any tests having been made to determine a type of coating best adapted for this purpose.

Paints having a high insulating value are generally those drying with a high gloss, which is apt to prevent proper bonding, a fact which has undoubtedly prevented a general use of this protection. A method for general use of this protection. overcoming this objectionable feature was de-

veloped by these experiments.

Corrosion Causes.—It may be well to review briefly the causes of corrosion in reinforcing steel for the benefit of those not thoroughly familiar with the subject.

The ordinary forms of iron corrosion have been found to be due to auto-electrolysis, the presence of segregated impurities being responsible for differences in potential at certain areas, which set up galvanic action and cause solution and the formation of rust at the positive nodes. A similar but more rapid action takes place when an electric current is passed through an iron anode immersed in an electrolyte, such, for instance, When damp cement contains as salt water. an embedded iron anode the cement acts as an electrolyte, and the same rusting action takes place, regardless of the fact that concrete contains sufficient lime to inhibit corroion when no electrical currents are present. With the electrolytic change of metal into oxide comes an increase in volume of the products of reaction, and there is developed an enormous expansive force of mechanical presumability in the creative or the constitution of the production of the product of the constitution of the product of the pro sure, which is sufficient to crack the strongest forms of concrete.

Engineers are active in their endeavours to prevent high-voltage currents from running wild, but this fact does not justify a dis-

regard of precautions against stray currents.
Preparation of Specimens and Methods of Testing -The tests were made on two series specimens as follows:--

Rods ; in. by 12 in., painted two coats and embedded in concrete cylinders.

2. Rods \(^3\) in. by 12 in., embedded as anodes in cylinders of concrete.

All cylinders were \(^3\)\_2 in. by 8 in., of coment mortar 1:2. The moulds were re-

Abstract of paper by Henry A. Gardner, Assistant Director of the Institute of Industrial Research, Washington, D.C.

moved in two days, and the cylinders aged from one month.

Tests on Series 1 were made by immersing the lower 2 in, of the specimens in water, connecting them in parallel, and passing through them a direct current at 30 v.

Observations were made for one week, when small cracks began to show near the bottom

on a few specimens.

The specimens were then immersed towithin 1 in. of the cylinder tops, the current turned on, and observed for ten days. Cracking was shown by every cylinder carrying an appreciable amount of current, the fracture starting at the anode.

Wherever the protecting film broke down the increased passage of current resulted in rapid corrosion of the steel, followed by the expansion and bursting of the concrete-

cylinder.
Series 2 were tested by placing them in individual earthen jars containing sheet-iron cathodes coiled around, but not touching, the cylinders. The jars were filled with water to within 1 in, of the top of the concrete.

The cylinders were connected in Series 1, and current passed at 30 v. for 240 hours, when seven specimens developed cracks. The voltage was increased to 55 v., and continued for sixty hours.

Observations on Tests .- In the specimens in which cracking occurred the anodes showed considerable rust, the paint coatings having been broken down. On the cathodes in Series 1 the paint coatings were still intact. although some had apparently been affected by moisture and the hydrated lime in the wet concrete, chalky surfaces being shown.

The coatings on anode and cathode bars which were embedded in cylinders which did not crack and which carried little current, were in a good state of preservation.

Bonding Tests.-In order to determine the comparative bonding strength of rods coated with the various paints a duplicate of Series 2 was made, with the exception that the rods. were placed flush with the bottom of each cylinder. At three weeks the specimens were placed on an iron block drilled with a 1-in, hole and tested in a Riehle<sup>2</sup> testing machine. Some paints that proved to be good insulators failed to show bonding strength, and rice versû. When painting rods in order to overcome the objection to using paints which dry to a gloss surface and prevent proper bonding, these coatings were dusted while tacky (not wet) with sharp particles of sand, which formed a rough surface, assuring a good bond. The corrosion of metal embedded in concrete structures, by stray currents of high voltage, is often productive of serious effects. The use of properly made paints upon such metal constitutes a safe-guard that should not be neglected by the Such paints may be prepared from engineer. the following substances

The vehicle should contain : Boiled or bodied oils or products which dry

to a fairly saturated film. Oils which dry by semi-polymerisation rather than oxidation.

Oils which dry to a flat rather than a

highly glossed surface. The solid portion should contain a percentage of :-

Pigments which are coarse, and which, therefore, tend to form films having a rough surface.

Pigments which are inert, and which do

ot act as conductors of electricity.

The painted metal should be "sanded," if

possible.

Mr. F. H. Tulloch will hold a Local Government Board inquiry to-day (Wednesday) at Skelmersdale into an application by the urban district council for sanction to borrow £2,000 in order to provide a new gas holder

Sixteen new houses have been erected under the Housing of the Working Classes Acts by the Llandadno Urban District Council. The contract was let to Mr. Luther I November last, and all the houses Roberts have November last, and all the houses have been occupied by tenants this week. During the past eighteen years the council have erected 67 houses at the total cost of £15.712. The council have in their possession land in King's Road on which 27 additional dwellings can be

# Currente Calamo.

The Professional Classes War Relief Council have undertaken to organise a Christmas Fair at the Albert Hall for the purpose of raising funds for the relief work of the council. The Organising Committee will be assisted by committees representing the different professions, and a committeeknown as "the Architects' Committee "has been formed to represent the professions of architecture and surveying. The committee invites architects to join, and to otherwise assist by giving publicity to the project. It is also desired to call the attention of all architects and others to the great importance of attracting visitors to the exhibition which is now open at the Maddox Street Galleries. The proceeds of sales are devoted to the relief of painters and architects who are suffering from the effects of the war, and if every reader would persuade at least one friend to visit the exhibition with a view to making a purchase, the relief funds would be greatly benefited.

The R.I.B.A. Journal gives fuller particulars with regard to the Kingstown Urban Council competition scandal, on which we commented a fortnight ago on this page. The appointment was in connection with a housing scheme estimated to provide 274 habitations, and the architects' duties were to include preparation of all plans and specifications, supervision of the work of erection, attendance at all Local Government Board inquiries and meetings of the Council and Committees, and preparation of documents for the Local Government Board inquiry and for carrying out the scheme, "at a fee, to cover all the work, of 21 per cent. on the accepted contract." It was stipulated that "in the event of the scheme being altered or not sanctioned by the Local Government Board, or abandoned altogether or in part, then no fees whatever shall be payable to the architect save for that part of the scheme gone on with by the Conncil and completed.' A deputation from the Institute of Ireland waited upon the Housing Committee and urged such modification of the conditions as would secure to the architect a fee of 5 per cent, on the typical house of each group. This, they explained. would preserve the 5 per cent. principle, and would mean only a very trifling increase in fees. As regards the provision that no fees be paid on abandoned work, its manifest injustice was pointed out, and the deputation asked for an alteration of the clause so as to ensure payment of a reasonable fee in case of abandonment of a scheme for which designs had been prepared. The deputation hoped that their representations had been favourably received, but have been disappointed to find in the revised conditions since issued that while 5 per cent, on each typical house has been agreed to, the commission on repetition work has been reduced to 2 per cent. Further, as regards abandoned work, the only concession granted is that the urban council "may consider a reasonable claim for money expended by the architect," In view of the unsatisfactory nature of the revised conditions, the council of the Institute of Ireland have passed a resolution recommending members not to apply for the appointment, or, in the event of their having done so, to withdraw their application. The terms of the resolution have been communicated to the town clerk, ring and unnecessary costs of renewal. There Kingstown, and to every member of the In-titute of Ireland. It is hoped that the stand the making of title on sale or mortgage of an

taken by the profession in Ireland against. these unfair conditions will have the stead has the stead fast support of their brethren in other parts of the kingdom, and that all British architects will refrain from applying for the position until the conditions are rectified.

The Iron and Steel Institute is about to follow the example of certain other British organisations with foreign members in clearing enemies from the roll. When the Institute holds its autumn meetings on September 23 and 24 the council will notify their intention to submit at the annual general meeting next May a new rule providing that if the war is then still in progress, all members, honorary members, and honorary vice-presidents who are subjects of an enemy country shall forthwith cease to hold any position in the Institute, the question of reinstatement being considered when peace has been concluded. A similar course should surely be taken by all our learned societies. It has not yet. The Chemical Society includes Germans, the council baving resolved by a large majority that, whilst regarding with the deepest detestation and abhorrence the ruthless and barbarous methods adopted by Germanic allies, and more especially the debasement of chemical science by their latest operations, " no steps can, consistently with the dignity of the society, and with due regard to the British idea of justice. be taken in the above direction until after the cessation of hostilities.

The Bill recently introduced into the House if Lords by Lord Haldane to amend the law with regard to property and sectlements is published. It is mainly the same Bill as that introduced last year with some amendments and additions. These embrace certain details in connection with the conversion of perpetually renewable leaseholds into long terms (clause 43); provisions as to corporations sole (added to clause 55); local land charges (clause 66); protection to purchasers acting without notice of a fraud on a power added to clause 69); enlargement of long terms (clause 71); power to reduce the fees on registration of title to land acquired for street improvements (added to clause 140); provisions for getting in bare legal estates left outstanding where registration of title to land in a compulsory area has been omitted (added to sixth schedule, clause 6); and extension of the time for registration of the title to land in a compulsory area (added to tenth schedule, Part II., clause 10).

The object, we are told, is "to facilitate the transfer of land " All land is made subject to the law relating to ordinary freehold land. This is effected by enfranchising all copyhold land, subject to compensation to the lord of the manor for any loss which the abolition of the incidents affecting copyhold tenure entail on him, being paid by the tenant or secured by a rentcharge, and to compensation to stewards of manors for the abolition of their office. (The compensation will, except in very small cases or where the parties otherwise agree, take the form of a rentcharge.) Special enstoms affecting the descent and alienation, etc., of freehold land are abolished, and, incidentally, fines, heriots, and similar incidents of special tenures. Perpetually renewable leaseholds are converted into leaseholds for terms of 2,000 years, thus avoiding constantly recur-

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Lord I work at a second to the task Buttin Critical task at the Boltzman task by another the most of Hill and the distribution of Boltzman at the distribution of the order to the order to the second to the contract of the second to the second square tower or keep, the seas half about the year 12 %. The Kerman and Hatton in the fifteenth contury, as a second of John ton Col. Robert Johnst a soil Hatta et Leel, and in 1876 it passed into the hards of Sir Dudley Courts Marjor tanks, Part , x came the first Baron Two knowth of Ellington. The eastle stands on the odge of a rocky promontory commanding spendid seems of the surrounding country and the river Whitadder. The reception floor of the castle is above the level of the ground, supported by massive vaulted arches. There is the oak doorway with its original peep hole and the shot-hole close by to deal with unwe one guests. When Border rails were common Hutton must have been a valuable stronghold, strategically and otherwise. To day it is a beautiful old residence, carefully preserved, and equipped on lars that meet the needs of the present day.

Mr. Vicary Gibbs gives some interesting particulars in the Gardeners' Chronicle with regard to the harmful effects of certain grasses and weeds around the roots of young forest trees, confirming some experiments made at Royston in 1912, and quoted from the Journal of Forestry. The result at Royston was as follows, taking 1 that the percentage of growth in the two clean plots. The least harmful of the ground coverings proved to be the creeping butterenp, where, however, the percentage of growth of trees was only 52, or little more than half that in the clean ground. The next was the stinging nettle, where the percentage was 41. In the case of plots overed with various grasses the percentage ranged from 33 to 13, the covering of the ground which proved most detrimental to tree growth being couch grass and perennial rye grass, in which two cases the rate of tree growth was 15 and 13 per cent, respectively. There appears to have been but little difference in the effect of the various crops on the ashes as distinguished from the larches. A photograph of the ashes and their foliage, which accompanied the paper, brought out very markedly the difference not only in height of the trees growing on clean ground, but in the colour, size, and appearance of the foliage

Mr. Vicary Gibbs' own experiments at Aldenham - made unintentionally fully confirm the foregoing. Some eightien years ago he planted a row of fourteen maples Acer Schwedler: Twelve of them stand on lawn, being planted in holes 6 ft, a ross, which are kept clean and free from turf, and weeds. At the time of planting the city was removed and the holes filled with good light loam. The thirteenth stands half on lawn, half in a shrubbery where the ground was well trenched; the fourteenth stands wholly in trenched ground. About the same time hoplanted fourteen copper beeches, and in this case, too, the conditions are the same, twelve trees being in a field, the thirteenth on the

Lea y ditation, and the fair year 1070 ms late father planted world of lorse cliestrats along the the park. The holes made were not z grand, consequently though the to put a new lindge ever the lake at in the chestnat avenue, and this ne tate the gradual raising of the drive as the bridge, and the consequent and replanting of the first trees in the why resold ground, at the soles of I. Although it in ght have been exit act to ving fairly bug thees up I about will to is an induction foldage, and of their flam the armoved on s

# -OBILLARY

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Compression

# Our Illustrations.

# (DERN INTERIOR EXECUTED WITH OLD MATERIALS.

Marray Adams Acton,\* the artist this Reyal Academy drawing, has sent us the fellowing particulars of the work which he has carried out in France, as shown. The original, in water colour, is particularly oright and transparent, being most effectively thated in clear washes:—"It is not an tively titled in clear washes: —"It is not an everyolay occurrence to find a client that proposes to build possessing the necessary cue act of appreciation to chable one to array of this particular type of interior. The house in question was in France, the Long suggested and carried out pracand let 2 suggested and carried out practally as snown in this sketch, every noon to the ground about being treated in a four manner. An old 17th Century that we had been condemned on the site, it is this was fairly well farmshed with its vican beams, old stene, etc., that had chart port of the original structure, one second a ratiofally, was to preserve as much the color internal as possible. This was accordingly as well be seen in the accordingly. or the self insternal as possible. This was constant as will be seen in the accompany of another, the interiors of the new and the restraint throughout. The property of the ornament selected to be to be advanted features was sufficiently be done denote the style. The walls not written the beams with small additions the most ornament allocations are considered features the second of the walls and most one of the restriction and in resistors almost in the second of the second of the resistors almost in the second of the second of the resistors almost in the second of the second of the resistors almost in the second of the seco one white, the beams with small additions there paired in position almost in the sericulation jist as they were when taken out if the old house, also the wooden floors, and one he cases the cloured tiles of the floor 2 were revised, with excellent result Nathing can be found more effective and cleasing as a setting for old furnature that the simplest form of interior treatment possible and in the firenlaces in this instance an stole, and in the fireplaces in this instance an abundance of old fire dozs and grate backs were intunately collected.

# A STREET VIEW IN WORCESTER

Werester contains, of course, many objects and several genuine timber framed inbings. They are especially numerous in Finite Street. New Street, and Lich Street. One of the most interesting is a large straction on Frans Street, supposed to have been the in Friars Street, supposed to have been a amount lesselity. Another old house courts seeing stands at the corner of Chur's Street in I the Shambles. In the Old Corn Mariaet is "King Charles's House," with the inscription. Leve Gold, honor ye Kinge, were the doorway. This curious half-timbered mouse originally extended round the carner into New Street, but a portion has seen in ten modernised. In the Tything, at the Whiteladies, are traces of an ancient namery, forwing the name, with a few remains of the chapel. In Sidbury, opposite the Talbot Iim, is an old house bearing date 1642. The Trinity House, or Queen Eliza-

### GORDON HEMM

### LE PREMIER MATIN

especified to it, is to remain permanently in Englayd, a treasured testimony for long years to meet his genius and to the always testerial relations of the Belgian and British to the state of the beginning british to the state of the former and by the determinant of the latter that, so far as is hardly to sold, the sacrifices Belgium has e made good and her indeper is the last term of the Royal Academy on p. 51s. If it is of the Royal Academy on p. 51s if it is statue has been rare at any exhibit : my years, and we trust it will

given that by a printer's error the faint  $A: x_0 \mapsto A$  for is an autately given on the  $A: x_0 \mapsto A$ 

not leave England." We resolve that our hopes have not been disappointed. On p. 193 of our issue of August 18 we recorded the presentation of the statue to the Trustees of the National Gallery on August 12 at the Royal Academy, and we again reproduce the well chosen words of Sir Edward Poynter:— "It is a work magnificent not only in design and expression, but in that profound and masterly knowledge of the human figure and masterly knowledge of the human naure and its capabilities of beauty which is the characteristic of the great masters of the great schools of Greece and Italy: and these qualities it displays in the highest degree, the sense of form being as refined as it is colossal in conception." colossal in conception.

### ST. JAMES'S CHURCH, WEST STREATHAM.

The chancel chancel aisle or gan chamber, and vestries shown by the perspective view we cliustrate complete the charch. These have been carried out by Messis. J. Garrett and Son. contractors, of Balham Hill, from the designs of Mr. W. Samuel Weatherley, now of 15. Buckingham Street. Strand. The external facings are dark Crowborough stocks, at a tile stone, both external and internal, Mr. Mr. S. Park, from the Bath stone firms, worke I and fixed by them. The internal wall faces are plastered, the lower part being parelled in oak. The reredus, seddia, chancel seats, communicants desks, etc., are also in oak. The fiéche is of teak, the spirette covered with lead. The chancel chancel aisle, organ chamber,

### THE MIDDLESEX GUILDHALL, BROAD SANCTUARY, WESTMINSTER, S.W.

A double-page perspective view of this excelent building appeared in our issue for February 5, 1911 when the County Council adopted the design prepared by Mr. J. S. Gilson, F.R.I.B.A., of the firm of Messrs, G bson, Skipwith, and Gordon, of 5, Old Street, W. In working out the scheme Mr. Gibson was assisted by the County engineer, Mr. H. T. Wakelam, Treday we publish the two chief plans of the new building as executed, and among our inset plates will be found a pair of good photographs lent us A double-page perspective view of this exbe f und a pair of good photographs lent us by the architects in illustration of the County Sessions Courts, known as Court No. 1 and Court No. 2. The frontage of the building towards Broad Sanctuary measures 102 ft. long, and to Little George Street it figures 161 ft. Portland stone has been used for the frontages.

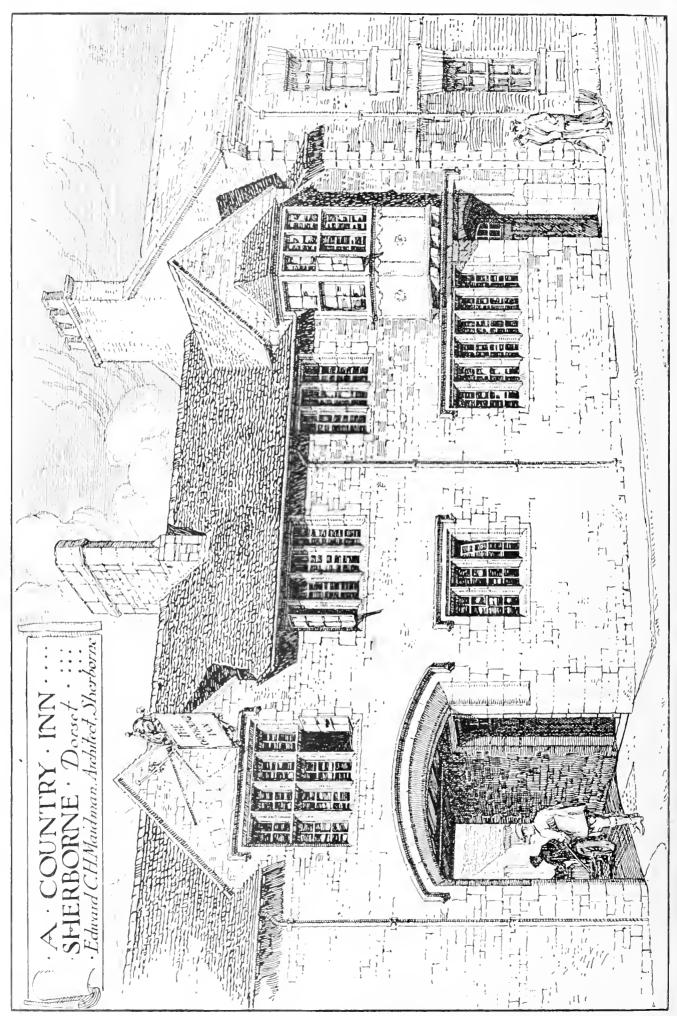
# A COUNTRY INN. SHERBORNE, DORSET.

It is the good fortune of few engaged upon the erection of licensed premises to have the opportunities here presented-a charming town, a good frontage, and clients who desired something different from "the ordinary," and good old materials obtained from namery, bearing the name, with a few remains of the chapel. In Sidbury, opposite the Talbet Lim, is an old house bearing date 1642. The Trinity House, or Queen Elizabeth's House, stinds in the Trinity, and some years ago was removed and rebuilt further back several yards to facilitate passing the properties of the principal apartments to the construction of the first form and visible in the principal apartments beneath. The work has been recently completed, Messrs, F. Bartlett and Co., of Yeovil, undertook the general building and carpenter work. The architect is Mr. Edward C. H. Maidman, Licentiate R.I.B.A., of Sherbeare. Sherloane.

M. Egole Rombeaux has kindly sent us you to transport of his magnitic nt marble at it. Which thanks to his liberality and it is which thanks to his liberality and it is problem of the subscribers who great ability, died on Friday last at 9. Campos it is it to remain permanently in

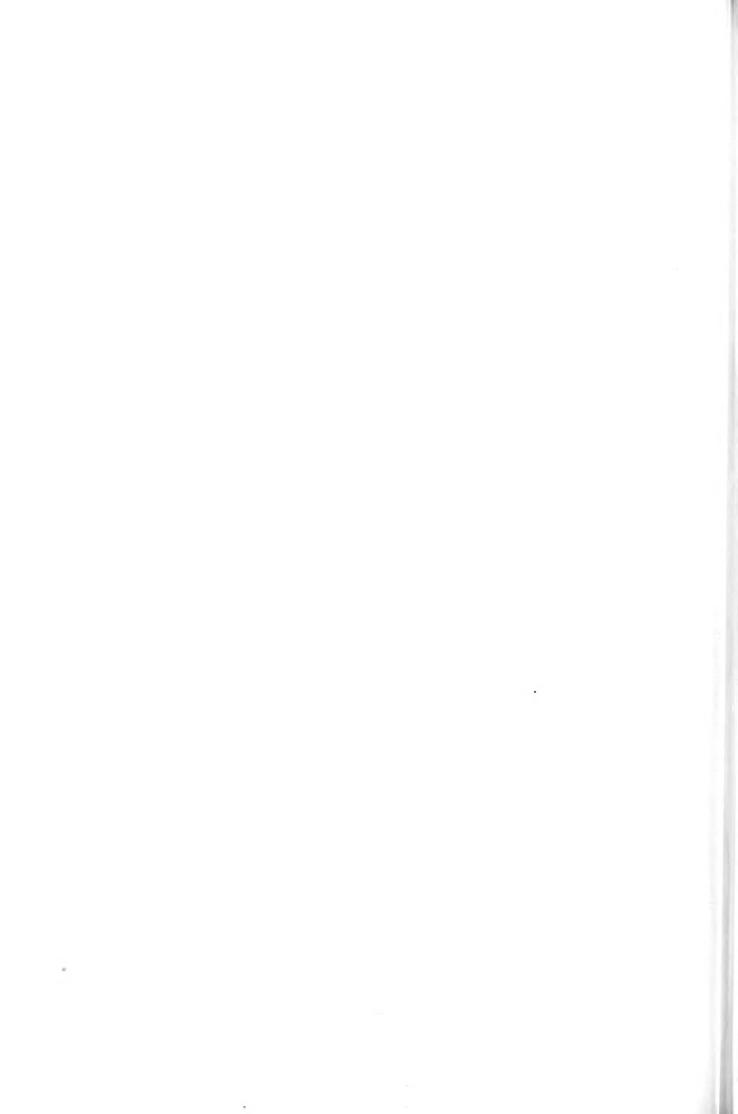
The re-opening of St John's Church, New-port, Isle of Wight, after re-scating, which has cost about £250, took place on Thursday after-moon. There have been several a nitions to the church furniture, including an earlie lecter, abor rails, and a pulpit rail all executed in

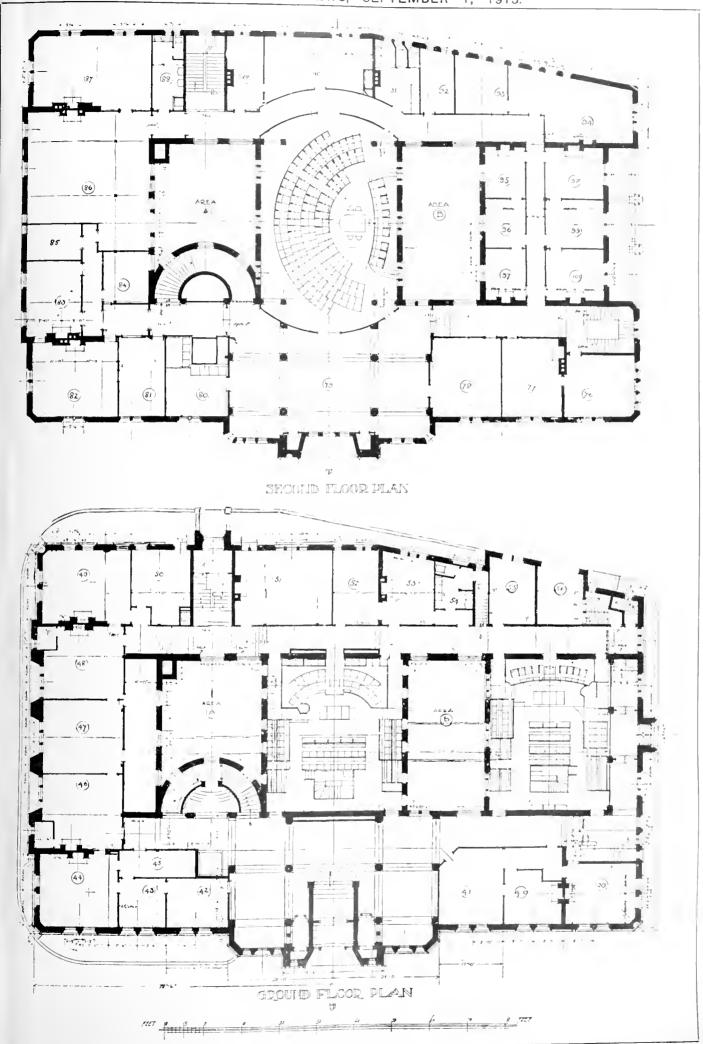
The ancient Guild Hors - Henlewin Arden was purchased last year in Mr. W. J. Fieldheise, lord of the manage whose object was to rescue the building from further deterioration. The Guild Hors, has been repaired and removated, and the land at the back chased of some uninteresting buildings, in place of which there is to be an old-world counter.





A STREET VIEW IN WORCESTER.—Sketched by Mr. Gordon Hemm.



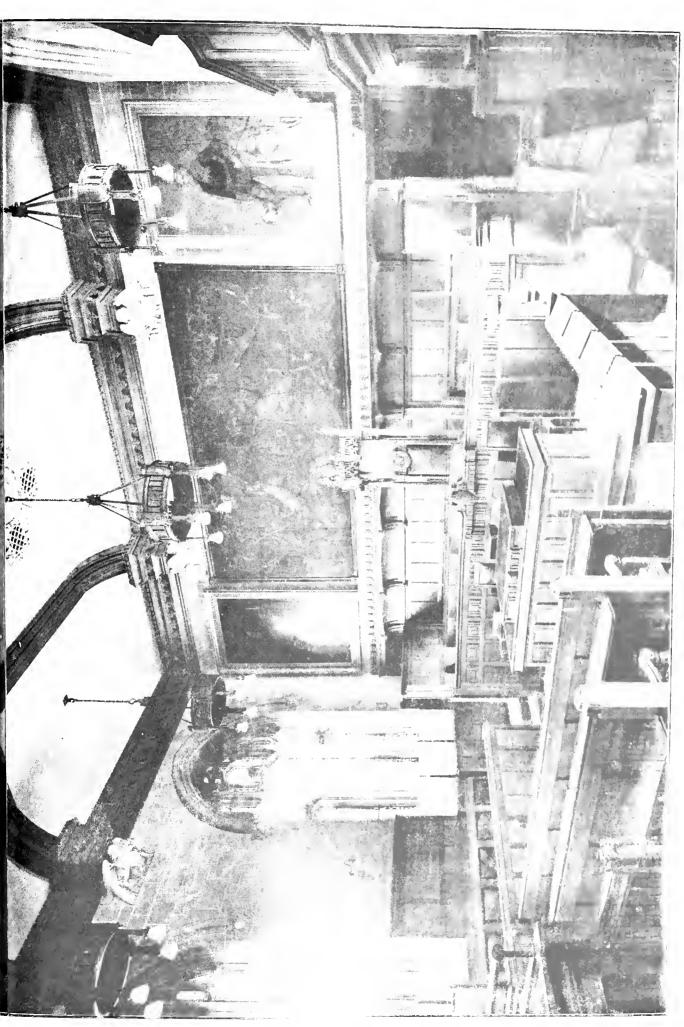


THE MIDDLESEX GUILDHALL, WESTMINSTER BROADWAY, S.W. Messrs. J. S. Gibson, Skipwith and Gordon, Architects.











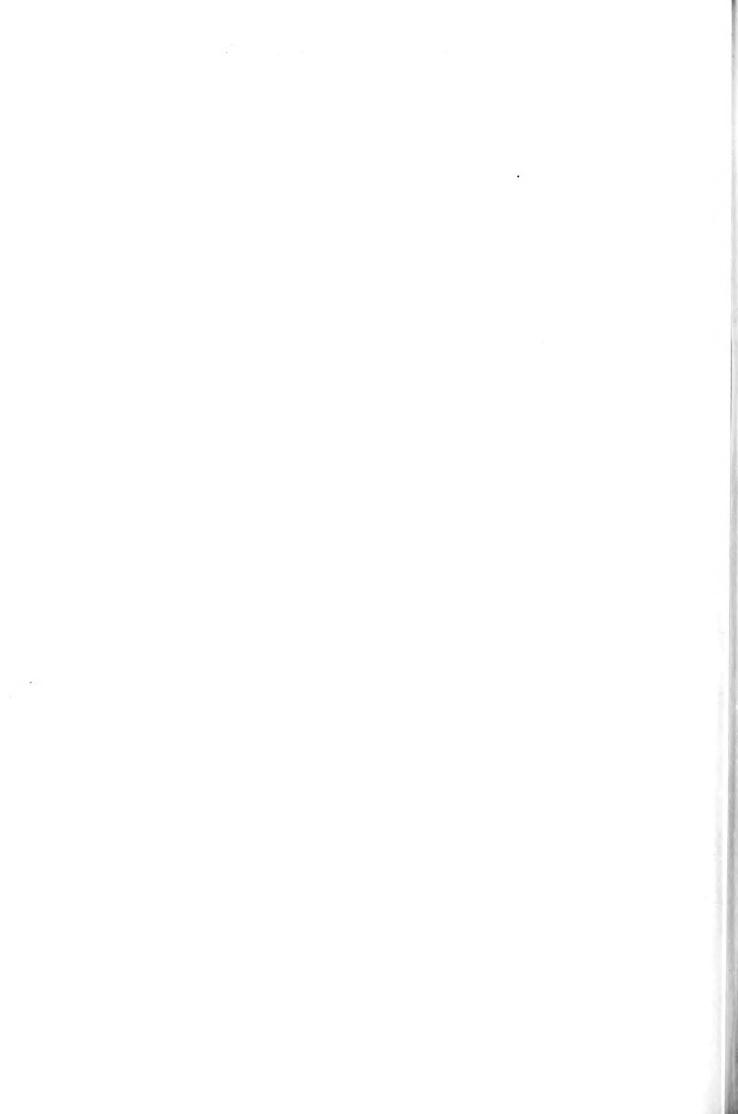




AND INTERIOR EXPORTED WITH OLD MATERIALS, By M. A. et a. Acten.



 $A_{i} = 1$  .



## Our Office Table.

It is perhaps not as well known as it might be that at the request of the Dean and Chapter of St Paul's and of the Surveyor to the Fabric certain architects have undertaken to watch the cathedral, with the object of ex tinguishing fires that might be caused by aerial bombs. During the winter months it will be necessary to obtain more help, and any who will volunteer for one whole or two half nights a week should communicate with Mr E. Drower, 28, Victoria Street, Westinger ster, S.W. It is hoped that the watch of this national monument may be undertaken by members of the architectural profession. It is necessary to secure another 120 volunteers.

In the current issue of the "Journal of the Royal Institute of British Architects " is published a fifteenth list of members, licentiates, and students enlisted in the Army or Navy for the period of the war, the total to date being 44 fellows, 325 associates, 161 licentiates, 209 students, and two hon, associates ciates. The roll of honour of those on active service includes architects in practice, their assistants and pupils, and teachers and stu-dents of the architectural schools. Definite proposals are before the council for the per-petuation of these names by inscribing them in a permanent form on panels to be fixed on the walls of the staircase leading to the library at No. 9, Conduit Street.

The Curator of the Guildhall Museum, Mr Bernard Kettle, reports that when the old General Post Office in St. Martin's le Grand was demolished a large series of Roman rub-bish pits were disclosed. The lowest portions of 120 of these were carefully excavated. The finds included a few whole pots and many thousands of fragments of Samian and coarse pottery, besides building materials, what stones, beads, knives, coins, and other small objects. It has been possible to assign dates to most of the holes—between A.D. 50 and 200. By the association in the same hole of dateable with undateable pottery light has been thrown upon many types of the latter. Last summer while the buildings 3-6. King William Street were being demolished another series of five large Roman pits were uncovered. From the fragments thus obtained nine Samian vessels of the First Century have been pieced together, and are now in the Guildhall Museum. These include a decorated vessel Museum. These include a decorated vessel finer than any previously found in London, and two specimens of a shape unknown hitherto in England. A lamp, two coins, and other objects of pottery and bronze were also obtained from this source.

The last remnants of the great Franciscan Priory, near Lewin's Mead. Bristol, a two-storied house, with some 14th Century arches the full height of the building, is about to be demolished. For many years—from 1809 on-wards—it was used as a Baptist Sunday-school in connection with King Street Chapel, and is now known as Ivy Cottages. The building, which runs north and south, has been structurally altered by the addition of floors, partitions, and windows, and is now divided into two dwellings under one roof. Mr. T. Pope's measurements are 36 ft. 6 in. by 11 ft. 6 in. in the clear, and the height, from ground floor to apex of roof in the clear, is about 29 ft. There appears to have been an outer lobby at the back of the building, from which access from the ground floor to the land on the ligher level was gained by means of a flight of steps. Portions of the wall of this outer hall still exist, and on the higher level there are remains of an original wall and buttress. There seems to be very little doubt that the old building was divided by a floor into two apartments. The upper floor, or Greyfriars' Hall above referred to, was lighted from the west by the two Pointed windows. These windows have been re-cently revealed as a consequence of careful examination of the old building. Mr. considers them to be of Late 14th Century date, and the mouldings show them to be of good type.

A Works Pupils' Certificate (Building Se. tion) of the University of Sheffield (Lecturer, Mr. W. S. Purchon, M.A.

A R I B A collins ARTBA: has been arranged by the University in consultation with the Sheffield. Master Builders' A-so ration to meet the pot-requirement of tudents who are working 640 with the object of becoming master builder and jet or of occupying other important positions in or of occupying other important positions to building businesses. The course has been arranged on the lane of the Works Pupil.' Certificate Course in Engineering, the stu-dents attending the day courses of study at the University during the winter six months (October to March inclusive), and at works during the summer six months (April) to September inclusive. A Works Pupils Certificate (Building Section) is awarded to students who complete the three years comes and pass the necessary examinations. The next session be, in- on October 1, 1915, and the entrance examinations for candi dates under twenty years of age, who have not passed an approved examination, will be held at 10 am on September 20 and Octo ber 1. If further particulars of this course of instruction are required, application should be made to the lecturer, either by letter or by appointment, at the University

Mr C F Gettings, the chief surveyor roads for Worcestershire, has just issued hiannual report, which covers the period of twelve months ended March 31 last. He states that the estimate for the year was £103,005, but £5,354 less was unexpended, as although the full quantity of work provided for was carried out, the conditions were rather more favourable than was auticithe conditions pated. Apart from the Road Board scheme, the committee had had strengthened some of the weaker roads in districts taking a fairly heavy traffic. There were now motor bus services running over 192 miles of main roads in the county, the whole of which have been put into operation since September, 1912. Over the Birmingham and Hales 1912. Over the Birmingham and Hales Owen Road the motor traffic has increased from 1.754 tous in a week in January, 1913. to 8,484 tons a week in May this year. The work in connection with tar-painting was extended during the year, some 94 miles being treated at a cost of about £5,000. Rather more than one fifth of the total mileage of rural main roads were now surface-tarred,

Instances are on record, says a writer in the Contract Record, of Toronto, where of pigment paints have been effectively used to stop the dusting of cement floors brought about by abrasion. If the floor has been about by abrasion. If the floor has been freshly liid and is damp, the possibility of lime relation (supportfying the oil in the paint may be removed by first treating the surface with a solution of finited zine sulphate as a primer. Boiled based oil, sometimes mixed primer. Boiled finseed off, sometimes mixed with Chinese wood oil, may be used as the liquid portion of the paint. These oils bave a remarkable landing action when applied to a cement surface. When mixed with jugment, they form points which are eminently suited as first coaters for ceacent floors. The first coat will dry rapidly and form a dense surface. Over this may be applied a second coat, and, if a high gloss surface is desired, a portion of variash may be added to this

Smoke, soot, dirt, etc., are very apt disligure stone masoury soon after crection, necessitating periodical cleaning treatment. One of the simplest and best methods of removating the surface is to use the following wash, which is easily made and applied Prepare a wash of soft water and about 1) bars of common laundry soap. Boil until the soap has been thoroughly dissolved Add a fine, clean, gritty said (white preferred), and may to about the consistency of While mixing, add about five table putty. While mixing, add about five table spoonfuls of ammonia per bucket of water.

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A continuous on dearnes et Great P. Street in connected from street will the tion street will be posal Vateria Street, Chickester Street, Square

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The Salian Gov The Saltan Govern the Victoria and Alba British public the man Bain, by Ivan Messas appropriation of the inte cent combition of his work view in the Central H. H. S. Senninhaber of the exhibition.

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At the new Convert Class 

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tore Fe () // fill. spoonfuls of animonia per bucket of water. With this preparation, so rub the surface with a stiff sorubling brush. Wash down with a stream of water from a hose, and then 20 over if again with sembling brush.

As a consequence of the war complete statistical of times of the rubbase of the United Kingdom for 1914 with not the published. A skeleton return is no 1 hast Monday night be the Board of Trode shows that with 252 additional mells at these purify 7,085,000 than in 1917. The not means was £50,925,000, as compared with £52 151,000 in 1915, a net de

#### PROFESSIONAL AND TRADE SOCIETIES.

INCORPORATED SANITARY ASSOCIA HON Of SCOTLAND The ferty first are, a construction will take place of the second to day. Wednesday, to the second of th it. - throughout Scotland I The proceedings will Will be represented accurate proceedings will be with the annual business one this layers, with the laminal business must be a single an lecture in the M is not Ham, W is 12, at Stricts. The hotime is by Dr. R. M. Bacharian, butterfolgast to the copyration, Gasgaw, and the subject is, This is a Relativity Disciss. Sin Hugh Shory Steman, Bart, will preside, To morrow P. J. Health Committee of Linnik Coty Co. [], will deliver his presidential address. I see diet papers will be read en "M. Saspey. [] The Care of the Health of the Code. [Mathods of Triating Vermin [] The Date of the service of the se m Balda.s. On Frainy t and "Refuse Bins on rure. On Friday to concluding day, there will be further yours on "Samtary Provisions in Southern Teachers," "Planting Schomes," "Planting of Houses to the Working Classes," "Economic Dataty in Time of War," "The Effect nome Datay in Time of War. "The Effect of the West, the Duties and Responsibilities of Local Arthorities in Scotland," and "The Training of Naises in Local Authority and Poordaw Hospitals and Their Relation to the General Sandy of Naises." All the papers well be observed discussion by the members of

ROAD SURVEYORS OF SCOTLAND -At the thest, etc. annual meeting of the Road Survey as a Scotland, held in Aberdeen, Mr. Peter C., k. Dunbar, was appointed president: Messes A. Forbes, Dunfermline, and W. L. Gossa. Dunblane, were elected vicepresidents; and Mr. Allan Stevenson, Ayr. Was applied secretary and treasurer, for thousand year. At the outset of the proceedings Mr. James Watson, Strathaven, the retiring president, occupied the chair, and in the coarse of an address mentioned that seven men bers of the association were serving with his Majesty's forces. The chair was after-wards taken by the newly-appointed president. Mr. Clarke. Discussions took place on several questions of interest to the members, amongst the tapics being the possibility of securing uniformity in the system of keeping road a on to the economics of road surfac-ing, and the best way of obviating the difficulties frequently met with in the filling up of opened road tracks. It was resolved that the next meeting of the association be held in Glaszow in August, 1916.

TWO SEVENTEENTH CENTURY SHEE FIELD HALLS.—The Humber Archaeological Society recently visited two Sheffield houses. Carbrook Hall and Attercliffe Hall, with the Carbrook Hall and Attercliffe Hall, with the old Attercliffe Chapel, which, with the exception of the cathedral, is the oldest ecclesiastical edifice in Sheffield. The former has for the past ninety years been used as a hierased house, and was described by Mr. J. R. Wigfull, A.R.I.B.A. Carbrook Hall date, here of Starbour the starbour of St dates, he showed, from the time of Stephen Bright, whose father, Thomas Bright, of Bradbury, settled at Carbrook about the of the seventeenth beginning. century. built or enlarged the hall, where on the back of one of the fireplaces, are still to be seen his initials and the date 1623. He was builifi of Hallamshire and lord of the manor of Eccleshall. In the seventeenth year of Charles I, he was granted arms as "a person of £1,000 a year estate, of credit and respect in the affections of the gentry, and of extraordinary merit. He died in 1642, of extraordinary merit." He died in 1642, and was succeeded by his son, Sir John Bright who took an active part in the Civil War, i.s.ng to the rank of colonel in the Parliamentary Army. He was appointed Governor of Sheffield Castle after its surrender, and afterwards Governor of York. The out panelled room, said Mr. Wigfull, was once the principal apartment of the house, and the state, in a doubt, of many a conference form of the Civil War. The panelling space form of a calibrate design. At one end of the state of the French Army, was grateful on August 4 last forder of July 301 as a Knight of the Legion of Honour, the state of the state of the Legion of Honour, captain on the large of the Invert was a vice-present. Wisdom trampling upon Ignor mentioned, but it is known that his civil services as Professor and Director of the School of Architecture appear also on the nomination. once the principal apartment of the house,

while Wisdom is typified by a figure in a long tole. Above this room is another great interest. The chapel dates from 1630. It was viiginally ob it, from east to west and 50 it, from north to south, together with in Juste on the north side, but it was con siderably reduced in size in 1857. of building it was £104, and the ground on which it stood—though of much smaller area than that which now surrounds it—was bought for only £3 3s. For many years the chapel was all owed to remain in a dilapidated condition, but about ten years ago it was remained and again adapted for service, while at the same time the city council took charge of the stayeyard and laid it out as an open space. According to Mr. C. Paul, what remains of Atterchiffe Hall is now used as a dwelling house, and is situated on Attercliffe dwelling house, and is situated on Atterelific Road, just past the junction of Old Hall Road. Dr. Gatty states that the hall was demolished in 1868 by Mr. Robert Hadfield, but said Mr. Paul) iccent investigations by Mr. C. R. Vine and Mr. Ward, of Atter-cliffe, show that the doctor was not strictly cerrect. The hall can claim greater antiquity than its Carbrook neighbour. seat of the Spencers, and William Spencer was born there in 1594. His son William became a licutement-colonel in the Parliamentary Army. After the collapse of the Common wealth he obtained a free pardon from the Crown, and was confirmed in the possession of his estates. He invited one of the ejected clergy of 1662, Richard Frankland, to set up his academy at the hall, and the Rev. Timothy Jollie also carried on his school The present remnants of the hall are there. supposed to have been the academical rooms. In one, which was probably the lecture room, is a plaster motto over the lireplace reading, hande thinke Whatsoever thou dost take in of the ende and seldom so shalt thou offend. The rooms contain some very interesting plaster work. The Spencers parted with their Attercliffe possessions some time before 1810. Afterwards the premises were occupied by a firm of spads and shovel manufacturers.

The Secretary of State for India has sanctioned the appointment of a Chief Conserva tor of Forests in the United Provinces.

The Ham Hill Stone Quarries, which Messrs Matchain and Co, offered for sale by auction on the 19th ult, were subsequently disposed of by private treaty at a very satisfactory figure.

The session for 1915-16 of the Architectural Association School of Architecture will open on Monday, September 27. The annual meet-ing of the association itself for the delivery of the presidential address will be held on Monday, November 8.

After being extended and rebuilt, the Mile End New Town Synagoone, Dunk Street, was opened on Sunday. The structure was first erected in Dunk Street, Mile End New Town, in 1885, and it has now been reconstructed at a cost of over £1,000.

A new council school at Tynywern, Tre-Thomas, built at a cost of £10,500, has been formally opened. The designer was Mr. J. Bain, architect to the Monmouthshire Educa-tion Committee, and the contractor Mr. R. W. Moon, Newport, Mon.

Additions are being carried out at the premises of the Ulster Banking Co., Limited, at Tullamore. The building contract has been taken by Mr. James Lees, Great George's Street, Belfast, and the architects are Messis. Blackwood and Jury, MMR.J.A.1., 41, Donescall Place, Belfast.

The rural d strict council of Wantage have adopted a scheme for the sewerage of the village of Harwell. A system of land treatment will be adopted, and the storm water will be separated from the sawage. The presents were, which are defective, will be used solely for surface water, and new sewers be laid throughout the parish for sewage.

Information has been received by the Secretary of the Glasgow School of Art that Pro fessor Eugene Bourdon, Director of the Glas

## Correspondence,

OUR ANCHENT CHURCHES.

To the Editor of the Building News.

Sir.- In the course of a lecture on Romanesque and Gothic Doorways, de-vered by Mr. C. H. Dedman at the Royal Photographic Society's exhibition, he referred to the great risk of dimage and destruction by aircraft to ancient churches, particularly in the Eastern Counties.

After the raid upon Scarborough the local authorities issued requests for photographs of buildings showing their condition prior to recerving injury, and received but a poor response. Yet there are thousands of photographers, both professional and amateur, in the country willing and even anxious to make records at the present time, if they were allowed to do so. In view of the fact that restrictions are necessarily placed upon outof-door photography at the present time, permits would have to be granted by the War Office or police authorities. If such permits were granted loosely there might be a of giving facilities to alien enemies resident in the country, but this danger can readily be guarded against by requiring references from the applicants to the officials of the many photographic societies throughout the land. Personal knowledge of the applicant would be a sine qua non, and the permits would be granted only for special work in specified places.

Our well-known abbeys, minsters, and cathedrals have probably been photographed from every point of view, and records of details secured, though many of these photographs have in the course of time been lost. The smaller ancient churches up and down the country, however, have not received the same attention, although they contain priceless relics of the past, which could not be restored in the absence of large-scale photo-

In some instances a single door, a window, or a few capitals are all that remain of the ancient work, and these should be copied on a scale large enough to show the tool marks. No expense to the country would be incurred, but the co-operation by the Government, the clergy in charge, and the photographer is necessary, and the work should be undertaken at once.—I am, yours faithfully,

J. McIntosh, Secretary, the Royal Photographic Society of Great Britain.

55. Russell Square, W.C., August 25.

[We could help occasionally to ensure per-

manent record if architectural amateur photographers who know what is worth reproduction sent us photos.—ED., "B.N."]

LEGAL INTELLIGENCE.
SUB-CONTRACTORS v. CONTRACTORS.
—Judge Cann has held a special sitting at
Coventry County Court to hear an action
brought by George Nichols, Limited, who were
sub-contractors for the plastering, to recover
£33 16s. from Kelley and Sons, builders, who
were the contractors for the building extensions at Coventry and Warwickshire Hospital
in 1912-14.—Eventually plaintiffs were given
judgment for £78 17s. Id.

-00 Mr. James Zeno Sloan, for the past few years assistant surveyor for Co. Down and stationed at Newtownards, has been granted a commission in the Royal Engineers.

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Mr. Samuel F. Hynes, F.R.I.B.A., Cork. has prepared plans and specification for works to be carried out at Lisheen church, near Arhadown, County Cork, for the Rev. Jas. O'Sullivan, P.P., tenders for which work have already been sent in.

The death has occurred of Mr. William Macdonald, carpenter contractor, Inverness, who was well known and esteemed in bailding trade circles throughout Scotland. For several branch of the Builders' Federation, and he held a similar position in the Scottish Federation. He took a warm interest in Celtic matters, and was one of the earliest members of the Inverness Gaelie Society, of which he was a vice-president. He carried out extensive contracts in many parts of the Highlands and Islands. Mr. Macdonald, who was unmarried and a native of Glenurquhart, was about sixty COMPETITIONS.

NOTTINGHAM .- The competitive designs for the three new branch libraries which are to be built in Nottingham when circumstances permit are now on exhibition to the public at permit are now on exhibition to the public at the School of Art in that city. Under the terms of the Carnegie gift the Public Libraries Committee proposed to establish new libraries at Highbury Road for Bulwell, on Nottingham Road for Basford, and in Bruce Grove for the Meadows district. Architects engaged in practice in Nottingham were invited to submit designs and sleep Architects engaged in practice in Nottingham were invited to submit designs and plans, and, in all, some fifteen competed, some among them submitting the necessary plans for all three buildings. Mr. J. Alfred Gotch, F.S.A., F.R.I.B.A., of Kettering, who was appointed assessor, has made his award as followed. Highland Book Libert in the control of th follows:—Highbury Road, Bulwell: 1,
Messrs, L. Bright and Thoms; 2, Mr. W. H. Higginbottom. Bruce Grove: 1, Mr. F. W. C. Gregory; 2, Messrs. J. Howitt and Son. Nottingham Road: 1 and 2. Messrs. Sutton and Sons. Messrs. L. Bright and Thoras estimate the cost for the Bulwell library at £3,430, Mr. Gregory's estimate amounts to £3,425, and Messrs. Sutton's (first premiated) to £3,400. In each case the buildings are of one story, and the plans provide for general reading-room, a juvenile reading-room, a lending library, and certain administrative apartments. The designs submitted all round represent a very high standard of architec tural skill, but no attempt has been made. since it was not desired, to provide anything else than substantial and efficient buildings. Wealth of architectural ornamentation which would necessarily have involved a considerable additional expense was not sought, and the competitors kept themselves well within the bounds of the specified instructions.

PERTH, W.A.—In connection with the erection of the permanent buildings of the University of Western Australia two prizes of a hundred guineas and twenty-five guineas respectively were offered for the two best designs for the laying out of the University's grounds at Crawley Park, Perth, W.A. A large number of designs were sent in, and the following awards have now been made by the Board of Adjudication :- First prize, 11. Desbrowe-Annear, Melbourne, Victoria; second prize, H. W. Hargreave, Perth, W.A. The design submitted by Messrs, J. Cheal and Sons, Limited, Crawley, Sussex, has. in addition, been granted an honourable mention.

#### ---TRADE NOTES.

Boyle's latest patent "Air-Pump" ventila-tors have been applied to Messys. S. Fletcher and Son's new factory, Wood Street, Ilkeston.

We understand that the architects for the Middleton Middleton Sanatorium have adopted the pewder Pudlo for the waterproofing medium, and, in addition, have specified its use in a large training college.

The Birmingham Engineering Co., Ltd., have decided to build a munitions factory on the Cawney Bank estate at Dudley.

The little church of St. Andrew, Pillmoor, in the East Riding, was reopened by the Bishop of Beveriev after restoration, the works including a new organ and a stained glass window containing a figure of St.

A faculty has been granted by the York A faculty has been granted by size 1 orac Consistory Court to the rector and church-wardens of Stokesley to remove the present chancel roof and to re-roof the same with a new oak roof, re-using, where possible, the new oak old slates.

Through the efforts of the Florida Association of Architects a law creating a State board of examiners of architects and providing for the licensing of architects, similar to the Illinois law for the same purpose, has passed both houses of the Florida Legislature.

The Board of Regents for New York has appointed the following architects as members of the board for the registration appointed the following architects as members of the board for the registration of architects, provided for under Chapter 454 of the Laws of New York, 1915:—Arnold W. Brunner, Manhattan; D. Everett Waid, Manhattan; William B. Bannister, Brooklyn; A. L. Brockway, Syracuse; and E. B. Green, Buffalo, Under the law the fee for registration is \$25, to be paid to the State Board of Regents. tion is \$25 of Regents.

## Building Intelligence.

MANDABAWN The building of the new Catholic Church at Mandabawn, near Coore hill, Co. Cavan, has now been completed. The hill, Co. Cavan, has now been completed. The building, which stands on the site of the old chapel, is, says the *Irish Builder*, Early Cothic in style, and is designed with nave, aisles, and square apse, from plans prepared by Mr. J. J. McDonnell, J.P., architect, M.R.I.A., 27. Chichester Street, Belfast, The lighting of the nave is from each end by tall lancet win days, argument in teacher, and he two light the nave is from each end by tall lancet windows, arranged in triplets, and by two light windows in each bay of the aisles the windows being filled with leaded glass. The nave and aisles are divided into live bays on each side by tall columns having moulded to the columns have the bases and caps. The ceilings are treated in fibrous plaster with moulded pitch-pine ribs and cornices, the roof principals and other joinery work of the church being of similar material. The cost of the new church has heen over £3,000. 

#### CHIPS.

The new central conneil school at Haslingden, built at a cost of £19,800, has been formally opened.

The Deubighshire County Council have appointed Mr. J. S. Wilhams, of Deubigh, as assistant to the county surveyor for main roads for the western division of the county.

The mediaval bridge of four spans in stone, the medieval marge of rour spans in stone, which spans the river Dove on the Uttoveter and Derby road about one mile from Uttoveter, has just been widened. The cost has been over £5,300 and the contractor was Mr. Thomas Godwin, of Hanley.

Captain John Miller, 6th Royal Welsh Fusiliers, who was killed in action on August 16 at the Dardanelles, was on the permanent engineering staff of Messrs. Guinness and Co. on processing statt of Mosses, Gumness and Co., of Dublin, and was a prominent member of the Engineering and Scientific Association of Ireland, of which he was prosident at the time war was declared.

time war was declared.

Messrs, J. and M. Clarke, of Clambrassil Street, Duldin, are at present creeting an addition to the mans' chorr at Sr. Clare's Convent, Harrold's Cross, from the designs of Mr. P. J. Munden, architect, Trinity Street, Dublin, The leaded lights and carred stone work are being executed by Messrs, Earley and Co., Camden Art Works, Dublin.

The band of workers engaged in excavations at Pomperi have made some interesting discoveries. The freecoes decorating the trichinium of a recently dug-out villa in what is known as the "Avenue of Tambs" have turned out to be remarkably fine and in won-larged terms are the properties. derful preservation. The freecoes comprise two separate pictures on themes familiar to those acquainted with household decorations at the famous R usin resort and the colonring of the newly-found frescoes is of unusual brightness

The Stainland Urban District Council are The Stainland Urban District Council are being urged by the West Ridling County Council to proceed with the preparation of a housing scheme under the Housing of the Working Classes Act. The County Council point out that in the urban district there is a great shortage of five-to-oned houses, and on the Registrar-General's standard of over-crowding there were sixty-two cases at the Bast census affecting a population of 457. The Stainland Council has replied that the matter will be taken into consideration at a favour-able communication. able opportunity.

At the last meeting of the Sheerness Urban At the last neeting of the Sheerness Urban District Council on Tuesday, a letter was received from the Local Government Board stating that their application for a loan of £5,000 was a generally satisfactory proposal in ordinary circumstances, but the council's proposed enlargement of the refuse destructor not being regarded as of pressing necessity proposed enlargement of the reason destruction not being regarded as of pressing necessity, they could not see their way to sanction the loan at present. This decision was regarded by the scancil as unfortunate, as the destructor. by the council as unfortunate, as the destructor enlargement is part of the water scheme, the existing boiler being required for the air-compressing plant to be set up at the supplementary bereinde at Sheerness East, which is to be the third source of supply, and has already been proved equal to an estimated capacity of 12,000 gallons per hour. It was resolved to lay more facts before the Local Government Board with a view to securing the local garden for the local core forthwith

police with the second of the Person

The Local Cover ment 12tioned a least to the area at a Newry of £77 for which are a con-

Mr. Alfred A. Webberger. France highling as a conformal process. G. Highlanders, was one of the com-plished of the your on Scattering.

The Local Government Boundary the approximent by the Courses  $\{P_i\}$ . Usban District Council of M=1,  $P_i$  is dispector of musicles at  $\{P_i\}$ .

Mr. G. C. Vernon Inkagen at Proceedings been appointed by the coracide state of Westhampmett as architecture for the condition hospital at 8 mm esc. Chichester.

The Johannesburg Municipal Council Line specifications for the installation of a reference in plant at the abattor, at an estimate.

Correspondence between to War tides Correspondence between the Way Office the Santary Inspectors' Association series to the indicary authorities are not granting a missions to santary inspectors or of a series do not hold medical quadifications.

A subcommittee of the Green's ka A subcommittee of the Governsk Control of the power under consideration a scheme to. The powision of hit dwellings for people of agglet a the R.N. torpedo factory, the suggested of nucleation being for 500 persons.

The annual exhibition in corner of a via the Royal Glasgow Institute of the Fig. Are all by opened on Saturday. September 25, is the Lord Provost, and that day as a so received for the private view. Variashing day is September 22, and the Press day September 22, and the Press day September 22, and 24

This Local Government Body to sanction a lean of £225 for a supplemental water supply Body Northamptonshire There is well Within inproduce the first state of the water forming, and works have the state of the urban distinct council who is not in to place the matter before the limit to the state of the Local Government Board in the state of the st pasable.

The arrough engineer of Kersings recoderised a scheme for the contract of devised a scheme for economically. He professes experimental length of reals economically. He proposes a constant experimental length of ready a research the wood and converting the format a concrete rout. The existing test data tremain, but will be reinfered by a labituminous concrete, even when a we surface carpet of concrete and leaps to the proposed of the

Surface carpet of concrete with a property of the row St. C. i. Chirch, at Llanganmarch, so we to we at the cost is estimated at 2.3 with a modate about 300 proposition with a century in sixe and with others commendate and north areado, with property a future north arise and also that a set of hells. Mr. W. D. Co. at S. F.R.B.A. of Westmaster, is the

A cross retrainented with this been excited in Red value the manney of the Barotess Value died at Crasside on Bootons of white Sadau marble of the transfer of an in height. Mr. R. B. of white Statem mat be strictly as it to me in height. Mr. B. support Newcastle on Lyr. the work from designs by Mess. H. Charlewood, architects, of M. s. . St.

The Bradford Corporator is a ways and means of entiring of extenditure in the lewest possess undertakings as the lewest possess and the Esholt sewage is instructed abandoned without serious less in the corporate ways and the form that several interests to the left several manufacture. abandoned without serious less in a continuous, but several properts with antinorised, but not actually in progess, have been shelved. These mediale the proposed new secondary school at Bolling Hall, the extension of the Thackley Open-air School, the new elementary school at Low Moor, the residential school at Thackley for delicate children, and extensions at other schools. M. J. Eastwood, builder, of Dart-

The town scancer of Aleideen have adopted used by their area teet. Mr. John Rust, for the retail fish market in Market adopted

Mr. Ormerod Whitaker, Back, Coline Road, Burnley, Stater Louist, who died on Jarrary 10, odly 230,654, with 251,854 gross.

oursel of Kingstown, County agreed to appoint Mr. J. Robens to for the erection of artisans's N. I seneme, and Mr. R. Donelly

Edward Stead, A.M.I.C.E., county z = z is Somerset, has joined the Royal E-z z = z. It the meanting the duties of the and surveyor will be carried our assistant surveyor, Mr. Folland.

A new chart rehamstitute at Clifton, near Work-rest in haif at a cose of ±1.700, has been home, pened. The architect was Mr. C. C. Breadey, of London, and the contractor Mr. Theomis Johnston, of Workington.

Mr. H. J. Bambury, builder, formerly of Mr. 11. J. Bantonry, builder, formerly of Caerleer, R ad. Newport, Mon., has died at Sydney. New South Wales. Mr. Bantoury had ben't have to be of working class houses in New pert, and oft for Australia a few years ago.

Mr. Joseph Mallett, of Great Yarmouth, has Mr. decopic Manett, of Great Larmouth, has been appearated waterworks engineer and collect of the Wive thoe Urban District Council, the succession to Mr. R. W. Macfarlane, who has been appeared waterworks engineer at Burgarile rseal

Bristol Health Committee have decided to ap-Ears of reason Committee have decided to appear a Mr. J. W. Kirley, at present einer inspector of reasonces, as consulting inspector at a salary of 25s, a week. Mr. Kirley has been in the service of the Health Committee for forty two years.

A consil school at Platt Bridge, near Wegan, to be at an outlay of over £6,000, has been foundly opened. Mr. H. Wade, Birley Street, Blackpool, was the architect, and Messis, Missey Bros. Enfield Street, Wigan, were the contractors.

Mr. J. R. MacLeod, who has done excellent work for the city of Montreal as trainweys and realways engineer, has been appointed area, if the sewers department, in succession and the sewers department, in succession to Mail's Stuart Howard, retired on a rension. Mr. Moell oil will combine the two offices.

The sewage treatment last year in the The staff sewage treatment last year in the bolombast Burry, Lanes, worked out, according to the manager's report, at £3 0s. 2d. per manager shallows against £2 10s. 7d, the previous year, the cost per head of population being 15.23d, as compared with 12.69d, last year.

The death has occurred at the front of Lance-The death has occurred at the front of Lance-Co-pora, Barby, son of Mr. J. Buley, surveyor to the Spalding Urban District Council. He was aimest instantly killed whilst fixing wire entanglements. The deceased acted as sur-The deceased acted as sur-veger for several years to the Holbeach Urban District Council.

The Bristol Docks Committee formally sanctioned at the last meeting a proposal submitted through the Board of Trade from the Westen, Clevedon, and Portishead Light Rail way Company to construct a landing stage and other works on the foreshore of the River Yeo at Wick St. Lawrence.

Mr. W. W. E. Fletcher, Local Government Mr. W. W. E. Fletcher, Local Government Board inspector, held an inquiry at Hadley. School on Tuesday in last week respecting the application of the county council for authority to becreen £801 for the purchase of five acres of and as a site for an isolation hospital. There was considerable opposition to the proposal

the ook place in Airdric on Tuesday lest week of Mr. John Frew, retired father of the Provest of the burgh, we was 55 years of age, carried out over a decree important works. One see Mr. John Frew, sanstary in-Τ... of Lulibagowshire.

United Committee for the Taxation es at d the Executive of the Scottish Taxat on of Land Values have est private conference of their reld in Glaszow on Friday and this wors. The object of the meet-ters were. The object of the meet-ters der the inimediate relation of the found time est and in particular attack as the land values move-table to view of the forthcoming

Extensive additions are about to be made to the Electricians Hotel, Longroyd Bridge, Huddersfield from plans and designs by Messrs, J. B. Abbey and Sons, of that town.

Acting on the principle of rigid economy for local authorities, the Treasury has refused to sanction a Poplar paying loan of £4,726 and a Barmondsey scheme to instal machinery for the crushing of refuse.

The partnership hitherto existing between J. Huggett and F. J. Huggett, builders, contractors, and fromnongers, at Station Road, Belmont, Surrey, under the style of Joseph Huggett and Son, has been dissolved.

The Tuberculosis Committee of the Coun ancil of Tyrone have accepted the tender Mr. Isaac Copeland, Belfast, at £2,750, for the erection of a pavilion, and another tender, as £2,015, for alterations to Dungannon House.

Mr. John Sweeney, formerly district engineer for the Department of Public Works, Ottawa, at Winnipeg, has succeeded Mr. C. H. Mathewson as resident engineer for the Department on the Toronto harbour improvement board.

Mr. A. G. Diury, an inspector of the Local Government Board, recently held an inquiry into an application of the Huddersfield Corporation to borrow £26,000 for the construction of relief sewers to the river Colne from to the river Colne from the Fartown and Birkby districts.

The rural district council of Eastbo have appointed Mr. William Walker, at Eastbourne have appended Mr. William Walker, at present surveyor and inspector of musances to the Connock Rural District Council, as district surveyor, at a salary of £200 a year, to include travelling expenses. Mr. Walker has held his present appointment for seven years, prior to which he servel under the Mayfield Rural District Council for two years.

The Board of Control of the State of Florida, at Hotel Mason, Jacksonville, have received tenders for the construction of the Negro Building and Hospital Building for the State School for the Deaf and Blind at St. Augustane. The plans were prepared by Messrs, Edwards and Sayward, architects, 635, Challes Building Masses. andler Building, Atlanta.

The Imperial Trade Correspondent at Toronto (Mr. F. W. Field) reports that a large company operating a departmental store in that city has decided to build a warehouse at Regina, Saskatchewan, at an estimated cost of 150,000 dols. (about £30,800). A company operating large departmental stores at Toronto and Wigninger has also decided to greet, a facand Winnipeg has also decided to erect a factory at Hamilton, Ontario.

The corporation of Belfast proposes to build 232 workmen's houses, and of these 168 have built, leaving a balance of 84 yet to be erected. The accommodation provided by the eracted. The accommodation provided by the tew houses consists of a large kitchen, scullery, two upstairs rooms, and a vard. The floors of the kitchen and scullery are filed, the yards are ball of concrete, and the fronts of the houses are of perforated brick. The new streets are wide and paved with pebbles, and the back insenses are all 40 ft, wide, and will be either concreted or tar-maoadamed.

A suggestive tensor

A suggestive paper contributed to the recent A suggestive paper contributed to the recent annual meeting of the American Concrete Institute by Mr. N. C. Johnson dealt with microphotography as applied to the examination of concrete, with the object of obtaining better knowledge of the structure of the material itself. A fact particularly mentioned by the nutbor was that all specimens of concrete examination by the number of the material specimens of concrete examinations. unined by him possessed a surprisingly large quantity of unhydrated cement, a feature he attributes to the difficulty in diffusing the attributes to the difficulty in diffusing the attributes to the uning the process of mixing. The voids revealed by the microscope also our hastes the importance of scientific grading.

ome hasts the importance of scientific grading. The work of electrifying the Lancashire and Yorkshire Railway Company's line between Victoria Station. Manchester, and Bury is steadily proceeding. With the exception of the section from Queen's Road to Victoria Station the "third rail" has been laid along the entire length. Much of the rolling stock is also ready at the Newton Heath works. October or November is unofficially mentioned as about the date of opening. The power-station at Ciffion Junction will not be ready until the end of the year, but arrangements have been made for obtaining a supply of electricity from the Manchester Corporation. The district covered by the proposed new electricity from the Manchester Corporation. The district covered by the proposed new electricity from the Manchester Corporation. The district covered by the proposed new electricity from the Manchester Corporation. The district covered by the proposed new electricity from the Manchester Corporation. The district covered by the proposed new electricity from the Manchester Corporation. The district covered by the proposed new electricity from the Manchester Corporation. The district covered by the proposed new electricity from the Manchester Corporation. The conway and Conway Bay Joint Water Suply Board bave accepted the tender of Messrs. J. Bryom, Ltd., of Bury, Lanes, at £2,750, for a steel girder bridge over the River Conway at Maenan, and midway between the Lanwars and Tal-y-Cafn, to carry a new water-main, and the tender of Mr. B Lumb. At £2,893, for the supply of the 15-inch cast-non-pipes required for the crossing. The engineer is Mr. C. F. Farrington. M.I.C.E., of Trinity Square, Llandudno, who succeeded to the appointment a few months since on the death of his father, Mr. T. B. Farrington.

The Leek Board of Guardians are about to enlarge their isolation hospital at Tinster's Wood. Mr. J. Moss. of Milton, Staffs, is the builder.

At Cymla, near Neath, Glam, a joint isolation hospital will shortly be built from plans by Mr. J. C. Rees, M.S.A., Parade Chambers, Neath.

A Roman Catholic recreation hall is about the built at Passage West, County Cork, to be built at Passage West, County Cork, from plans by Mr. J. F. M'Mullen, M.R.I.A.I., of South Mall, Cork.

11.M. Commissioners of Public Works are about to enlarge the post office at Dundee, the existing premises being quite inadequate to modern requirements.

The corporation of Ipswich are applying to the Local Government Board for sanction to borrow £8,760 for providing sub-stations in connection with their electric supply undertaking.

The order constituting a Drainage Board for the Derwent Valley has been confirmed. An area of about 10,000 acres has been scheduled in the neighbourhood of Wressle and Bubwith.

Stirling Town Council has decided to defer till after the war the execution of the St. Mary's Wynd improvement scheme, estimated to cost £13,000, and involving the clearance of a slum area.

The Public Service Stores Tender Board of Wellington, New Zealand, have accepted the tender of Messrs. P. R. Bailie and Co., at £1,931 for the supply of 120 miles run of twintwisted rubber-insulated wire.

Alterations and additions are about to be made to the old Tabernacle Chapel in Elder Street, Bridgend. Mr. P. J. Thomas is the architect, and Mr. R. Jones, jun., of Coychurch, has taken the contract at £1,030.

Mr. J. T. Dewhurst has resigned his appointment as sanitary inspector and assistant surveyor to the Ruislip-Northward Urban District Council, and the council have appointed Mr. W. L. Carr. engineer and surveyor to the council, as chief inspector of nuisances. For the present no assistant inspector of nuisances will be elected.

The Glasgow Corporation are about to widen two overhead bridges carrying Pinkston Road over the Caledonian and North British Railways and two other overhead bridges carrying Balmore Road over the same railways in connection with the augmented water supply now being provided. The plans have been pre-pared by Mr. J. R. Sutherland, of John Street, Glasgow, water engineer to the corporation.

A site has been selected for the Ontario Government Hospital at Orpington, Kent. The hospital will contain 1.040 beds, and will primarily be used for acute cases among the wounded men of the Canadian contingent. The cost of construction and equipment will be borne by the Ontario Government, subject, on completion, to a grant made by the War Office. A beginning has been made, and the work will be pushed on without delay.

At a meeting of the district committee of the Middle Ward of Lanarkshire on Friday, the Middle Ward of Lanarkshire on Friday, the desirability of making application to the Local Government Board of Scotland for authority to prepare a town-planning scheme in respect of land lying in the parishes of Cambuslang and Old Monkland was under consideration. The extent of the area included in the scheme is 5,616 acres. After considering the whole remarkability was unanimously resolved to make is 5,616 acres. After considering the whole proposal it was unanimously resolved to make the application to the Local Goverment Board.

HM. Commissioners of Public Works are reports that, according to the local Press, megotiations for the purchase of a site for new freezing works at Wanganui have recently been completed. Not less than £100,000 will

# THE BUILDING NEWS

## AND ENGINEERING JOURNAL.

#### Effingham House.

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### FACTORY CONSTRUCTION: "NORTH-LIGHT" ROOFS

The north-light, or "saw-edge," roof truss is simple in design, and may be crected with a minimum of skilled labour. For spans of from 15 to 25 ft, it provides a suitable and satisfactory method of roofing one-story factories. The truss may have the ordinary bar tie-beam; a favourite recourse is an H section for tie, because such affords a convenient means of supporting brackets for shafting. Some designs include two trusses on one girdertype tie spanning from stanchion to stanchion. The slate covering, leadwork, and glazing are simplified in north-light roofs, Comparing it with an ordinary symmetri-cal roof with ridge skylight, in the latter the slating is split up into two areas, needing two verge tinishings and two flashed margins. In the saw-edge trass the slating is in one spread, the glazed surface having a similar unity. The gutters between the bays of these roofs require consideration. One method is to obtain "fall" by slightly and gradually increasing the height of stanchions.
Our detail sketch shows the general

type of north-light truss adopted where support for shafting is required. It canbe styled a neat or indeed a scientific not be styled a neat or indeed a scienting roof truss, but it serves its purpose practically. The tie member is, of course, vastly stronger than messary. It is a rolled joist, preferably with broad flanges, because in this type a more generous margin is presented for drilling and bolting. In all classes of steel framing this advantage attends broad flanges. In practical north-light roofs we put up with the superfluous metal so far as the trussing is concerned, because it admirably meets convenience in another way. There is, further, an advantage in the girder-type tie-we may, if desirable, set in the feet of principals, and so gain more space for the intermediate gutters, without petrating any great constructional effence.

In our sketch, therefore, we have shown a truss with H tis-beam instifying its extra cost and superfluous (in a sense) metal on the grounds above advanced. The tie is a light section of R.S.J., pre-ferably with wide flanges. It is not pretty, but there is little to please the eye

and the other providing a necessary tre throughout the building. The excivatory bolts and nuts, and a street of type could be greatly station of trenches and pits to the stanchion foundations. If we are not contemplifying such additions as travelling cranes, the requisite steel supports will, merely to meet theory, be very light, but for practical reasons, to obtain good and strong connections, and generally to provide a stiff and rigid structure, suitable for machinery in motion, we do well to allow an ample margin of strength. We have shown our stanchions 15 ft. high from floor to underside of tie-beam. The load on each such prop is the bay area by the weight per foot super together with the truss itself and one length of cross-tre joist. For lightness in roofing, galvanised iron, or one of the special inventions in fine-resisting ashesios tiles, will be found best. Assuming, in this case, some form of the latter as very suitable, and obviating the objection to galvanised iron- its short life -we may put down the loal of toof, including an allowance for wind pressure, as, say, 40 lb, per foot super. The bays are 10 ft, wide, and the span 20 ft., hence the load upon the truss is 20 + 10 > 40 lb. 3,000 lb. Our scheme is for light or relatively light machinery and machine work, such as a munitions factory engaged in the lighter class of work, and to be economically and quickly constructed. After reviewing these conditions we will arrange for ties, cross-ties, and stanchious of similar siction, say, 6 in. × 5 in. > 26 lb. In this case, each roof truss may be estimate I to weight say, 672 lb., and the cross-tie joist 250 lb. The load upon the prop is therefore 8.000 + 672 + 260 lb sav. 4 tons, so that we have some double the margin of strength in the stanchions, but we must allow for the use of these supports for miscellaneous purposes in an engineering works and also the making of good ti-and connections in the steel framing while the 5-in, flange gives a fair surface for throughway heles for 5 in, bolts. In truth the provisions are extremely light and could not well be cut down. We frably with wide flanges. It is not pretty, but there is little to please the eye in the lop-sided saw-edge roof; so we throw aside all but commercial considerations. We pay a little more for steel, but get certain practical works benefits. Omitting the H beam, and putting an ordinary bar, we might in the end bave to pay a good deal more for special gantry framings for shafting.

A one-story factory, to be constructed at low cost and expeditionsly, includes a series of columns or stanchions (as far more suitable) upon suitable foundations, with R.S.J.'s running overhead at right angles, one way forming roof tie-beams,

holts and muts, and a structure type could be greatly stitute in diagonal struts, were not such a 2h tem convenient where a close agrae of the ex-and belting is required. It has a convenient need to be seen that the "tre" at it the

stanchion heads is good.

The cutting of steel jesses, etc. is now by means of improved power his house of means of improve the winder associated descending accurately and experience of the character shown for the light duty assumed, do not really need head-plates, all practical purposes being met by angle plane countries sawn pieces of suitable stool and libed to stanchions and libed to girders. For a maximum of 3 tons load a plands steel joist out the squite a top and bottom can be connected to training and cross these by simple angle personal heavily loaded stanchious the head plate.

heavily lended structures in Thead plate is indispensable. It will be noticed in our sketch that the feet of the principals are seen of to the tre-beam by cut angle peeks. The tre-beams must, therefore, here in less accurately spaced and dirilled, which is possible thus to complete the provide staging before the lighter pears of the roof trusses are erected, leaving the influence at a certain stage, an array of the ps. beams, and cross beams, to which are envenience, the part trusses can be for This lightens the labour of historic. This lightens the labour of has in z.

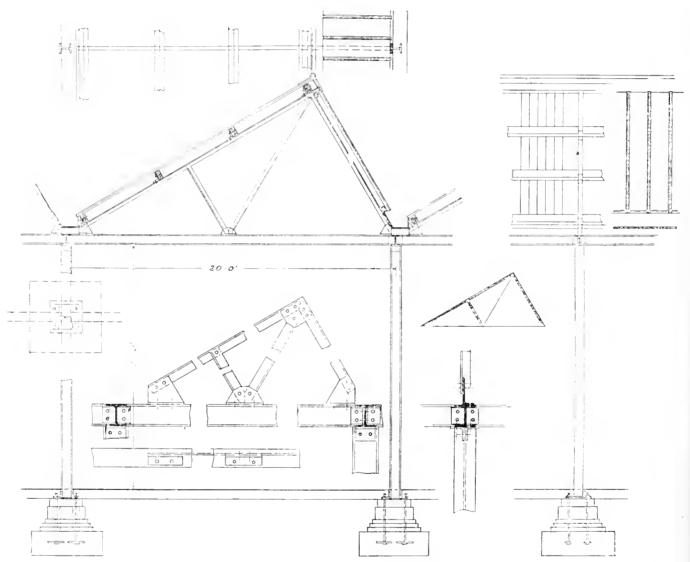
In argent work this type for filmis itself to expeditions building 8 much repetition occurs that machining which, repetition (ceris that incenting which, after all, is merely sawing, dr., ing and riveting is expedited, and may be reco-formed to set guide or "tyig," service was to stanchious and roof nembers. Given to stanchions and roof nombers. Given some form of power, modern curek using saws, drilling machines, and rouses into outfit, one skilled engine of call supervise ordinary labour, and if tooks sary, completes the whole work with a need to writ the sonyen need to writ the sonyen need for its supervise is need to writ the sonyen need for its second size of the writers of the same as long to write the issue of great more into a lost of great more into a lost of great more into a lost of great sent times. SPHIT TIMES.

the designer, but the angle gives 25-in. width for the belt holes. At the head of the principals there is a plain cut \(\frac{3}{8}\)-in. platé 3 m. iz At the back of the principals place. At the back of the principals are 5 m, by 3 in cleats, pieces sawn off steels angle, drilled and riveted to principals and boffed to the timber purlins, which are shown 6 in, by 4 in, to carry 1 in, boarding and light asbestos shows. If the sheets are to a steek length, the purlins must be spaced to suit the size of sheets. We leave the covering of the long slope of roof to the choice of the reader. If galvanised iron, light Z steel purlins will suffice. The matter of completing the roof now concerns the

free ends of the tie-beams and ties, and to carry purlin-ends, etc. To provide a galvanised from walling, horizontal steel members must be framed between the ex- hand-pulley block; but for heavy work, terior stanchions, and spaced according to which is not here contemplated, but such the size of sheet adopted. In this case as is required in, say, a foundry, quite the brickwork of the structure will be special care is needed, because the carrier confined to stanchion foundations and a and its burden brings concentrated load suitable plinth to the iron walls. Some-, upon the centre of the girders bracketed thing very light will be all that is here from stanchion to stanchion, while the necessary, the real foundation being stanchions themselves are eccentrically under the exterior stanchions, which take stressed. all the load. It should be noted that a structure composed of a number of bays, gineering shops it is hard to beat solid ridge, the gutter, and the glazing of the on the system shown in the sketch has wood-block flooring, both on account of its steep side. We show a section suited to not the natural "tie" of a two-storied good footbold and because there is less

roofs and stone templates to catch up the which is formed the "road" for the traveller. It is no great matter if the crane means nothing more than a couple of steel joists carrying a kind of enlarged

A concrete floor is shown, but for en-



DETAILS OF A NORTH LIGHT ROOF.

the necessary tearling-terras and drips must be farmed, with outlets to rw.p. which, where required, must run down beside stanchions. In the construction of the indge, the rough-hoarding is carried up to a ill and the space on the other side 00f ridge is bounded against the rebated timber that holds the upper ends f the gazing bars, so that the lead can be dressed, ver the whole and down on the glass. Ordinary skylight bars and putty can be used, but newadays our ran there it the put of glazing lens is learning is and green practice; the best are carried below by a longitudinal timber and water runs direct into the

Valley 20ther lift too fact by has brick external walls to the horse who could be stop the was here gabeeneds to stop the

cast to night teat, it lead by adopted, building, being comparable to a table and trisk of accidental injury to perhaps deliits legs, the strength of the whole being cately machined castings. The bases of in the attachment of the legs. The the stanchions are below floor level, leavstrength in the design shown resides in ing the least obstruction to space. Where the bolting at the stanchion heads, the kind and location of machine-tool is Strong brick exterior walls add to definitely known, suitable concrete foun-stability. Where such do not exist, the dation should be put down, with anchorexterior stanchions might well be strutted bolts to secure the machines. the horizontal steel sections.\*

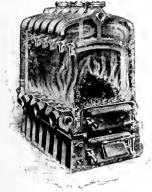
connected by several riveted plates to the

Since this was written, and the sketch completed, we have solded the anchor-bolts, etc., to stanchion four dations as shown have tild the table legs to the floor. Genuine base plates are arranged, riveted by angles out gussetwise. 44-in, flues could be left in the bick pers, and ground before bedding stone template, a curately holed for (in, bolts.

A great variety of industries, works, The proposals do not contemplate etc., have adopted this north-light roof, travelling cranes. Such would be best It may be modified and produced with served by auxiliary, shorter stanchings variety of detail. We have chosen the form seeming the most suitable for en reaf supports, and carrying joists on gineering and manufacturing premises generally. At the present time many industrial concerns have had to increase their premises, or hold in view possible increase of works area. Our plans show the simplest and most economical scheme for urgency in providing new works for light duty, and one that can be carried out with ordinary steelwork, such as at the present time is likely to be procurable by the builder, where elaborate constructions may entail some delay and difficulty in delivery.

#### MODERN WARMING SYSTEMS.

The present dearness of fuel will probably many lovers of the extravagant and wasteful open hie to realise that the time has come to supersede it by less costly and more efficient means of heating. Gas and elecmore efficient means of nearing, was and electricity offer no real advantages. The latter may, some day, and then no one will dream of dedicating an altar in every living room to the demons of dust and smoke; but, as yet, the cost of electricity is prohibitive. Gas is little cheaper, and will probably advance still further in price: and with it there is always the increased danger of fire, and of explosion -for which all insurance offices do not compensate when it occurs in adjoining premises. Gas, moreover, is destructive to books, pictures, and metal work. Its ease of installation is its recommendation to most people, but the apparent low cost thereof is very soon far more than compensated for in the ordinary private house by the adoption of hot-water heating. It is an established fact that with a properly designed and installed lowpressure hot-water warming apparatus eight average sized rooms can be warmed healthily and adequately throughout the day at the same cost as that of two open fires. Of the boon to the housekeeper following the cessa-



Broken View of Sectional Boiler.

tion of the ceaseless work of keeping the stoves going, and cleaning the rooms—of the saving in the laundry bills, and the end of damage to fabrics and furniture none have an adequate conception who have not been emancipated from the thraldom of the fireplace.

It is necessary, of course, that intelli-gent knowledge should govern the selection of a suitable heating apparatus, as systems which offer advantages under certain condi-tions may fail to do so under others. Moreover, the architect—while insisting on economy and efficiency—will rank appearance, especially in the home, as of equal importance. He will find guarantees for all three if he adopts the suggestions embodied

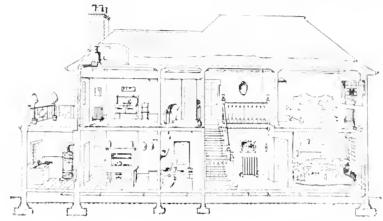
three if he adopts the suggestions embodied in an informative brochure issued by Messrs. F. A. Norris and Co., of 11 and 12. St. Andrew's Hill, Queen Victoria Street, which they will send free on application.

As they point out, the difficulty of combining economy, efficiency, and appearance has been successfully overcome by the low pressure hot water and steam systems of heating. The former is most generally in vogue in this country on account of the comparain this country on account of the comparatively small variation in temperature of the atmosphere, and is especially suitable for warming private residences, hotels, public buildings, churches, schools, etc. Steam heat ing can often be employed with advantage factories, workshops, etc., where a supply of exhaust steam may be available, and in large buildings where long runs of piping are necessary; also in places where the apparatus is used intermittently, as it is possible with a steam system to raise the temperature in a building very quickly when required.

for more hygicial surroundings call for something better than a half-warmed and "stuffy" room in which to spend the dull writer evenings. The result of this move ment is shown by the rapidly increasing furnament is shown by the rapidly increasing furnaces, for a considerable of houses and mainstons installed "lived tile distribution of heat can be obtained."

At Oxford the Bode in Labour should be more even distribution of heat can be obtained.

to the open grate fire, in order that a more even distribution of heat can be obtained. With a modern heating boiler practically world, is warmed by me in of a Nerro of the field is utilised, only sufficient being remembers that nothers in the rature of a

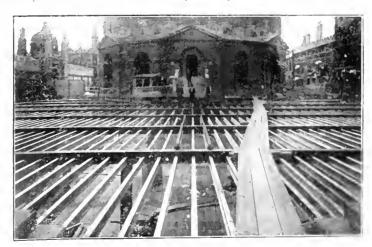


A Low Pressure Warming System in a House without Basement,

allowed to escape up the chimney to create light is allowed in this building, it may be the necessary draught. The question of appearance has also been carefully studied, and ments regarding the safety of this warming radiators can now be obtained in many grace ful designs, both in the plain and ornamen-'al finish, while with suitable enamels or bronzes they can be made to harmonise completely with their surroundings, and in this respect alone are really an acquisition in any home. The necessary pipes for the conveyance of the hot water to and from the radiators can also be laid out of sight or rendered quite inonspicuous; moreover, the scientific development of central heating has made possible the use of smaller sizes of pipes.

For stores, shops, and all buildings of any pretensions to size a central heating apparatus is the only reliable and efficient method ments regarding the safety of this warming system. The new underground book stores consist of two floors under the roadway and lawn in from of Radeliffe Camera, and are capable of storing about two million books. Ventilation is provided by means of large inlet and extractor fans driven by an electric motor; the air first passing through a screen to purify it and then being conveyed through ducts to the necessary points. In cold weather the air is passed through a heater, thus the stores are ventilated and warmed at the same time.

Low-pressure hot water is universally recognised by the fire insurance companies as a safe and effective method of heating, and generally more favourable terms of insurance



Beneath the steel joists which support the roadway and lawn are the underground Book Stores of the Bodleian Library, heated and ventilated by a "Norris" System. Radeliffe Camera, in the background, also has a "Norris" Warming System.

to employ to keep the building uniformly warm and comfortable. The results obtained warm and commonance. The results obtained are decreased fuel and labour expense, cleaner stocks and interior furnishings, and absence of fire risk. To these advantages must, of course be added the maintenance of an inviting and confortable atmosphere which lends so much to the attractiveness of business premises, and helps in no small measure towards their success.

are obtainable where the notice.

Ventilation can be secured by (it it) ordinary direct ordinars with buffle parts when the air is admitted to the projection through the wall at the back or through the floor immediately beneath the radiator. illustrated.

Another method is known as the "indurect" system, for which a special type of radiator is manufactured, this usually being enclosed and suspended from the base-The large and increasing number of business and public buildings which are being enclosed and suspended from the basement ceiling, a cold air duct leading from the

ing to the tottod t is as escaped them that the true to be leading into the

#### EX TUBBLE AND CHEICES.

" her, to tary at is desired to ntimest efficiency from the escit conditions of working are ve to this end. Ample ventila at all times most necessity, as also of its which will heat the building i's to the requisite degree early in



Sh wing Radiator fixed in Fireplace.

and maintain the temperature dur. the lay, with due regard for economy.

The cary of its comparative slowness in heating up, and also on account of the large amount of the large amount of the large amount of the large.

pressare bet water is not, as a rule, the most describle system to use, although Messrs. North and Co. have, of course, fixed many very successful installations of this kind in various factories.

In factories where exhaust steam can be obtained from the power plant it may be atil sed for warming. This system is worked at this spheric pressure, and when properly des good and installed forms a very efficient and econo mical method. When high-pressure steam is available, it should most certainly he used, as it gives off approximately 50 per cent, more heat per square foot of heating siriace than steam at low pressure.



B L. car. and Dramit. School, Oxford University.

exstems are used, coals can be in the remaining lights and in other as no st in down draughts from

the rotes of privite energy of the second se ford difficulty

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## THE WORK OF THE TRADES TRAINING SCHOOLS.

report and awards of the judges on with report and awards of the judges on the With done at the Trades Training Sides of the Worshipful Companies of Carpenters, Jonners, Painter Stainers, Plastreis, Tyleis and Bricklayers, and Wheel wrights, at 155, Great Titchfield Street, Port With the provest the first street, and the provest of the management of the schools, of which Mr. H. Phillips Fletcher, F.R.I.B.A., F.S.L., is the director, is to improve the technique of each craft by in structing men who actually earn their living by their lab airs therein. In most of the classes it is reported that the number of their lal surs therein. students is smader than in provious years and the amount of work to be adjudicated up n is consequently less, owing to the war. In the Carpenters Class the work executed is regarded by the judges of very good character, and the following awards were made:—Certificate and £2 in books or tools, Thomas James Woodard: certificate and 30s, in books or tools, J. Harold West: eerificate and 15s, in books or tools. Cecil Davies. In the Jamery Class many of the exhibits were left m an unburshed state owing to students being detuned on overtime work.

The Alexander Howard Medal and £2 in looks or tools (these prizes are in every case 2) yen in books or tools of the value stated) has this year been awarded to G. Austin for has this year neen awarden communication in excellently executed honours board in English oak. Certificate and 15s., W. S. Halass cortificate and 10s., J. Dipple. The Hales: certificate and 10s., M. S. Hales: certificate and 10s., J. Dipple. The inaudruling awards were:—Silver medal and £2. H. G. Howe: certificate and £1. E. C. Owen; certificate and £5s., W. Chance. In Masons' work the judges were of opinion that in future the exhibits should be executed on a larger scale and the joints above. shown. The awards were: — Banister Fletcher Medal and £2 in books or tools, Herbert George Bush; certificate and 50s. Henry Joseph Maibach; certificate and 21. Richard Sherman: certificate and 15s., Frederick Jimes Moore, In the Painters' Class there was a marked improvement in the quality of the work. Violent colouring was avoided and more care taken in the preparatory processes: the examples of graining were quiet in colour, and showed care and skill in the execution: while the specimens of signwriting exhibited a distinct improvement on that of previous exhibits. The awards were:—Silver medal exhibits. The awards were:—Silver n and £1. Edward Leander: bronze medal William Bedford; certificate and 15s. E. Fowler; certificate and 10s., L. Harlow; certificate and 10s., W. Giddins. In the Plasterers Class the judges experienced some difficulty in separating the prize-winners, so uniform was the work:—Silver medal and 15s., Thomas McDonnell; bronze medal and 15s., Alfred Austin: certificate and 15s., John James Donovan; certificate and 15s., John Love: certificate and 10s., Stanley Thresher: certificate and 10s., Walter Pettit. The Plumbers' Class maintained the excellent record of past years, the prize-winners being as follow:—Silver medal and £1. Albert Henry Briffett: Silver medal and 10s. Alfred Griffey: silver med d and 10s., William Per s 2s: bronze medal and 15s., Charles Lam s is a bronze medal and 15s., Charles Lambane: certificate and 15s., Charles Porter: certificate and 15s. Henry James Briffet: cert heate and 15s. Percy Harris. The Smiths' Class also maintains the previous high standard. Special prize of £2. Herry Collects: special silver medal and £1 (former cer point of silver medal). Harold Prund: brazze medal and £1 (presented by the Blacksmiths' Company, S. Jones; certificate vid 15s., S. Blake, Considerable promise via d'splayed in the Stone Carvers' Class, the reach's being. Bronze medal and £1.

Bricklayers Class, a high standard of excellence was maintained, no works falling below the average submitted in recent years. The silver medal and £1 went to Albert The silver medal and £1 went to Albert Henry Smith, and the silver medal and 15s to George Henry Wilmot; special prize of £2 (former recipient of silver medal), Goo John Rynolds; certificate and £1, Alfred Hurst; certificate and £1, James Walsh; certificate and £1. Joseph Henry Grove; certificate and 10s., Frances Geo. Bond; certificate and 10s. George Wiles; certificate and 10s., Harry Wiles.

The exceptional demands made by the war has affected the Wheelwrights' Class more than any other in the school, and the work has been produced entirely by apprentices of between niterin and numeteen years of age. Notwithstanding this, the quality of the work is well maintained. The certificate and 50s, went to W. H. Dawar, a certificate and £1 to F. Mitchell, the master's prize of £1 to G. Packham, and a certificate and 10s. to M. Ellis. The exhibits in the Wood-carvers Class were mostly of an elementary character, and the awards were as follows: Certificate and £2. James Shirley; certificate and £1 (given by Jomes' Company), Fredeand rick Devisse; certificate and £1, Harold ('row; certificate and £1, Thomas Waltham; certificate and £1, Hugh Chittham; certifi cate and £1. Ernest Brock; certificate and (given by Joiners' Company), Sidney

The work done in the Wiremen's Class is of a practical nature, and does the exhibitors great credit. The awards are: Senior Diviguad credit. The awards are: Senior Division—Certificate and £1, A. E. Darlow; special prize of £1 former recipient of first prize). A Jordan; certificate and 7s. 6d., A. V. Morgan; certificate and 5s., G. Hastings; certificate and 5s., H. Rickards, Junior Division—Certificate and 15s., P. Doody; certificate and 10s., F. Goodge.

The new session of the whole of the classes commences on one of the days in the week after next, opening Monday, the 20th inst. They are held in the evenings, beginning at 7 or 7.50, and the fees are very moderate, being uniformly 3s per term for apprentices and 5s. (or in the solitary case of wood carvers, 6s) for a lults.

## ANCIENT MONUMENTS IN WALES.

The sixth report of the Royal Commission on Ancient Monuments in Wales and Monmouthshire mainly deals in continuance with the inspection of the monuments of Merionethshire and Pembrokeshire. It is remarked that much of the latter county lies within the military protected area, and "the necessity of the latter county lies within the military protected area, and "the necessity of the neces sary restrictions upon the movements and occupations of civilians have slightly retarded the progress of the work of the Commission.

During the year the Commission issued

volume on the ancient monuments of bighshire, practically completed that dealing with those of Carmarthenshire, and completed the inspection of the menuments of Meriou ethshire. They also finished the task of examining the inthe schedules and maps of

examining the title schedules and maps of the entire Princ pality.

The Commissioners declare that there can be no two optaions regarding the importance of farm and field names to the Welsh archaeologist. The fact that the Welsh place-names are being traidly replaced by English names, so that the local lore which is often enshrined in the former is in danger of being last are in itself a sufficient reason for the lost, was in itself a sufficient reison for the

nndertaking

Continuing their policy of visiting the principal monum ats, the Commissioners made special loars of aspection to the counties of Merioneth and Pembrok dur'z last year. who displayed in the Stone Chryers' Class, the reads being a Bronze medal and £1, Marioneth and Pembrok dur' x last year. A red Plathus; certificate and £1, Regmald Di, loss; rectificate and £1, William Cooker and the distance of £2. For Legae, the Legae, the Legae, the progress that has been made in the progress that has been made in the progress that has been for a red a red first not zero. Visual Harden and reference of £2 forms are subjected to the community, and they remark that they are with of his dominaction favour of the progression not morely of the large and a cable manuments, but of these maders and less immosting remains which are always in loss. For morely or design that the first not respective to the countries of the progression of the progression in favour of the progression in the first not red to the countries of the progression of the progression in the first not red to the countries of the progression of the progression in the first not red to the countries of the progression of the progression in the first not red to the countries of the progression of the progression of the progression in the first not red to the countries of the progression of the p

THE A.A. SCHOOL OF ARCHITECTURE.

The curriculum of the forthcoming session The curriculum of the forthcoming session of the Architectural Association School of Architectura, which opens on Monday, the 27th inst. has just been published. The classes are held at the Association's premises. 18. Tufton Street, Westminster, the headmaster being Mr. Robert Atkinson, A.R.I.B.A. The lecturer on Theoretical and Practical Construction is Mr C. E. Varindell, A.R.I.B.A., and the Day School masters are: First year, Mr. Alan Potter, assisted by Mr. W. M. Keesey, A.R.C.A.; second year, Mr. R. Lowry; and third year, Mr. L. H. Buck nell, A.R.I.B.A. The master of the School of Design is Mr. H. M. Robertson, and the lecturers are: Greek and Roman Architecture, Mr. Theodore Fyfe, F.R.I.B.A.; Me haval Architecture, Mr. Aymer Vallance, M.A.; Renaissance Architecture, Mr. A. E. Richardson, F.R.I.B.A.; Professional Practice, Mr. A. O. Colland, F.R.I.B.A.; and Water-Coloar Class, Mr. H. F. Waring, At the Evening School Mr. Robert Atkinson is the headmaster, assisted by Messrs, C. E. Varindell and E. M. Robertson; and the Day School masters (Messrs Potter, Lowry, Kresey, and Bucknell) each attend one evening per week and take a special subject.

The Evening School has been entirely rethe Architectural Association School of and take a special subject.

The Evening School has been entirely to The Evening School has been entirely rearranged, and now consists of an advanced School of Design and a preparatory course for junior students. The School of Design well be worked on similar lines to the third year of the Day School, but will be of a more advanced character. All work will be on a strictly competitive basis, and will carry on as far as possible the tradition already established in the Day School. A special studio has been opened for the School of Design, which will be onen every day until 11 mail. Monthly subjects will be set and will be criticised by the headmaster, who will also attend one evening per week. In addition, twelve hour sketches will be given at fortnightly intervals. In the Day School the fees re: First year, 15 guineas per term, and 10s. 6d. per term subscription to the Athletic Club; second and third years, 16 guineas per term, and 10s. 6d. per term subscription to the Athletic Club—In each case the fees are inclusive of all demonstrations and lectures.

Evening School.—Preparatory courses, including lectures, 4 guineas per term; third and fourth years, including lectures, 5 guineas

per term.

The fee for course of instruction in the Evening School for the preparation of R.I.B.A. Testimonies of Study (exclusive of lectures), 2 guineas per term, or 5 guineas er session.

In the School of Design the annual sale ription is £1 1s.; per monthly

21 10s

A large number of scholarships, student A large number of scholarships, stiments, the chips, and prizes are offered to students, the crincipal one being the A.A. Scholarship, aline 48 guiners. All inquiries as to the chool should be made of the Registrar, M. B. scott Holmes, B.A., 18, Tufton Street, 8 W. >-

The Swedish paper and woodpulp industry is an an exceedingly precarious situation as a result of the difficulty of obtaining essential naterial. It is stated that the majority of the actories will be forced to cease operations if a emedy is not found soon.

emedy is not found soon.

Mr. Vincent L. Raven, of Darlington, chief nechanical engineer to the North-Eastern Railway, has accepted an important position in the lovernment Minitions Department. The appointment will necessitate Mr. Raven's resience in London during the period of the war Ir. Raven, who was elected a member of the Darlington Town Council early in the present ear, has since 1910 been chief mechanical en incer to the North-Eastern Railway, having een preciously chief assistant. cen previously chief assistant

The relative merits of cast-iron and vitrified The relative merits of cast-iron and vitrified oneware pipes for house sewer drains has been chansticely investigated for a year by Mr. A. Shaver, chief sanitary inspector of the City overnment of Passadena, Cal. The judgment that body on their officer's report is in favour. The east-iron pipe, and an order has been ade to the effect that in future that pipe above all be employed. The conclusion arrived at that east-iron pipes can be made root-proof the joints and can be thrown out of alignent without breaking.

## COLOR BRICK

with a south of early acid mixed in a con-the proporties of the concern diministration in one and to live parts of the Villes and and The vall should and a solution, then record control

the proportice of a connected muratic and to live parts of the first vall should be suitidated vitations solution, then thoroughly clean of the sine water. The parts between the brokwork should be pieled back from the cool of the or cleater and depth of plate to a resolutely before applying the plate to be entire of the walls should be thoroughly solved with water, for on account of the parons of time of the brick water would be a solb buring the of the brick water would be a solb buring the following the content of the parons of the brick water would be a solb buring the content of the brick water would be a solb buring the content of the brick water would be a solb buring the content of the brick 
In applying street to real brickwork the In applying strice to real brickwork the procedure is plactically the same as described, except in the matter of channing off the surface, though the walls should be brushed to remove any mortar that may have splashed on the surface of the briefliat the time of laying up the vall.

## ---EFFECTS OF COLLMN REINFORCE MENT.

Results of tests of twenty-four large concrete columns with varying percentages of spiral and longitudinal reinforcement, have be a reported by a committee of the American Concrete Institute. Then effect is to con-firm the values used in current practice. Strength increases consistently with larger stiel percentages. Strain measurements, both longitudinal and lateral, show local differences in strains at different positions along the length of the column, and indicate that the ratio between lateral and longitudinal unit strains (Poisson's ratio is apparently 4 or 1-5 for low stress intensities.

for now stress intensities.

The formal statement of conclusions war ranted by the tests, according to the commit

1. Current practice scens confirmed as to the effect of varying percentages of longitudinal reinfercement within the range of the tests as expressed in the formula:

2. Columns with spiril reinfere ment appear

2. Columns with spiral reinfere ment appear to be stronger and to igher than a lumins with mossimal reinforcement.

3. Spiral reinforcement seems to be approximately four times as the tive in giving ultimate strength to the column is the same volume of longitudial reinforcement.

4. The effect of the brightndual reinforcement decreases as the percentage of spiral reinforcement in reises.

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heen notived to a control of Blackbern the resignation of There are being the most of a constitution of the osignation of £ Mr. W. Scubbs

offered Second Line of the Fig. 1s Wood Rathe feed this Bartone Yes one Regiment with the order of the Fig. 2s Mark 1s of Yes 2s 2s Wood Rathe order of Mark 1s of Yes 2s 2s Wood Theorem to the order of the Christian of the Second Rathe of Christian of the Second Rathe of Theorem 1s of the Second Rather of Theorem 1s of The and Royal Rother Regiment killed of the Royal Ro Continuous Control West Fairfulling Mr. (1997). Re apprendict State Control Co action of the experience of the same of the experience of the expe Barbar - I sity Batterier . First

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to a randle, v.tr. at r tion required to at: 3 In all part of

3. In all part of the carried or or or ordinarily laber to prove the measured one what, the shall not be less than a 4 result in all parts of factors and included moderness in members of the colling matter measured or ordinary beautiful and the best beautiful and the shall not be be the shall not be shall not shall not be shall not shall not be shall not shall

(5) In all open places no elemployed during the period total after sunset and one hour between way over a yard or other spile of approach to any place of wolf of the out of

not be less than 0.05 foot candle.

In Recommendation (6), per the information of individual constitutions to which the above registerneds is not be applied, and the case it is plantly yards is to receive separate considert. Finally, in Recommendation 7, such as are made for the period colorization of the now coupled unit of Familia of this country is the "footboard opening of footboard of the commute coupled in the defined is the illumination point. It is be defined is the illumination point.

be becomes as the ulumination perform 1.15, light source of one standard and contact operators in surface one 1 or from the occurs of a placed that the light rives in eq. (1) is strike the surface at right of 2 m.

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Mr. W. T. West 19 past book is t Divisor of Circ pound book so

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#### THE VALUATION OF NONCON

FORMIST CHAPELS
Mr. C. Hewetson Nelson, of Liverpoor. has rendered a public service in obtaining a memor indum from the Board of Inland Revenue as to the position of Nonconformist chapels under the Finance Act, 1910. The inquiry arese out of a proposil to value the Wesleyan Church at Wallasey. Mr. Hewet son Nelson ascertained that there appeared to be no specific exemption of churches under ta: Fin nice Act, 1910, but that, on the contrary. Section 6/1 provided that where land was held by a permanent trust (such as is the case with most churches) it should be valued once every fifteen years, and the in-

Allied once every lifteen years, and the in-crement value duty collected thereon.

At Mr. Nelson's request, Mr. Arthur Hen-derson, M.P., the President of the Board of Education, kindly undertook to obtain the opinion of the Treasiny, and in the course of a fortuight forwarded the follow-ing memorandum prepared by the Board of

Inland Revenue:-

Mr. Nelson is under a misapprehension as to the purpose of the valuation. The scheme of valuation set up by Part I, of the Finance (1909 1910) Act, 1910, is a general one. It embraces all land in the United Kingdom, both that which in its present ownership ownership and condition falls within the scope of the land valuers duties and that which does not. Much land which is at present within the scope of exemptions may. on account of some future change of condi tion, become liable to increment value duty, and the original valuation would then, of course, become an essential factor in the calculation of duty. No increment value duty or other land value duty is, of course chargeable on a church held by or on behalf Wesleyan Connexion and occupied the and used for its purposes, though increment value duty might become payable in the event of a sale.

In reply to this memorandum Mr. Nelson drew Mr. Henderson's attention to the fact that the memorandum did not state:-

1. Whether churches held on permanent trusts came within Section 6 of the Act:

Whether churches came within the exemptions of Section 37 as "property appropriated for charitable purposes. To these inquiries Mr. Henderson has

To these inquiries Mr. Henderson has obtained the under-mentioned note from the

"Notwithstanding that a Wesleyan trust falls within the provisions of Section 6 of the Finance (1909-1910) Act, 1910, property held by such a trust would be exempt from increment value duty on the periodical occasions for collection of that duty, provided that the conditions for exemption under Section 37 of the Act be fulfilled. In any normal case church purposes would be charitable purposes within the meaning of that section.

At the last meeting of the city council of At the fast meeting of the tray council on Winchester approval was given to a scheme for the further widening of Bridge Street, from No. 20 to Cheesehill Street, in accordance with military requisitions. An application will be made to the Road Board and the county council for a great towards, the cost which is for a grant towards the cost, £11711s.

A rew reredes and panching have been dedicated at St. Thomas's Church, Penkhull, Staffs. The work was carried out by Messrs, Meikleredin and Sors, Stokeen Trent from designs by the two churchwardens, Mesers, A. R. P. Piercy and J. Arfon Jones, both of whom are architects. The carving has been executed and presented to the church by Mr. Meiklejohn, sem, new in his eight tool.

At the last meeting of the Shipstonson Stour Rura, District Council it was reported that the zernal work on the contract for Shipston sewerage amounted to a cest of £5,167 fs. 6d. and that the istimate was exceeded by about £79, and the Joint Commutee recommended the council to apply to the Local Government. Government l for sanction to a loan of £50 to meet The Joint Committee also recommended this. The Joint Committee also recommend the council to apply for sanction for a long of \$2.7 for carrying out the work on connect that to work we delay of \$2.7" for carrying out the work on connecteds with the rew sewers section to delay second be caused when the council were in a position to deal with that matter. The report was adopted

## Currente Calamo.

The "explanations" by the officials of the reasons for the dismissal by March next of 1,700 of the temporary men on the staff of the Land Valuation Department may satisfy the comparatively few people who believe that when this Government gives place to another the "refreshing fruit" of their labours are likely to be utilised by their successors any more profitably to the nation than heretofore; but it is rather hard on the men under present circumstances. Before the war there were 4,000 of them engaged, and we doubt very much whether, as it is stated. 97 per cent, of the valuations have been made We doubt still more whether much of the £123,000 we are told is to be saved by turning them adrift is ever likely to appear on the credit side in future Estimates. However, "economy" is the order of the day in all that concerns the professional workers. There is no need of their votes in Parliament, where the four-hundred-pounders must still be given full pay for half time, and little outside where war bonuses and increased wages are being so generously distributed at the cost of the taxpayer. For them the sole consolation is that discharges are as "automatic" as successive strikes of Welsh miners who have so mastered the secret of coercing the Government, and whose successive defiances of all attempts to keep them to their engagements will doubtless continue to extort concession after concession while their friends at court and their German sympathisers calmly contemplate our fast vanishing coal output!

The special Housing Conference held at Bristol last Saturday rightly emphasised the fact that the housing question is more urgent than ever, and that it must be recognised that it is a national and not a mere local matter. It is always difficult, and frequently impossible, to move local authorities in the matter. They are afraid of the rates rising for they say so, ignoring the fact that few other forms of outlay yield so good a return, and add lastingly to the solid capital of the town or district wise enough to perceive it. We have long recognised that an Imperial need demands Imperial help, and that this would encourage private enterprise and stimulate municipal activity more than anything else. Mr. Am mon, of the Fawcett Association, urged that Government should advance from the National Exchequer sums equal to 20 per cent, of the amounts sanctioned by the Local Government Board for housing schemes. It would be a good investment, but the State will never move till the workers recognise that only united pressure will compel it to do for Englishmen what they are being taxed for to do for Irishmen. Ireland, as he insisted, has not been side-tracked by all kinds of shibboleths as have English workers, and it only needs persistency to induce legislators, who will do nothing till they are obliged, to frame some such measure as the Irish Labourers Act.

The Connoisseur, in a second sound article on art and national economy, drives turther home some excellent reasons why if the sacrifice of art will weaken the country during its mighty struggle, then art should be fostered. and those who can still afford to support it should do so to the best of their ability. The question at issue is whether the expenditure on the productions and wares of artists, art craftsmen, designers, and dealers could be transferred to other objects during the present crisis with advantage to the nation. The re-

art-workers into retirement, and others not so advantageously situated into lay employments. The amateur economist will say, "So much the bett r: the younger men can join the Army or Navy, while the elders and those otherwise incapacitated from active service may become munitions makers." As it is, however, the first part of this programme has already been largely carried out. The younger men. have volunteered for the front as eagerly as those belonging to any section of the community. Many a career which might have been crowned by immortal fame has ended in a nameless grave amidst the lowlands facing the English Channel, or on the steep hill-slopes overlooking the Hellespont. Of the elder men. some have already been compelled for a time to sacrifice their artistic knowledge, gained during years of study, and turn to work which could be as efficiently performed by any hack office clerk. The majority still try to maintain their positions, hoping that with the support their wealthier patrons can still afford to give them they may hold out until the end of the war. What will happen if they fail in their endeavours? Dealers will suffer: close up these various galleries and shops, and the result will be ruin to most of their proprietors, a heavy loss to property owners, and a substantial decrease of Government revenue. Repeat the process throughout the country, and the loss to the community will be enormous. One of the most profitable methods of wealth creation is in the employment of the higher forms of art. Commodities almost valueless in themselves are converted by the hand of the artist into something rare and precious. A strip of canvas and a few ounces of pigment are transformed into a beautiful picture; a block of stone into a fine statue; some fragments of clay and silica into a delicate piece of porcelain; a few lumps of wood into a costly piece of furniture. These articles tend to become more valuable with time, and by accumulating them we are adding to the national savings as much as if we put by the purchase-money for them in the savings bank. Interrupt such service by setting their producers to the industrial labour more perfectly executed by people whose ability rises to no higher office, and the country is impoverished rather than strengthened. National economy is essential, but it must be a wise and discreet economy rather than a blind and partial parsimony. There are certain directions in which large savings may be advantageously made.

A case of some interest incidentally to some of our readers which was heard in the Chancery Division before Mr. Justice Sargant on June 16, 17, 18, and July 14 last, is fully reported in "The Illustrated Official Journal (Patents)" of the 1st instant. On September 7, 1906, Letters Patent (No. 19.949 and No. 19,949a, of 1906) were granted to William Hervey Brown for, respectively, "Improvements in bond ties for walls and the like" and "Improvements in bonds for securing facing constructions to concrete columns," On March 4, 1908, Letters Patent (No. 4.953, of 1908) were granted to the sume patentee for "Improvements in and re lating to bond ties for walls and the like." as a patent of addition to the patent No 19,949, of 1906. A petition for the re vocation of the patents No. 19,949 and No. 19,949a, of 1906, and another petition for the revocation of the patent No. 4,953, of 1906 were presented by the Expanded Metal Com pany, Limited. On the last mentioned peti tion an order was made by consent for the The first-men revocation of the patent. sult of such procedure would be to drive some | tioned petition (with a petition for the re

vocation of a patent No. 13,624, of 1908) came on for hearing on July 28, 1914, before Mr. Justice Warrington. On the third day of the hearing, it was stated to the Court that the parties had agreed to the dismissal of the petition on terms, and an order was made accordingly (31 R.P.C. 397). On January 7, 1915, a summons was taken out by Robert Newbald Kay, who asked that it might be declared :-(1) That the applicant, as the solicitor employed by the patentee in his opposition to the petition, was entitled to a charge upon the patents No. 19,949 and No. 19,949a, of 1906, and the whole of the interests therein of the several respondents to the application, including the interests of them, or any of them, in or und r an indenture, dated December 20, 1907, and made between the patentee of the one part and Richard Johnson, Clapham and Morris, Limited, of the other part (being a sole and exclusive licence under the two patents. amongst others), and any royalties or moneys receivable under or by virtue of the indenture, and upon any other property recovered by, or preserved for, the respondents to the application, or any of them, in the petition or the opposition to or defence thereof, for the taxed costs, charges, and expenses of the applicant of, or in reference to, the petition. as such solicitor as afor-said. (2) That it might be referred to the taxing master to tax the costs as between solicitor and client, including the costs, charges and expenses of the applicant of and in reference to the petition, and his costs of and incidental to the application. (3) That the amount of the taxed costs, charges and expenses (including the costs of the application) might be raised and paid to the applicant by a sale of the patents, including the interests of the respective respondents in or under the indenture of December 20, 1907, and the other property if any) so preserved, and that until paynent, and also in the meantime pending the nearing of the application, the whole of the premises should stand charged as aforesaid. After a lengthy review of the whole cirumstances, Mr. Justice Sargant said: "In he result, I dismiss the summons, and I am fraid that I must dismiss it with costs." Leave, if necessary, to appeal was given. nd a stay of execution was granted until August 1, and then, if notice of appeal was iven, until the hearing of the appeal.

Among the sculptured stones which are bout to find a permanent home in the new ruseum at Whithorn is the "Inscriptive tone Pillar," which had its more modern osition about a quarter of a mile from the urgh, on the road to the Isle of Whitorn. Its position there, however, accord ig to a correspondent of the "Scotsman," as wholly capricious, it having been brought om the Mains Farm, which is partly within ie precincts of the burgh, and where in all robability it served the purpose of a burgh bundary mark, as other stones can be aced in the environs-uninscribed, hower-performing a like function. It is of reat antiquity. The stone is of the hardest riety of the prevailing rock of the district. ight above ground, is 3 ft. 2 ins., and its rth 3 ft. 10 ins., the broad side being 1 ft. ins. and the narrow 9 ins. The hiero-vphic figure upon the stone consists of two meetric circles, of which the interior is inches and the exterior about 1 ft. 2 ins. i diameter. Within the inner circle is scribed a cross, formed of lines drawn id it is of parallelogram form. Its height

double. like a concex has as to exhibit direct four distinct double course tenses, of which mid. Control two, placed end to end make a diameter, out the four thus forming two diameters, passing at right angles to each other through the fortheon. centre of the circle. The e two concentric circles stand upon a sort 1 pedestal made their action but the pedestal made dressed to the new transfer to the circles drawn double, which are dis of two lines drawn double, which are distant from each other at the base, or widest part, 6 ins., and at the top, or narrowest part, where the concentric circles r st, about 1; ins. The height of this pedestal is 8 inches, which being added to the other or largest circle (1 ft. 2 ins), makes the whole height of the hieroglyphic figure 1 ft. 10 ms. Under the concentra circles, and partly across the pedestil, are the words Locati Petri Apostoli. The last two words present no difficulty, and the common people style the stone that of the Apostle Peter, but the first is not a little puzzling. From what has been brought to ight of late years. however, the original inscription upon the stone seems to have been thic est locus Petri Apostoli- "Here, or this is the place of Peter the Apostle." When it is understood that in such inscriptions locus is frequently translated as if it were sanctus, the meaning of the sent-nor appears obvious, the translation thus being. "Here, or this is the Church of the Apostle Peter." This stone, probably, originally marked one of the Chapels of Ease Cruggleton, Isle of Whithorn, Kukmaid in Kirkmadrine, etc .to the renowned monastery at Whithorn, erected in the reign of David I. There is a hole at the top of this stone 8 inches deep and two inches in diameter.

Mr. Walter H. Whitear, who last year showed by presamptive evidence in the Athenaum that Samuel Pepys was born at his futher's house in St. Binde's parish, and that the house abutted on the churchyard, but thought its exit stuation would probably never be determined, now writes to the same journal that he thinks that, with as much ear thinty as is possible after the lapse of time. the site was that now occupied in Salisbury Court by the White Swan public-house and the restaurant adjoining on its south side; and an interesting confirmation is that the measurement of the two frontages together is forty feet, and that the site of the back portion in the churchyard is that now occupied by Nos. 9 and 10, St. Bride's Avenue. Soon after the Great Fire, a body of Commissioners was appointed to supervise the rebuilding of the City, and of these, three were instructed to make a survey of the devastated ground and the properties involved. The original MS, surveys of Ohver and Mills, two of the Commissioners appointed, are happily still extant, and are in the Guildhall Library in five large volumes. Of the importance of these unique records it is impossible to speak too highly, and their value in research like this is priceless. From their giving the names if the owners of the adjoining properties one is enabled to proce t gether the plan, and reconstruct it as a whole. Some of our own readers who may have occasion for ordinary business reasors to seek similar information will do well to note the

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#### ---COMPETITIONS.

COMPETITIONS.

CITY OF YORK TOWN PLANNING COMPETITION II - ritter to petition are under an orient on the George of the Society of As extent with a control of the Society of As extent with a control of the amendment. Members are corrected to a minimizate with the Society of the competition.

#### ARCHÆOLOGICAL.

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THE ROUAN FORT AT AMBLE SIDE, WINDERMERE Treater at death with morland. Antiquarian and Arra 22 a Society was held at the Rouan Fort. Antice side, on Friday, when Mr. R. G. Contravological states are more grant and some side. of exploration during this year. At a of exploration during this year. At the red of last season it was discovered that even meath the second century fort my anoficer dating from the century before, and this year all digging had been devoted to explore 2 this earlier fort. Whereas the ater fort by east and west, the earlier hay amost not and south across the eastern end of the let roce. south across the castern end of the let robe, propering beyond it some saxty feet on the month. It was defended by a dail of dail, varying in with from 25 to to 40 tt., according to the distance between term, and 4 ft. or 5 ft. deep. In the latter of there database oak timber was found, who have ditches ork timber was found, which sig-gested that a pulsade was a councel. In ale-these defences was a rampart, whose founda-tions, consisting of a stap of hard steepay-ing, that there discovered it so ral places. The rampart Itself was chared away by the build rs of the arter fort. The north end of the sarly for, prip to 2 beyond the limits of the later fort, and re-garded most attack on the later fort, and rebeyond the him to of the fit year. Between the coived most attent on this year. Between the fort and the middle roolway, or to the of the ditches, was found a parent of the ditches, was found a parent of the ky covered with churcost, who has 20 contessent the floor of a gatherise. So tall trenches had been duz on the other sides of the early fort to invits limits, in his ortion amount of pottery, believed to be orgito the first century, had been discovered. One large Samian dish, found in the bottom of the early ditch, was almost complete. The broad course had been found, one of Dom's an Ober Em peror under whom the early fort was prolified built, and one of Arton he, on Emperer of the second century, also a fourth century silver comin a well belonging to the later fort.

### ---A HOUSE WITHOUT NAMES

A specimen of the architecturid and build A specimen of the architectur it and found ing abilities of George Washington is a brick house, still studing, it good repair, which was built by the father of his country in 1790 at Glasgow, Barren County, Kettings, although it was in Fairfax County, Viewhen it we leek.

attronger when the when it we have the section of the lor data, says the section of the lor U.S.A. The lor data, says the section of the lor U.S.A. The residence of construction of the local U.S.A. The local wild section of the local U.S.A. The local section of the local local section of the local sect Gereral Wishington for the sectioneral Spottswader who were Virginia at that time. Gereral was because a rectained for addition. Stephen in the same and the section of additional with down a roof was land and with down a roof was land drawn at the times, and fistened with which is a There as not a sure way.

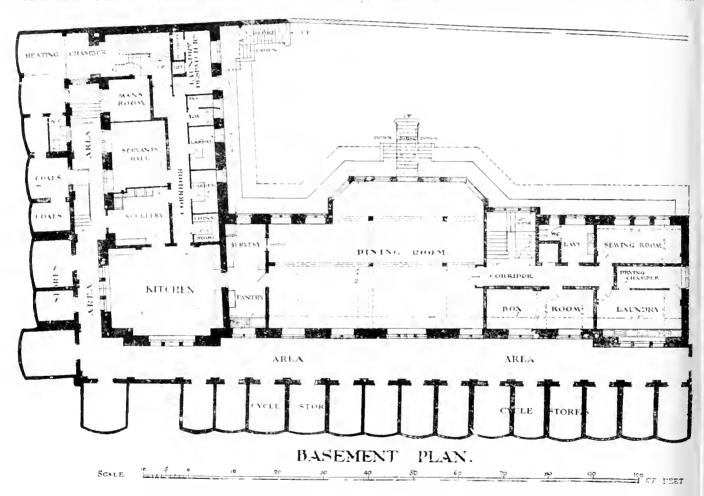
## Gur Illustrations.

## ST ANDREW'S CHAPEL, ENETER CATHEDRAL.

it in shows a measured draw I is a a start in shows a measured draw of St. Andr. w's Chapel, which is sturted in the first heart aisle of Exeter and a start of a start of the first and some start of air aisle. It was Marshall's a dramally, a've its tellow chapel, but satisfies of the Norman choir. Stapledon more etcl the renevations so as to make it rarallel to Bronscombe's restored chapel of themsely. The detailed shafts are clearly

the Isrian work. The foral length of the welfooking and naving an engaged to the tailing is 150 ft, and the width across the tailing is 150 ft, the height to the apex of right of the main entiance, and on the left central of charged being 57 ft, above chancel there is a large social or drawing room, floor. Miss Margaret I. Chilton, R.B.A., which will be used for dances, concerts, etc. has designed and executed the stained glass lass windows of the chapel are by Messrs, this floor the office and the waiting room, Powell, of Lindon. Mr. Herbert J. R. ad, of matron's sitting room, and two private re-Eveter, executed the reredos in the chapel, tiring rooms, also lavatories, cloak room, and which is of Beer stone. The sedilia and poseina are the gift of Mrs. Griffin, as is also the mather flooring to the sometimes. The cold tension is also the mather flooring to the sometimes. The cold tension is also and the first, second, and third floors, the mather flooring to the sometimes. The cold tension is a second, and third floors, the sout a transept window, and the stained the marker flooring to the sanctuary. The pulpit is the gift of Canon Hitchcock. The markle flooring is by the Markle Mosaic Constone and wood carving by Mr. Lewis Small stone and wood carving by Mr. Lewis Small (stall, the servants' bedrooms having been transfel to Bronscombe's restored chapet of transcolors. The detached shatts are clearly meation of the carbot bishop's work has been about £13,000. It is hoped in the floor has three bothrooms, two has been about £13,000. It is hoped in the floor has three bothrooms, two has been about £13,000. It is hoped in the floor has three bothrooms, two has been about £13,000. It is hoped in the floor has three bothrooms, two hivatories, near future to complete the tower at the north east other, the height of which will two linen stores. Situated at the end of the will two linen stores. Situated at the end of the corridor is a staff staircase. This staircase, "with everything wright poetry is also the "Exen Domesday that it also serve as an additional staircase that the corridor is a staff staircase. This staircase is also the "Exen Domesday the first of the residents from any floor in case of the transcolors." A.R.I.B.A., and the street can be reached direct.

The total length of the overlooking and having an entrance into the A door from this room leads out to the garden. There has also been privided on also rooms on the first, second, and third floors. The and twenty-six on the fourth floor, giving The a total accommodation for ninety-seven residents after deducting ten bedrooms for the stall, the servants' bedrooms having been



NUTFORD HOUSE, BROWN STREET, W .- Mr. VICTOR WILKINS, Architect.

6. Let's Liver Portheals and the decision of Services Take been an edit to decise the estate the chapel analyse at medical altary to St. Andrew (18). Cathern Dated 1305 is an order Button's that contribute sets and the editors of Andrew of K. kenny, late dear, and others. Among the names we and that of Henry de Kifkenny, who was at the time of Batton's order stal living and common of the Cathedral. anor of the Cathedral.

WALTER W. HITCHINS.

ALBAN'S CHURCH, WESTBURY ~ I PARK. BRISTOL

PARK. BRISTOL The western portion of the shurch, con-isting of nave, north and south aisles, and consents was completed in 1909. The work transepts, was completed in 1909. 3' the east end now nearing completion, consists of the choir and sanctuary, a chapel together with a large box room, and lavatory together with a large box room, and lavatory we printed several particulars contains set and vestices for choir and accommodation for both residents and staff.

There are service hits from the servery and launchy despatch room to the upper floors.

There are service hits from the servery and launchy despatch room to the upper floors.

On the ground floor, directly opposite the superintended the execution of the hard are lined with Bath main entrance is the longe, with windows which cover a considerable area.

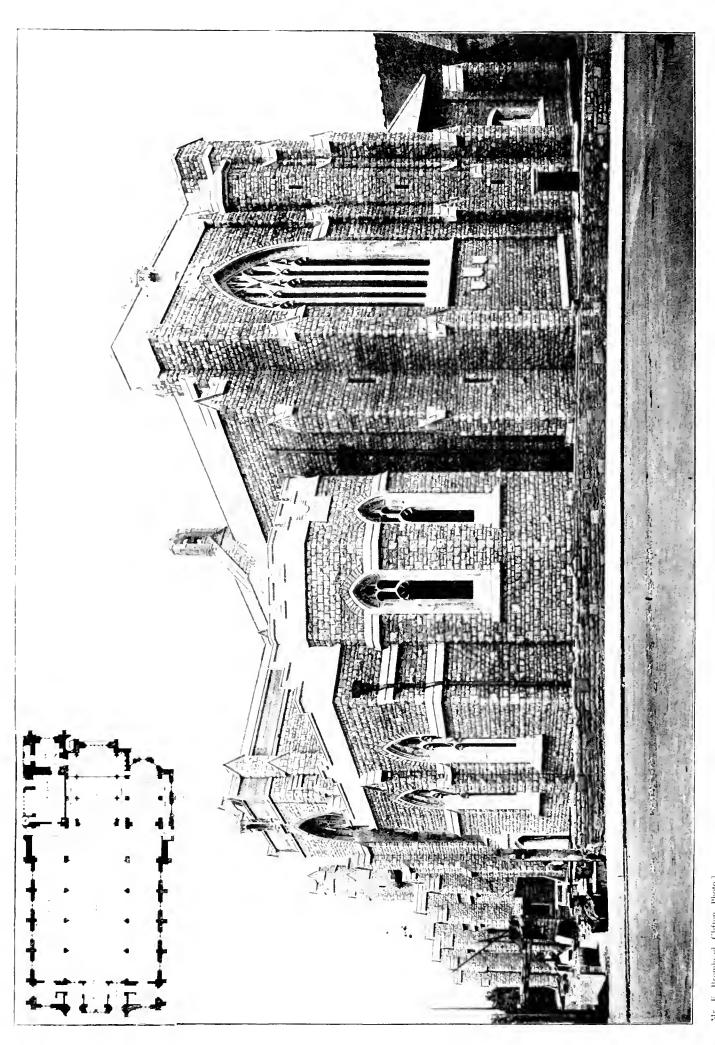
HOME FOR EDUCATED WOMEN WORKERS. NUTFORD HOUSE BROWN S PLACE, W. STREET AND NUTFORD

This building, of which we give a view and three plans, is being built as a resi-dential club for educated women workers. is situated in Brown Street and Nutford Place, W., and will give accommodation as tollows. -In the basement, a large diningroom and kitchen, scullery and offices ad-joining. On this floor there is also the ser-vants' hali, Laundry despatch room, heating chamber, coals and cycle stores. A sewing toom, laundry, and drying chamber for the use of the residents have been arranged, together with a large hox room, and layatory

s Lacer Partificals" and C. F. W. Dening, F.R.I.B.A., Gaunt House, The elevations are Georgian in style, with the low Services "Tave been Orchard Street, Bristol. are faced with purple brown Chesham bricks and stone dressings. The windows are varied in some cases by light red brick dressings, and these, with a heavy modillion cornice, combine to give a Georgian character to the edifice. The huilding has been designed by Mr. Victor Wilkins, architect. 12. York Buildings, Adelphi. W.C.

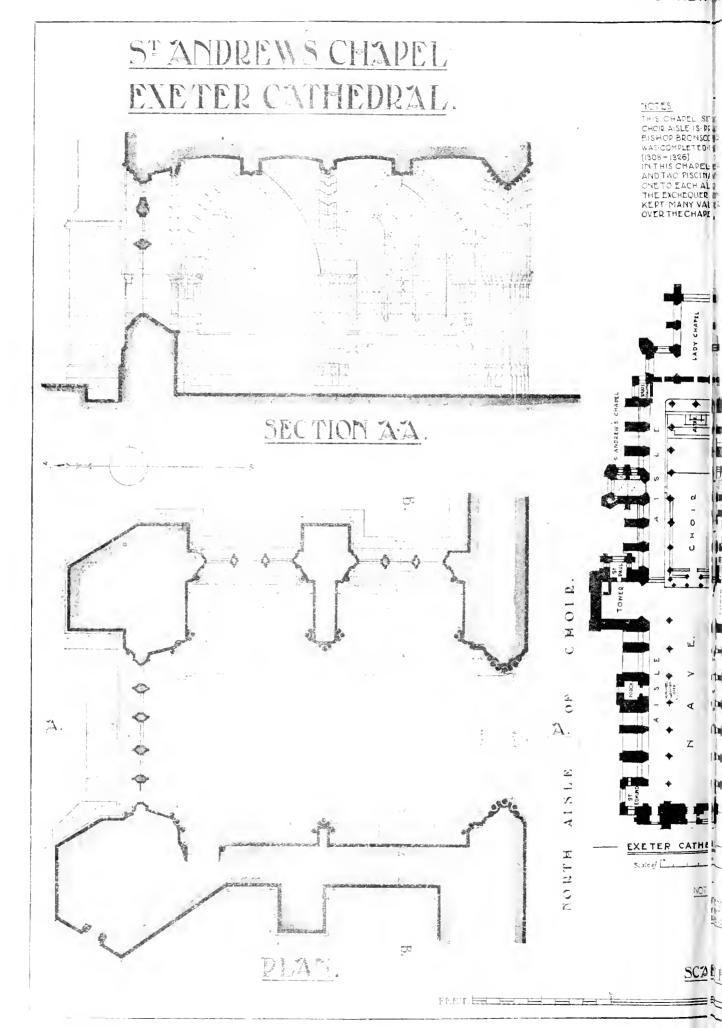
MESSRS, GOSSAGE AND SONS, LTD.'8
NEW OFFICES, WIDNES, LANCS.
The staircase hall and board of director'

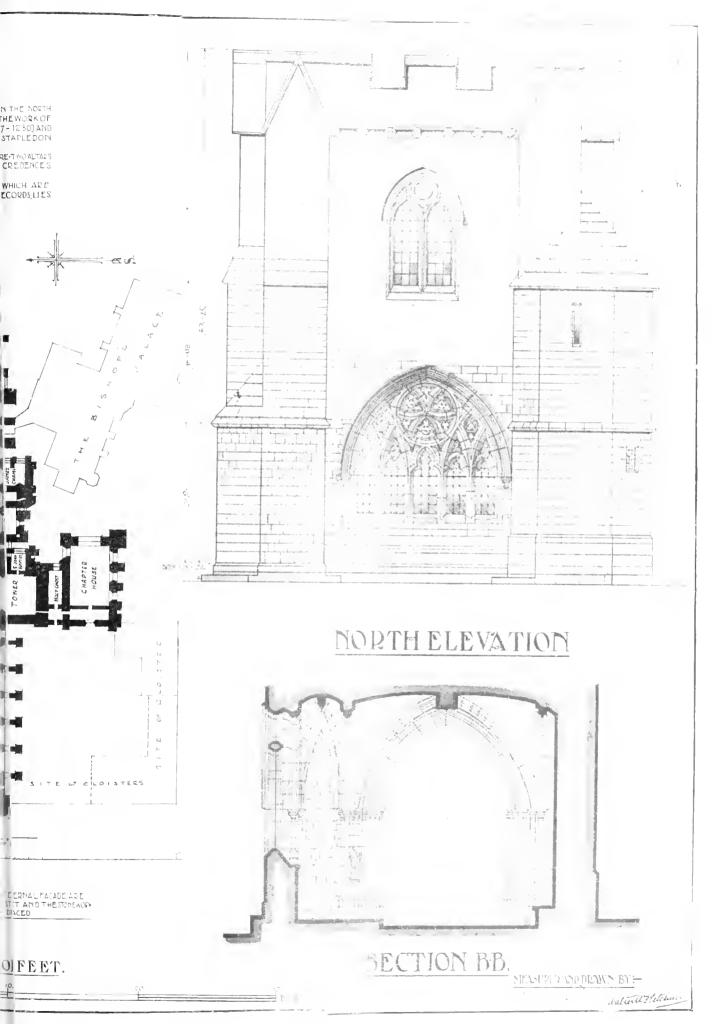
room fireplace furnish the two views given by the accompanying plate. A plan and a pair of photographs of the general central office and of the board room appeared in the BUILDING NEWS for April 23 List, when we printed several particulars concerning the work. Messes, Charles W. Harris and Laurence Hobson, AA.R.I.B.A., of Liverpool, are the architects who designed and superintended the execution of the buildings,



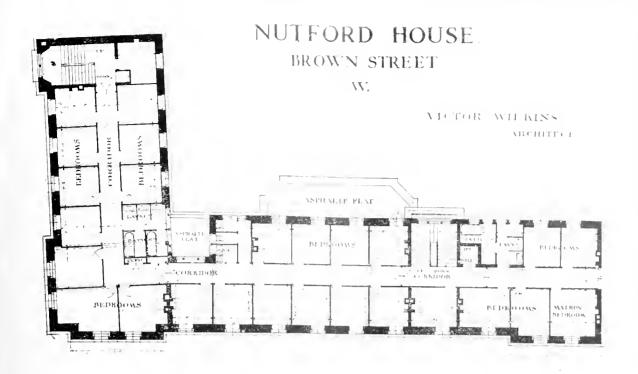
F. W. DENING, F.R.I.B.A., Architects. Mr. F. Brombtad, Clifton, Photo.]
ST. ALBAN'S CHURCH, WESTBURY PARK, BRISTOL.—Messrs. E. G. Rodway, A.R.I.B.A., and C.



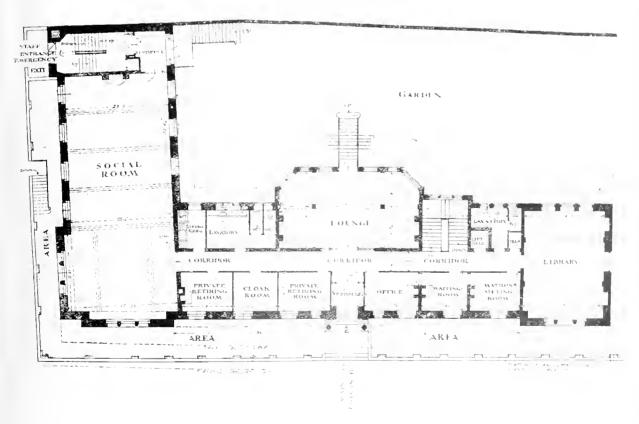








FIRST FLOOR PLAN



BROWN STRELL

GROUND PLAN

SCALE 10 5 0 10 26 3c 4. 1: 60 6. 70 80 GO 100 FEET

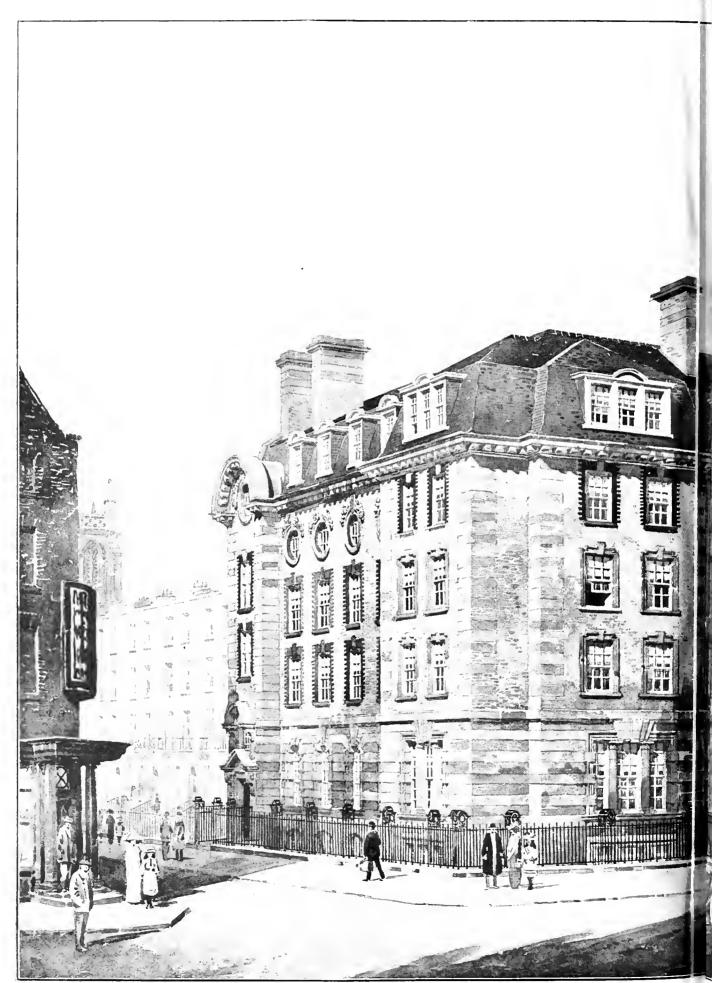




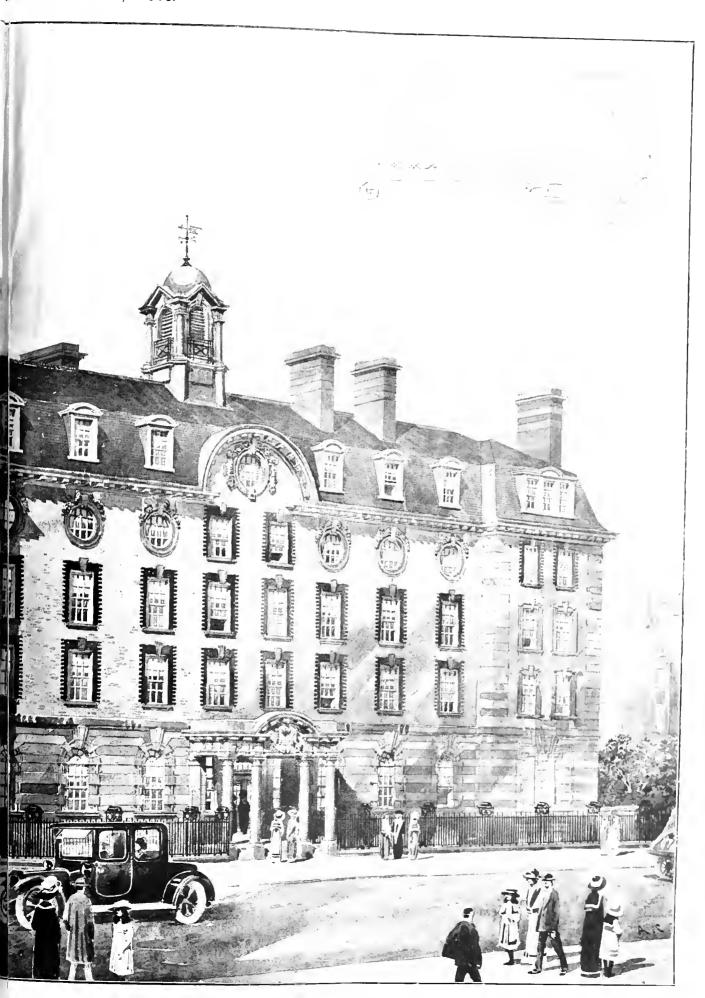
Own 2

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HOME FOR EDUCATED WOMEN WORKERS, NUTFORD THOUSE, BROWN



TEET AND NUTFORD PLACE, LONDON. W.-Mr. VICTOR WILKINS, Architect.

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## HYDRATED LIME IN CONCRETE.

Results to be secured by the use of hydrated i lime incorporated in the concrete mixture are set forth by Robert S. Edwards, consulting and chemical ergmeer, of Portland, Oregon, in a paper recently published in the Lo. Angeles Builder and Contractor.

Hydrated lime is now widely used in this country for mixing with concrete to mall, the concrete dense and moisture-proof. The additional concrete dense and moisture-proof. tion of small percentages to the mix is mining diately effective in promoting plasticity throughout the mass, thereby rendering the concrete more homogeneous and keeping a so during transit, before placing. After placing concrete which contains hydrated lime its subsequent spading in the forms is greatly tail tated, and the thorough covering of all steel reinforcing rods is more perfectly reinforcing rods is more perfectly account plished. In fact, concrete mixed with a small

pushed. In fact, concrete mixed with a small percentage of hydrated lime seems to fall ...most automatically into place.

The proportion of plasticity and home geneity which small percentages of hydrated generty which small percentages at all lime give to concrete cannot be secured in any other way at so little added expense for the material used. On many large reintorced conmaterial used for many large remnorced con-crete buildings which are being constructed in the United States to-day the concrete as mixed at one or two central mixing plants, which are generally located in the ground or in the basement of the building. After mixing it is dumped into carriages and elevated taen distributed through galvanised non paper or chutes to the various parts of the building. It is a well-known fact that Portland cement. when mixed with water, is not very plastic some brands of cement being extremely non plastic; and while the mixture for reinforced building construction is a rich one (generally 1:2:4), yet even so it is sometimes very difficult to secure sufficient plasticity in the concrete to insure its being elevated, poured, and distributed without considerable s and clogging of the pipes, attended with more or less separation of the aggregate.

The use of hydrated lime as a void filler in concrete mixtures, and for rendering concrete mixtures more water tight, dates back several years. Xumerous tests show that a replienment of from 10 to 15 per cent, of cement by hydrated lime in rich mixtures does not de crease the compressive strength of the con-crete after three to four months' time, and ultimately increases the strength and perform-ance of the concrete. It apparently makes but little difference as to its action as a void filler whether the hydrate is manufactured from a dolomitic or high magnesium time or a high-calcium lime, it being necessary only to have a product which contains no free lime or unslaked particles. The proper hydration or dry slaking of line reduces it to a finer degree of sub-division than can be accomplished by any mechanical means.

The amount of water required to convert the dry hydrated line into a plastic paste varies from 50 to 70 per cent, of the weight of the lime; while to obtain a mortar of similar consistency with Portland cement an addition of 25 to 39 per cent, of water is required.

Unlike Portland cement, however, the add tion of water to hydrated lime does not create any chemical reactions: simply a lime paste is formed, which holds its excess water for a long time. Unon the addition of small quan tities of hydrated lime, amounting to 10 or 15 per cent, to the weight of cement used in concrete mixtures the Lydrate, which has absorbed a large amount of water, corresponding to its weight, is thoroughly disseminated throughout the concrete mass; and, owing to its fine piastic cond tion, it is forced immediately into places in the concrete which the cement cannot reach.

Concrete so mixed, on leaving the mixer, flows more readily into place, and the coarse aggregation in the concrete mass. In other words, the extreme finely divided condition of the moistened hydrated lime paste has in creased to a marked degree the covering or

the constraint of the which hydroches age of the constraint of the

From a subsection of the foregoing data section is a subsection of small percent, be drawed in each or a small percent, be drawed in each in added to concrete time in a road way, will accomply?

all wing.

I. Rendering of the contrete highly personal venogeneous thus producing denselying returned venogeneous thus producing denselying returned via the individual venogeneous of the rand efficiency of the rand. From of the uniform resistance to wear and other tresses.

K (p.n., a certain amount of time in the cancete while setting.

7. Hembring the concrete mass more nearly write right, and thereby preventing the alternate wetting and drying out of the finished concerns

4. In large pieces of work the above proje the given to concrete by hydrated lime would materially reduce the labour in spreading and bringing the concrete to a uniform surface, which is of great importance in paying work.

## OBITTARY

We regret to learn that Mr. J. H. Dawson, late miniging director and one of the the late miniging unector and one of the founders of the Stancliffe Estates Co., Ltd., stone mercuruts, quirry proprietors, and miniscrymen, of Stancliffe, Darleydale, passed away on the 30th ult., at the age of fifty

seven, after a long illness.

Lieut, Hugh Arnold, of the 8th North underland Fus bers, was recently killed at the Dardandles. He was the second son of Mr. C. P. Arnold, for many years a partner n the firm of Crawley and Arnold, solicitors in the firm of Crawley and Arnold, solicitors to the E. distriction Commercians, in I was a nephew of S.r. Phomas Graham Jackson. Bart. R.A. Born in 1872, and educated at Easthonne and at Clatton College, after studying art at the Sarle Schools he became a worker in stanced glass and a well-known member of the Art Werkers' Guild. He was responsible for the letterpress of a book on standal gases of the Muldle Ages in England and France. He was married and leaves a wife and three voing children to mourn his loss. Mr. H. F. Traylen, A.R. L.B. A., of Stam. ford, writes: An ong the many losses to are sustained by us in this terrible war the name of Hugh Arnold will be in the front rank. As a fixed gass art st he held a name and reputations could to none. He had the proud distinction of long among those whose was chosen to represent the modern English was chosen to represent the modern English school of stimed glass painting at foreign exhibitions. It is strong line, straightforward near entstance of the subject in hand, and his artistic clear in thods left no doubt that he would make a good soldier, and his death at the Dudardelles has proved it. Locally he had a great reputation. He ento by executed the window in the west end of the south a slice. Stiffenge's Church, Stamford, two windows it the chancel of Edith Weston Church, and a change time light window in Grada. this in may be sent the Church House, Remer H rts. H s to thook with Church thanks, Le estershire. His great de'gh was en hera' be gliss, and his work in this arm may be seen in the Church House, Remer H rts. H s to thook were entirely Robert Hirts. His in thods were entirely original though triang his assistation from Early 14th Century work. The pointing of the needes a Browne's Hospital Chapel. Stemford, sevel were of his bread are view. gifts, and he delights I in working in tempera----

A new Hirling mover to be pital is in one bad to be a Mark. South Who follows a Rang Geometric is the contractor.

The integral by self-at Education is to be expected to f(t) = f(t) and the formulation in this set f(t) = f(t) and the self-analysis of f(t) = f(t) and the self-analysis of f(t) = f(t).

## Our Office Cuble.

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hm\_ err would be a Mr. R (

Mr. R. C. Standard meat Consist of Time of Remains ago whilst share gress. The strength of the problem of the p north side of the Point on the Hamilton will be larel, in Northwell and of bronze and is consultant about 1 ft. high. It is borrols must in the control of the road, which cans from eq. t vessel. On the exterior s.c., tron, which cans as in Press Clashy Avg. G. (mainto, XX) the Emperor has been purposely fessor Havefield says. The input to be an example of a vel antiquity, a Roman efficially our The Emperor mention I is the clearly Domitian; his removes usual bosonise he was so lead death. When he was the solid time, who to the capacity of 17 cover two gallens, and to the was Land Whendale has interented Abbeyt supported Shall (Sall 1814) who was shain at the Battle of Main 1644, while highlying on the Key. The Emperor mention I at C

in 1644, while lighting on the Kin 1644, while lighting on the Kesskull has a hole on the tep of family were improporators of Hosafter the dissolution of the Molyed at The Priory. It has hostfur the sallet langing in the ratio Sir John Fenwick (Archolic Sir John Fenwick) Archolic of the Lindschafter of the Duke of Single College Single Singl the Bittle of Marston Moral of the Bittle of Marston Moral of that on the helmet 2 - year the Bittle of Marston Moral of that on the helmet is the left so

At their last meeting the rest of Rose entirent received a roles by tube realises of spensory, anto not £1,200. The county surveys All viney, also prepared a scheme to spenditure area which was £1. To soluted that only £2.00 a feet for the rest of the rest o for the crief or of the lead Action M.C. thanks strong the verticent Board had some brightness at \$1000 and \$1000 and that no permanent leads. erected at less than be had could not advise the council ratepayers money ( ) in a d sticks. It was decided to the surveyor's place to the Line Bound

The Treasury received of money to the Cornoration of R building of extensions to the Cornoration of R McDat Street. The Trainer as thereupe approved the restrict work at the evolution over the first own to the product of graders because the product of the produ creased to a marked degree the covering or spreading quality of the cement, and reduced to a similar marked degree the friction has tween particles of fine and coarse aggregate. This answers the question: "Why does hydrated lime benefit coverete?" The action has compared to the ciling or greasing of a shaft or pared to the ciling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling or greasing of a shaft or pared to the colling of the content of the product of the product of the product of the pared to the pared to the content of the product of the a that th she sof the building would suffer t kept untinished through t the way r. At the meeting of the cor-nation on Thursday a letter was received t the west m the Local Government Board refusing sayeti , a loan for the alteration and moment of the Springfield Estate at ariand recently purchased for £13,5001, a sanatorium for consumptives. The and have also returned the plans for the satornan with a request that certain edifications, in the way of curtailment, ould be made when sanction to proceed thathe scheme is torthcoming.

The Silve of Australia, the official organ the bistitutes of Architects of New South des. Queers and, South Australia, West istralia, and Tasmania, publishes in the strissic a portrait of the new president of e. West Australian Institute of Architects, 21. F. Cayanagh, and also several illus ations taken from some buildings designed of elected by Mr. Cavanagh in collabora on with his brother, Mr. J. C. Cavanagh on with his brother, Mr. J. C. Cavanagh, the baildings include the Central Fine r., do Station, the Redemptorist Monastry, the Commercial Bank (the first portion which was erected by Mr. H. Trigg), and be Convent Parochial School, Perth. The esign for the Fremantle R.C. Church is other of the fremanic R.C. Church is nother of the firm's works; also the P. of O. Hotel, the Esplanade Hotel, and the ment flote, the Orphanages at Glendalough d Clonzari, Baird's Arcade, the R.C. Archishap's Pulace, the Christian Brothers, Col. 2c, the Fremantle Fire Station, and several ricks. Mr. Cavanach studied in London, assed the R.I.B.A. examination in 1888, and was made a Fellow of the Boyal Insti-ate of British Architects in 1895, but after cyang his subscription for twenty years he is an aved his active membership to hapse • re-extering into private practice he was of draughtsman in the Architect in Chief's by an South Australia.

large train gauge was placed last year by Te City Corporation on the roof of their mon-nery in Golden Lane, and the rain water from strong area of surface is collected monthly and analysed. As the result of the examina ion 16. H warth, the City Madical Officer, tates that in the month of December last in the im int of deposit registered as fall-City amounted to 54% tons avoirdu Or that mass of dut nearly 34 tons house. Of that mass of and healty 59 tons were some, and included sulphate of am menta and chlorine, while 2% tons were moduble, at he asisted of tar, curbon, and gut. No dense for has as yet been tested. The exmination is being continued.

Students of Structural Design who have Stir forts of Strictural Design who have be efited by V L. L. bearing that title, by Professor Hora e B. Thayer, will welcome V & H. London, Constable and Co., Ltd., 16s., will be deals with a variety of simple including beams, girders, via ducts trusses, building heams, girders, via ducts trusses, buildings, stand-pipes, and chevator truss. Many concrete examples are given, with copions illustrations, and the various suitpets are ably treated, theoretially and practically. Some examples of American terracetta are illustrated in the higher n high office buildings.

Mr. A. C. J. Green is resuming his classes season or advertising and salesmanship, it were much appreciated last year by by were much appreciated last year by a leaders, who had probably little ideal standardly these matters concern the first and engineering trades. The geschick for a limited are very nominal, this soft respected will get all further particles on application to Mr. Green, at the Research, and the Hugh Myddelton meet. It statute, Clerkenwell Green, 1922 Street, Ed., on Thesday even and 745 for the conthe 28th mst., and at 27 Since, E.C., on Thesday even (7.15) then 2 on the 23th inst., and at assacia Bond Commercial Institute, South Hackney, on Wednesday 28 of 7.5%, commen up on the 29th Both sections are very accessible, and and its view many thousands in

FM H W Bassant of Favor of State Fizza Square, c. t. thou not detect, tas

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#### PROFESSIONAL AND TRADE SOCIETIES.

ARCILEOLOGICAL CAMBRIAN SOCIETY The Ven. Archdeacon Thomas presided at the annual meeting of the Camorian Archeological Society held at Shrewsbury on Tuesday in last week. There was a large and representative attendance. The report of the committee stated that it was mammously agreed, owing to the continu ance of the war, to postpone the society's A grant of £5 was recomannual excursion. mended for excavations at Llanthony Abbey and £20 for excavations at the Roman city of Priconium, near Shrewsbury A special grant of £25 had been made to the Prince of Wales's Fund. The committee had decided to publish the series of MS, notebooks of Fenton's "Tour in Wales," now in the possession of the Cardiff Library .- The Chairsession of the variant Library.—The Chairman moved the adoption of the report. Mr. T. E. Morris, London, in seconding the motion, said in regard to the votes for excavations, he would be very glad if in future the association could persuade the owners of the soil where excevations were made to hand over any finds to museums. He regretted to say that during the last twenty-five or thirty years most of the objects of interest so dis covered had gone, and no one knew where, It could be seen from the reports of the com missioners on ancient monuments in Wales that a good many objects of interest in the Principality had been lost, and he hoped in making their grants they would urge that the objects discovered be preserved in some institution.— Mr. Utyd Gardner, Alerga venuv, supported Mr. Morris's suggestion.— The Hon. Mrs. Bulkeley-Owen asked If the The Hon. mecting suggested that interesting finds should be placed in the Welsh Museum or the National Library of Wales. They did the National Library of Wales. They did not want such discoveries to go out of Wales. Mr Gardner said he did not want them to go out of Wales.—The report was adopted.

THE SOCIETY OF ARCHITECTS.- The following are the house list nominations for following are the house list nominations for officers and Council for the ensuing session, 1915-16: President, \*E. C. P. Monson, IR I B.A. F.S.I. London; Vice-Presidents. \*Edwin J. Sadgrove, F.R.I.B.A., London, and \*A. Alban H. Scott, M.R.San, Inst., London; Past Presidents, \*Albert E. Pridmore, F.S.L. London, and \*Percy B. Tubbs, F.R.I.B.A., London; Hon, Secretary, †E. J. Partridge, F.S.I. Richmond, Surrey; Hon, Treasurey, †J. Harbert Pearson, London; Hon, Librarian, \*Gilbert A. Harrison, 1966, p. 11, 1969, p. 12, 1969, p. 13, 1969, p. 13, 1969, p. 13, 1969, p. 14, 1969, p. 14, 1969, p. 15, 1969 Treasure, †J. Herbert Pearson, London; Hon, Librarian, \*Gilbert A. Harrison, Oxford, Council (18 seats, 21 nominations); \*Henry Adams, M Inst.C. E., London; George Bames, London; †P. M. Beamont, A.M.I.C. E., Maldon, Essex; J. A. Bowden, London; †B. D. Cancellor, Winchester; Edward Cratney, Newerstle-on-Tyne; G. E. D.ck as-Lewis, Aberystwith; Charles Dunch, London; †Herbert O. Ellis, London; G. Blair Imrie, London; \*T. Stewart Inglis, London; \*CO F. Seymour Leslie, R.E. (retire b. Woodwich; W. H. Lockton, A.M.I.C.E., Newark-on-Trent; \*F. G. Moscrop-Young, London; \*Charles E. Salmon, London; \*Noel crop-Young, London; †George H. London; \*Charles E. Salmon, London; Di Sheffield, London; "Alfred J. Taylor, Bath; "B. R. Tucker, M.R.San.Inst., London; "Thomas Wallis, London, and Victor Wilkins, London, (An asterisk \* signifies proposed re-electron; a dagger † proposed change of office. Additional nominations for Council and officers may be made by any three members who shall send in their nomination. properly signed, to the Council before the first day of October, and the names of such nonmees shall be incorporated with the list proposed by the Council, which shall be arranged alphabetically. The Fallot papers containing the complete list of names will be issuel in advance of the special general meet u.g. on October 14 to members who are not under any hability to the Society.

The great square tower which ferms the central feature of the mich front of the Victoria Tower at Ottiwa has been learning for form Tower if Office 1748 need forming 1765 ward for some years, and now, on the advice of an engineer from New York, it is to be demolished and rebuilt on fresh foundations. The tower was built between 1975 and 1308 The tower was

LEGAL INTELLIGENCE.

DISPUTED USE OF A SEWERAGE OUTFALL.—The case of Wapentake of Use OUTFALL.—The case of Wapendake of Olive and Derwent Dramage Commissioners of Fletchers (Shippley), Limited, came before Mr. Justice Low in the Vacation Court on Wadnesday on a motion by the plaintiffs for an in-term injunction. Mr. T. Terrel, K.C., for the plaintiffs, said that the object of the in-junction was to restrain the defendants con-tinuing a certain outfall which they had recently constructed, whereby sewage and other foul matter flowed from the defendants' works into the Cherry Orchard drain of the plain-tiffs' system of drainage. Mr. Robertson, for the defendants, asked that the matter should allowed to stand over for a fortnight, to enable his clients to file eidence in reply the plaintiffs' affidavits. He explained that the defendants had to obtain an engineer's report, and that this must necessarily take some report, and that the small the defendants were willing to give an undertaking to have the drain scoured and cleansed at the point where the effluent entered. Mr. Justice Low directed that the evidence should be furnished by the defendants to the plaintiffs at Selby by Monday, and that the motion should come on for hearing to-day (Wednesday).

MANITOBA PARLIAMENT BUILDINGS: ALLEGED CONSPIRACY WITH CONTRACTORS.—Sir R. P. Roblin, former Premier of Manitoba, with Mr. W. H. Montague, Mr. J. H. Howden, and Mr. G. R. Coldwell, all members of the late Conservative Government of Manitoba, have been arrested on a charge of constraint to define the conservative of the late Conservative Government of Manitoba, have been arrested on a charge of constraint to define the constraint of t conspiring to defrand in permitting the contractors for the new Parliament buildings to draw large sums of money for work not performed, and collusion to increase the prices under contract. The arrests are only technical, as the accused consented to appear in Court without accused consented to appear in Court without compulsion. All four were released on £10,000 bail each. It will be remembered that on May 12 the investigations of the Royal Commission appointed to inquire into charges made by the Opposition in connection with contracts for the new Parliament buildings, led to the resignation of Sir R. Roblin's Government. In the general elections on August 6, 40 out of 49 seats were carried by the Liberals.

THE RISKS OF SKETCHING.—Mr. Alexander Wallace Rimington, F.S.A., R.P.E., the well-known etcher and water-colour artist, of well-known etcher and water-colour artist, of Pembridge Crosceut, London, was charged at Beaumaris Police Court on Saturday with a breach of the Defeuce of the Realm Act by making a sketch of a section of the Menai Straits without having a permit. Admitting the offence, he pleaded ignorance of the fact that he was sketching in a prohibited area. He that he was sketching in a prohibited area. He produced income-tax, rent, and rates receipts, together with a British Museum reading ticket and an old passport, to prove his identity and his British nationality. In view of the great uncertainty as to areas in which sketching was prohibited, he begged the Bench to communi-cate with the Home Office in order to get such cate with the Home Unice in order to get such areas clearly defined by authority.—The Bench dismissed the case, but said the police were justified in their action, and begged Mr. Rimington not to repeat the offence.

The Eastbourne Rural District Council have appointed Mr. William Walker, of Cannock, district surveyor.

The parish church of Burton-Hastings, near Nuneaton, is about to be restored and researed at an outlay of £1.150.

New Council schools are to be built at Wyggstown, Leierster, from plans by Mr. Howard H. Thompson, of the latter borough.

The testing of the Upper Medway, on the completion of the Conservancy Board's improve-ment scheme, took place on Tuesday last week, when a barge 75 ft. in length, and laden with ient scheme, took pince on twentage as a chemical barge 75 ft. in length, and laden with 20 tons of ballast, was towed up the river to be before by the strain ing "Keston." The 120 tops of ballast, was towed in the river to Tembridge by the steaming "Kesten." The centraceompanied by a monor-launch, left the VII S init? Horseway at Maids one, the beundary of the Upper M dway Conservance Board, et 3 a.in., and entered the Toubridge Town Lock some eleven hours later.

The invitery surrounding he disappearance of Mr. Hard E. West, late a secunt surveyor to the city council of Canterbury, his at length been solved. Mr. West was connelled by a breakdown in beath to resign his position under Mr. A. C. Turley at Canerbury, and went to his father's house at Weckhambreaux on Angust 16. He discussated from there on the 23rd, and no trace of him was discovered until Thursday night, when his body was receivered from the Lesser Scour River three miles from his home. The mystery surrounding he disappearance

### Correspondence,

ARCHITECTS AND THE WAR OFFICE. To the Editor of the Building News.

Dear Sir,-My attention has been drawn to letter in your issue of August 25, headed More War Department Inaccuracies," signed by Mr. C. Stanley Peach, in which certain charges of inaccuracy are brought against Mr. Tennant, M.P., Under-Secretary for War, in a reply to a question addressed to him in Parliament,

In your Editorial column you comment on

The reason for the alleged inaccuracy that whereas Mr. Tennant stated that the offer of the Royal Institute of British Architects was made in May, Mr. Peach points out that the offer was made in the previous

September.

As a matter of fact there were two offers made. The first (in which the President R.I.B.A. did not appear) was made by the Architects' War Committee, who in September, 1914, offered to his Majesty's ber, 1914, offered to his Majesty's Government an assurance of the loyal and energetic support of the profession in any direction which may be found practicable and desirable," leaving the Government " + . in leaving the Government dicate what form of assistance would be of This letter was acknowledged most value. on September 23, 1914. It was thought that the best way to take advantage of this offer was to obtain the names of gentlemen who would be willing to serve under the War Office, and such a list was asked for and obtained.

The offer, however, to which Mr. Tennaut referred in his reply was a subsequent one, and went much further than the above. E. Newton, president of the Institution, called at the War Office on May 13 and there laid a definite scheme before the authorities. This scheme begins as follows:—"In the first month of the war the R.1.B.A. made a general offer of assistance to the War Office and to other Government Departments in all matters in which its special qualifications might be of service. This offer was accepted in general terms and, since that date, all quests which have been received from the War Office for advice in connection with architectural and engineering appointments have been promptly dealt with. It is now suggested that the War Office might make a more extended and systematic use of the R.I.B.A. organisation." Then followed a detailed description, illustrated with maps, of how the R.I.B.A. could assist the War Office. Copies of these were at once circulated to all commands in the British Isles, showing how responsible officers could take advantage of

the proposals.

Now in considering the accuracy of Mr.
Tennant's statement, it is necessary to consider the terms of the question. The member who made the enquiry asked: "Whether early in the war the President of the Institute of British Architects submitted plans for wooden huts, and offered the services of a number of qualified architects and surveyors. and if full advantage was taken of the offer of such plans and services with beneficial

results?

It will be observed here that specific refer ence was made to the President of the R.I.B.A., and it appeared therefore that the question had reference to the second and mot the first offer of service.

Mr. Tennant's reply was: "The President of the R.I.B.A. offered the services of the Institute in its corporate capacity to assist in any work carried out by the War Depart This offer was made in May, 1915 by which time the greater part of the work

in the names of a table men, and severa - f

these have been gryen employment."
It will, I think, be seen that Mr. Tengrint answer was accurate. Although he did rat specifically allude to the earlier ofter, he may dicated that it was not ignored, by the latter part of his answer. The ofter of the Institute in its corporate capacity was not made until Mr. Newton's visit of May 13. Yours tru
R. H. Brade.
War Office, London, S.W., August 31.

## SLEAFORD CHURCH, LINCOLNSHIRE, AND THE S.P.A.B.

For the Elitor of The Building News

Sir.—In your issue of 18th ult., in "Currente Calaino," there is a quotation from the Guardian on the subject of unnecessary interference. sterference with old work, instancing Sleatord Church, Lincolnshire, where carving which had lost its defined outline owing to decay has been renewed in stone, to insert which old stones which were still performing their structural duty were removed. This work, it is satisfactory to note, has now been discontinued owing to the interference of the church authorities.

I have been engaged at Sleaford. The carving referred to was so perished that another winter's storms would have obliterated it beyond recall. The carving was carefully copied before it was impossible to do so, only such new stones being inserted as were absolutely necessary. The statement in the last paragraph is untrue, and 1 am authorised by the church authorities to state that "the work was stopped simply because our Building Fund was temporarily ex hausted, but after the war we have every intention of completing the work." The other statement is:—"The south door of Tickhill Church, Yorks, has been entirely renewed, though the stonework was nowhere so badly affected as to be of danger to the I have also been, but only during structure. the last year, engaged in superintending some very conservative reparation at this church; during that period the south doorway has not been touched.

Whilst all must sympathise with the expressed motives of the S.P.A.B., one must regret that their efforts are sometimes stultifield by unfortunate methods of procedure. Their ideas of protection are in direct conflict with the advice issued by the R.I.B.A. addressed to promoters of restoration.

I think that in making statements such as those referred to the S.P.A.B. should at least he sure of their facts, and also pay a httle respect to the opinions of those who also have spent their lives in the study of ancient buildings, and yet venture to differ from them in technical details.—I remain.

W. H. Wood, F.R.LB.A. 20. Collingwood Street. Newcastle-on-Tyne.

The Essex Archaeological Society has just The Essex Archeological Society has just sustained a less by the death, in his cignty fourth year of the Rey, James Wright Kenworthy, for twenty seven years the vicar of Braintree, and latterly a resident of Colchester.

Draintree, and latterly a resident of Cotchester, Mr. Thomas Astell, timber merchant, of Astell Bros., Limited, Bedford, who died on May 23, left estate valued at £13,548 0s 2d., with net personalty £3,283 13s, 3d. Mr. Thomas John Astell and Mr. Charles Astell, timber merchants his sons, are the executors.

timber merchants his sons, are the executors.

Three temporary wards, each 134 ft, by 22 ft, and 11 ft in height, and accommodating 40 patients each have been added to the rear of the East Suffolk and Ipswich Hospital, Anglesca Read Ipswich Mr. H. Whard Cantley, A.R.F.B.V., Butter Market, Ipswich, was the architect, and Messis, W. G. Fisk and Co., of the same borough, were the builders.

Those was obtained on Friday, for the same

There was opened on Friday, for through ruffic between Leith and Portobello, the new and which was rendered necessary by the was finished and hence comparatively little advantage would be gained by the War Department availing itself of the offer. No plans for wooden huts were submitted early in the war by the President. A number of qualified architects and surveyors have offered themselves for service under the War Department, and after careful examination of their qualifications, several of these have been selected. At the beginning of the war the President of R.I.B.A. was asked to send

## Building Intelligence.

MANCHESTER TO

MANCHESTER The experiment of the behavior of the behavior of the result of the result of the same weeks. The result of the capacity, like the star expector as 1 divid Wharf, of 40 000 to a refer to the relation of madding grain at the rate of 1 260 to perhour, it is a reinforced counter to the madding 200 storage bins and 1 suppositions, as well as distributing, we also a prising 260 storage bins and 1 suppositions, as well as distributing, we are grain. The structure is 100 to 2 and the grain. The structure is 100 to 2 and the grain. The structure is 100 to 6.25.

295 ft. long, and 165 ft. wide. The eq. p. p. ment includes six receiving elevators in last. ment includes six receiving elevators, e. 1 six discharging or shipping elevators, e. 1 a. 1 these being provided with an intrastic so decapable of weighing 200 tors of grain per hour. There are also aromatic sines to weighing and so king, non-hinery trivialing into carts or railway wargens, and for the discharge into constant vessels on tongs. The elevator is built at the east end of No. 9. Dock of the horizoness part the discharge into constant at the east end of No. 9 Dock. It has subways on b the sides of the dock, in which run band acceptoral arranged so that during the time general eargo is being dealt with portable elevators

and conveyors will be used for discharging parcels of grain from vessels to the granary THE GUILD HALL, HENLEY IN ARDEN. On Thursday, without orientary the doors were opened to the patche of Henlands and Califf Hall before the Califf Hall before the company. ley's old Guild Hall, whose existence was practically unknown to the mhalatants of the little town until the work of restration was taken in hand. Stucco had the exterior tim-ber, and laths and plaster covered cak beams and rafters. The building was let oft in tenements, and the Warwickshire County Council had made an order for its demoition. The Lord of the Manor, becoming the owner of the site, determined to restore it is far as nossible to its original appearance. This has possible to its original appearance been done upon lines suggested by Mr. Alfred Redway. Exteriorly at now presents the appearance of a half-timbered building. Part. the ground floor is occupied as bank premises. and the remainder is at present tenantless. The front of the building is add incl with the escutcheons of the founder and several other former lords of the manor. A stancase leads up to the guild room, a lofty apartment ever looking the main street. This guild room up to a year ago was partitioned off for bedroom purposes, while the old oak brains at I ratters were hidden from view by a low plaster outling. The oak woodwork now disclosed is a principal feature of the hall, and is still in a principal feature of the half, and is still in a fairly good state, though eaten away here and there. The flooring of the same wood has been renewed in keeping with the style of the place. The stained glass window in the little apartment known as the Lord of the Manor's room, contains a representation of St. Authory and the arms of the Settins, Earls of Dufley.

STATUES AND MEMORIALS.

VICTORIA EMBANKMENT A broaden medallion of the late Sir W. S. to lbert 1836–1911; somewhat similar to that energy the memory of Sir Walter Beson, has been placed in position on the river val. I the Victoria Embankment, facing C. one Ches District Railway Station. It has been executed by Sir George Frampton. If A Be eath the head of the plays to lyric, author, homerist and sat tist as the figures of Comedy and Trugedy. We if 200 yards eastwards, in the Embanking dens, is the bust of G Horr's great S.r Arthur Sullivan.

### ---TRADE NOTES.

Boyle's latest patent "Art property bas been adopted at All Souls Cooley . Oxford has been adopted at All Souls Cooley. Oxford, Rough easting on brickwork is considered an innovation in those districts possibled with a local building stone. For the innetty brick dwelling houses erected at Bradford under the city architect, waterproofed coment rough-cast was adopted. We understand the city architect has also specified a large quantity of Pudlo for the rough-easting on the Gras-sington Sanatorium. sington Sanatorium.

### CHIPS.

is I her s at Buckhayen, built the Wanys Sea mails of ota di

c with vowtan has accepted the President of the London Master Decorators.

We con. Vanbrugh H.A. House, Buckhath, builder,

rei A. H. J castorial church at High Road to was opened last work. It is a particle cost £5,000, exclusive of the safe, and was built from the s Glendinning and Hanson, of

2001 Iown Council have granted 5, of 225 to Mr. G. Wasanp. 5 v.s. for work in connection with ware works extension scheme at

sold at Astradmyniah, buid or of £ — has been formally opened.

Liding was designed by Mr. D. Puglis, or by aromeet for Glamorganshire,
the Colors Beams and Makin of e contractors.

on Sixus Ave Me (Arley Gennee, in F.H. Arreld and See, Unisted, s. December, a. L. andréy 25 et al. (7.5). The small Er2, 7.5 and Er2, 7.5 and a market and the processor of the processor as an order to assembly a few small because and the processor as an order to assembly and

At the size ston of the Local Government Body to Backing Urban District Council free and the Local Plant Council free and the Local Plant Body as the first as of the control plant at more received matter a scheme estimated to cost £13.5%, with an additional £1,600 for

contro the Clurca Rara, Ostrici Countries they last meeting that the work of supplying water to the village of Stanton Drew had treet see estally completed. The work was carried out by Mr. Stevens under the direct of Mr. Brown, waterworks manager was carried

At B. there may Golligaer, a new boys' to be a mas been formally opened. The midling was as good by Mr. P. Pugh Jones, building was as good by Mr. D. Pugn stones, of Cardiff, the county architect for Glamorgan, and M. 888. Hamilton and Millard, of Caertine to a contractors. The outlay was pa l'v. were the contractors. The outlay was a l'tre order  $\mathfrak{L}5,00^\circ$ .

In men, wo of his brother, the late Rev. W. F. D. i.v. who was for over thirty years vicar of the parish, the Bishop of Ripon research involved and dedicated a stained lass window in Holy Trimity Church, Button-on-Tenry. The window is the work of Mr. J. M. Compen, and the subject is the Miraculio is D. i. gait of Fishes.

The two stry property in Castle Street, Moreouth to straining the single apartment to which Kedere Burns and Jean Armour which has keeping was recently acquired by the track which I School as catton of Burns and a Kiddel School and on Saunday afterneon it was formally opened as a public strip of Limitage and fine poet and his wife.

The Evantors and Architects Registration Bird videocomy for introduced into the Evantor's Council of New South Wales within 12 states to the computer with the constitution of New South Wales within the council of the constitution of the constitution of the distribution of the distribution of the constitution of the constitut

was kilolist Formy by a short a whice of parts conty at the Louterant Verteen who was also do a strong to have pool a contract the second

 $\begin{array}{lll} & \text{for } his \\ f & M(A, -\rho, ) \in D, S \\ P(\beta, ) & S(\beta, -\rho, ) \in D, S \end{array}, \text{ when }$ 

the Land Government Board for

per P. F. et . Warwickshire Yeomaniy formerly conk to my city surveyor of Lichhold, has been killed in action.

The cutt perces of Norway floorings have advinced to £1 12s for u.s. and £15 his tormixed, but the increased freight absorbs fully

Caraam F. Falcon, of the 9th Worcestershire Regiment, an official in the Engineer's Depart ment of the Lendon County Council stall, has noen killed in action at the Dardanelles.

The new Gwyddon council school, at Aber-ira, Mon., built near the urban council offices at a cost of £7,250, has been formally opened. Mr. J. Pritchard, of Risca, was the builder.

The partic iship lather to subsisting between W. R. Nunns and A. Bracewell, architects and surveyors, at Bank Chambers, Bingley, York, in fer the style of Nunns and Bracewell, has been dissorved.

Additions made to the isolation hospital at Bit erreas, at a cost of £6,500, have been formely opened. Mr Hugo R Bird was the architect and Wessis Harris Brothers were the continuetors.

The final district council of Hollingbourne amounteed at their meeting on Thursday the resignation of office of Mr. J. Stanley Roper on the completion of thirty years' service as surveyor of highways.

Monorial stones have been laid in connection Althornal stones have been laid in connection with a new Wee eyan chapel at Stratton, Dorset, Mr. F. T. Ma'thy, of Dorchester, is the architect, and Messes Watts Bros., of the same town, are the contractors.

The contract, amounting to several thousands of pounds, for reinstating the Grand Hotel and Restamant, greats, damaged in the bombard-ment of Scarborough last December, has been placed in the hands of a local builder.

From September, 1914, to July, 1915, the stall I from September, 1914, to July, 1915, the state of the orderince survey at headquarters, South-ampton, and in the Carlisle, Edinburgh, Nor-wich, Shrewsbury, and York Divisions have subscribed £1,308 for the relief of distress due

At Thursday's meeting of the School Board for Dunfermine a letter was read from the Scotch Education Department giving provi-ional approval to the creetion of a permanent school at Rosych, the plans for which were prepared some time ago,

Mr. Thomas Oliver, of Puckaster, Niton, Islo of Wight, and of the Hawthorne, Brambey Hill, Croxdon, late of Messrs, Wm. Oliver and Sons, Ltd., timber merchants, who died en July 16, aged seventy-five, left estate vilued at £134 808 gross, with net personalty £113,314.

The opening of a new Roman Catholic school The opening of a new Roman Cathofic school it Birches Head, Hanley, took place last week. A two storied building has been erected in Boulton Street, the ground floor serving as an infants' school and the upper room as a chapel for the Catholics of the district. The site was purchased for £1,150, and the building has entailed a further expenditure of £2,300.

The tural district council of Omagh have received a communication from the Local Government Board, staring that it is abselutely essential that during the present crisis the issue of further instalments of the loan of £21.95 under the Labourers Act should be curtailed. With this end in view the crection of as many of the outstanding cottages as pos-sible must be deberred until the termination of

Bankipur, the new capital of the province of Hehar and Oussa, is undergoing quite a meta-morphosis, and buildings are being erected on a , sides. The Government House, Secretariat, ar, sides. The Government House, Secretariat, Post and Telegraph Office, and the High Court are all new up to roof level, while quite a number of longal ws for the accommodation of Government officials are in process of contruction. Plans have also been prepared for the University buildings, and, altogether, Indian Linguisting assures us, there is a good time it store for contractors, big and small

which is presented by the second of the seco

Major G. A. R. degris, of Sydney, for some years a member of the New South Wales Institute of Architects, and at one time assistent non, secretary, has been wounded at the Darlaneaus.

Mr. Reginald J. Samuel, B.Sc., A.M.LC.E., of the Road Board engineering staff, has been gazett I heat mant in the Royal Engineers, and is now on duty with the 6th Labour Bat talion of that regiment.

Mr. T. Eccles (of Messrs, Woolfall and Eccles, architects, Liverpool) has just returned from France, having been engaged there some time superintending the erection of a base hospital designed by his firm.

Several groups of labourers' cottages are being built for the rural district council of Boston. Lines, and will be ready for occupation on October 11. Mr. H. Kidd is the architect, and Messrs, Bradley are the builders.

A new school which has been built by the Morthyr Corporation at Gellifaelog has been formally opened. The architect was Mr. J. Llewelyn Smith, of Aberdare, and the builders Messrs. Enoch Williams and Sons, Dowlars

M. Arthur O. Callear, engineer to the Madeley and Braseley Joint Water Board thorough of Weilock) has been appointed surveyor to the Madeley District Council of the said borough, his total salary to be £205 per ammin

An institute that block of insurance offices and An important obok of insurance omes and chambers is in course of erection in Colmore Row. Brimingham. Messrs. Ewen Harper and Brother, of that city, are the architects, and Messrs, W. Sapcote and Son, also of Birmingham, the contractors.

The Right Hon. Herbert Samuel, M.P., the Postmaster-General, has unveiled a tablet at Great Avton School, North Yorkshire, erocted in memory of Captain Cook, the celebrated circumnavigator, who was a native of the district, and went to school at Ayton.

The annual green book dealing with the thirty-minth session of the Leeds and Yorkshire Architectural Society has just been published. It shows a total membership of 170, of whom eighty-seven are ordinary, twenty-nine honorary members, and lifty-four associates as against 170 in the previous year. Nine members and nineteen associates are serving with II.M. forces.

At the Roman Cathol's church at Broxwood, At the Roman Cathol'c church at Broxwood, near Pembridge, Herefordshire, a monumental slab in memory of Lieutenants Richard and Groffrey Shead-Cox, the two elder sons of Mr. John Shead-Cox, Lord of the Manor of Broxwood, who were killed at Neuve Chapelle in October last, have been unveiled. The memorial was designed and executed by Mr. Eric Gill, of Westminster.

At St Mary's Church, Stone, Kent, on Tuesday in last week, the wedding took place of Mr. J. P. Killick, Assoc.M.Inst.C.E., county surveyor of Hertfordshire, and Miss. Lizzie Sheldon Maybury, daughter of Mr. H. P. Maybury, M.Inst.C.E., chief engineer and manager to H.M. Road Board, The bride was given away by her father, and Mr. E. B. Went, of the Road Board, attended the bride-grown as best man. A reception was subsequent groom as best man. A reception was subsequently held at Barnesfield, Greenlithe.

A significant instance of the Government's determination to enforce economy in local administration was furnished at a Local Government Board inquiry at Skelmersdale, near Ormskirk, on Wednesday, when the informal district council sought leave to borrow £2,000 for improvements to their gasworks. Mr. F. H. Tulloch, the Board's inspector, said he was there to squeeze the council down to the last farthing, and asked for minimum requirements. Eventually a modified scheme pressed for by the inspector at less than half the original cost was submitted by the council's gas engineer. A significant instance of the Government's

was submitted by the council's gas engineer.

At the last meeting of the corporation of Cr we the town cleek read a letter from Jr. W. J. Bull, assistant borough surveyor, who is if and to poin the multiary forces, stating that he had assertained that no G verranent abovait is were mide to officers' wives or dependents and a king that the council would allow half pay during his absence on military service. Ald main Beiges movel that in the event of M., Bull being granted a counsistent of H.M. Army half my be allowed by the council to its who but not his absence on military service. Mat. Ze a. war " A, amendmen ria ton with the presum war " A, amendmen ria ton a" war se equal to 25 a year be granted to ben of the proposal to allow £112 Y, half Mr Ball's salary, was rejected, and the resolution was adopted.

The new Technical School, Grey Fig. 8 Re-Doncaster, will be opened by the Mayon to morrow (Thursday).

A new Wesleyan chapel, near Hayes State Uxbridge, has been formally opened. Mr. W. Harborough, of South Bermondsey, was the builder.

The Treasury has refused to sanction the raising of a loan of £10.500 by the Guildfund Town Council for the erection of forty cottages for working men.

A group of Council schools is being built A group of Council Schools is nearly outer in Rylana Road, Erdington, Birmingham. The contract was taken at £12,420 by Messes, Hot-per and Sons, of Blackheath, Warwickshire.

At a meeting of the Sewage Committee of the Bradford Corporation on Wednesday it was announced that the Local Government Board had nounced that the Local Government Board had declined to sanction any further loan in connection with the Esholt tunnel scheme. The contract, which is for over £100,000, was let last year to Messrs. Best and Sons, Limited, and a good deal of the preliminary work has been

The current issue of the Architectural Association Journal reports the total number of members of the association serving with the Forces as 587. All former students of the school will be interested to learn that School Lieutenant H. P. G. Mande has now received a staff appointment as "water adviser" to the Army Corps, i.e., the whole three divisions.

The marriage arranged between Lieutenant P. Hubert Boulnels, R.N., and Miss Lucy Boase, took place yesterday (Tursday) after noon in the Catholic Apostol's Church, Dundee, Lieuwang, Boulneyes, noon in the Cathelic Apostella Church, Dundee, Lieutenant Boulhois, who is in command of a submarine "somewhere off the ceast of Eng-land," is a son of Mr. H. Percy Boulhois, M.I.C.E., of the Legal Government Board, and formerly city engineer of Liverpool.

A mevement to secure the passage of a uniform State building law is now being carried on in Massachusetts. A special committee of the Boston Chamber of Commerce has appointed a sub-committee with Mr. C. H. Blackall, a Boston architect, acting as chairman, the purpose of this committee being to gather data and direct the Chamber's attitude toward a Bill now pending in the Legislature. a Bill now pending in the Legislature.

Theodore Sington, who was at one time an architect in practice in England, and latterly a writer of articles for the Press, of Lime Grove. Old Trafford, has been sentenced to six months imprisonment with hard labour by the Man-Imprisonment with nard labour by the Manchester City magistrates under the Defence of the Realm Act. Sington is an elderly man, the son of German parents who had become naturalised in this country. The charges against him had reference to articles sent to an American journal and below morthly in Royan. American journal, published monthly in Boston

Major G. T. Hurst, M.S.A., of the 3rd (Natal) Mounted Rifles, Durban, has returned from late German, now British South-West Africa, where he was engaged with his regiment in assisting General Botha to after the colour schame of the root H. alter the colour scheme of the map. " His criti cism on the architecture there, where it existed is," says the Society of Architects Journal, "that it is too awful for words and typifes the coarseness and aggressiveness of the Colonial character, swinish with hardly a re-deeming feature."

deeming feature."

Lieutenant Henry Fawcett Garrett, B \ \ \cdot \ of the 6th East Yorkshire Regiment, who was killed in action on the 22nd alt, in the Dardanelles, was a member of the well-known family of engineers and agricultural implement makers, of Aldelangh, and was thirty years of age. After leaving Pembroke College, Cambridge, he became an artist, and he executed some decorative wall paintings at Winchelsen and elsewhere. Shortly before the war his design for the mamorial to Canon Barnett, at Whitechapel, was selected by the communicial and he was engaged upon it when the war lork out.

Work his boom started on a three-stary

Work his been started on a three-stary bank building for the Meichants' Rank at Granville and Pender Streets, Vancouver, which will cost \$175,000. It will occupy an area of 50 f. by 104 ft. The banking chamber will be 20 ft. in height from floor to ceiling Ahove that there will be two floors of offices, and the whole structure will be equal in height to five ordinary stories. Grey marble will be used throughout, and dull steel instead of brass will be used to carry out the grey colour scheme. The plans have been drawn by Messrs Somervell and Putnam, Ltd., architects, of Vancouver, and the contractors are Messrs Purdy and Henderson, Ltd., Vancouver.

### TO ARMS!

### 4th Pattalion "Architects" Central London Regiment Volunteers.

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ORDERS FOR THE WITE BY LHUT, COL. A. W. WROLN.
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Next for duty, G. H. P. (ser.

GLNEAU PARADIS.

Weekend compens Than Ditton, Saturday and Sinday, September 11 and 12. Contingent from Sinday, September 13 and 12. Contingent from quested. Hours to paradictor men not scepang in camp. Saturday, e.p.m. Sachay, 1145 ann. Penn, 10,10 cm., Waterloop. Weekers attending competes said in their name, to the Quartermaster before Thursday morning next.

### MENTRON WORK.

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DRILLS AND PARADES.

"A Company Incides, minimum range, ters light and tone to consense. Monek Street, We minister a to so to many my members of the so parameters of the so parameters. Monek Street, We minister a to so pain.

We directly, Company parades, 545 to 745 and a 15 to 845, at 15 and 54 and 64 at Milliamk School, Notice will be posted in visionly at Headquarters.

Thursday Strailing Seconders from Acting But Vecchi, Server Conjuncy Seconders from Acting But Vecchi, Server Company Seconders and Company portades as for "A Company Seconders and Company Headquarters," "Company Seconders local Headquarters," Company A Athlistic Ground, Borcham Wood "D Company Paradem in Section drift at Vercer's School, Habborn, Incides and Thursday, a 45 pm Company pure, Widneydays, at Dean's Arade.

SCHOOL OF ARMS.

SCHOOL OF ARMS.

Mi beink School, in trust on in boxonet highting, dymnastics, physical drill, boxing and single sticks, on Tuesdays, Itomacto's p.in.

on Tuesdays, from 6 to 8 p.m.

RECRUIT DRILLS.

A tempony beate-Varid, 545 and 545, Wednesdays and Fridays 41 wet, the drills will be held at Milbank School.

B Company, Dulwich College, Mondays, 8 to 1) p.m. Thursday, 5 to 3 p.m.

C to upony, Botcham Wood and Elstree Dustriet, Headquarters, VA, Athletic Ground, Borcham Wood. For mill part cular apply to Alan Potter, Grey 6 tibes, Borcham Wood. Herts,

"D Company, Mercy," School, Tue-day, and Thursdays, 6.45 p.m.

Thursdays, 6.45 p.m.

ORRESPONDENCE.

Special attention of members is drawn to the fact that correspondence should be answered by return II this is not attended to the office work of the corps is immensely mercased. Furofinent forms of new members and all correspondence not reterring to reterring for the Army or to financial matters must be abless d to the Adultant, by conduct Street, W, and tegrading recruiting for the Army to the Recruiting Other, at Battalion Hendquarters, and tegrading recounts and subscriptions to the Payanaste. W R Hughes by Dishwood Houng, E.C.

By order,

Ly a GUTHRIE, Adultant.

By order,
L. a. GUTHRIE, Adoutant.
BATTALION HEADQUARTIES, IS, TUFTON STREET, WESTMINSTER, S.W.

### MEETINGS FOR THE ENSUING WEEK.

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Thrusbay, Royal Photographic Society's Exhibit non, "Contarbury Cathedral," by R. P. Bosgrave Graham, Suffolk tion. To inversify Cithedial R. P. Howatave Graham. Street Gallety. Havmark t. S00 p.m.

Satisfied (Sept. 11) Association of Mannaged En-grees Val. to the Oldham Cor gers on Waterworks at Delph

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The leaf is announced of Mr. John McKissack, of the firm of Messrs, John McKissack and Son, architects, 63, West Regent Street, Glasgew. He had been in professional practice in Glasgew for fifty years, and had designed many charches and other important buildings in Glasgew and the West of Scotland. For about two years Mr. McKissack has been laid aside by ill health, the practice being carried on by his son and partner, Mr. James McKissack.

### TO CORRESPONDENTS.

We do not hold ourselves responsible for the opinions of our correspondents. All communications should be drawn up as briefly as possible, as there are many claimants upon the space allotted to correspondents.

It is particularly requested that all drawings and all communications respecting illustrations or literary matter, books for review, etc., should be addressed to the Editor of the EURIDING News, Elfingham House, I. Arundel Street, Strand, W.C., and not to members of the staff by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributors' risks, and the Editor will not undertake to pay for, or be liable for, unsought contributions.

for, unsought contributions.

\*\*\*Trawings of selected competition designs, important public and private buildings, details of old and new work, and good sketches are always welcome, and for such no charge is made for insertion. Of more commonplace subjects, small churches, chapels, houses, etc.—we have usually far more sent than we can insert, but are glad to do so when space permits, on mutually advantageous terms, which may be ascertained on application.

When favouring as with drawings or photographs, architects are asked kindly to state how long the building has been erected. It does neither them nor as much good to illustrate buildings which have been some time executed, except under special circumstances.

nces. Telephone: Gerrard 1291. Telegrams: "Timeserver, Estrand, London."

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NOTICE.

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X1. Ot R ILLI STR (TTONS).

The New Offices of the Mutual Lafe Assurance Company, Waterloo, Ontatio, Canada, New Premises, View of Main Entrance and General Office, Mr. Frank Darling, F.R.I.B.A. (Royal Gold Medallist, 1915) (Messrs, Darling and Pearson), Architect.

St. Michael's Church, Mill Hill, N. View and Plan, Mr. J. S. Alder, Lacentiate R.I.B.A. Architect, Library and Art Gallery, Shrew-bury Schools, View and Plan, Messrs, Forsyth and Maule, FF.R.I.B.A. (Royal Gold Medallist, 1915) (Messrs, Darling and Pearson), Architect.

### Strand, W.C.

369 The Middle-ex County Guildhall, Broad Sanctuary,
340 Westmutter, S.W. Portion of the Roof in the
340 Council Chamber, and View of Flarone and
341 Bench in County Sessions Court No. 2. Messrs,
341 J. S. Gibson, Skipwith, and Gordon, Architects. Billiard-room, "Crow Clump," Weybridge, Messra, Tubbs, Messer, and Poulter, Architects.

St. Michael's Church, Mill Hill, N. View and Plan. Mr. J. S. Alder, Licentiate R.I.B.A., Architect.

### TEMPORARY MILITARY HOSPITAL WARDS.

The problem of providing additional hospital accommodation has been one of the most pressing of the war. In the case of one great London hospital, a solution has been found in the provision of temporary wards in the open spaces between the permanent blocks. We are indebted to Mr. Percivall Currey, the architect of St. Thomas's Hospital, for the present information and the accompanying plans and section of one of the new wards provided at this institution.

At St. Thomas's accommodation has been found for 332 beds for patients and 40 for orderlies, in six temporary wards, erected by the War Office under Mr. Currey's supervision. It will be seen from our block plan of the hospital, Fig. 1. that the temporary wards are generally of the same length as the permanent wards, extending from the main corridor to the loggia that connects the ward pavilions on the river frontage. Single pavilions on the river frontage. Single wards of two rows of beds accommodate 30 patients, the double wards having the number of beds indicated on the block plan, which shows the temporary buildings cross-hatched, it being noted that the baths and sanitary accommodation are, in all cases, excepting the 80-bed ward, arranged between the columns of the open loggia.

The cross section of a 66-bed ward, Fig. 2, and a plan, Fig. 3, are given herewith. It will be seen that two 20-ft. wards are thrown into one, excepting that a central screen 5 ft. 3 ins. high is arranged, and are roofed with collar-beam roofs, carried by the side walls and a fir girder upheld by steel stanchions. The height of the wards is 12 ft. 6 in. to the ceiled collars. and 10 ft. 6 in. to the heads of the quarterpartition walls, giving about 750 cubic ft. space per bed. Between every bed is a vindow with double hopper-type opening ashes, so that the wards approach nearly o the reputed ideal hospital ward—the pen air—and have perfect ventilation, eing excellently lighted. They are unoubtedly a model of their kind, and hould be carefully studied by all ingrested in the problem of providing additional temperature. onal temporary hospital accommodation. The whole of the wards are framed of imber, with 4-in. by 2-in. quarters, and in. by 3-in. heads and ceils. They are rected upon brick and concrete foundaon. About 3 ft. of ground is excavated, nd one foot of concrete laid, with 9 in. dimensions. brickwork under the main walls, and in. sleeper walls. As indicated, there three cross-sleeper walls carried right

timber girders strutted up from the area out in 1-in, rebated linings, with deal pavements. Here are arranged the servery, linen-room, and sisters' room. Central doors connect the main corridor conveniently for the hospital and medical staff. It will be observed that the wards and the structure over the area completely fill the interval from corridor to loggia and buttress and add stability to the whole construction.

sills and light transomes, both the upper and lower sashes falling back, with hopper-type cheeks of 3-ply board, the lower sash being rather restricted in the opening for the reason that the inter-bed space is necessarily restricted, and the 30° opening of the upper sashes would be inconvenient in spite of the fact that under each window is a small table, which Blocks of concrete, as our section in-forms a natural fender for attendicates, are provided as foundation to the others by the patient's bedside. forms a natural fender for attendants and

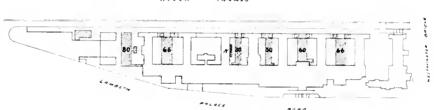


FIG. 1.—BLOCK PLAN, ST. THOMAS'S HOSPITAL.

when called upon to provide temporary above the lower sheet.

steel stanchions, which are 4 in. by 3 in., with base-plates, and are bolted by angle-asbestos slabs in two lengths, nailed to with base-plates, and are boffed by angle-plates to the 9 in. by 4 in. fir girder at the junction of the roofs. The rafters and collars are 4 in. by 2 in., with 7 in. by under the windows; but to make out, collars are 4 in. by 2 in., with 7 in. by under the windows, a certain amount of 2 in. ridge-piece; and the floor joists are sawing of the stock slab has been neces-6 in. by 2 in. upon 4 in. by 3 in. plates, sary. To keep water out at horizontal with 1 in. grooved and tongued boards, joints a narrow double-sided zinc angle We give these details in full because, is run behind the upper and appears when called much to provide temporary above the lower sheet. Similar material Similar material

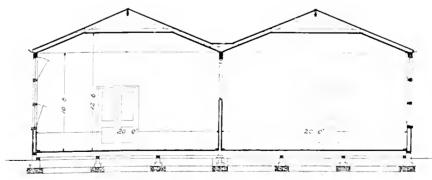


Fig. 2 -Cross Section of Corridor.

architect — by structure. the having in mind details suitable for pe:manent building-may be often in some doubt and hesitation as to scantlings and These details show what scientific disposition of a little material can accomplish.

custom povers the roofs, but in the form of Roman tiles, with ridges and hips of the same, while the valley gutters are land in ruberoid.

The partition dividing the two wards is of 2-in. plaster slabs, with deal cappang, forming a dwarf wall that fits snugly between the stanchion flanges. There is no doubt that the throwing of the two three cross-sleeper walls carried right of to the underside of the floor. Where the ward buildings cross the area next the main corridor, they are carried on the main corridor, they are carried on the control of the floor. The winds we openings are made to the control of the two wards into one greatly assists in ventilation, there being a larger total volume of

ur and a better and more controllable zeneral are movement. For heating the baths are arranged as shown on the plan, wards, gas radiators are employed, with with walling in 2-in, slabs. The baths flues carried through the walls and above and lavatory water supplies are all from

) we ) we LOCGIA SINK BATH ROOM ) we EMERGENCY EMERGENCY DOORS DOORS L. 20:0 === \_\_\_\_ SISTERS AREA AREA LINEN SERVERY ROOM

### CORRIDOR

FIG. 3.—PLAS.

the eaves me. The space between ground the hospital hot and cold-water mains, and floor is venilated by air-bricks, and the drainage being also connected to the and to shoper walls.

felt damp-course laid to all brick walls hospital drainage system. Between the ad to sheeper walls.

wall is arranged, with doors to the pleasant riverside hospital terrace, so that these accessory apartments are most completely isolated, in a sanitary sense, from the actual wards.

The beds, of military size, 6 ft. 6 ins. by 2 ft. 6 ins., are spaced 6 ft. apart. From two of the interspaces, as shown, are arranged emergency exits. From the loggia, patients can pass on to the hospital terrace, which naturally forms, with its charming river views, a pleasant place for convalescents. The building, cross-hatched, on the extreme left of the block plan is a temporary but for the accommodation of forty orderlies. Near by, in a basement of the medical schools, are further temporary quarters, mess-room, baths, etc., for eight sergeants.

The contract for erecting the wards was let to Mr. J. Carmichael, and it is almost literally true to say that the ink was scarcely dry upon the contract than the ground was out, urgency and despatch being the order of the day. The total The total cost has been £9.765 for 372 beds, including the forty beds for the hospital orderlies above referred to, and works out at a little over £26 per bed. The amount includes the cost of all fittings to lavatories, etc., complete, and also about £350 for new kitchen plant and utensils. Naturally, the addition of 372 beds to the hospital proves a strain on the normal kitchen department. The cooking for the temporary wards is effected in a special kitchen, K on the block plan. This serves the whole of the wards. At the same time, the serveries are equipped with a gas stove, boiling pan, and other conveniences.

We have personally inspected these new wards, and heartily recommend any hospital or institution or local authority to carefully examine the buildings. Unfortunately, we are faced with the necessity for yet further provision for the care of wounded. In Mr. Currey's designs the architect who may be entrusted with work of this nature will find an admirable model, and there are necessarily many little details of arrangement needing careful study. On these depend the comfort of the patients. A visit to St. Thomas's, too, may assist to bring cheer to the men who have been brought low in their devotion to their country.

Mr. Alexander Muir, sometime mason and builder, of Glasgow, of Dean Villa, 58, Aytoun Road, Pollokshields, who died on February 10 last, aged 90 years, left personal estate in the United Kingdom valued at £9,027, of which £7,716 is Scottish estate.

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At the annual meeting of the Harlow Trust At the annual meeting of the Harlow Trust of Carnarvon, Mr. Alfred Richards, the chairman of the Finance Committee, replying to inquiries as to whether there were any indications of a revival in the slate trade, expressed his regret that there were none, nor were there any hopes of an improvement until after the war. The Government were probabilities had ling schemes on the part of public atter the war. The Government were prohibiting building schemes on the part of public builties, and for private speculators he did not know of any worse enterprise than building.

At St. Nicholas Cathedral, Newcastle-on-Tyne, the judgment has been read of the Chancellor of the Diocese, Lieut.-Colonel Errington, M.A. in the application of the vicar and churchwardens of the Cathedral Church in regard to the completion of the rood screen by altering the shape and dimensions of the cross and placing upon it the figure of Our Lord crutoffed. The Chancellor granted the faculty, confirming the erection of the screen, which had been erected in 1888 without a faculty. He agreed that the existing figures of SS. Mary and John were out of place, and should be removed. The vicar (Canon Gough) intimated that he should carry the case further. The Chancellor seemed to forget that at Chester Cathedral they had just erected upon its rood a linge figure of Our Lord on the Cross, and a figure of St. Mary and St. John, while at Wells Cathedral they were doing precisely the same thing. Nicholas Cathedral, Newcastle-onsame thing.

# THE ADDRESS IN THE ENGINEERING SECTION OF THE BRITISH ASSOCIATION

By Prof. H. S. Hele-Shaw, F.R.S.

The fact is the time is not an ordinary one, for the war which a year ago cast its shadow over the meeting of the British Association in Australia has, as the months have passed by, gradually infolded the most terrible page in the history of the world.

It is terrible not merely because of the frightful slaughter which has taken place, and which will yet take place, owing, on the and, to the gigantic armies employed, and, on the other, to the nature of modern warfare. A predecessor in the chair, one who has left many marks of his genius on the peaceful engineering works of the country. Mr. Hawksley, commented about fifty years ago on "the unhappy necessity of devoting so much of the science and skill of members of the Association to the defence of the homes of the people of this great nation. He further remarked, with great prophetic insight: "War is no longer carried on by means of mere animal courage and brute force; on the contrary, we perceive, much to our amazement, I believe, that the highest branches of mechanical science and the most refined processes of the mechanical arts are resorted to by the modern warrior for the purposes of offence and defence. And we are taught by the logic of the facts that the modern soldier must cease to remain a passive machine, but, on the contrary, must henceforth be trained as a skilled labourer, if not, indeed, as a skilled artisan.

I do not think, however, that either Mr. Hawksley or anyone else could have anticipated what refinements of skill and science would be brought to bear, not merely on the destruction of the human species, but of those ancient edifices of beauty which cost hundreds of years to build, and which cannot be replaced, or even the loss of those great works of engineering in the form of bridges and other structures which, though doubtless replaceable, represent the accumulated wealth of mankind. All this does not constitute, however, the worst feature of the war which is still raging. I do not know which will hereafter stand out in the blackest light: the callous disregard by our enemy of the recognised laws which have governed warfare amongst civilised countries hitherto, of which the recent murder of a defenceless submarine crew in neutral waters is an example, or the fact, of which there is now abundant and overwhelming proof, that this country, while animated only by peaceful intentions, was itself the real object and ultimate aim for the destructive effort of our enemy.

Fortunately, we now all know that our determination at any cost to ourselves to stand by our treaty obligation to a weaker country was really a fateful moment in the history of our Empire. Had we then failed, such failure would have spelt our own doom.

This is not the place to dwell at any length on this subject; but I cannot help pointing out that the whole attitude of scientific and professional men in this country at the beginning of the war shows how little they realised the real nature of what was before us. Thus my own predecessor, after the war had begun, in his presidential address in Austra'ia, used the words: "The discoveries in pure science and their innumerable applications to practical ends are ever a potent factor working for the common good." The truth is that the great majority of us did not realise to what uses science would be put in the mutilation and destruction of our fellow creatures.

and destruction of our fellow creatures.

Still, we are told by soldiers that practically any applications of science constitute legitimate warfare, and that the only way to escape from destruction ourselves is to employ all the resources of science in our own defence.

It is on these grounds that the meeting of the British Association for the Advancement of Science has been held this year, because science is proving such an all-important factor in the present war.

The mere holding of this meeting, however, with a vague sort of idea that science is

associated with war, does not seem to most of us to meet the real needs of the case The decision to hold the meeting was made m March 1c., six months ago. Since that time the nation has awakened to the fact that matters have become very much more serious, and we scarcely needed the solemn warmings of our responsible statesmen to enable us to realise this. We see our foe turning every resource towards the active prosecution of the war and bringing in the aid of every man towards that end. If the result were a small matter, we might pursue our way, as we did at first, with the fatuous cry, Business as usual"; but day by day it brought home to us that the Hymn of Hate, childish though it may seem, really represents the serious mind and deadly intention of our enemy. When I say this I know there are exceptions, and it is gratifying to find that at least one German guest of British Association acknowledged in print the generous manner in which the German guests were treated in Australia after the war broke out, even being given a passage home. This and much else warns us that our failure in this war means the loss of what has been built up in so many centuries, and what we value above all -viz., om freedom; and that this loss would be accompanied by atrocities and degradation beyond the most savage happenings of the past. It believes us all, then, who are members of it to show that the British Association, which has rendered such great services to the country in the past, can bear its share of the burden to-day.

Remembering how soon we forgot that

Remembering how soon we forgot that black December week fifteen years ago, and the lurid indication from the German Emperor that he and his people had the will to destroy us then, if not the power, and how swiftly we relapsed into national ease at the end of the Boer War, it behoves every man who can de so to take his share in making ready for the terrific struggle Germany is certain to put up in the arts and manufactures.

Now, when we look closely into the causes of Germany's great advance, we can learn lessons which we have been culpably slow to Although there are other take to heart. causes, first and foremost, and overshadowing all others, is the determined and whole hearted organisation of German industry. see it recently stated that the scheme above referred to (the Victoria Falls scheme) was lost to this country because the industrial banks of Germany backed their own manufacturers, and this is no doubt partly true, As I have already quoted, Germany's power in war is admitted to be her mechanical organisation, and the organisation of every material and engineering force to that end Just as striking, if not more so, is her organisation for the arts of peace, and 1 lately heard a very shrewd man of affairs express his amazement at Germany's entrance into war when by peacefully pursuing the way she was going she would have dominated the world commercially in a few years time, and, in the words of the speaker might in many manufactures have made as practically bankrupt. It is undoubtedly in the matter of scientific organisation, e more than the organisation of science, that Germany has achieved such wonderful re sults, and it is therefore in this direction that we must leave no stone unturned we wish to have any chance of holding our own in the future. I will indicate a few of the matters in which there is ample scope for doing useful work in the above direction.

### Enternos.

A sign of the times is the inclusion of an Education Section in an association for the advancement of science. This has not been done on the narrow ground of improving the teaching of science in schools, but because it is now recognised, and this none too soon, that the whole problem of education must be treated in a scientific manner.

When the subject of engineering education is mentioned we are apt to think only of the

training of such equations is have been a sidered in a recent report, and by the Institution of Cross Engineers, and to exclude as that report purposely does, the training of our artisms and foremen. We certainly do not connect the idea at all with the training of the artisan himself. As a matter of fact, while high scientific training of the professional engineer and mandriact ner is of vital importance, the proper education of the men whom he will have to control recarcely less see. The latter education may not be of the same kind, but it is just as vital to the country, and its present condition is a serious evil.

A well-known American, in the "Clother of Electric Review," writing on the "Indicational and Corporate Development of Indicational and Corporate Development of Indicational and Corporate Development of Indicational and Corporate out that theoretically the aim of both employer and employer is the same—namely, the efficiency of indicating duction to increase the return of the investment in labour, and in capital. Coferto mately, however, as he remarks, "The relations between the two have frequently lossy hostile industrial warfare over the describations of the returns rather than a operator of for the increase of financial returns of both parties."

One of the most lamiliating thous of the present war has been the mutual relation. the two in this country in what is probably the most critical period in our history. I will say more later on this subject, but there is no doubt the subject of industrial education needs earnest consideration. Take the first, the education of the professional man —the class, for instance, joining such insti-tutions as the Civil, Electrical, or Mechanical Engineers; we find in one respect a most satisfactory progress as to what is insisted upon before such men are allowed to join one of these bodies. All such institutions now demand technical diplomas or university degrees, and, in addition, satisfactory evidence of practical training. But to prevent injustice to the man who may be self taught, they hold examinations conducted by recognised men of standing in scientific and technical subjects. Great as this progress has been in recent years, there is a great ded to be done. In the first place, professors and teachers of engineering and technical subjects have to deplore the miserable previous training of a large number of students. It seems still to be a common idea that if a boy is unable to make any decent progress in the usual school subjects, he can be sent to a technical school if he is useful with his hands, under the pathetic impression that the success of the engineer depends upon los hands rather than upon his head; and the first year or two at a technical school college is thus taken up with a work that ought to be done at a secondary school. It is not fair to put all the blame upon the school, for I have known students coming from the classical side of such a school with no knowledge of science, and very little of mathematics, who have taken the highest places in the engineering course, and after entering their practical work, have rapidly risen in the profession; and this was because such men had been well trained to apply their mind to any subject and had a sound foundation upon which to build. This only shows that a good student will always rise to the top, and does not prove that the present school system is the best for an average boy, or makes him work as hard as, for instance, the corresponding school in Germany does. A large number of thinking men are convinced that our whole education system seriously needs reform. I say this not merely in reference to scientific education and technical training, but to the whole attitude of mind of the young of all classes of the community towards the serious works of life when they leave school. I will allude to this under another heading later on. In the matter of education and its bearing upon technical training, we have, then, a good deal to learn from Germany. There are some There are some things that we think are quite as good, if not better, in this country, but there is no reason why we should not try to find a way to adopt the better features of education from our enemy, and, while retaining independence of thought and originality, inculcate firmer

<sup>\*</sup> I regret to say this forms a striking contrast to the brutal treatment meted out in many cases to British visitors in Germany.

discipline, for there is surely a happier mediam in this matter.

There is the matter which calls for remark before I pass from this subject. I see in the report above alluded to there is a great divergence of opinion concerning the wage earning value of highly technical students. Here, again, is a matter which in itself is worth a very careful discussion. The ques-tion depends first upon the student himself. next upon the kind of training he has had, and then upon the nature of the work he is expected to do. The blame in not getting is expected to do. The blame in not getting the best results from a well trained student is very often due to the employer, and our section might do something to bring pro-fessors and employers into closer touch; both employer and professor may have something to learn from each other.

In leaving this subject I cannot help point out what important continuation schools are to be found in the meetings and discussions of the younger members of various engineer ing societies, and how much a young engi learns in the preparation of a paper Anyone who is accustomed to take the chan at such meetings will bear witness to the excellent outlay of money represented by th award of prizes and medals for such work Many men to my knowledge have got jobs through thus showing acquaintance with a special subject or originality of thought.

### Research.

is one thing If there another which the British Association be congratulated upon, it is the work which it has done in the matter of research, and it is very interesting to go back to the earliest days, more than eighty years ago, and to see how, in very different days from the present, research in all branches of science was encouraged, and what a potent factor the various meetings have been, not only in actually fostering the work of research itself, but in obtaining the recognition which is accorded to-day. Amongst other things, the National Physical Laboratory stands largely to its credit, as having been first powerfully advocated at one of its meet-This section has not been behind the others, and at the present moment there are three Research Committees—viz., those on Gaseous Explosions, Compound Stress, and Impact. The work of the first of these is so valuable that its results have been published all over the world.

To-day there is a more general recognition of the importance of research, and the recent institution by the Government of a committee for the organisation and development of scientific and industrial research is the latest indication that the nation is beginning to

realise its importance.

So far from all this making our work less necessary, there is all the more reason why we should have a permanent Committee of Research, because one of the intentions of the new Government committee is to utilise the most effective institutions and investigators available, and the statement is made that one of the objects of the Government Research Committee is to select and co ordinate rather than originate, and that one of its chief functions will be the prevention of overlapping between institutions and indiwith the organisation in England, Wales. Scotland, and Ireland. Now, the great advantage possessed by this association is the fact that it includes not only Great Britain and Ireland, but all the colonies, and, in deed, one of the three researches above-men Australia tioned is being carried out in Another research of the association is being carried out in Cyprus; and work is also being done in such places as Jamaica and Ezypt It is more important, therefore, than eve that the British Association work in research should go on, as, since its members are drawn from all parts of the British Empire, its influence should be correspondingly great.

There is another reason for research being subject of a permanent sub-committee, and that suggestions for new work are more likely to be matured, and work of an advisory nature made more practical than is possible at one annual meeting.

There is yet one more reason, which is that although we have made some progress, we are still far behind Germany in the organiare still far belind Germany in the organi-sation of research. There is no doubt that our students and scientific men are quite capable of conducting researches, but the training for this is like the training for the officers of an army; it cannot be done hastily, and, indeed, men themselves cannot be obtained for this purpose without years of preparation. All such work must be done as a factor in the reorganisation of our manufacturing and commercial resources in the great struggle that lies before us.

There is one subject which affects both education and research, and might be a matter to be reported on by our committee It is very rarely that a professor is both a good teacher and gifted with the power of original research. Even when a professor or lecturer is so gifted, however, it is almost impossible for a man really to devote himself properly to research and at the same time undertake the duties which are attached to a professorial chair. Why not face this sub-ject boldly, even relieve the bad lecturer (there are man who admit their failure in this respect) of a certain amount of his work, provided he is doing well in research; or for the man who can do both well, see that he not only has efficient assistance, but even more-that he is given the opportunity of devoting long periods (for instance, alternate years) entirely to research.

There are numerous other questions which would come up under this heading, and which could be usefully dealt with by our com-

mittee.

There is one more subject that we might consider, and that is a better differentiation of researches on purely industrial work, such as are often of a most profitable nature to the professor or research student, and those which are of a purely scientific character. While it is only right that every successful research, even if conducted at the expense of a public body, should bring solid return as well as fame to the worker, some steps should be taken as to the fair and equitable distribution of the proceeds. I see that one distribution of the proceeds. I see that one of the proposals of the new Research Committee is that discoveries by institutions. associations, bodies, or individuals in the course of researches aided by public money shall be "made available under proper conditions for the public advantage. discovery is patentable, I assume, it would be protected at home and abroad, unless wish to spend public funds as much for the wish to spend public itinds as much for the benefit of foreign trade rivals as for out-selves. This is one of the many matters in connection with which a British Association committee might from its cosmopolitan character render great service.

### STANDARDISATION AND THE METRIC AND DECIMAL SYSTEM.

One of the favourite jibes at this country is our supposed utter want of system in re gard to our standards and systems of measure With regard, for instance, ment generally. to the decimal system, it is frequently stated that thirty or forty countries have adopted the metric system, while only three retain the inch as a standard. It must be renembered, however, that the population and wealth of the three latter are at least equal to, if not greater than, all the others, though this does not really prove anything, except the difficulty of the subject, and that here is a great deal to be said for both sides. In the report of the Decimal Association last April the hope is expressed that one the changes for the better arising fr the war will be a reform of our weights and No class of the community would he affected more closely than the engineer, and engineers cannot fail to be interested in the question as to whether the general and immediate adoption of the metric system would or would not be a valuable means of assisting British firms in their competition with Germany and Austria in countries where that system is in vogue. Although it is very nulikely that a wholesale change is imminent. it is certain that the metric system is gradually spreading, and in the United States

British Association has over and over again had the subject before it, and our committee might be of service in making a report on the present state of the matter.

One thing is certain: the Committee might be of assistance in recommendations which would bring into line all British engineers in duplicating tenders for countries which

have the metric system.

Coming to standardisation, here we have nore ground for satisfaction. The Engineermore ground for satisfaction. The Engineering Standards Committee during the last ten years has done a work which is quite equal to that in any other country of completing standardisation of all important matters in engineering, and, moreover, has secured the recognition of these standards in all public As giving some indication of the contracts. range of this work, it may be said that there are more than sixty committees for dealing with every conceivable engineering matter, from bridges, ships, and locomotives, down One of the last of these to electric lamps. committees, dealing with the automobiles, has eleven sub-committees, many of which have already completed their work. It is almost impossible to do justice to the extraordinary achievement of bringing order out of what was apparently hopeless chaos, and to the benefit of the British engineering industry of this work, largely due to the energetic secretary, Mr. Leslie Robertson. We may justly pride ourselves that this section was a pioneer of standardisation, by taking up the subject of small screws, its work being taken over ultimately by the Standardisation Committee.

There is yet work to be done, however, and one matter of great importance would be to get a universal standard of temperature for instruments of measurement other than zero. A temperature, for instance, of about 62° F. would make steel rods' measures more practically workable than at present.

In connection with the subject of temperature and standardisation, I recently came across a statement by the General Secretary of the International Electrotechnical Commission ("Journal," January, 1915) that the want of uniformity in the rating and testing of electrical machinery has been a serious evil, and he goes on to say: "The German standardisation rules, for instance, which, through well-organised and combined effort on the part of the German makers, had, previous to the war, become widely recognised on the Continent of Europe, as well many countries to which British machinery is exported, by permitting a higher temperature rise than is considered good technical practice in Great Britain, certainly have not assisted the British maker in foreign markets.

### EXHIBITIONS AND MUSEUMS.

In recent years a large number of commercial exhibitions have been held of all branches of machinery, and it is satisfactory to note that one of the features of such exhibitions has been the holding of scientific lectures and the inclusion of the exhibition of scientific instruments and apparatus, and also exhibits showing the relation of scientific experiments to engineering work. In some of the prito engineering work. In some of the privately organised exhibitions with which I have been associated myself the scientific men have been invited to take part when the general lines had been settled on which the exhibition was to be run, and thus we had comparatively little influence. I have thought from time to time that it would be well if a permanent committee of such a body as the British Association existed which could exert more direct influence, chiefly, of course by reports and recommendations. The course, by reports and recommendations. managers and organisers of such exhibitions would value assistance of this kind, and in return, would listen to suggestions which might materially add to the scientific value I know from experiof such an exhibition. ence that a British exhibition is a most important means of promoting British industry, for the number of inquiries that come from parts of the country and from all parts of the world show how much interest dually spreading, and in the United States and Australia very strong forces are on foot to bring about a change to that system. The have been held in London, the date of the opening being a week or two after the date at which the war begain, but was, of course This exhibition was to have been Anglo-Dutch, and though organised by private enterprise, was even in advance bringing in touch the consumers and manufacturers of the two countries. The "Beama Journal" quoted recently an American magazine in which the writer was advocating the support of a permanent Commercial Museum for industrial purposes, and this is what he said We produce a surplus of manufactures that must be sold. Our manufactured exports have about doubled in ten years—in truth a cause for satisfaction, and yet we have not accomplished enough. . . We have only made a beginning considering what we can do and will be forced to do in the future. Manufacturers must compete with old-established nations in the market they seek to invade." It is noteworthy that this museum, which is really a permanent exhibition, is a very complete organisation, containing, amongst other things, science laboratories.

It is sad to think that the great hopes held out of the Imperial Institute by the President of this Association, Sir Frederick Abel, at the meeting held in Leeds in 1890, have not been altogether fulfilled. The President expressed the belief that, amongst other objects, the Institute would combine "the continuous elaboration of systematic measures tending to stimulate progress in trades and handicrafts, and to foster the spirit of emulation amongst the artisan and industrial classes." It may be a very fitting time to bring forward the whole question, because it has often happened that an excellent scheme, which has somewhat languished, has upon its revival at a later time, when its importance was better realised, been crowned with success.

Another matter which might be considered is the question of departmental museums at the technical schools and universities throughout the country. The organisation of these is simply a matter for the enterprise of the individual professor in each department. The museums in the engineering department of the colleges with which I have been associated were very much appreciated by the students, who constantly were the means of securing fresh specimens, and, after they have left the college, continued to contribute articles of great interest, such as fractures, corrosions, boiler-plates, models, etc. This matter might be handled in a much more systematic manner, and possibly a report from our Committee, with a recommendation to the proper quarters, would be of use.

### PATENTS AND PATENT LAWS

This subject is well worthy of the consideration of the proposed committee, since progress in engineering, certainly on the mechanical and electrical sides, is largely dependent upon invention, which is not likely to be seriously undertaken without adequate protection, not entirely for the inventor, but also for those who really make the invention practical by means of capital and business support. A great deal of nonsense is talked and written about inventors, as if they were a special class of being, generally mad, and always impossible Some inventors are both. but the fact is, most engineers spend their lives seeking new ideas and devising new methods of carrying them out; in short, in inventing. It is of the greatest importance that every step should be taken to encourage sound invention, and to see that anything of value is secured for this country. Of course, every invention worth anything is immediately known in other countries, but I need not argue to this Section that the country which actually produces the inventions is at a great advantage, quite apart from the royalties payable on foreign patents. The foundation of the Munitions Invention Panel is a step in the right direction, and will doubtless be followed later on by Government Committees for peace inventions. Such committees or Government departments dealing with various industries will be assisted by suggestions from a body like this. Take for instance, the present state of colonial

There are many other matters; for instance, the question of extending the time of secrecy in the provisional patent. The "close" time in patents was the act of Chamberlain, and is a splendid legacy of that great man; but for really many important patents the close time allowed is not enough.

Another matter is one in which the German system has certain advantages—viz., in having two classes of patents. One of these is the patent "proper," which is only granted after the most severe search and criticism, and holds the usual period when granted. The other is a secondary patent, granted for the shorter term of five years, and is given for one of the hundred and one minor improvements and devices which though of real ville, only constitute small modifications in detail, and not new applications of principle.

Having previously spoken of German ways

pretty plainly. I should like to say here that I believe the suspicion of injustice to British and other foreign applicants by the German Patent Office is to a great extent, if not alto gether, unfounded. It is doubtless true that German manufacturers, in common with most of us, would like to avoid paying royalties. and it is, moreover, a common belief in this country that there is an advisory committee of manufacturers associated with the German Patent Office. This view is supported by such statements as in the prospectus of the Deutsche Maschinfabrik, which runs as follows:-" With the present day competition every firm is compelled to protect its new designs by means of patents, and watch that no other patents are granted which would seriously effect (sic affect) it. withstanding an utterance like this, my own experience and that of others is that if the stringent rules of the German system are observed, any valid application is granted. the motto which appears to guide the offi-cials being: "We will be just, but we cannot afford to be generous."

There are other matters, such as the question of giving wider powers to our Comptroller to refuse to grant where novelty is less than nacroscopic. Here again the German system of demanding that some definitely new effect might to some extent be followed, especially in view of the constant accumulation of published devices, some patented and others not.

### ORGANISATION.

This, I venture to think, is by far the most important question of any I have raised, and I will go so far as to say that I believe it to be the all-insportant one, as it practically embraces the others. If you do not agree with me, I feel sure it is because we do not understand the same thing by the word "organisation." When you speak of organisation to most people they immediately seize upon some small feature which may be to them of more immediate interest. It may be to them of more immediate interest. It may be the general arrangement of their accounts, their system of storekeeping, of dealing with their workmen, of the sales department, or bitly other minor details. If you take this narrow view of organisation, you will, of course, at once say that a sciediffic man his very little to do with it, and, indeed, the manufacturer, as a rule, thinking of his we has organisation, scouts the idea that a man of science can either know or have anything to say about it which is of any value.

any value.

Let me therefore take the dictionary definition. To organise is to "arrange or consti-

The all the transfer of the supply of real and the subject of the view of the subject of t

When we come, however, to these interdependent parts and their relation to the
whole, it is there that we find the weak
joint in the armour. It is in this respect
that Germany can teach us a striking lesson
in the arrangement of these interdependent
parts with respect to the whole. From the
top to the bottom the whole forces of their
industries are so thoroughly organised that
they get all that is humanly possible out
of the various factors. I do not limit these
merely to the wonderful organisation, of any
works, like Krupps, or the Deutsche
Machinenfabrik, or hundreds of other works;
but I include the organisation of all the
Government departments, together with the
bunks, the railways, and the shipping, of
that every facility is afforded for the world
commerce of the German Empire.

Taking only one of these details, I re-tember when at Liverpool, and the battle member of the Manchester Ship Canal was being fought, what facts came out as to the difficulties in the transhipment and handling of goods. The late Mr. Alfred Holt, for an stance, was one of the most earnest in pointgoods. ing out that the want of co-operation and organisation in getting goods from our manufacturing centres was adding largely to their cost, and actually exceeded the cost of traisporting these goods across the ocean. In Germany, on the other hand, the Government Germany, on the other hand, the vectoring steps in, and, by means of special differential rates gives the manufacturer every facility, and the lowest nossible rates for obtaining and the lowest possible rates for obtaining raw material and delivering the finished goods trail parts of the world. It was this organsion that not only rendered Germany so formidable a rival in times of place, but makes her so powerful in war This co-ordination in Germany is carred

This co-ordination in Germany is carried out in every industry in a way we generally have little idea of. For instance, the offer day, at a deputation to the Government, Mr. Runcimar remarked that the difficulty connecting the manufacturers with the connecting the manufacturers with the connecting staffs in this country is deep search but perhaps not altogether meurable. For ther, that the manufacturer must realise with the can get from the universities, and at university must know what the words required Dr. Foster, the treasurer of the Clemb Society, also said that "the Germa's we so imbued with the need of pursuing modern and efficient methods of education in applying science to industry that they hold in contempt a country which notoriously neglects such processes"; and he attributed this contempt as partly contributory to their cheefulness in entering into war with us.

Now, while these remarks are undoubtedly true, they are only a part of the truth. The

evil s far wider to in in any special applicatton, for, as the German knows perfectly well, there are innumerable individual case of organisation in this country of equal effi-ciency to any in his country, and he is glad chosen to learn from special cases. Let us take the and I do so because it shows that the man of science is capable of industrial and manufacturing organisation, if he turns his mind to it. A refer to the case of the Is me of Barr and Strond, Limited. As you know, the founders of this firm were originally colleagues in the Yorkshire College former, Professor Barr, occupied the presidential chair of this section three years ago, and they together invented a range finder. Now, whatever the most of the whatever the merit of the range finder, it is safe to say, like every other important invention-tor instance, the turbu e-that the invention alone would have stood a small chance of concarg into practice. In fact, to make the invention is, as a rule, the beginning of the duf-Professors Barr and Strond, however set to work to carry their invention into practice, and did so with such effect that prictice, and did so with such effect that their works, which began on quite a small scale, rapidly grew. The first part of the new works was opened with about innety hands, all told, in 1904. In the course of ton years it has increased to such an extent that there are now 1.700 employees. Those of its who have visited the works at Glasgow know the almost perfect way in which the whole arrangements are made, not merely for the scientific side, but for the comfort of the men, including the working dress, which in itself becomes a uniform. It gives some idea of the scientific side to know that there are at the present moment twenty-three men with high university qualifications. most of them with university degrees, and many of them men who were absolutely the first on the college list in the final examinations. This industry is another illustration of the lead given to Germany by this country because the Barr and Stroud range-finders were brought out before any of the German range, finders of the kind now being made, the Germans having followed in their lines and copied them in many respects. I have enlarged upon this, because I cannot help pointing out that the Barr and Stroud range finders have had no small effect in the mar vellous precision of our naval guns, and in will no doubt pass through your minds what we owe to private enterprise, which started the manufacture of the turbines, rangefinders, guns, and other naval features. we think of such battles as those off Heligo-land or the Falkland Islands.

The other day Field-Marshal von Moltke stated, and there is no reason to disbelieve him, that, great as was the storage of ammi-mition and shells before the war, the enor-mous demand for exceeded all expectation, and Germany found herself for a time in the same plight as her enemies; but he further stated that Germany's emergence "from this dangerous position was largely due to the extraordinary organisation, which included not merely the adaptation of their factories for munition purposes, but capacity for work of the people, and the patriotic spirit of the

German workmen.

THE RELATION OF EMPLOYERS AND WORKMEN. This bring the to consider what is probabi-Phis bring the to consider what is promote the most serious feature in our national Fig. to-day, which I have already alluded to under the heading of education—viz., Curellation of employer and workman. It is hopeless, as long as there prevail such theas as seem to do at present, to think of any sound organisation of our industrial system taking place, because the interdependent parts are not arranged with respect to the whole; they can never be arranged until we change radically. Now, as one who has served an apprenticeship, who has taken his money weekly from a tin box with Lundreds of other men, who has been a member of the Amalgamated Society of Engineers was working as an engine fatter when Whitworth scholarship made a collage career possible. I am the last man to put this evil down entirely to the working man. I he windividually be is just as capible of patriotism as any other class. Get nim by himself, even the men whose strikes have

caused such despondency in the minds of Allies, and who have seriously jenjarvery existence of the country, and you will find (except in the sort of case to be found in all classes of society) that he, as an individual, is willing to make sacrinees and, it necessary, to give himself for his country. The truth is that the canker which is cating the heart out of our industrial life is due to an entirely wrong attitude of mind. For instance, however much we may sympathise with men who see a loss of employment in the introduction of Jaboursaving machines, some means should be found by which they can share the benefits to the State and to their employers by the introduction of such machines.

Again, the questions of piecework and overtime must be seriously considered by the State, and not allowed to become the subject Once more there is of disastrous disputes. the question of a standard wage. It is against the cternal laws of Nature to try and keep living beings at one dead level of equality and merit-i.e., it is against the law of the survival of the fittest. The trade umons have a great opportunity of placing their country and themselves in a leading position amongst nations if they will courageously grapple with a great problem by recognising degrees of merit and corresponding degrees of payment. These are a few of the man, matters which must be dealt with in the immediate future.

The matter of labour disputes is so serious to demand plain speaking. It must be admitted that there are many employers and companies which, to satisfy themselves and their shareholders, extort the largest possible dividends and pay the smallest possible rate of wages, and do so apparently without the slightest idea that the men and boys under them are capable of education and personal influence Can it be wondered, then, that men under these conditions are willing enough to listen to the orator who merely appears to their fighting instincts, and to join in the game of grab as against the employer On the other hand, strikes have occurred when employers have honourably carried out their obligations and undertakings, and the men have shamefully departed from an agreement made by their chosen leaders, throwing over the leaders the moment they have fancied it to their own selfish interests to deso, and without a single thought of their duty to the community as a whole,

We have recently seen the Prime Minister and other leading statesmen struggling, some-times in vain, to bring large bodies of men to a reasonable state of mind. Is not this (and I speak without the slightest reference to purty questions) a case of Nemesis over takınır üs for having in so many cases pandered to the selfish instincts of large bodies of men in order to secure their votes, instead of steinly telling them unpalatable truths'

There was recently an intensely interesting article by the late Professor Friedrich Paul son, previously Professor of Philosophy in Berlin University, published in the "Educational Review," of New York. In this tional Review." of New York. In this article, the subject of which was "Old and

like minds, though it renders them excessively tiresome people to dwell among in peace time, enables their Government to extract every ounce of energy in the conduct of a war. He further went on to say that the British Empire "could not have been created by minds like these, but it should not be forgotten that in the concentration necessary to national effort in a struggle like this the German system of seif-subservience to the State has enormous advantages.

One of the tasks to which the British Assocutton might bend its energies with the greatest benefit to the country is to bring about a reform of our educational system, so about a reform of our educational system, so that while we do not kill individual enter-prise and freedom of thought, which have contributed so largely to the political organi-sition and constitution of the British Empire, of the value of which we have had of the value of which we have had such wonderful evidence from our colonies and dependencies during this war, we seek to implant in the minds of young and old those ideas of discipline and service to the State the want of which so seriously threatens the successful organisation of our industrial

### CANTERBURY CATHEDRAL \*

A lecture on this building, illustrated by about eighty lantern slides, was delivered at the Royal Photographic Society's Exhibition, Suffolk Street Galleries, on Thursday evening, by Mr. R. P. Howgrave Graham, F.R.P.S., M.L.E.E. Mr. Alvin Langdon

Coburn occupied the chair.

The lecture was limited to the main struc tural features of the existing cathedral church, and it was explained that with ittwo great crypts, its double transepts, and the Trinity Chapel and corona beyond the choir, it afforded a subject wide enough to need considerable compression in the available time, even if the numerous important tombs and the extensive monastic ruins were ignored. The slides shown formed part of a collection of 580 photographs taken by the lecturer, illustrating the Cathedral and Benedictine Monastery of Christchurch, and Mr. Graham introduced them by pointing out how the unique interest and value of the buildings were enhanced by the remarkable preservation of a series of records which enable us to date the more important parts within a few years and to follow the great rebuilding of 1174-1184, after the devastating fire of the previous summer, so closely that walls, columns, and vanlting can even be dated month by month. The history of the building operations was developed chronologically, and after a few words about the Saxon and Norman

a few words about the Saxon and Norman. The following illustrations of Canterbury Cathedral have appeared in The Building News during recent years:—Ground plan of monastic buildings and cathedral (by 1ste Rey Mackenzie E. C. Welbest, March 3, 1876; chapter house, north transport, nave and contral tower from cloisters (drawing by T. H. Currey), December 2, 1881; in the cloisters (drawing by G. N. Stevenson), September 24, 1899; do, (by E. Winbridge), March 4, 1870; 18th Century doorway to cloisters (National Silver Medal drawing by Harry P. Chiford), March 8, 1893; Norman staircase to registry (sketch by Maurice B. Adams), October 18, 1872; do, (sketch by J. W. Twist), September 12, 1890; infirmary arches and other ruins of monastic buildings (sketches by tional Review." of New York. In this article, the subject of which was "Old and New-tashioned Notions about Education," he nointed out that the whole of our educational system was going wrong, and that we could not escape the conviction that a tendency towards weakness and effeminacy was its chief trait. His three mottoes were, Learn to obey, Learn to apply yourself, Learn to repress and overcome desires; and he remarked with great truth under the first heading: "He who has not learned to sio this in childhood will have great difficulty in learning it in later life; he will rarely get beyond the deplorable and unhappy state that vacillates between outward submission and uproarious rebellion."

The other day a writer in the "Saturday Review" said, with great truth, that "what Great Eritain is suffering from acutely and dangerously at the present time is the absence of discipline," and a neutral writer in the "Times temarked as follows:—"The uniformity of German effort, due doubtless to their myriads of well-organised, machine- to the truth of th

work at the west end of the crypt, the main part of the Norman crypt was described and allustrated by a series of excellent photo-graphs, attention being drawn to the fact that alternate pairs of columns had sculptured capitals and plain shafts, those between them having nearly plain capitals and shafts ornamented with spirals or scrolls. The existence of unfinished sculpture on one of the capitals is a most interesting proof that much—perhaps all—of the carving was done after the completion of the crypt, and suggests the intention to enrich the whole series. The lecturer pointed out how much architec-The lecturer pointed out how much architectural skill and energy in the south-eastern corner of England was associated with the Abbey of Bec, in Normandy, whence came Lanfranc, who built the first Norman Cathedral at Canterbury: Anselm and Ernulph, who rebuilt the choir and gave us the crypt as we now see it; and their friend Gundallah to whom we are the White Tananallah. dulph, to whom we owe the White Tower of London, St. Leonard's Tower at Malling, and other work at Malling and Roclester. In 1174 occurred the terrible fire so graphically and humanly described by the monk Gervase, and whether or no this caused the cessation of the work in the crypt. it marks the inception of grand and new ideas carried out by Walliam of Sens for the monastery. The restrictions imposed by the conservatism of the monks, who demanded that every fragment of old masonry uninjured by the fire should be utilised afresh, forced William to cramp his genius in order to avoid the destruction of certain chapels remaining untouched by the fire. A view of the choir looking north-east, and illustrating the curious construction of the choir due to the retention of the projecting chapels of St. Andrew and St. Anselm, was followed by one of the interior of Sens Cathedral (1143-68), taken from a similar viewpoint, and the remarkable resemblance in the two piers with foliated capitals and the system of vaulting showed the influence of Guillaume on the work in his native city. Guillaume's fall in 1178 from the scaffolding at the east end of the choir, and the continuation of his work by William the Englishman, give us a distinctively English eastern crypt and the Trinity Chapel and corona above, and these show incomparable delicacy and refinement, combined with a touch of Classic feeling which harmonises wonderfully with their semi-Gothic constructional principles. Such grand work left little needing to be done, and perhaps small financial resources for building during the Early English and Decorated periods, to which belong only minor features, such as a doorway, a unique screen, and a fine window in St. Anselm's Chapel, the last two being nearly as exactly dated as the work of the two Williams. Late in the Decorated period, however, is the exquisite bridal chantrey of the Black Prince, with its beautiful bosses, but this is built into the Norman transept of the crypt, and has no construc-tional significance. The nave, carried out by Prior Chillenden, in the Early Perpendi-cular style, was fully illustrated, and this Prior's somewhat inartistic but very busi-nesslike proceedings were emphasised by a slide showing his portrait in a vaulting boss, where he appears as a severe, hard-headed, and somewhat unimaginative man. The central tower, dating from the close of the fifteenth and the first few years of the sixteenth century, is a wonderful example old conceptions were in the melting-pot, and such art was rapidly decaying; it is, indeed, curious that Prior Sellyng, one of the curious that Prior Sellyng, one of the moving spirits of Renaissance thought, seems to have been responsible for the design and part of the execution of this tower, which was conservatively repaired a few years ago mider the direction of Mr. W. D. Carón. The lecturer gave illustrations of the exterior and of the buttressing arches introduced in the content of the content of the server of the content of the duced to strengthen the tower-piers, and concluded his lecture with a few remarks on modern works of restoration at Canterbury, good and had.

Mr. Pearson, the borough surveyor of Marlborough, has accepted the post of estate agent to Sir Audley Neeld, Bart,

### LOAD TESTS ON BRICK PIERS.

At a recent meeting of the National Brick Manufacturers' Association an interesting paper based on an investigation now being conducted in Pittsburgh by the U.S. Burean of Standards, in order to determine the physical properties of large piers when tested to destruction, was presented by Messrs, J. H. Griffith and J. G. Bragg, members of the staff of the Bureau. It is of interest to mention that Prof. A. V. Bleininger, the well-known cerume chemist, who has addressed several meetings of brickmakers in Canada, motion in an advisory capacity Canada, acted in an advisory capacity throughout the investigation.

So far, more than twenty-two piers have been tested.

As nearly as possible each pier was 50 in. square by 12 ft, high, except two piers, which square by 124t, high, except two piers, which were built 5 ft high. Each pier averaged 44 courses. The joints were about 5-16 in, thick. The qualities of brick used, kinds of mortar, ages of piers and results of tests are tabulated below. Three typical styles of bonding were selected for test—header every other course, every fourth course and every

Maximum Load Vitrified A.S.T.M. Load in in 16 COSTO Hard Spec. 1909	Kirid of Mortar	Age
129,000 126 • Pers of 13 822,000 930 1,280,000 1360 182,000 178 • 802,000 182,000 178 • 802 1,197,500 1270 215,000 210 • 764,000 840 1,360,000 1450	1 Lune + See Note	4 Mc
1.545,800 1760 777777773 838,000 870 7777 1,594,000 1760 7777 723 2,695,000 2900	1 (15 % Lime 1 (85 % Cerrent 3 Sand	1 Mo.
660,000 650 824,000 870 822 826,000 870 822 820 820 820 820 820 820 820 820 82	l Cement 3 Sand	IMo.

seventh course; thus there were three types seventh course; thus there were three types of bonding for each set of piers. One of the 5-ft, piers had steel-mesh reinforcing placed in every horizontal joint; the other, every four courses; but the results obtained were inconclusive (see Conclusion No. 7).

### METHOD OF TEST.

Each pier was constructed in the laboratory on a steel plate 1 in, thick, levelled on the floor. The plate surface which was to rest on the base of the testing machine was planed. A plate 12-in. thick, with eye-bolts for crane connections, was laid on the top of the finished pier, connected with the base-plate by four vertical rods, so that the piers could be filled easily and set in the testing machine without injury. The top plate was removed after the pier was in place. The pier was levelled, the top covered with a thin coat of plaster of Paris, and the head of the mackine brought down, squeezing out super fluous material. The pur was then left for several hours to allow the plaster to set. Measurements of compression were made at several corners, as were also transverse measurements and strains between bricks.

As shown above, bricks laid in cement mortar stood up best. Cement-line mortar mortar steed up test. Cement-line mortar gave a'most as g od results. Piers using linne mortar were only about one-half as strong as those with cement; but it should be noted that vitafied brick laid up in lime interior, rather than by a special coffine most a when properly aged etherene y

### CHARACHERSTIC FAILURE OF PIERS

At about these fourths may mum load ver As around his elements may mum load ver-tical hair cracks began to appear. With contained barlag the pairs brown up are vertical laminations. This condition was in-duced by the bending of the individual bracks. causing them to split transversely. The bending is the result of nor uniform bearing proceeding from lack of homogenests of texture in the pier, in an indevedual brick or in the mortars

The progressive action of this cracking is most interesting. Sometimes very early in the test small harreracks formed in the upper or lower surface of a break, usually just under or near the vertical joints, and widened at the surface as the load increased. Finally, subdued sounds were heard, which increased in volume until, in the case of vitrified and hard-burned brick land up in lime mortar, a succession of popping sounds occurred frequently increasing until the sound became a loud "bubbling" in the final stages. When a brick split, the ones above and below tended to do the same, until the structure became a succession of strips, and failed either by spalling out in large masses or as a group of thin, isolated columns.

The following are the main conclusions reached in the investigation:—

(1) The strength of piers under vertical loading bears a close relation to the kind of brick used and the quality and age of the mortar

(2) The low strength of pers laid in lime mortar is attributed in the main to insufficient ageing, with a consequent lack of a proper carbonation of the mortar.

(5) Experiments seem to indicate that the strength of a pier is largely independent of the course bonding. The real function of bonds is to maintain a certain integrity and monolithic action of the masoury against initial strains induced through so'ting and "drying out" of the mortar rather than to of the mortar rather than to give any great increase of vertical strength.

(4) The elastic limit of the piers land up ru cement and cement-lime mortar was approximately one-half the maximum load.

(5) Piers fail through a tendency to separate into vertical strips caused by hending failure in the individual brick produced by nnequal distribution of the vertical load over the cross-section. This is aggravated by ineffective shearing and adhesive strength of the mortar

(6) A high modulus of rupture of the brick is more desirable than superior crushing strength. Higher modulus of rupture would be realised in practice by increasing the thickness of the bricks or by laying them on edge.

(7) A further study of the action of stelmesh reinforcing in the horizontal joints is recommended in order to ascerta a the load efficiency of piers having an outer shall of hard brick with an inner core of softer brick. This construction would be us I where a high-grade brick is not easily obtainable.

Exterior work is progressing recodly in the crection of the First Church of Chris's selectist at Wamineg, for which the Fort Gardy Construction Company are the general contractors. The architects of this bulling and Messis, The Grend Jury at the Central Comment Court his thrown our the bill a ress Messis; The Grend Jury at the Central Court his thrown our the bill a ress Messis; Cross Cinema, and Libral Grant 22 for the raw of Coss Cinema, and Libral Grant 22 for the raw who, as renorted in our issue of Armed 1 p. 133, were committed by the Madels one Secret magistrate on a charge of the magical atternet William James P. why. The case at confer a fire which occurred at the Caraca these Crosma 

Crieffic A boys' department has been will a senh's R man C those Schools. It is part of a larger's home or in the schools of the pavish, the old ones strong as those with cement; but it should be noted that vitrafied brick laid up in lime mortar withsteel a pressure of more than 1.400 lb, per sq. in. The weakness of these piers was caused mainly by an almost entire.

Sons, Cardiff.

## Our Illustrations.

LIDRARY AND PICTURE GALERY. THE SCHOOLS, SHREWS VEHLERY.

This building, situated upon the rising and known as Kingsland, overlooking from the south-west the River Severn and the town of Shrewsbury, will form another nk in the chain of school buildings which was the ridge. One of the main purposes of the building is to house the famous election of rare books, and it will, ultieffection of rare books, and it will, ulti-nately, also contain a bequest of valuable later colour paintings of the English School. The plan comprises a wide entrance-hall, at one end of which are placed the reading-room and the picture-gallery, at the other, iso-lated by fireproof doors, the library, whose size and proportions are regulated by the inclusion of 17th Century bookcases from the old school building in the town. A librarian's room, store, and strong-googn A librarian's room, store, and strong-room for the storage of the more valuable books complete the accommodation. The design of the building is based upon the Jacobean tradition of the old school buildings, and is carried out in Grinshill sandstone and 2-in, hand-made red facing bricks, of varied shades of colour. Notable features are the bay window to the reading-room and the two colonnades to the south and north of the hall, forming respectively a porch and a loggia, from which latter the magnificent view across the river may be enjoyed. The roofs are supported by oak trusses, whose timbers contribute largely to the interest of the interior of the building. Red hand-made tiles, laid with "swept" valleys, form the roof covering, finishing with a half-round ridge tile, while the gable ends are coped, and terminate in moulded stone finials and projecting kneelers. The windows are filled with leaded glass, with a large number of opening casements: wrought-iron stanchions. with foliated heads, preventing unwarranted intrusion through the windows of the library, are also provided. The picture-gallery is lighted solely by means of two ranges of dormer lights close to the ceiling level, the gable-end being, therefore, devoted to a de-corative feature, formed of niches in which replicas of two 17th Century figures on the old school building will be placed. These niches, with their enclosing pilasters and enclose, with their enclosing pilasters and enclose. tablature, all executed in Grinshill sand-stone, surmount the foundation-stone laid by H.M. the King at his visit to Shrewsbury last year. Warming and ventuating the tors keep the temperature inside constant, but the reading-room has, in addition, a but the reading-room has, in addition, a large recessed fireplace, whose projecting stack forms so prominent a feature in the illustration. Moulded brick cappings, curved horns, weathered base and offsets, add interest to the work. Care has been taken, by keeping the joints of the stone quoins irregular, and by using, for the walling, a struck join, pressed in with the thumb, to give a soft surface texture to the building. The cost of the work will be approximately 25.500. The architects are Messrs, Forsyth and Maule, FF R.I.B.A. 309, Oxford Street, W., and the general contractor is Mr. Henry Price, Welsh Bridge, Shrewshare, The drawing here reproduced was bury. The drawing here reproduced was shown at the Royal Academy this year.

ST. MICHAEL'S CHURCH, MILL

ST. MICHAEL'S CHURCH. MHLL HILL. N.W.

This new church is to be elected on a site in Flower Lace, adjoining the Hartley Memorial Hill. boult by the same architect. The church will consist of nave 91 ft. long and 25 tt wide, aisles 30 tt by 14 ft. wide, chancel 40 ft. by 25 ft. morning chapel 39 ft. by 14 tt. organ aisles detgy and choir vestries, and suitable porches at entrances. There will be no charse by windows, but the aisles at dichatel will be 1 div and have timber architections of same health as the nave and charcel, and the ode windows will be large and kert but up so as to secure good lighted to the nave and that of the steep arcade. tribes not teen cave and connect and the tibles of hole dispellfulling it before proportions and richely moulded. It is intended to erect a toper at north west corner of maye.

next Flower Lane, as shown in the view. The window and other dressings externally will be of Weldon stone, the walls faced with will be of Weldon stene, the walls faced with red and purple bricks, relieved by stone bands and copings, and the roofs will be covered with red hand made tiles. The inside stonework will be of Bath stone. Accommodation will be provided for 750 persons. The architect is Mr. J. S. Alder, Licentiate R.I.B.A., of 1, Arundel Street, Strand, W.C.

### BILLIARD-ROOM, CROW CLUMP. WEYBRIDGE.

A v.ew of this house from the appeared in our issue for June 9 last, from the original shown at this year's Royal Academy. On July 10 last year the plans and ntrance side of the house were illustrated. entrance side of the house were illustrated. We now give a view of the billiard-room, with its ingle-nook and hooded fireplace. All the woodwork is in oak and other hard timber. Mr. W. G. Tarrant, of Byfleet, is the builder. and the architects are Messrs, Tubbs, Messer, and Poulter, of Craig's Court House, Charing Cross, S.W.

# THE MIDDLESEX COUNTY GUILDHALL BROAD SANCTUARY, WEST MINSTER, S.W.

To-day we give two interior photographs of this building. That to the left illustrates part of the root of the Council Chamber, and the other shows the throne and bench of the County Sessions Court No. 2. Two plans of this building appeared in the Building News of September 1, when interiors were published of the County Sessions Courts Nos. I and 2, together with a brief description of the building, which is erected on the detached site next the Westminster Hospital and facing the Houses of Parliament and Westminster Abbey. Messrs. J. S. Gibson, Skipwith, and Gordon, of Old Bond Street. W., are the architects. An exterior perspective appeared in our issue of February 3, 1911.

THE NEW OFFICES OF THE MUTUAL LIFE ASSURANCE COMPANY. WATERLOO, CANADA.
This handsome Canadian assurance office has been built at Waterloo, Ontario, from the designs of the Royal Gold Medallist of the R.I.B.A. for 1915. Mr. Frank Darling, F.R.I.B.A. (Messrs. Darling and Pearson). The building is monumental in character, and admirably adapted to its purpose. The photographs may be taken as typical of others, and representing Mr. Darling's style at its best. We hope shortly to publish two others of similar buildings erected in other parts of Canada by the same architect. The marble work was carried out by Messrs. P. Lyall and Sons, of Montreal. Messrs, Doulton and Co., of Lambeth, executed the terracotta of the great portal shown. The ornamental plastering was done by Mr. R. C. Dancy, of Toronto, Messrs, Jos. McCausland and Son, also of that city, were employed on the painting, while Messrs, J. S. Scott, of the same address, were entrusted with the woodwork.

HOUSE, HAMPSTEAD HEATH.

This house and chauffeur's cottage is erected on the high ground on the Hampstead Garden Suburb. The garden adjoins a large wood, and from the front the view is unin-terrupted over the Heath, for which reason the garden room was provided. The bricks the garden room was provided. externally are Chesham greys, with dressings in reds from the same kilns. The timber framing is in oak with trowelled plaster panels. The tiles to roof and tile hanging are red hand-nade sand-faced Bedfordshire tiles. The woodwork is painted white tiles. The woodwork is painted white throughout, except the motor house doors and front door, which are bright green. Gilbert C. Waterhouse is the architect.

The ender of Mr John Hunt, South Wharf, Covoland Road, Gosport, has been Gosport, has b Wharf, Cleveland Road, Gosport, has been accepted by the Admiralty for new block of buildings for the accommodation of the sick berth staff at Haslar Hospital, which is a gift from the Canadian balles to the Mother Country.

erected in the churchyard A cro-A cross is to be erected in the churchyard of SS Mary and John, Cowley, Oxon, as a memorial to the late Rev. R. M. Benson. The cross will be built from designs by Mr. J. M. Comper. It will stand about 21 ft. high, and at the top of it there will be a crucifix with figures of St. Mary and St. John on either side. The cost will be about £300.

### LEGAL INTELLIGENCE.

ADMIRALTY CONTRACT AT ROSYTH— QUESTION OF CROWN PREROGATIVE.— QUESTION OF CROWN PREROGATIVE—Judgment has been given by Lord Anderson in the Bill Chamber of the Scottish Court of Session at Edinburgh in a case the appellants in which were the Lords Commissioners of the Admiralty. They appealed against a deliverance given by William Dunlop, Glasgow, on the sequestrated estate of Andrew Plair, public works contractor, Glasgow. The Commissioners, in May, 1914, entered tito a contract with Mr. Blair for the execution of storage works at Royth at a cost of £7.031, and before the contract was completed the contract was the contract was completed the contractor was sequestrated. At the date of the sequestration of £2,771 19s. 10d., and had been paid £1,800.
The trustee declined to carry out the contract, and the Commissioners entered into a new contract with another contractor to complete the work for £6,280, making a total of £9,051

19. 10d., representing a total increase of tract with another contractor to complete the work for £6.280, making a total of £9.051 19s. 10d., representing a total increase of £2.020 19s. 10d., which, less the sum due to the contractor—£971 19s. 10d.—inade the net extra cost £1.049, which amount, the Commissioners claimed, was the damages they sustained through the failure of the contractor and the trustee of the equestrated estate to implement the contract. For this sum of £1.049 the appellants, as representing the Crown, claimed preferential ranking in the sequestration. The trustee admitted the claim to an ordinary ranking, but he rejected the claim is of ar as it was made to a preferential ranking. Lord Anderson has refused the apclaim in so far as it was made to a preferential ranking. Lord Anderson has refused the appeal, affirmed the deliverance of the trustee, and found the Crown liable in expenses. His Lordship said, in his judgment, that the apellants maintained their right to preferential treatment on the following grounds: That the Crown had an inherent right, by way of prerogative, to a preferential ranking; and that there was no provision in the recent Bankruptey Act of 1913 which abrogated or modified that prerogative of the Crown. Regarding the first point, the appellants founded, on a decision of Lord Cullen in the case of the Lord Advocate v. Galbraith, in which his Lordship held that the Postmaster-General was entitled to a preferential ranking in a sequestration for the amount of a telephone rent. His Lordship was unable to agree with Lord Cullen's reasoning. His Lordship took, that view because the principle. His Lordship took that view because the prinrus Lordship took that view because the principle was inequitable; the alleged prerogative was hostile to the general policy of the Bankruptcy Acts, which aimed at equal treatment of all creditors in the matter of the distribution of all creditors in the matter of the distribution of the estates of a bankrupt. But assuming that Lord Cullen's judgment was sound on the foregoing point, his Lordship was against the appellants on the second branch of their argument—that the provisions of the Bankruptey Act of 1913 had neither modified nor abrogated the alleged Crown privilege. He held that Section 118 of the Bankruptey Acts of 1915 implicitly abrogated any such alleged prerogative. In this result his Lordship was fortified by the consideration that his judgment determined that on this point the law of Scotland was the same as that of England.

A mission hall is about to be built at Blaen-avon in connection with St. Paul's Church. The architect is Mr. G. A. Treharne, of Aber-

In response to the special appeal for funds to meet the deficit of the Architectural Asso-ciation many fresh donations have been sent in, bringing the total receipts of the fund to a little over £310.

Mr. A. E. Brookes, the surveyor to the Darham County Council, has been instructed by the Government to act as engineer-in-chief in the construction of the whole of the new military roads on Salisbury Plain. Prior to going to Durham Mr. Brookes acted as sur-veyor to the Cornwall County Council.

A verdict of suicide while temporarily insane A verdict of shicide while temporarily hashe was returned at a Sunderland inquest on Thomas Henry Lackenby, a sculptor, who resided in an attic at 9, King Street, Sunderland. A sister of deceased said that for some time past he had been very depressed, and done very little work. He was found lying on the floor dead with a tube from the gas bracket between his lips. The gas had been turned on.

At a meeting of the Town Improvement and Streets Committee of Newcastle-on-Tyne Corporation on Wednesday the city engineer presented a report on a census of uninhabited premises taken on August 24, 25, and 26. The senten a report on a census of uninhabited premises taken on August 24, 25, and 26. The figures were:—Self-contained houses, 80; flats, 8; houses and shops combined, 11; doubtful if fit for habitation, 76; total 175. When the last census was taken, in May this year, the total was 193.

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1915. THE BUILDING NEWS, SEPTEMBER 15,

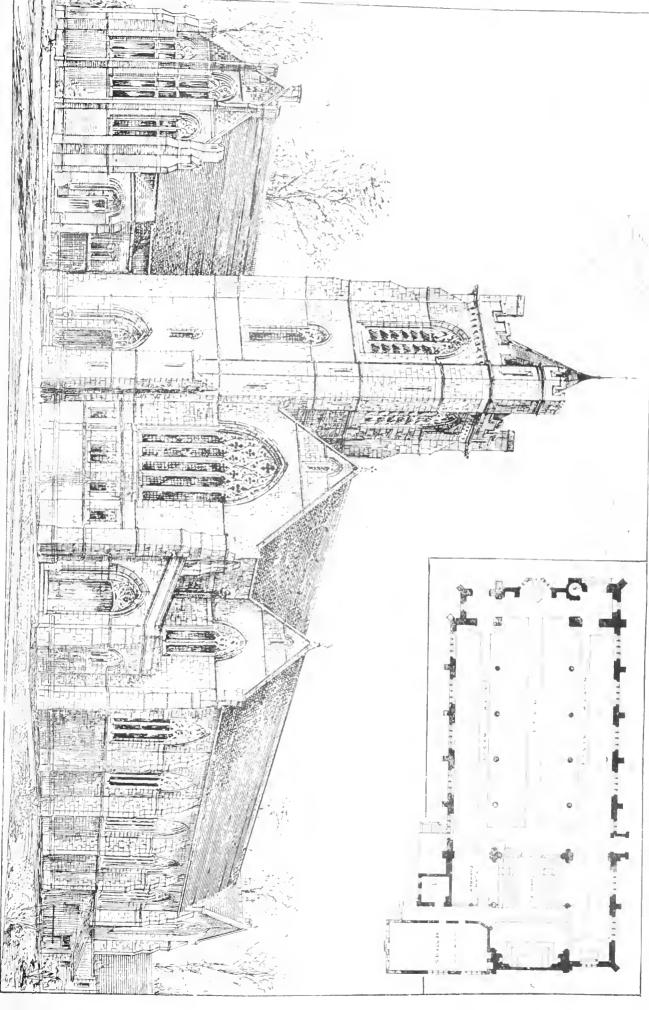
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1915.

SEPTEMBER 15,

THE BUILDING NEWS,

SURREY.-Messrs, Tubbs, Messer and Poulium, Architects. THE BILLIARD ROOM, "CROW CLUMP," WEYBRIDGE,





THE BUILDING NEWS, SEPTEMBER 15, 1915.

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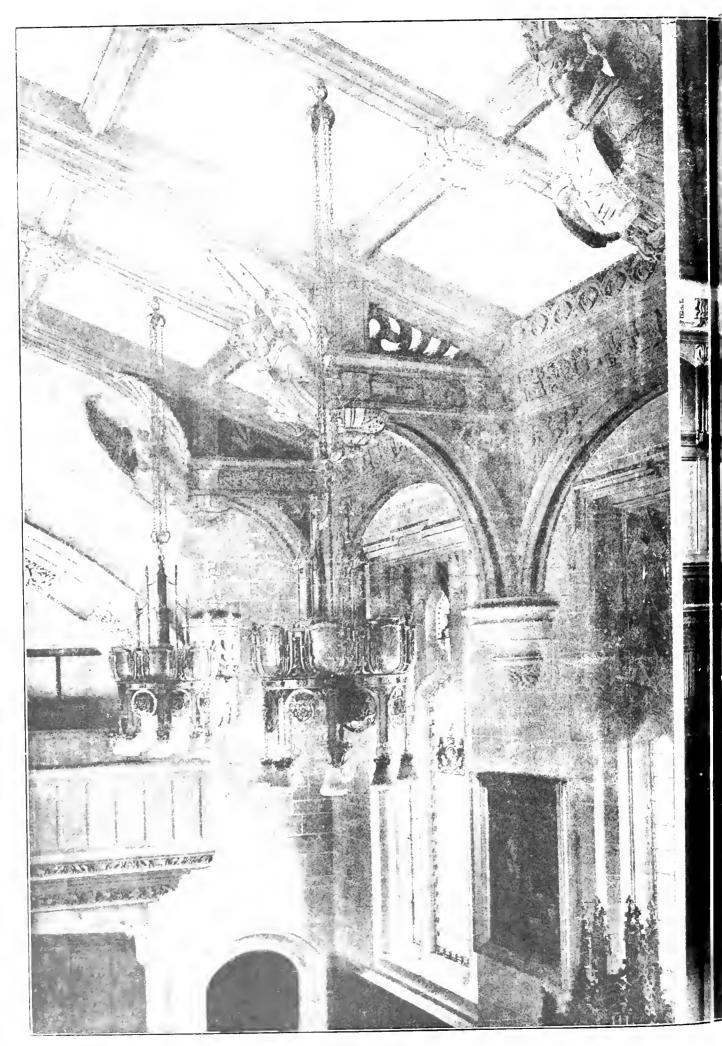
NEW OFFICES OF THE MUTUAL LIFE ASSURANCE COMPANY, WASF Mr. Flank Darling, F.R.L.B.A. (Royal Gold Mall



LOC ONTARIO, CANADA: GENERO NO MAIN ENTRANCE t, (15) (Messrs, Dyramo and Princeson, "

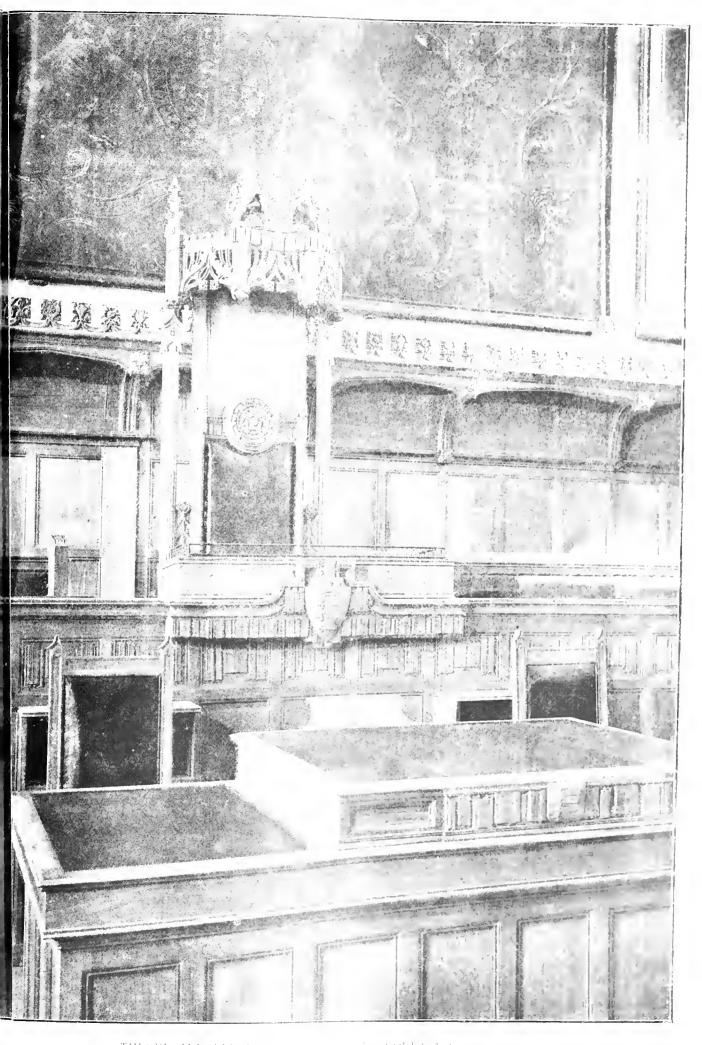
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OCT 2 1915



Company of the Charles

H THEFT LISTA COUNTY GUILDHALL, BROAD SANCTUARY



Garage Andrews

STHINSTER, S.W.—Messis, J. S. G.,



## Currente Calamo.

Now is the winter of our discontent, with competitions generally very unlikely to be made glorious summer by this sun of York, which shines as dubiously as old Sol himself through the autumnal morning mists, on the prospects of competitors in the town-planning scheme that the city is about to engage in. No one knows who the assessor is to be, or if an architect is to assist him. For £175-the amount of the three premiums-the corporation demands the right to use all or any of the designs thus appropriated. The work asked for is very considerable, and of the kind that demands much time and brings little fame, and the hundred pounds offered is preposterously inadequate. The time fixed for delivery of the designs is insufficient. Unless the conditions-for which, by the way, every competitor has to deposit ten guineasare materially amended, competitors are not likely to get fairly treated, and the city of York is almost certain not to get a scheme worth carrying out.

Of all the addresses at the British Association meeting last week, we think that of Prof. H. S. Hele-Shaw, which we give elsewhere, was the most timely just now. It is useless to ignore the fact-we of the engineering and building trades know it already too well-that when the war is over the labour problem will demand solution with an urgency more terrible than that of the Sphinx of old. It is hopeless, as Prof. Hele-Shaw says, to expect the machinery of our industrial system ever to work well again while the interdependent parts are not arranged, and never can be arranged till we change them radically with respect to the whole. The canker which is eating the heart out of our industrial life is due to a wrong mental attitude. It is no use blaming either side. There are employers and companies as deaf to the rightful claims of the men and boys they exploit as there are shameless departures from fair hargains with honourable employers by men who have thrown over their own leaders the moment it seemed to serve their interests to do so, without a thought of their duty to the community as a whole. We know why this is! The politicians have pandered to the selfish interests of those who could finance parties on the one hand, and to those of the masses who have the vote on the other; and we who have let them are pursued deservedly by a Nemesis we cannot escape unless we insist that truth shall be told, at whatever cost and however sternly, to Labour and Capital alike.

An appeal involving a claim to a Crown prerogative has been decided at Edinburgh by Lord Anderson. The case arose out of an Admiralty contract at Rosyth, Before the contract was completed the contractor's estates were sequestrated, and his trustee declined to carry on the contract. The Admiralty employed another contractor to finish the contract at an extra cost of £1.049, and for that sum they claimed a preferential ranking on the contractor's sequestrated estates. The trustee admitted the claim to in ordinary ranking, but rejected it in so far is made for a preferential ranking.-Lord Anderson refused the Admiralty's appeal. and sustained the trustee's deliverance. The ppellants were found liable in costs. His ordship said that it was part of the common aw of England that the Crown possessed that rerogative which might be asserted in the

distribution of a sequestrated estate. That was also the law of Ireland. It was contended that the doctrine of Crown prerogative as applicable to all kinds of debts had been introduced into the law of Scotland by the Act of Queen Anne. His Lordship did not agree with that contention, but in any event he held that the Bankruptcy Act, 1913, impliedly abrogated any such alleged prerogative.

While our own Local Covernment Board is cold-shouldering building in all directions Germany, according to an American correspondent quoted by the Literary Digest in the last issue to hand, is making a national matter of it. Even the news of the new Lille-Warsaw express, making in 30 hours the trip from front to front, is somewhat overshadowed by the report that the city fathers of Berlin have just authorised an issue of bonds to the amount of \$75,000,000, to be spent upon public improvements throughout the city, such as new subways, parks, new schools, and play-grounds. Incredible as this seems, at a time when many Germans are declaring their country to be fighting with its back against the wall, and to be the desperate victim of a conspiracy to starve, stifle, and crush its peaceful non-combatants into submission, we are given the definite testimony of the Lord Mayor of Berlin in corroboration as follows:--"At the beginning of August, immediately after the outbreak of war, things looked quite different. It was as if the whole business organisation, so to speak, held its breath. But that was merely a momentary pause. Then all at once we got our bearings and adapted ourselves to the new conditions. And in a few weeks the whole social organism, public and private, was again in full working order. In the first few days the number of unemployed rose from 20,000 to 60,000, a fact that clearly indicates the confusion that at first was prevalent."

That, we are assured, is the practical working out of the German principle—to keep on working at everything as in time of peace. Berlin is bailding two large underground lines which are to be under municipal control. In addition to these building operations within the town, there are others beyond the real area of the city itself. The new western harbour of Berlin is a gigantic undertaking of this nature. It is now almost complete. The larger part of the project, which has cost 40,000,000 marks, has been completed since the war. This harbour is intended to take up the immense smiffic created by the Berlin-Stettin Canal. This is the so-called Great Ship Canal, which will make the city of Berlin, as it were, a Baltic port. A not less important building is the great market-hall in the north-west quarter, which will be the largest hall in the world, and will cost 25,000,000 marks.

The claim of the Commissioners of Inland Revenue for increment value duty to the amount of £45 is still being pressed, unfairly and hardly we think. The claim against Mrs. Walker is based, as readers will remember, on the interpretation of the Increment Value Duty sections of the F names (1909 10) Act. 1910, as interpreted by the White Paper instructions, and as, in effect, upheld by the House of Lords in the Lumsden case, namely, that Increment Value Duty is collectable that Increment Value Duty is confectable where the property has been sold for more than it is worth at the time, in the opinion of the value of the

been not the value of the mand a concas a latted to be . 1. theoretic diction of the predges of Mr. L. yd George and the Law Officers of the Creek when the Bill was before the House, corresponding of the country at the General Election which followed the reject in of the original Bill by the House of Lords, and opposed to the intentions of the Parliament which ultimately passed the A. This was fully recognised by the late Good need, and remedial legislation was promised on a ago. In June, 1913, in reply to a question put by Mr. Royds as to the deav in hearing the Lumsden case, the then Attorney Genera, Sir Rufus Isaacs, stated that the matter involved in the appeal, that is to say, this question of the levy of Increment Duty when there was no rise in the value of the site, would be discussed in Committee on the Revenue Bill, to be introduced later in the Session, "and," he added, "the result of the discussion might render it univeressary to proceed further with the appeal." The Government, realising that the country was 100 behind them in this attempt to levy duty out of builders' and other occasional profits, had evidently determined to remedy the injustice by a clause in the Revenue Ball. In due comse the Bill was introduced, and it contained a clause providing a partial remedy. After some negotiation the Chamellor of the Exchequer agreed to a clause which provided, in effect, that in the case of property which consisted of land with a building or buildings upon it, no Increment Duty would be chargeable unless there was in fact a rise in the value of the bare land. The B.I. was withdrawn owing to a contentious clause affecting agricultural land site-value deductions.

Mr. Lloyd George promised to re-introduce it early last year. Nothing was done, and meanwhile the Lumsden case got to the Lords, and there opinion being equally divided the Crown got a judgment. On July 23, 1914, Mr. Asquith, in reply to Mr. Chamberlain, stated that the Government was prepared to introduce and pass that Session a one clause Bill giving the promised relief to those who were affected by the Lumsden decision, including, surely it must have been meant, Mr. Lumsden hamself, the most notable sufferer, and other victums, such as Mrs. Walker. Nothing was done, but Mr. Lloyd George gave his personal pledge on behalf of the Commissioners of Inland Revenue that no further claims of a similar character would be made. In space of this the Revenue Department brought Mrs. Walker before the House of Lords, and obtained a judgment against her practically similar to that of Lumsden's-thus on the strength of the judgment in Lunsten, ty which the House of Lords was bound, ove. ruling the judgment which Mes. Welker laid obtained in her favour against the Crown in the Valuation Appeal Court in Edinburgh. It was admitted in the Lords that and Mrs. Walker's case come first, and had the court been as equally divided about that as they were about Lumsden's, judgment in its lave been given for Mrs. Walker. Yet, it spite of al. this the Commissions of head Revenue are still pressing a wider for their pound of flesh! ----

The Royal Institute of the Ar atoms of Ireand have awakened to their respects outly in regard to questions pertaining to the amount monuments of Ireland, and have given practical effect thereto by appointing a small sub-commit-

### MONUMENTS. V.E. ALITHIA

I, suggests a megalathic monuments . . i. is. on which Professor G. Elliot Smith or and a del ite at the British Assoatom's receting in Dundee in 1912, was resumed ast beek at Manchester in an address thich the gave on the influence of ancient happy a cavisation on the world's culture. The thisses which he submitted were that the ssential elements of the ancient civilisations of India, Further Asia, the Malay Archi-Jelago, Oceania, and America were brought the necession to each of these places by marmers. Nose Oriental migrations on an Ate sive some began as trading intercourse between the Eastern Mediterranean and between the fastern Meinterranean and lucturescent tine about 800 mer, and continued in reverse centuries; that the highly complex and artimum culture which they spread Carner than the twenty first Dynasty, but included many important accretions and modifications from the Phoenician world cound the Eastern Mediterranean, from East Atrica and the Sudan), Arabia, and Baby-ma: that, in addition to providing the cavely which stimulated the development of the pre-Aryan civilisation of India, the cultural stream to Burma, Indonesia, the castern at rad of As.i. and Oceania was in turn modified by Indian influences; and that, his cay, the stream, with many additions from Ir donesta. Melanesia, and Polynesia, as well as from China and Japan, continued for many conturies to play upon the Pacific littoral of America, where it was responsible for plantig the germs of the remarkable pre-Columnan civilisation.

The reality of these migrations and the sized of culture was substantiated and dated by the remarkable collection of extraordinary practices and tantastic beliefs which the antient mariners distributed along a well-nomiel route from the Eastern Mediterranean to America. He submitted that these were responsible for stimulating the inhabitants of the coast dongs great part of their extensive itherary to adopt munimineation, to build a great variety of megalithic monuments, to make thele, to worship the sun, to adopt tattooling, massage, and other practices, to practhe verying liner, and the use of precious stars and metass, to adopt definite metal-agoral methods, as well as mining, and the in goal methods, as well as mining, and the use of intensive agriculture, associated with a tracel registion, to adopt certain phallic this and practices, to use the swastika symmetric formed in the heavenly twins." To practise that is, and to display a special aptitude for a lessificant daring in maritime adventures, as well as to adopt a number of curiously wherever features in host-darildant.

arbitrary features in boat-building.

Mr. W. J. Perry, in a contribution to the discussion of the disc discuss, the cited a series of facts which, he held, perited to the conclusion that the search the erten forms of material wealth fed the arress of the megalithic culture to those uses where they were to be found, and the treserve in absence of the desired form of reath determined that of megalithm influ-

### ---THE LOGISCHOOL OF BUILDING AT BRIXTON.

W. Char, several times drawn attention to We have several times grawn attention to the 2-1 mode that is being done at the L. C. C. S. F. Cof Building at Ferndale Road. But to and Lagain remind readers that there is a beauty in which a boy can better start to be a research of a his lite's work than the several transfer of the lite is work than the several transfer of the lite is work than the several transfer of the lite is work than the several transfer of the lite is work than the several transfer of the lite is the lite is the several transfer of the several transfer of the lite is the lite is the sever at the statistics, which, thanks to the government to Lendan Council, is the relation of the state of an entropy of and and entropy of and and it is sent easily a commodate a hundred ridge all boys.

Reasers referested should visit the school Readers referrested shound visit the semantic forcide themselves a quantited with the total of the particle of the semantic force of or insequenced by the teacher, every end thus establishes a firm basis response For the second and third cost the instruction is developed to setted a making full sets of drawings

Davies Bichter, decoration is similarly inculcated; and colour is likewise dealt with by Mr. A. R. H. Jackson, A R C.A.; and other leading members of the staff are Mr. H. F. Murrell, A.R.I.B.A., Mr. G. P. Denham, A.R.C.A., and Mr. Allan Graham, ARIBA.

Theory is well seconded by practice in the shops, in which the boys carry out practical work in their chosen trades. Our contemporary the *Decorator*, in its August issue, gives an extremely interesting account of a recent visit to the school, when Mr. C. E. Wilkinson, the president of the London Association of Master Decorators, conducted a representative body of members over the building, and indicated more especially the trend and scope of the curriculum for boys who have chosen to become decorators. first year's work includes Building Construction, workshop practice, the study of materials, workshop arithmetic and mathematics. experimental mechanics, geometrical plane drawing and lettering, freehand drawing or building details, and other studies of contemporary history and literature bearing on the arts.

The excellent illustrations of the lads actually at work given by the *Decorator*, and the details of pilaster decoration and other examples, are very interesting. At the present time one of the larger rooms is being wholly decorated by the students from a simple design, and the decoration of the whole of the upper floor by the boys is to follow.

### OBITUARY.

We regrot to record the death of Mr. Wilham Henry Lynn, of Belfast, which occurred on Sunday last, at the age of 86. Mr. Wil-ham Henry Lynn was President of the Royal Institute of Architects of Ireland from 1886-9. He was the architect of Chester Town Hall. with the adjacent market front; the Clark Halls, with the bridge adjoining them, at Paisley; new municipal buildings at Barrowin-Furness, and the public library buildings at Beliast. These were mostly won in comat Beliast. These were mostly won in com-petition. In 1861 he was awarded the first premium for the Houses of Parliament and Covernment offices at Sydney, New South Wales. He was placed second in the Ply-mouth Gundhall competition, and he took the third premium in the competition for the Glasgow municipal buildings. His design for the Birmingham new buildings to be connected with the town hall was disqualified owing to a technical point, but his scheme was acknowledged as by far the best submitted. As partner of the late Sir Charles Lanyon up to 1872, he carried out a great many public buildings in Ireland, including the Queen's University of Belfast, for which institution he has only just lately carried out extensive additions won in competition as recently as 1910, when (October 14) we illustrated his plans for this considerable undertaking. The whole of the drawings for the work were made by himself personally unaided, a remarkable feat for one so ad vanced in years. Lord Dufferin invited Mr. Lynn to advise on vast contemplated inprovements in Quebec, and amongst other xorks a V ceregal residence (a new chateau. St. Louis) for the Governor-General of Canada, to be erected in the citadel. Mr Lyon was joint are need for the new cathedral at Belius; with the late S.r. Thomas Drew, R.H.A., but subsequently be arranged o that his finer I and partner in this under d ng should every on the work alone, and a was done. We give a purtrait of the this was done. We give a portrait of the invised in our issue for January 17, 1894. For many years Mr. Lynn was an active member of the Architectural Association Excessors. He was an exceedingly espablished because or are a water of the nearly and extrem by and most deservedly popular with a Disconfrares

One of the oldest practising architects in V toria or, probably, in Australia—Wr. John James Clark, diel at the residence of business that the lessons that the son stands of the first developed to bus son. St. K.lda, Melbourne, on June 25, 1 hakit 2 full sets of drawings of the age of seventy seven, after a combinate and freehand drawing burned at the Melbourne General Cemetery taight by Mr. Herbert, in the following day, the Council and mem-

b rs of the Royal Victorian Institute of Architects being present at the funeral. Mr., Clark was born in Liverpool in 1838, and was educated at the Collegiate Institute in that city. Sailing for Australia in the Martin Luther, he arrived in Melbourne in 1851, the following year, at the age of thirteen, entering the Public Works Department. After serving for five years, he visited Europe to study its public buildings. On his return, in 1858, he was appointed officer-in-charge of the Treasury Buildings, Collins Street, Melbourne, which he resigned at the age of twenty-one. Between 1861 and 1878 was a period of great activity in the Public Works Department, and Mr. Clark was concerned with the designing and carrying out of many of the large State buildings, amongst which were the Government Printing Office. Customs House, Public Offices, Bendigo, the Mint Administrative Offices, Government House, various asylums and gaols, whilst he detailed and was in charge of Messrs. Smith and Johnson's design for the Melbourne Law Courts, concluding this last work seventeen months after retiring from the Government, with compensation, at the age of forty. From 1879 to 1881 Mr. Clark practised privately in Melbourne, in which latter year he joined his brother in partnership in Sydney. The firm was successful in carrying off prizes for town halls, the principal of which was the Brisbane Town Hall. In 1883 he was appointed Government architect for Queensland, the principal work being the supervision of the public offices (now known as the Treasury Buildings), for which building his firm had previously been awarded second prize in a public competition. In 1886 he resumed private practice in Brisbane, and three years later, with his son, took a nine months trip through America, Great Britain, and Europe. In 1896 he went into the Public Works Department, West Australia, hospital and asylum work being entrusted to him. Retiring from this service, his son joined him in partnership, and the firm practised in Perth till 1899, when they returned to Brisbane three years, afterwards resuming practice in Melbourne. The works carried out were mainly won in competition—viz., City Baths (Melbourne), Maitland Hospital (X.S.W.). National Mutual Buildings (Ballarat), Carlton Refuge, Women's Hospital (Melbourne). Auckland (N.Z.) Town Hall, Mr. Clark was appointed architect to carry out the Mel-bourne Hospital, his design having been placed second in a previously-conducted com-petition. This work—his last—is about nearing completion. Mr. Clark was very successful in competitive work. Out of 47 competitions entered, he won 24 first, 12 second, and 2 third places, a total of 38 scores out of 47 He was a skilled landscape artist in entries water colours, having studied under Buvelot, and from 1877 to 1889 he was as much absorbed in this branch of art as in architecture itself. Some years ago he was elected a Fellow of the Royal Victorian Institute of Architects, and for some time occupied a seat on the Council, being appointed Vice-President for a number of years.

Mr. George Lister Sutcliffe, F.R.I.B.A., formerly of Heptonstall. Leeds, died on Sundry at 25, Cannon Place, Hampstead, in his 51st year. He joined the Royal Institute of British Architects as an Associate in 1891, becoming a Fellow twenty years later. becoming a Fellow twenty years later. The funeral service will take place at Rosslyn Hill Chapel, Hampstead, to-morrow (Thursday), at noon.

Lieutenant George Leonard Cheesman, the 10th Hampshire Regiment, who was killed in Gallipoli on August 10, aged 31, since 1908 a Lecturer in Ancient History at Oxford University. Mr. Cheesman took a warm interest in the Roman Wall, and also in the excavations of Roman remains at Corbridge and elsewhere, and in the elucidation of ancient Roman inscriptions. He was 8 member of the Council of the Society for the Promotion of Reman Studies.

\_>----The "Premier Mitm." by M Egale Rombaux, which was purchased by subscription for the nation, and was illustrated in our pages on the 1st inst., is now placed on exhibition in the Tate Gallery, Millbank.

## Building Intelligence.

ENGLEFIELD GREEN.—Princess Chris ENGLER IELD GIGLEN.—Frincess Christian opened on Saturday and handed over to the War Office the new military hospital which has been erected on the outskirts of Windsor Great Park at Englefield Green, providing accommodation for 120 patients. general construction has followed the lines of the Red Cross Hospital at Netley. The floor of each ward is extended 8 it. beyond the front wall, so that through doors in the centre the beds can be wheeled out and, it desired, left there during fine weather under a covering of striped cauvas stretched across two steel poles. The six pavilions, each containing twenty beds, are planned in a semi-circle facing the south. Belind these are arranged twenty-two other buildings for the staff and general administration.

GARLICKHITHE, E.C.-The Lord Mayor and the Sheriffs attended in state on Sunday morning at the reopening, after restoration, of St. James's Church, Garlickhithe. The building is one of the old riverside churches near Mansion House Station, which was consumed, as an inscription states, "by the late dreadful conflagration, A.D. 1666," and was rebuilt by Wren between 1676 and 1683. The elegant stone lantern of the tower, which projects from the centre of the west front, forming a porch, is known as "Wren's Lantern." Richard Steele was sometimes a worshipper at the church, and his impressions are recorded in the Spectator. One of the cluef objects of interest in the church is the altar-piece, a picture of "The Ascension," by Andrew Geddes, which has been cleansed and restored.

HULL.-A colony of 120 rest homes erected in the western suburb of Hull out of a legacy of £200,000 left by Dr. Lee, was opened on Friday. Apart from the cost of the site and buildings over £100,000 will remain to endow the homes. The homes are built on a site of 6½ acres, with frontages to the Anlaby Road and Pickering Road. The blocks are arranged in a quadrangle, and each block contains accommodation for eight inmates, four upon the ground floor and four upon the first floor. Upon the south side of the site stands conspicuous a central block, which contains a general room 50 ft. by 25 ft., panelled in oak and furnished. This is to be used as a reading-room and a library. In this block is also provided the board-room, a room for the medical man, and a room set out exactly as the dming-room of the late Dr. Lee, in Pryme Street.

Mr. G. Spur, an assistant surveyor at Ponte-act, has been appointed to succeed Mr. G. L. Dallow as surveyor to the Halesowen Rural District Council,

A new Congregational church at Highroadwell, Halifax, built at a cost of £3,700, has been formally opened. Messrs, Glendinning and Hanson, of Albany Chambers, Halifax. were the architects.

A Baptist school chapel has been opened at Hawksbridge, Oxenhope, Yorks. The architect was Mr. Herbert E. Illingworth. A.R.I.B.A., East Parade, Leeds, and the outlay has been £2,100.

The Maghull Epileptic Homes Committee have decided to add a fresh building at a cost of £15.000 to adjoin the Henry Cox Home in Smithy Lane, Maghull and plans have been passed by the Maghull Parochial Committee.

Mr. R. Barry Parker, F.R.I.B.A., the consulting architect to the First Garden City. Limited, has left Letchworth for a few weeks for Portugal, having been called upon to advise the municipality of Oporto upon a town planning scheme for that city.

Last Saturday the Dewar Memorial drinking fountain, erected by subscriptions in the Abercorn Gardens, Portobello, was unveiled in memory of Dr. Dewar. The structure is 14 ft. high, and has been carried out in grey Aberdeen granite, with a bronze portrait of the famous doctor on one side of the body of the monument which is suprounted by a pediment tamous doctor on one side of the body of the monument, which is surmounted by a pediment standing on balls at the corners. The inscription occurs in a similar panel on the other face, the fountains being at either end. The design was chosen in open competition from 100 proposals submitted. The sculptor is Mr. T. Currie Bell, Synod Hall, Edinburgh. rdes. .00 pro-Mr. T. schen. growt

## WATER SUPPLY AND SANITARY MATTERS.

GLASGOW WATER EXTENSION SCHEME It in sometiments of a the Gas-20W Controlation is the Parliamentary Bills Committee that in a smeather with the proposed Corporation Water Order where provides and the inclusion of the River Turk in the Lich Katturn mayor amounts. Corporation Wate. Only whose provides anothe inclusion of the River Turk in the Lech Katime water area as amounted have to a made whereby the Ear, of Meray is to receive £5,25% and the Crown authorities £2.2% in full of their claims at the Royal Forest of Glen Finlas. A report on the scheme states that a supery of at least 10% of gallons daily, over and above compensation water, will resolutioned, and for this quantity the estimated cost of the works is medicate. The Corporation scares in perpetuity the entire solution of the new lake, extrading to over 40 acres, and a belt of land round the ake for present and future requirements. In the compensation to be poid [viz. £32.56] is embraced the ground for dain, reservoir, lond u.g., wayleaves, servetades, temporary as of land for railway and sidings, and all claims a injectent to the proprietor for disturbance of game, best of shootings, and interference with remaining lands, as also the claim of the Crown for interference with the Royal Freest of Glen Finlas. The compensation is not payable until Whitsunday, 1917.

THE WATER SUPPLY OF LONDON. The twelfth animal report of the Metropolitan Water Board, just issued, shows that the funded debt on April 1 last amounted to £48.84e,892 with £1.4c2.952 of interest, and in addition animities and rent charges amounting to £7.90%, or a total of £1.477.552 equivalent to £7.90%, for the sand gallons supplied. The net water reintal received by the Board during 1914-15 was approximately £2.953.40%, or an increase of £22.090. The percentage of collection for the half-year ended March 31 last in respect of domestic supplies and fixed charges was 94.4, being the same as for the corresponding period last year. The audit of the Board's accounts for the year ended March 31, 1914, showed a certified deherency of £15,365 a against an estimated deficiency of nearly £105,000. This satisfactory position was attributable to the fact that the income exceeded the estimates by about 70,000, due to the favourable conditions of the summer of 1913 to a further reduction in allowataces for empty premises, and to savings under the head of immpring and distribution charges. The Board's staff numbers 923 efficers uncluding 53 woment. THE WATER SUPPLY OF LONDON. ing and distribution charges. The Board's staff numbers 923 officers uncluding 58 women. 3.189 workmen and others on weekly wages, and 116 service staff on weekly wages, or a total of 4.223, with an aggregate salary list of total of 4,228, with an aggregate salary list of £173,943. The board's supply (direct and in bulk to adjacent undertakings) during 1914 was bulk to adjacent undertakings) during 1914 was 89,420 million gallons of water, or a daily average of 245 million gallons. The grand total volume is equivalent to 399.2 million tons of water. The Thames furnished 58.5 per cent, the Lee 23 1 per cent, and the wells, etc., 18.4 per cent, of this total. The total estimated population supplied by the Board at the close of last year was 6.744.247.

### TRADE NOTES.

Boyle's latest patent, "Air-Pump" ventila-tor, has been applied to Naas Presbyterian Church, Ireland.

Church, Ireland.

The cult of fresh air is gradually extending to bathing. It is interesting to know that an open-air swimning bath has recently been constructed in Lister Park, Bradford, The cement flat roofs over the dressing-rooms have been made wet-repellent by the waterpreading powder Pudlo.

The death is announced of Mr. David Walter Hemberson, builder, Quarrypark, Ecclefichan, Mr. Henderson carried out many large building contracts in the South of Scotland.

Mr. Henderson carried out many large building contracts in the South of Scotland.

At Oadby, near Largester, Mr. A. W. Brightman, an inspect a under the Local Gevernment Board, has held an impury into an application by the arban district council for sanction to horrow £4,000 for the sewering of the Wagston Road district and the extension of the wags disposal works. It was stated that the processal works. It was stated that the processal works. It was stated that the processal works is the disposal of sewage disposal works. It was stated that the processal works for the disposal of sewage by lated arragation had proved quite of sewage by lated arragation had proved quite mismfalle. A scheme has been prepared by Mr. W. Boll, the council's surveyor, and Mr. E. G. Marshey, M. Inst. C. E., the horough engineer of the ester acting as consulting engineer of the ester acting as consulting engineer to deal with the sewage by means of perfociating fixers and the council had unamended approved to the preparing the scheme attention of the disc.

### Correspondence.

ACOBEAN OAK BENCH SHLESING CHURCH SUSSLA To the Liver of the Burney Nave Sir, 1 burned of the Superior Sin. 1 for cot and a cotar good many years to the other the interval the chiral factors the interval the chirch has bee I was all I to see that the which taimer's contract the which termined X can can exceed the becauted X can can exceed upon either less of seating conducting the second matter and permitted with new pewing, as it being done during the time exceeds the living in 1670, and recommity years. The dark have the interesting old dark have the belong to this for the 1 interesting old dae beauties belong to this for high 1 very and all even ment a test of but nowhere could this for the found. Possibly the year and even museum, if it is not be so that two dd be interesting to our come of it. An illustration of the drawn by Mr. Manusce B. A beautiful Butting News for February 2, at these case he me in the so so there can be no mistage identity. Can any reader ted which is pened to it '-1 am, etc.,
September II, 1915. A SISSEX MAS

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The parish church of Milltown County Goway, is about to be repaired and altered, from plans by Mr. J. V. Bretman, Bank County is Belfast.

Mr. G. L. Pepler, of the Loca Green's Board, held an inquiry at Grinss's or Westo day into an amblication by the Grinss's Rai District Council for authority to propage town planning scheme.

A new Council school at Berriew, recording the Llangollen, built at cost of  $\pm \gamma^2$  has seen formally opened. The areanteets were Messis Shayler and Ridge, of Clive Chambers, Sarewebury, and Mr. Isaac Jones, of Llander and visite contractor.

Mr. Edmund Leonard, an inspect work to Air. Edining Leonard, an import Local Government Board, will be duen inquiry at Carlisle to-day (Wednesday) into it depotation from the city council for smatter to-borrow the sum of £9,582 for the provision of workmen's dwellings.

In the finashed from and steel traces of

In the finished iron and steel traces of the North of England the prices of several and thous have been advanced Us, per ton Common roon bars are now £11-1 s., in a slotn of £11-10s., sheel sheets (single and d £11-15s, to £12, steel strip £1) lbs, are as bars £11-15s. The £12 steel strip £1) lbs, are as bars £11-15s.

Mr. John Wilson, of Orchard Vila, Birs, side, Bacup, passed away on Saturday 122 t. The deceased, who was seven to be surveyed for an analyse seven to 1912 he represented levell Ward or the account. He has left a wild a are, seen a side and daughters.

Parhamentary nower will be sorbly session for utilising for highing pair is suitable of power the falls of Lo 20 Error Belleck and of the Slanton teach. Line Canals above the falls will carry water to places lower down. Mr. L. Stevens is the consulting engine P. J. M. Andrew. Shoon, Prop. Bros. superintending enginer, we M. E. Winslow as secretary. The roots has been subscribed by the prop. Consulting engineers are now manping to a decidencessary canals and of the artest conduct the power.

Lieutemant dames Dixon, of the Bros.

## Our Office Cable.

May r. H. P....ips Fletcher, F.R.I.B.A. F.S.I. M. Plasix Bussars, of New Bridge Street, E.C., the surveyor to the Carpenters Company and the inrector of the Trades Train Company der the infector of the Frades Fraining S. Lass been awarded the Croxy de Griche Lass been awarded the Croxy de Griche Lass Lass and the French Mediter rate of the French Mediter rate of the Ordres du Jour, the French equivalent of being "mentioned in dispatches. The Major has been specially sent to the Aviation Maritime as military observer and four the last four months has server, and for the last four months has been making aerial reconnaissances of Turkish p sitions from the coast, and dropping b mas on munition factories in Asia Miner. Syria, and Arabia.

Mr. J. Landfear Lucas inquires as to the Mr. J. Landfear Lucas inquires as to the present whereabouts of a well-known carved stone which was embedded in the front of 52. Newgate Street until these premises were pulled flown in 1863. The stone is mentioned in the "Survey of London and Middlesex." Vol. III. Pt. I «Nightingale. 1815]: by John W. Archer, 1851. in "Vestiges of 0.5d London": and in "The History of Signboards," by Larwood and Hotten, 1866. The two last named authors give an illustration. The carving represents Adam and Eve. with the date 1669, and initials at the top of the stone "18." Eve initials at the top of the stone \*\* 1.8.1 is shown handing an apple to Adam, and a tree, round the stem of which the serpent tree, round the stem of which the serpent is winding, occupies the centre. A writer in "Notes and Queries" has made inquiries at the Guildhall and British Museums without result. The carving exactly tallies with the arms of the Fruiterers Company, and it is suggested that the premises may have been the property of the company, since it was the custom to mark houses, are with tennels mark houses, etc., with panels showing the owner's arms

The Board of Education intimates that the Regulations and Syllabuses which governed Examinations in Science and Technology held in 1915 will continue in force for 1916 In the prefatory note to the volume of Regu-lations and Syllabuses for Examinations in Science and Technology, 1915, the Board announced their intention to discontinue those examinations at a date to be subsequently announted. The Board now desire to give notice that after 1916 they will no longer hold Lower General Examinations in any subjects of science and technology. The Hig-General Examinations will for the present continued. The conditions governing the award of scholarships, exhibitions, etc., in science in 1917 will be announced in due course. The time-tables of the examinations to be held in 1916 will be issued shortly.

The Calendar of the Royal Technical Col-The Calendar of the Royal Fechical College. Glasgow, handsom ly bound in purple, with a perspective of the new college buildings, erected at a cost of £400,000, from the designs of Mr. David Barclay, F.R.I.B.A., of St. Vincent Street. Barclay, F.R.I.B.A., of St. Vincent Street, Glasgow, as a frontispiece, has just been published. The 120th session of the college will open on Tuesday, the 28th inst. The School of Architecture is under the superintendence of a Joint Committee on Architecture, representatives of the college, and of the Glasgow School of Art. The Glasgow Institute of Architects have been consulted regarding the consultation of office automatic with the Senior of Architects have been consulted regarding the correlation of office apprenticeship with the course of study provided by the School of Architecture, and the Council of the Institute have expressed their concurrence in, and issued to the members a recommendation in favour of the alternative schemes of study arranged, under which attendence at the School of Architecture is combined with the service of an office apprenticeship. The work of the School prepares for, and exempts from part of the Final Examination of the RIBA. The courses of study provided by the Glasgow School of Architecture are given in both the Reyal Technical College and the School of Architecture are given in both the Reyal Technical College and the School of Architecture are given in both the Reyal Technical College and the School of Architecture are given in both the Reyal Technical College and the School of Architecture are given in both the Reyal Technical College and the School of Architecture are given in both the Reyal Technical College and the School of Architecture are given in both the Reyal Technical College and the School of Architecture are given in both the Reyal Technical College and the School of Architecture are given in both the Reyal Technical College and the School of Architecture are given in the School of Arch as is to a Diploma, and is the normal course eass to a Portoma, and is the normal course for lay stolents. A restricted portion of the same, called the Certificate course, altitude of lesser requirement and arranged for stolents who cannot give the time required for the Diploma course, will yet pro-

vide a fairly sufficient education. The whole Certificate course qualifies for the Semor Cer tificate; the jumor division of this course, for a Jumor certificate. The fees are: Full day, ten guineas per annum; half-day, five guineas per annum; evening classes, two guineas per annum. A Diploma course in Bailding, extending over three sessions, has Barlding, extending over three sessions, has been instituted at the College, with the object of providing for students a thorough know

THE BUILDING NEWS: No. 3167.

ledge of Building Construction.

The directors of the University of Penn-sylvama Museum announce that Dr. Clarence Fisher, Curator of the Egyptian Section the Museum and the leader of the Eckley B Coxe, jun., expedition to Europe, has un-cartified a great temple at Memphis, Egypt. The temple, it is estimated, is of the period of Rameses II., and was erected more than of fameses 11., and was erected more than 3.000 years ago. While no definite data can be given out at this time. Egyptologists are inclined to believe that the temple is one that was built by Seti I., and that it is the one-described by Herodotus.

The annual report of the Newcastle-on Tyne City Engineer, Mr. W. J. Steele, for the year ended March 31, 1915, states that the estimated population of the city is 271.525, and the number of inhabited houses and flats 50.943. The number of dwellings erected during the year (each flat being counted as a separate dwelling) has been 163. compared with 111 in the previous year, which was the lowest recorded since 1882. The number of unoccupied premises of a habitable nature has further declined. In February, 1914, there were 336, and in February, 1915, there was only 152, which is about \(\frac{1}{4}\) of I per cent, of the total number of houses in the city. The estimated cost of new buildings for which plans were approved during the year was £396,392, comproved during the year was £ pared with £491.373 in 1914. In twenty four streets the carriageway was resurfaced with tar macadam, the total area laid being 34,728 square yards. The approximate total length of highway now maintained is 254 miles, the cost of maintenance per mile being about £128. The house refuse amounted to 94,561 tons, and is equivalent to 6.96 cwt. per head of the population, or 37,12 cwts. per house, the cost of collection and disposal being 22.03d. per head of the population, or 9s. 9.41d. per house. The street refuse amounted to 42.128 tons, and is equivalent to an average of 166 tons per mile of highway cleansed. In the Ouseburn Valley 72,514 loads of material were deposited in the embark-ment forming Road No. 2 under the Cor-poration Act, 1904, and its vicinity: 27,852 oads were deposited by the corporation and 14 662 loads by private individuals. The 44.662 loads by private individuals. The total quantity deposited during the previous year was 51,403 loads.

For those who contemplate a change residence the "Homestead." issued by the Great Central Railway for the special purpose of enabling house-seekers at once to decide how far they can live out of town, will be found most useful, as not only are the season ticket rates given, but a full description of each place is included, also useful local data such as rates in the pound, water, cost of gas, population, altitude, subsoil, etc., is also stated. Special articles are contributed by well-known authorities on "Where Shall We Live, and Why?" "Golf and the Choice of a Home," and "The Homestead Country: Its Literary and Historical Associations." The book is profusely illustrated, and produced in quite a superior style. Copies can be obtained free on application to the G.C.R. Publicity Office, 216. Marylebone Road Publicity Offi London, N.W.

The Michigan State law regulating the practice of architecture came into operation on August 24. The usual restrictions for the practice of architecture are enacted, and further it is permitted that any builder may draw plans for himself, or for any building that is being erected under his supervision Architects who have practised prior to February 5, 1915, who can show satisfactory evidence of character and competency, can obtain a licence on application.

The County Council of Surrey have granted the surveyor, Mr. A. Dryland, two months leave of absence to recuperate after sowere

### TO ARMS!

### 4th Battalion ("Architects") Central London Regiment Volunteers.

Recrints are intgently needed for the Regulars, Territorials, and Volunteers. Intending recrints should apply to Battalion Headquarters, where they will be advised as to the branch of the service for which they are best suited.

ORDERS FOR THE WEEK BY LIEUT.COL. A. W. WARDEN.

ENTRENCHING.

Special Parade. To-night, 15th inst., at Dean's Yard, Westminister, 6.15 p.m. Members desiring to offer their services must attend this parade; no later opportunity of volunteering can be given.

PARADES.

opportunity of volunteering can be given.

PARADES.

At Camp, Thames Ditton, Saturday and Sunday, 18th and 19th inst. Parade, Saturday, 3 p.m. Sunday, 11.15 a.m. (train 10.10 a.m., Waterloo). A number of fatigues are required on both days. The remaining tents will be struck on Sunday. Accommodation can be provided for a few men only on saturday might. Members desiring to avail themselves should at once inform the Quartermaster, telephone 999, Briaton.

DRILLS AND PARADES

telephone 999, Brixton.

DRILLS AND PARADES.

"A" Company. Tuesdays, Miniature Range, Gas Light and Coke Co.'s premises, Monck street, Westminster, 5 to 8:30 p.m.

Wednesdays, Company parades 5:15 to 7:15 and 6:15 to 8:15, at Dean's Yard, Westminster.

Thursdays. Signalling. See orders from Acting Buttation Signalling. See orders from Acting Buttation Signalling Sergeant Cheadle.

B" Company. Muniature Range and Company Parades as for "A" Company. See orders at local beautignariers.

neadquarters.
"t" Company. See orders local headquarters,
Paython, A.A. Athletic Ground, Boreham Wood.
"D" Company. Platoon and Section Drill at
Mercers' School, Holborn. Tuesdays and Thursdays,
6.45 p.m. Company parade Wednesdays at Dean's
Yard.

SCHOOL OF ARMS. SCHOOL OF ARMS.

Special Note:—After date of these orders, the School of Arms will be held at new drill head-quarters, Chester House, Eccleston Place, Westminster, Instruction in hayonet fighting, gymnastics, physical drill, boxing and single-sticks on Thesdays to a p.m.

physical drill, boxing and single-sticks on Thesdays from 6 to 8 p.m.

RECRUIT DRILLS.

"A" Company. Dean's Yard, 5.15 and 6.15, Wednesdays and Fridays.

"B" Company. Dulwich College, Mondays, 8 to 10 p.m. and Thursdays, 6 to 8 p.m.

"C" Company. Boreham Wood and Elstree district. Headquarters, A.A. Athletic Ground, Boreham Wood. For full particulars apply to Alan Potter, Grey Gables, Boreham Wood, Herts.

"D" Company. Mercers' School, Tuesdays and Thursdays at 6.45 p.m.

CORRESPONDENCE.

Special attention of members is drawn to the fact that correspondence should be answered by return. It this is not attended to the office of the work of the Corps is immensely increased. Enrolment forms of new members and all correspondence not referring to recruiting for the Army or to financial matters must be addressed to the Adjutant, 10, Conduit Street, W., and regarding recruiting for the Army to the Recruiting Officer at Battalion Headquarters, and regarding accounts and subscriptions to the Paymaster, W. R. Hughes, 146, Dashwood Honse, E.C.

By Order,

C.

By Order,
L. R. GUTHRIE, Adjutant.
BATTALION HEADQUARTERS.
15, TUFTON STREET, WESTMINSTER, S.W.

Under the provisions of the Spenborough Amalgamation Order, Mr. Clifton Lund is re-tiring from the surveyorship of the Cleck-heaton district, which he has held for seventeen

At Wembley, yesterday (Tuesday), Mr. A. W. Brightmore, of the Local Government Board, held an inquiry into an application from the urban district council for power to borrow £12.071 for the extension of the sewage disposal works.

The cost of the conversion of the grand stand The cost of the conversion of the grand stand on the racecourse at Blackpool into a temporary hospital is estimated at £25,000, and will be borne entirely by the War Office, the Blackpool Corporation's contribution being the preparation of the plans, the letting of the contracts, and the supervision of the work.

Messrs. Kerner-Greenwood and Co. have sent us a chart showing important tests made by the Japanese Imperial Government. They experi-Japanese Imperial Government. papanese imperial Government. They experi-mented with several waterproofers, and it was proved that "Pudlo" gave the best results against percolation. Further, the test with neat cement (not waterproofed) and a mixture of three parts of sand to one part of pudloed cement proved the latter to be much more extensively then next convent, the exact features cement proved the latter to be much more waterproof than neat cement, the exact figures being an absorption of 21 monmes against 23 monmes of water. The chart will be sent to any applicant, together with the last of the series issue of "The Charm of Lynn," the business side of which deals principally with drainage work. Address Messrs, Kerner-Greenwood wall Co. Aprils Sengre King's Lynn. age work. Address Messrs. Kerner-Cand Co., Ann's Square, King's Lynn.

### RIBCHESTER MUSEUM OF ANTI-QUITIES.

In the North Lancashire village of Rib-chester on Friday Dr. Haverfield declared open the newly built museum of Roman antiquities, in which are now placed some of the later relies found at this old Roman station. The museum has been placed under the guardianship of the National Trust. A numerous party of members of the British Association in attendance at the Manchester Association in attendance at the Manchester meeting were present, many having motored over the twelve miles from Preston. Str Frank Forbes Adam, chairman of the council of Manchester University, presided. Dr. Haverfield said that at Ribebester they had the temping of a Popular fortunally and the remains of a Roman fort such as was called a castellum. It was by the castella that the Romans held disturbed areas, especially on frontiers. Britain was an unquiet area, and from Chester to Carlisle, from the Velocity Velocity Carlisle. the Vale of York to Tyneside, so far as the hills went, forts were placed at strategic opints, joined by a network of roads. Some of these forts were along the Roman Wail. A few were north of it many guarded the land south of it. They were all much the same-square or oblong in outline, three to six acres in area. They were purely mili-tary. Strategically, the use of these forts rested on the assumption that the enemies of the Empire would only attack in small bodies and that under the then conditions the attack was weaker than the defence. In the end the system broke down. The enemy arrived in hordes, the isolated forts fell one by one, and the frontiers had to be set back. Of such forts North Britain contained perhaps fifty or sixty, not necessarily all in use at once. Faint vestiges of one still stubbornly survived in a corner of Manchester; another, larger and more important, was there in Ribchester. It guarded a crossing of the Ribble from north to south. It guarded also the entrance to the Ribble estuary, and the passage up the valley inland, and the low hills which one could penetrate the Pennine range from Blackburn to Todmorden, to Skipton, to Ribblehead—all three easy passages. It was built possibly by Agricola, but more probably, Dr. Haverfield thought, four or five years before Agricola came to Britain, and it was held, with various reconstructions, till the very end of the Roman period. It was large and strong, but little was left of it now; one large piece, indeed, had been washed bodily out by the Ribble. In a field just west of the churchyard a grass-grown bank and mound marked its former western limit. Here some useful exeavations were made twenty years ago by Professor Gar-stang. More lately Miss Greenall, in building her house, discovered parts of the headquarters building, right in the centre of the fort, and coerced her architect into preserving them in situ, and encouraged excavation. Professor Anderson, of Manchester, and Mr. Donald Atkinson had been able recently to recover the plan of the headquarters building nearly whole There was a little more to do some day.

The urban district council of Cleator Moor have obtained the consent of the Local Government Board to the borrowing of £7,000 for the purchase of land and the erection of working-class dwellings under the Housing of the Working Classes Act.

An equestrian statue of Dick King, who saved Natel by his famous 600 miles ride from Durban to Grahamstown, when the former town was besieged by the Boers in May, 1842, was unveiled on August 14 on the Esplanade at Durban by the Mayor.

On the occasion of his retirement from the Bucks County Asylum service, Mr. Edwin Field, the engineer and clerk of works, has been presented by the members of the Visiting Committee, present and past, and the officers and staff of the asylum, at Stone, near Aylesbury, with a purse of gold and a barometer.

During some excavations at Minster, in the Isle of Sheppey, a Roman coin was found, which has been identified at the British Museum as a coin of Hadrian, who was Emperor from A.D. 117 to A.D. 138, and built the wall extending from the Solway to the Type. There is proof of the Roman occupation of Shepper from Roman bricks found in Minster Abbey Church and in the abbey wall.

### LATEST PRICES.

N.B.—All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

### TIMBER.

Owing to stoppage of supplies all prices have advanced considerably.

IRON. Per ton. Per ton	
Rolled Steel Joists, English	0 6 6
Basic Bars	0
	0
South Staffs 8 0 0 , 8 15  Best Snedshill 9 0 0 , 9 10  Angles, 10s , Tees 20s, per ton extra.  Builders' Hoop Iron, for bonding, £13 5s, to £13 15s	0
Builders' Hoop Iron, for bonding, £13 5s. to £13 15s Ditto galvanised, £20 to £20 10s. per ton Galvanised Corrugated Sheet Iron—	3.
No. 18 to 20. No. 22 to 24	١.
Best ditto	0
Cast-Iron Stanchions     7 7 6 , 9 0       Rolled-Iron Fencing Wire     8 15 0 , 9 5       Rolled-Steel Fencing Wire     7 15 0 , 8 0       Galvanised     6 5 0 , 6 15       Cast-Iron Sash Weights     6 5 0 , 6 15	0000000
Corrugated Iron, 24 gauge 16 0 0	•
Galvanised Wire Strand, 7 ply, 14 B.W.G	
Cast-Iron Socket Pipes— 3 in, diameter	€ 6
Iron— Per ton. Cold Blast, Lillieshall 137s, 0d. to 142s, 6d	١.
Wrought-Iron Tubes and Fittings—Discount off	١.
Standard Lists f.o.b. (plus 2½ per cent.)   Gas-Tubes   63¾ pc.   Water-Tubes   60   Stam-Tubes   55½   Galvanised Gas-Tubes   52½   Galvanised Water-Tubes   52½   Galvanised Steam-Tubes   42½   Galvanised Steam-Tubes   42½   10   10   10   10   10   10   10   1	
OTHER METALS. Per ton. Per ton.	
Lead Water Pipe, Town £*30 0 0 to -	
Lord Rorrel Pine Town *51 U U	
Lead Pipe, Tinned inside, Town *32 0 0	
Lead Pipe, tinned inside and outside	
Composition Gas-Pipe, Town. *33 0 0 , —  Country *34 0 0 , —  Country *34 0 0 , —  Lead Soil-pipe (up to 4\frac{1}{2}\text{in.}) Town *33 0 0 , —	
Country *34 0 0 , — [Over 4\xin. £1 per ton extra.]  Lead, Common Brands	6
Lead Shot, in 28lb. bags	000
Pig Lend, in lewt. Pigs, Town	0
Genuine White Lead	
brand)	

# SCRAP METALS

ARTHUR P. COLLINS, Snow Hill, BIRMINGRAM.

Phone Central 1029 Felegrams "Metalise, Birnamgham.

Baokers: The National Provincial Bank of England
Ltd., Bennett's Hill, Birmingham.

SLATES.										
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Permanent Green., 20,, 10, 11, 12, 6,	
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BRICKS.	
(All prices net )	anda in
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Mild Stocks 1 9 0 ,, ,,	+ 1
FI	vered at , station.
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Pressed Wire Cuts 1 18 0 ,, Red Wire Cuts 1 11 0 ,,	
Red Wire Cuts 1 14 0	**
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Ruabon Facing 5 0 0 ,	14
Staffordshire 3 15 0	
Ditto Bullnose 4 0 0 ,1 11	**
Best Stourbridge Firc- bricks 4 0 0 ,, .,	
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thickest part	. 2 0 0
3½" Chimney Bricks fit for outside work 3½" ditto ditto through and through	2 0 0
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5 , 9" ,	0 3 6
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GLAZED BRICKS.	
HARD GLAZES (PER 1,000).	
White, Ivory, and Best. Salt Glazed. Buff, Cream, Other	Second
Best. Seconds, & Bronze, Colours.	Colours.
Stretchers-	£12 7 6
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Park, Paddington G.W.E., or South Lambet (G.W.E.) per foot cube	0	1	7
Delivered in railway tricks at Nine Elms L. & S.W.R. (	0	1	Si
at Nine E.ms Depot	0	Ī	91
led in random blocks of 20 ft. averace, Jelivered in railway tracks at Westbourne Park (G.W.R., South Lambeth			
(G.W.R., or Nine Elms L. & S.W.R., Delivered on read wasgons at Publico Wharf or Nine Elms	0	2	53
Depot	0	2	64
THES.			

THES.	
s. d. 1	Nord.
Plain red roofing tiles 42 0 per 1,000	TV. 5
Hip and Valley thes 3 7 per dec.	
Broseley tiles 50 0 per 1,000	1.1
Ornamental tile	
Hip and Valley tiles 4 0 per de z.	1+
Russbon red, brown, or brindled	
ditto (Edwards 57 b per 1,000	11
Ornamental ditto 60 0	1.1
Hip t les 4 0 per doz.	1.4
Valley tiles 3 0 ,, Selected "Perfects" rooting	9.7
Selected "Perfects" roding	
tiles Plain tiles (Peake's). 46 0 per 1,000	1.7
Ornamental ditto	13
H:p tiles 3 10 per d s.	1.9
Valley tiles 3 43	9.1
"Bosemary" brand plain tiles , 48 0 per 1,000	1.6
Ornamental tiles 50 0	1.1
Hip thes 4 0 per doz.	1.9
Valley tiles 3 8 "	4.9
Staffordshire (Hanley) Reds or	
brindled tiles	1.9
Hand-made sand-faced 45 0	5.1
H p tiles 4 0 per doz.	+ 5
Valley tiles 3 6 "	. ,
"Hartshill" brand plain tiles,	
sand-faced 45 0 per 1,000	1.1
Pressed	9.9
	1.1
Hip tiles	7.7
Valley tiles	9.9
011.6	

OH.S.						
Rapeseed, English pale, per tun a bitto, brown Cottonseed, refined Olive, Spanish Seal, pale Cocoannt, Cochin Ditto, Ceylen Ditto, Mauritus Palm, Lagos Intto, Nnt Kernel Oleine Sperm Lubricating U.S. per gal. Petrolenm, refined Tar, Stockholm per barrel Ditto, Archangel Linseed Oil per gal. Baltic Oil per gal. Putty Genuine Linseed Oil pur cwt.	26 29 39 21 46 42 32 35 17 30 0	15 0 10 0 0 10 10 5 0 5 0 7 0 6 19 2 2 3	0 0 0 0 0 64 67.10	27 : 30 : 40 : 40 : 45 : 11 : 43 : 43 : 43 : 33 : 35 : 10 : 19 : 10 : 10 : 10 : 10 : 10 : 10	0000005050800	
Putty Genuine Linseed Oile	0	9	6 ,,	-	-	
"Stority" Brand	0	9	0 ,,	-	-	
GLASS (IN CR.	AΤ	ES				

English Sheet Gia s: 15 nz. 21 oz.	. 25 oz.	32 oz.
Fourths 5;d.		
Thirds 5]4.		
Fluted sheet 5:d.	6;1	
Hartley's English Rolled 1 in.		
Plate 311.	3 <b>:</b> d	4 - 1.
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VARNISHES, Etc.	Fer g	3.110	n.
Fine Pale Oak Varnish	£0	8	6
Pale Copal Oak	0	10	U
Ommilar Copal Oak	C	10	0
Superfine Pa e Elastic Oak		12	0
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats	of		
charches		14	6
Fine Elastic Carriage	C	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	0
Extra Fine French Oil	1		0
Eggshell Flatting Varnish	C	18	
White Copal Enamel	1		
Extra Pale Paper	0	12	
Best Japan Gold Size	0	10	
Best Biack Japan		16	
Oak and Mahogany Stain	0	9	
Bronswick Black,		8 (	
Berlin Black		16	
Knetting		10	
French and Brush Polish	0	10	3

On Translat in last week the new schools at Castletown were formally of ened by Cardinal Logue. The schools were creeted by Mr. Mc-Anerey from plans prepared by Messis, W. H. Byrre and Sons, Dublin, and cost a wat £4,0

The Hants County Council have adopted plans the Harts country council have adopted pains of Mr. W. J. Taylor, of Winchester Castle, there let the rive or, for the reconstruction of the loradity at Winchester Horizon who at a Camenester main could over the tracer Moon.

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correspondents.

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for, unsought contributions.

""Trawings of selected competition designs, important public and private buildings, details of old and new work, and good sketches are always welcome, and for such no charge is made for insertion of make commonplace subjects, small churches chapels, houses, etc.—we have usually far more sent than we can insert, but are glad to do so when space permits, on mutually advantageous terms, which may be ascertained on application.

When forcempts is mith degrees or releases to the contribution of t

When favouring us with drawings or photographs, architects are asked kindly to state how long the building has been erected. It does neither them nor us much gived to illustrate buildings which have been some time executed, except under special circum

Telephone: Gerrard 1291. Telegrams: "Timeserver, Estrand, London."

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NOTICE.

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Risky. Yes.

PHILIP J.-Thanks no.

R. P. L .- At the usual date, 2, No.

H =We take your own solicitor's view.

CONCRETE - The congunal patent must have e-long since. Possibly some "improvement expired long since. Possibly foch patented since

been perented since.

Post like to Yote Door.—The interruption of regular and punctual transit and unavoidable shortage of labour in the distributive facilities of the news trade is causing mach disappointment to readers of our own and similar journals. Wherever this is so and difficulty is experienced in obtaining The Bernhous News junctually on Wednesday morning, we will send a copy Post FIEE direct to any reader's address on receipt of 4s, 4d., the amount of the quarterly subscription. Readers away on holiday, or in campana also have single copies sent them Post FREE to any address on receipt of four penny stamps.

new Congregational church is to be built Bilton from the plans of Mr. A. A. Gibson, of Harrogates

A new United Free church in Dumbarton Road, Dalmur, has been formally opened. The cost was £4,700.

cost was £4,700.

New Council schools at Glyn.lyfrdwy.
Merionethshire, erected at a cost of £3,000.
were opened on Two-day in last week. The architect is Mr. Howard Jones, of Borth.

The Housing Committee of the Horts County Council have approved provisionally of plansfor the erection of 100 cottages. The prices range chiefly from £175 to £210 per cottage.

Alterations and additions are about to be

Alterations and additions are about to be carried out at the Tabernacle in Elder Street, Bridgend. Mr. P. J. Thomas is the architect and Mr. R. Jones, jun., of Coychurch, is the

Plans have been passed by the Dean of Guild Court of Kilmarnock for a ham and bacon warehouse in Woodstock Street for the Scottish Cocoperative Wholesale Society. The probable

The Fylde Water Beard is ab un to undertake the construction of three reservors at Balchead, near Clitheroe. The cost will exceed \$2,000,000, and the enterprise will give employment to 600 navvies.

A new Board school built in Culder Street, Govanhill, Glaszow, for the Govan Parish School Board, has been formally opened. The architect was Mr. Andrew Balfour, F.R.I.B.A., Mains Street, Glaszow.

The Wilberfoss and Thornton Level Drainage The Wilhestoss and Informed Level Dramage Board have instructed Messrs, Fairbank and Sons, engineers, of Londal. York, to examine the upper watercourses in the district and submit a report to the board.

# OGILVIE & CO. Many years connected with the late from of W.H. LASCELLES & CO., of Bunhull Row.

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Witson and Sons, Perth (accepted).

# THE BUILDING NEWS

## AND ENGINEERING JOURNAL.

Effingham House,	CONTENTS.	Strand, W.C.	
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Shrinkage and Time Effects in Reinforced Concrete	6 M From Day	12 0° 5 r - 100 10 F	г
Building Intelligence	December 1997 A. Pearson, At Eto		

that may exist for temporary building in other material than wood. Apart from the question of first cost there may be occasions where a more solid form of structure may prove best suited to specific duty.

Among systems of construction suited to rapid building is that of light steel stanchions filled in between with some thin and inexpensive panelling, as brick flat, on-edge, or concrete slab. Of these, if oboccasions where a more solid form of struc-

THE WAR AND EMERGENCY
BUILDING.
With timber supplies restricted, praces high and tending to advance, it is more desirable than ever to consider the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may exist for temporary building in the scope that may be scope that

On these general ones we shall consider

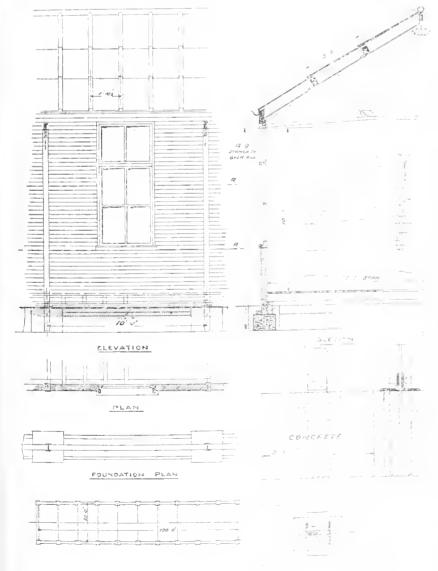
It is to be taken a whereas we cannot even to work, space quarters here the 6 in, apart, we enty need seed each roof truss, say at 10 ft. normal times we can reverby 20 ft by means of note: glot storage for \$27, or less. A filling 22 standardness at the cast say, of £25, in bring all enting, riveting, and content and bolts, nothing more in the way of steel would be morehald the morehald standardness. and bolts, nothing more in the way of steel would be needed, since patie or glar I window would fit in between the stan he is an I give longitudinal stable at your walls, leaving the matter of cross stability to some means of holding down the standhiors to earth, of typing the heads to be factorises, or a combination of these methods; for we cannot, as when doing give the satisfactural brack walls, of ordinary this stassification on the walling to resist with present rely upon the walling to resist with pres

of the standhouse for leading with the standhouse for leading to half-brick walling, brick in edge, or concrete slab. Taking the first the 4-in bricks should fit singly between the fluides of the standhouse. For a 20 fr spin the steel roof truss would weigh signal with and allowing for lead and wirel

or 4,224 1 s., this would repose the weight upon each stanchion; but the seed weight upon each standhron; but the scoll reinforces the wall, and the wall streets the steel, so that if we can use to that the post is held firmly upright we can do with a very light section. Set we are consilering brick flat as upon ea-venience in fitting between the flat 288 at 5 m. let 42 m. s. t. n. w. no. 8027 st. self.

with the second of the second

to him a set until the house as were selfer as the strain in the set until the state him as well as the state him as the s over the other. If the recently of star-ture I per Is in the confirmers of star-eh in heal world on as it sast a must the sufficiently powerful to employ this



TEMPORARY IRON BUILDING WITH PANEL FITTINGS.

tic; if the stability depends on stanchion Sometime to earth, this resistance must be brosen slown before the building is wreesed the ordinary cases, no doubt, a roof trass shoe, well bolted to a stanchronheal, provides all resistance needed; but where we wish to cut down the weight of steel as much as possible, it is advan-tage us: well anchor the post to the earth. In emergency building, and for temporary building, we should, with shortage or soiled labour, endeavour to avoid elaborite design and work, as in base plates, ancherage, and head plate connections, see any to keep all tabour on steelwork to catting to lengths and simple dribing to deriveting. We may effect the diget in ground anchorage of stancarons, avoiding real base plate construction, by proceeding much on the old gate pest principle, belding the stanchion ends in a nergic blocks. The concrete could be laid with recesses ready for the posts, and these latter being plumbed and secured as son as, or soon after, the recess is ground, the concrete grips the steel; and if the general foundation is hemogeneous oncrete, to everturn the standingn we must overturn the foundation, or cause a runtur, neither of which is a likely event, excepting in a country of tornadoes The stability of hollow, barn-like structure of the type sketched is greatly assisted where the foundation grips the post.

These considerations are to the point, I cause we desire to keep down cost of construction to the nimest. We do not wish to put a pound of unnecessary steel, in these days, in temporary or emergency building, nor to use superfluous walling material, and as regards this latter point. we may argue that masmuch as rain may penetrate 45 in. of brickwork, 2 in. of walling material would be as good as 42 in., since in either case we must do simething to make the structure waterproof. Hence we might consider that 2-in. If material, such as slab, would fit into 3-in. by 3-in. H stanchious. weighing 82 lb. per foot, and, stiffened to some extent by the rebated or grooved walling in cement mortar, suffice to carry less than two tons of load, even if-for erthodex, permanent construction—the 3-in, by 3-in, be outside the generally accepted ratio of slenderness. With a real grip on foundation and an efficient tie allove, the steel post is greatly strengthened. Again, when an efficient roof truss sits squarely upon a stanchion head, the resultant stress may be said to partake of the nature of a balanced or "concentric" load

The foregoing sketch was prepared to illustrate generally the considerations we have suggested, and to form a basis for argument rather than of insistence. The drawing shows stanchions set 10 ft. apart centre to centre, and it may be worthy of remark that we might employ steel in this manner, and yet, with some very light woodwork, compressed asbestos sheets as walling. The idea may be exercised our either in brick panelling or some suitable form of slab, and in the event of a yet more advanced price of scantling timber, be found suggestive. We need, however to remember that steel is in urgent demand, and greatly advanced in price. It is this reason we have suggested that the stanchions should be as light as possible; and since, in this particular panel construction, they should he regarded not so much as true pillars, but as wal stiffeners much, indeed, as reinforcement we have suggested that the full value of the steel should be obtained by seeing that the posts are securely anchored to the ground. The scheme was sketched to scale for 4, in. brickwork and permanent work we should use \( \frac{3}{2} \)-in, steel; 5 in 1: 4, in joists as stanchions. Tak and in place of 2\( \frac{1}{2} \)-in, angles and bars,

ing a building or shed 100 ft. by 20 ft., we may compare this with the timberframed method. We will assume 10 rt. walls, stauchion construction on the one hand and quartering on the other. Put-ting an extra steel post at each end, the whole number of stanchions is twentyfour. Allowing that the quarters in a temperary timber framed building are 1 ft. b in apart, there would be some 80 c. ft. of timber in 4 in, by 2 in, posts. as against, say, 5,800 lb, steel in 5-in. by 44 in stanchions, giving these extra length to bed well in concrete, as a simpler system of ground fastening than genuine base-plates and anchor bolts, and more suitable where unskilled labour is involved. Taking that which would appear to be the limit in constructive lightness 3-in, by 3-in, H stanchions and 2 m. grooved and tongued concrete slabs, the steelwork would be reduced to less than half, say 2,900 lb. As to roof ing, there is considerable timber in a roof with each pair of rafters tied by a collar. Taking the 100 ft. by 20 ft. pr posal, and allowing, for temporary con struction, say 1 ft. 6 in between the rafter centres, there would be some 120 c. ft. of 4-in, by 2-in, rafter and collar, as against the nine light steel It is true that with the arrangement shown in our sketch there are purlins, pole-plates, and ridge-piece to the extent of about 100 c. ft., which somewhat alters the outlook. In comparing, therefore, a collar-beam roof and one with light steel trusses, we must bear in mind the expense of purlins. A way out, possibly—and we are endeavouring to omit all superfluous timber-would be the em ployment of **z** steel purlins, say  $8_4^+$  lb. to the foot. Light steel offers many ad vantages in purlin construction, where timber is dear. Inasmuch as that cleats are required to secure wood purlins, whilst drilling the principals for these we might make provision, with no more labour, for fastening the z steel to the truss.

The sketch discards any more elaborate means of fixing steelwork than by cut angle-pieces or plain sawn plates. The angle-pieces or plain sawn plates. stanchion is shown bedded in concrete, the cross-hatching on detail being a suggestion for leaving a sinking in the concrete block, to be finally grouted, the exact position in building being located, and the post plumbed, by means of angle-pieces riveted to the web, and taking bearing on concrete finished to a true and level surface. To connect the stanchions to the trusses in place of the ordinary shoe are shown two cut-plates, which are riveted to the feet of principals and tiebeams and bolted to the web of **H** stanchions. As drawn to scale, and as designed, no doubt in place of suggesting a temporary structure, it might be considered suited to quite permanent work and of superfluous strength. Structure of this nature, and no stronger, has been found extremely useful in ordinary com-mercial building, and would be found particularly so where firms have, in emergency, as to fill urgent contracts, suddenly extend their premises. The sketch is put forward rather to be suggestive, and the remarks above made as to wind-pressure, stanchion and panel con-struction and strength bear upon the point of how to reduce steel to a minimum rather than as referring to the design and details shown. To reduce cost it is necessary to gain correct ideas on the method of construction, and to get the utmost out of every pound of steel we must see that it is secured in the best manner.

The roof trusses would be 4-in steel only, with 1-in, bolts and rivets, where in

say, 2-in, only; and connections and angle-pieces in 4 in, in the roof and 8 in, in fish-plates and angles to stanchion connections and quasi base-plates. panelling is shown in brick flat, and where there are no windows might be reinforced, as suggested at R.R. The window is in deal rebated linings, with deal sill and transom and stops against the underside of the pole-plate, which finishes the walling and gives a fixing for the gitter. Since the weight of the roof is chiefly upon the stanchions, and there is little upon the wall itself, very little wall foundation is required, but a larger block of concrete is shown in which to embed the stanchion

With timber at present prices, and the uncertainty as to the future, and assuming steel procurable even at present en-hanced prices, it is possible that there would not be a very great difference in the cost of creeting similar sized buildings in 4-in, by 2-in, timber framing and in the method shown and one or the other of the panel materials discussed. But it would be necessary to use and dispose steelwork with the utmost economy. advance this opinion with caution, but as it is well to look ahead and consider all suitable methods we have put forward a practical alternative to timber. It should be remembered, too, that there are many uses to which steel and slab construction can be put, apart from those immediately attendant upon or the result of war. \_\_\_\_

### THE SKY-SCRAPER.

As yet the sky-scraper is not an institution in England. Remembering the extremely high value of land in the City of London and in some of the other leading towns in the kingdom, and the natural tendency of late years on the part of most leading business concerns to rnn an office, or at any rate have an address, in the capital, wherever else their works or real executive may be located, it is a matter for congratulation that the authorities have resisted the desire to add story to story skywards in Babel-like fashion. For the great disadvantage to the community of high office buildings is sufficiently obvious. They detrimentally sufficiently obvious. exclude sunlight and air from the streets; they prejudicially increase the congestion of traffic; they almost render impossible ethicient fire-protection; and they overtax the sewer and water systems, quite adequate to the smaller population of the same area. Architecturally they are eyesores, of course, but that fact has not hindered their erection in America, and it may not here if Commerce, freed for some years to come from German competition and encouraged by the prospects of as long a peace as succeeded the final crushing at Waterloo of Napoleon's project of pan-European domination, redoubles her efforts to repair the losses of the present and to lay the nations under willing because beneficial tribute British merchants and manufacturers.

On the other hand, if local authorities are obdurate, and Government departments still determined to keep builders and architects idle till the awful total of the war bill is liquidated, many of them will have to seek a living elsewhere when they return to civil life, and will need to learn a little more about the construction of sky-scrapers as well as other structures for which we have little need here. Admitting all their disadvantages just mentioned, it is probable that the community does benefit to some extent by anything that promotes the concertration of business, and it is certain that the ground landlord gets far higher rents -inst as he does here when single houses

are turned into flats. Nowhere, probably, have these considerations so overridden all others as in New York, where floor has been piled upon floor till a maximum of fifty-five stories and a height of 775 ft has been reached, as in the case of the Woolworth Building, which towers like a giant above its compeers, and reduces ordinary four and five storied buildings such as we are familiar with to the appearance of rabbit hutches by compari-

As owners and builders successively sought to outdo each other in America, it soon became evident that the ordinary construction, in which exterior walls earry their own weight and some of the adjacent floor load, the rest being horne by iron or steel columns, became impracticable. The wall thickness insisted on by local authorities became so great that more and more of the space available for renting became absorbed. Windows had to be narrower and narrower to conserve the strength of the walls, and hence light became more and more poorly distributed; and if the unit-bearing capacity of the ground under the footing was low more and more costly work became neces sary properly to distribute the pressure over the soil. This led to the adoption of what is known as cage construction, on which all loads, including the weight of the wall, are carried at each floor level by the steel, and by which therefore weight-carrying walls are practically eliminated from the sky-scraper It follows—at least, in American practice, whether or no time has yet sufficiently tested the theory-that windows may be used for almost the whole of the exterior wall area without danger to stability, and it is claimed that such structures are hurricane and earthquake proof to a greater degree than ordinary buildings. Possible rapidity of construction is another advantage gained. In America an old building is demolished and a new one of twenty-five stories completed on its site in a year. The reduction thus effected on the loss of site and increment value and the interest on the money spent in building is thus very materially reduced.

The increased depth of foundation demanded by such tall structures, of course, means much excavation, and if more than 5,000 cubic yards have to come out the steam shovel is employed. Shoring cf undermined adjacent walls is also a heavy item, and in unstable ground the foundations of neighbouring buildings have to be renewed. The principal types of foundation are continuous, masonry fout ing, raft footing, piles, or caissons. The first method is not recommended, as considerable thickness of concrete is required properly to distribute pressure, and centres of gravity of applied londs and footing area are not likely to coincide. The second is not often used. Formerly piers were often made of stone or con crete, but seldom nowadays, except for small footings; for others the method is too costly. A grillage or raft footing has advantages, and so, of course, have piles, especially concrete ones, which are now very extensively used. The caisson type of foundation is, perhaps, the best of all. It is really a large single pile, round or square, made of brick or concrete. The method favours a larger pressure on the bottom of the footing, since the caissons may be driven with but a bare clearance A large column will carry more per unit area than a small one; perfect contact with bearing area is assured; injury beyond inspection or repair is avoided. and there is less danger to adjoining buildings. Of the two methods of sinking buildings. Of the two methods of sinking the caissons the hydraulic is the cheaper. A pipe, usually of steel, open at ears felt, and fin and copper are used. If the

end, is sank by jets around the lower edge, and by weights placed on top. The dirt is excavated after bottom is reached and masonly built up inside, and on the top of the masonry a grillage is laid to receive the column base. In cases where the soil has not sufficient stability to resist the mrush of water as the caisson is pumped out, the more costly pneumatic carsson must be used. With this a trans-verse bulkhead about eight feet from the bottom of the chamber forms a working chamber, and on the top of this is laid the masonry, an opening being left to the chamber below. A double valve forms an air-lock, which allows the passage of workmen and material. The caisson is forced down by the weight of the pier above. aided by the excavation of the material in the working chamber, in which air pressure is maintained to keep out water and silt. As soon as the rock is reached. and sitt. As soon as the rock is reached it is levelled, and the working chamber filled with misonry. The grillage is similar to that used with the hydraulic caisson.

The columns for the exterior walls are necessarily quite near the property line. and, to avoid trespass, the American architect and engineer favour the cantilever girder, designed and built much like the ordinary plate girder. With the cautilever, however, shear is of more importance than moment, hence those parts which in a plate girder carry shear receive special attention. Sometimes the cantilever girders have more than two supports, thus securing the advantages and the disadvantages of continuous beams, which the American engineer seeks to avoid. As regards the columns generally, and the beams, stringers, tie-rods, etc., there is little difference from those employed here. Floors, of course, receive special attention, brick, terracotta, tile, and concretz, and steel, well protected by one or the other, being usually employed. The ordinary floor with the fire-trap wooden joist is out of the question, although wood is often used on the top of the floor, in spite of the fact that it will not survive a fire. Terracotta, in hollow blocks, forming an arch, set in cement, are more typical than any other floor, flat and agmental arches being both used. latter is the stronger type, and allows a longer span, and is favoured in warehouses and similar buildings. Probably the flat urch would be more effective if the joints were radial, which they seldom are, owing to the additional cost. Combination floors, which are really reinforced concrete floors with terracotta fillers to lessen weight, find some favour. A floor known as the Roebling is also in demand. It is said to have advantages over expanded metal. instead of which it uses a wov in wire sup-Many other systems are ported by rods. in vogue, some of which hardly seem to fulfil the requirements which should be rigidly demanded by the architect. These are: Strength to hear the live load and its own dead weight safely; resistance to : temperature of 1700 Fahr, for four hours while thus stressed, and ability to withstand fire streams after. In only less degree the floor should be agreeable to stand on, have good acoustic top and bottom surfaces, so as to be sound-proof as far as possible, be light in weight, durable, and economical.

Roofs are of only less importance than floors. Wood should never enter into their construction, as protection against exposure fires is indispensable. Tile reofs are fairly common, consisting of several layers of felt on which tiles are embedded in coment. Slate is sometimes used in-

last two are employed, car has to be taken not to place either in contact with concrete or terra offa, on accountcorreston.

The cornice is not favoured. Its in hi teetural advantage is recognised but structurally it is disliked. It is much exposed to flames, and it is an eccentive load on the columns. Wind-bracing is of the highest importance. In addition to its principal function, it gives stiffness to the structure, and American builders maintain that, if properly designed, it will resist earthquake shocks, and that all high buildings should be so designed that the addition of wind to other leads should not cause stresses more than 25 per cent. in excess of ordinary values.

Specifications for high buildings do not seem to us to err on the side of stringency. It is true, no doubt, that there is little vibration, and that the live load seldom Under average reaches the maximum. circumstances it is said the live beid viries from 10 to 40 lb., and it is considered safe to specify from 60 to 150 lb. per square foot. But high authorities have insisted that a selected crowd of people might weigh as shigh as 181 lb, per square feet In view of this, live load should hardly be reduced below 75 lb., and 100 lb. seems safer. Certainly where machinery is in stalled to any extent the floors should be designed for a live load of not less than 150 lb.

From a very practical text book by Prof. Horace B. Thayer, recently pub-lished in this country by Misses, Con-From stable and Co., Limited, which we have already recommended to our British readers, and to which we are indebted for some of the facts gleaned herein, we take the following points in which the specification for the steel frame of an average high office building should differ from ordinary minimum requirements.

Dead Loads.-Dead loads shall be cheesed in all cases from architect's and contractor scross sections and details.

Live Load for Floors.—The live head on first

there from for riots,—the average of first thor shall be taken as 10 fb per square foot plus a concentration of 5.7 fb and where. Use same values for remaining flows, except that 80 is substituted for the uniform

Live Load for Elat Roofs. The live load on a flat roof shall be taken as of 15, per square foot.

Live Loads for Pitch Roofs, The live loads on pitch roofs are to have the same values as or mill buildings. Live Loads for Columns.- The live load on

the columns consists of uniform loads on floors and roofs as specified above; this to be taken at its full value on column in story below; 25 per cent, of same, two stories below; 26 c. r.

at its full value on column in story below; 35 per cent, of same, two stories below; 26 e.g. reent, three stories below, and so on. Maximum reduction, 50 per cent.

Wind Loads,—The wind pressure on exterior walls shall be taken as 5c lb, per vertical square foot acting in any horizontal direction.

Loads for Footings—Footings shall be designed for dead loads plus 20 lb, per square foot for all floors. If dead plus his as reduced for columns plus wind exceeds twice the allowable bearing values as given below all areas must be pronortionately increased. able bearing values as given below all areas units be proportionately increased.

Allowable unit street in

Medium Steel - Tension on the 15,000; compression on gross section.

length in inche-

16,000-90 least radius of gyration in inches

Sheer on shop rivets, pins, and gress sections of webs, 12.000; shear on field tracts and holts, 9.000; bearing on shop rivets and puts, 24 c 6; bearing on pins, 24 c 6; other flexural stresses, 16.000.

16,000.

Allowable compression on wa'l placenty:

Brickwork, lime mortar 100: brickwork, Portland cement mortar, 150: concrete Portland cement, 3 sand, and 5 stone, 250, stone masonry, first class, 250.

These values may be increased 50 per cent, for local bearing on bulky masonry as in completions.

cement, 2 sand, 4 stone, 500: I Portland cement, 1 sand, 5 cinder, 200 Footing areas shall be designed for the fol-

wing values:—
Foundations.—On soft clay, 15; wet sand, 15, rednary clay, 50; dry clay, 45; dry sand, 50; course sand, 6, gravel, 75; hardpan (comonted

Computations - Above values are Communitions.—Above values are for dead plus live, for combinations including wind, allowable stresses may be increased 25 per cent appropriate for feedings, which will be governed by the rule given under the heading of L. ans for Footings. It. Deflection Limit.—Beams will possess softh coefficient strength to carry their loads including the dead weight of walls without any assistance from the masonry. So loaded deflections shall not exceed 2.57 the of the span.

#### THE LONDON SALON OF PHOTO GRAPHY.

The annual exhibition of the Lendon Salon of Photography, which was opened on Monday at the galleries of the Royal Society of Painters in Water Colours, 5a, Pall Mall East, is of great excellence and value, and will well repay a visit. Salon aims at showing only that class of work in pictorial photography in which there is evidence of personal artistic feeling and execution, and it has the support of many accomplished amateurs in this and other countries who strive after a synthesis of truth rather than the mechanical reproduction of facts. The scheme of hanging is a novel and effective one: there are no frames, but each photograph is pinned to the wall, which i covered in with large sheets of glass. Robert Demarchy shows some interesting experiments in the use of bromoil transfer on stone, including No. 2, "Rouen," illustrating half-timbered houses in a dark, payed alley, beyond which is the fourteenth-century church; and No. 4. a iridge on "The Seine, Paris." The a i ridge on canals and bridges of Bruges are the subjest of several pictures, notably No. 5, by Miss Francesca Bostwick: 32, by Charles Job; and 328 by T. H. B. Scott. No fewer than seven prints, all of great excellenes in selection, viewpoint, and lighting, are sent by a well-known Glusgow architect and amateur photographer. James McKissack; they include "In the Days of Peace." No. 48, hay-makers leading a wag at in a field, their labours hastened by the threat ming stormed u.s. werhead: No. 25. "La Lieutenance, Honfle er." and the south portal of "South Jacques, Lisieux." No. 123, and two or three seas apis. Direct representations of the west partals of "Rheams, 1899," and the level line of battlements of "Darand the level line of battlements of "Dan ham Castle," as seen from the W as seen from the Wearside below, are given by Frederick II. Evans in Nos. 135 and 137, who also sends an admir, he per tree if "Rye." No. 111, as seen from Winchelsen aer ss the murshes. on which a few isolated sheep and stur of bushes beside the dykes convey an idea of wide and dreary spaces. Sunlight and shadow are contrasted in the interior of "The North Transept. Peterbers ugh." No. 88, contributed by W. A. Clark. The picturesque S ine-side vil-lage of Caudebeesen Caux provides as usual several taking subjects, among which are the view along the main street, with are the view along the main street, when the ages of the church, No. 96, by Peter W. Gibb, and No. 182, the discreasy of the Flamboyant church, by John H. An-ders n, who falls into the common error of styling the edifice the "Cathedral." Selling picture of "The Victoria Memo with a leaf of the new palace gates to the right, is shown by Hector Murchi son, N., 156, and next to it is a representation in solution of "Outord Church." N 157, by J. L. Tucker. Fred Judge, of Hastings reads several brongil transfers

in successive printings, in which colour has been superposed. The subjects are varied sylvan landscapes. country scenes, and portraits. James N. Doos little, of San Francisco, contributes three interesting illustrations of the buildings of the Panama Pacific Exposition now on view in that city, in Nos. 122, 126, and 132, and Miss Jessie T. Banfield, also of San Francisco, makes a good picture out of " The Rotunda, Fine Arts Building. at the same exhibition, in No. 304. Cas the Acre Priory and "The Wharf at Lincoln T are well portrayed by Bertram Cox in Nos. 276 and 277. A. H. Blake lers been to Kensington Gardens for the subjects of his excellent works, Nos. 263 and 270. John La Farge's gateway to the Chapels of St. John the Divine, New lork, is shown in a photograph by Miss Blanche C. Hungerford, No. 320; she also obtains some picturesque effects from the suspension chains of "Brocklyn Bridge," in Nos. 273 and 274. A tenuous column in the south aisle of "Avila Cathedral" is contrasted with the massive piers and quadripartite vaulting above in J. R. H. Weaver's work, No. 310. Among the best of the Swiss scenes are "Curling at Kandersteg," No. 248, by Ward Muir; "The Lauterbrunnen Valley," No. 246, by Miss Constance H. Ellis; and "On the Brenner Pass," by Soveral of the portraits John Keane. Several of the portraits challenge attention, notably the seated figure of "The Prime Minister," a dign field one of "The Lord Chief Justice, and "The Minister for Munitions," i a dignikhaki, ali by Walton Adams (Nos. 230-2); that of James McKissack, No. 55, by Dan Dunlop, and of F. H. Evans, No. 110, by J. R. H. Weaver. Easily first among the seascapes are the fine contributions of F. J. Mortimer.

By Mr. Janne.

1. In general, a beam entering a wall column, or any other quasi-rigid long sup-port, may be considered as continuous, or partially continuous, according to the conditions of the supported end of the beam.

If the supported end of the beam has such length that the allowable adherence between the concrete and the reinforcement in this supported end is at least equal to the tensile stress in the steel arising out of the assumption of continuity, it is clear, then, that the assumption of a continuous beam for the end of a beam entering a wall column is legiti-

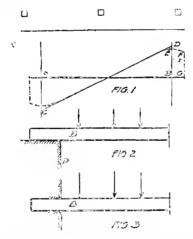
It should be borne in mind, however, that no matter what the assumption is with respect to that supported, a certain part of the tadherence between concrete and steel in the supported end of the beam must withstand the shear in the beam. This fact, at first, seems in contradiction with theory, and a few This fact, at first, words of explanation are perhaps necessary.

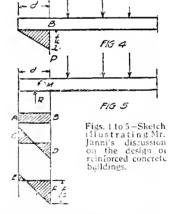
Let us suppose that in Fig. 1 A B is a beam supported at both ends and uniformly loaded; shear sliagram will be given by the line

As in any section of the span the adherence between the longitudinal steel reinforcement and the concrete is proportional to the vertical shear in that section of the beam, it is plain that on the right of B, as well as on the left of A, the reinforcement should not have any tendency to slip, as there is no vertical shear in any cross-section of the supported ends of the beam.

Tests, however, show that, while for limited efforts the theoretical formula holds good, this is not the case with higher stresses, far below the breaking-point of the beam.

The above phenomenon, apparently in contradiction of theory, finds its explanation in the fact that the modulus of elasticity of the concrete is not constant, but diminishes with the increasing stresses; so that, starting from a certain value of stress, the concrete begins to loose gradually its grip on the steel, which





PROBLEMS IN THE DESIGN OF REIN FORCED CONCRETE BUILDINGS.

Ponets of special interest to designing engineers are contained in a discussion (in Con-erct - Cement Age) of the queries propounded below. The subjects are taken up in order by Mr. A. C. Janni, who is consulting engi-neer for the New York Central, and by Mr. A. M. Wolf, principal assistant engineer. fondrom Company, structural engineers. hieago

1. Is it right to consider beams entering vall columns as continuous or partially contimuons?

2. Should the effect of eccentric loading on columns be considered?

3. If a beam enters a wall column and is considered to be continuous or partially continuous, what effect does it have upon the eccentric loading of the columns?

If a column is avowedly eccentrically loaded and no provision for this is made in the design, should we consider entering beams as freely supported or consider them as continuous or partially continuous because of the monolithic nature of the construction?

then finds a new position of equilibrium extending its tensile action behind the vertical lines of supports.

The dotted line in the figure below should represent the diagram of shear. Incidentally it may be seen that the maximum actual shear is smaller than the theoretical one.

As said before, a designer, in assuming the hypothesis of the continuity of a beam entering a wall column, should take care first of the amount of shear shown by the diagram BEFG, and afterwards satisfy himself whether or not the remaining part of the allowable adherence is enough to withstand the moment due to the fixed end assumption.

Mechanical devices such as deformed bars, hooked ends properly made, etc., are, in a general way, good means of insuring the fixedness of that part of the reinforcement of the beam on the supports, while the vertical re-inforcement of the column passing through the supported and of the beam ensures its quasi-rigid connection.

Similar remarks may be made regarding the assumption of a partially continuous beam.

2. The effect of eccentric loading columns is an important condition of equali brium, which should be investigated by the

designer.

A column with eccentric loading is under the action of axial compression and bending; and specially for long spans carrying heavy live loads the compressive maximum stress may reach important values, the tensile stress in the steel doing likewise.

3. A wall column being a column rigidly

connected with the wall, no matter what the assumption of the beam entering the wall column may be, it has no appreciable effect upon the column itself.

In connection, however, with the idea of a beam and its supports, there is a certain point in the design of a beam entering a column or a wall column, which is often overlooked by some designers; the point referred to is the investigation of stresses upon the support of a heam, arising out of the various assumptions made concerning the supported end of it, or, in other words, out of the reaction of the support.

A few words on this subject may not be

amiss.

Let Fig. 2 represent the case of a beam with a supported free end, and Fig. 3 the case of a beam with a supported fixed end. The distribution of the compression upon the support P, in Fig. 2, which is indeterminate, should be assumed, for the sake of safety, to vary according to a straight line, as shown in Fig. 4, the maximum compression fc being **by**:

 $fc = 2 \frac{R}{b \cdot d}$ 

where R = total reaction, b = width of beam, d = length of the supported end of heam.

The case shown in Fig. 3 is never fully realised in practice; but the investigation of the stresses upon the support P should always

be made.

This case may be represented as in Fig. 5. the reaction R being a compression and M

the moment.

The diagrams to which each of these re actions give place are shown in Fig. 5; AB being the diagram due to the vertical reaction R (compression) and CD being the diagram due to the moment M.

Adding those two diagrams together, the total diagram EF is obtained, which gives the maximum fc, the value of which can be

given also by the expression:

$$fc = \frac{1}{b \times d} \mathbf{R} + 6 \frac{\mathbf{M}}{d}$$

where the letters have the same meaning as above.

4. A column, which, being eccentrically loaded, has been designed disregarding such condition of loading, is a deflective unit of construction, the conditions of equilibrium of which can hardly be improved by assumptions regarding the beams supported by it.

The assumption of a freely supported beam while it is rightly made for the sake of safety, with respect to the beam itself, cannot be upheld with respect to its support, especially when this support is a column whose re-inforcements extends vertically through the end of the beam and above it.

The prevented movement of the supported end of the beam during its deflection gives place to a moment, no matter whether or not the designer in his assumption took care of

Even if the reinforcement of the column does not extend in the beam end and above it (which would be mother serious mis-take), the friction between the top of the column and the bottom of the supported end of the heam is such that it would tend to deflect the column toward the span, during the deflection of the beam.

In either case, therefore, a bending moment is developed at the top of the column, which should have been taken care

of.

The other two assumptions, namely, continuous and partially continuous beams, which are more proper for a beam entering a column, while they would result in economy, would not improve the conditions of the equilibrium of the column. By Mr. Wolf.

In the writer's opinion it is right and proper to consider beams entering wall columns as continuous or partially so, the degree of continuity depending mainly upon the number of spans in the building parallel to the beam in question, the reinforcement of beam and the size and location of column, that is, whether the latter is in an upper or a lower story.

The degree of continuity to assume in beams east monolithic with columns is dependent upon so many conditions that exact tuies are

umpossible of taranulation.

For example, a beam may be built mono-lithe with a wall column, but so little steel provided for negative moment at the column that when loaded the beam cracks at the top and the continuity is entirely destroyed, and the beam becomes practically a simple span. It is apparent, then, that to have continuous action steel must be provided in the top of the beam to care for the stresses developed. Just how to arrive at the amount of reinforcement necessary is a subject regarding which much has been written, and as a result we have some bending moment formulas covering average conditions and which give safe results, and have been used to a considerable extent, and, in addition, are recommended by the Joint Committee. These are  $Mwl^2/12$  at centre and at support for interior spans truly contamons, and for end spans,  $Mwl^2/10$ , at centre and adjoining support of end spans for both dead and live load under favourable conditions of fixity. For beams and slabs continuous moment is usually taken as wti/8 at central support and  $wl^2/10$  near middle of -pan. (These moments, of course, being for uniformly distributed loads.)

A beam is said to be fixed at both ends when the tangent to the elastic curve is horizontal over each support. Now, a beam framing into a large lower story exterior column which is relatively very stiff and unvielding will, if properly temforced, be very nearly fixed, and it is evident that if steel is provided for a moment of 1/10 wt over the supports and the centre the construction will be safe, for a coefficient of 1/12 applies to a fixed beam, and 1/8 to a simple beam, 1/10 being an average

of the two coefficients.

Taking the opposite case of a slender top story exterior column supporting a roof beam, it is evident that the conditions are by no means so favourable for continuous action, for more or less hending is sure to take place in the column, and the conditions of support approach those of a simple beam. For this reason, then, little or no continuous action should be depended upon in exterior beams of raif construction where light columns are used. Here again the judgment of the de-signer must be used in determ uing just what moment coefficient to use.

Some designers argue against reinforcing a continuous beam over the support for the full negative moment in accordance with the fornullas given above, which are for beams with constant moment of mertia, for the reason that the negative moment can be reduced by making the beam stiffer in the middle, or, in other words, designing for an increased hend ing moment at the centre and a reduced moment over the supports. It has been generally accepted, however, from studies by Santord E. Thompson and others, that it is in general unecommical to design concrete beam stiffer in the middle than over Sametimes, in order to comply the support. Sometimes, in order to comply with city building ordinances, it is necessary. in order to economise as much as possible, to design beams which tend to act as continuous for a lesser moment over the support than at the centre, as called for by ordinance, thus making allowance for the increased stiffness of the beam at the centre. Thus, for in stance, it by ordinance a moment of wt 8 is specified at mid-span for continuous beams, the steel over the support should ho 6/10 of that at centre to have the beam act as somewhat continuous, and, at the same time, be as economical as possible in the use of steel. This practice is often followed. use of steel. This practice is often followed, loft truly continuous action is not obtained, even if the safety of the structure is not endangered. For truly continuous action to develop, it is necessary that the member be designed for the maximum theoretical.

At a meeting of the town cannot for Mark borough, four candidates for the office of horough, four candidates for the office of horough surveyor and inspector of nuisances to Hartshorne and Seals Rural District Council, was elected.

moment which occurs ever the supplied uniform loading, and for a number of you throoms spans in formal which it solling the spans of the by the above formula is placed over the sigport, the steer will be overstrested cracks will tend to develop.

Some harding ordinances and been to practice by stating that the some of the centre moment and that over support should be 1,6 kHz, and that at least sufficient size, to fulfil the requirements of a nominity perto 1.18 u/ sha, he had over the vigg Such recommendation between the support encoding commenced in the specific state of the support encoderated commenced in the support pagency of normalists contained the matter seems has the real treatment of the fact, more fainty she support in the traced to this practice than to any other

cause.

It does not require much dominated a to prove that contain uses a ties cannot be obtained by using a centre moment of  $1.9 \text{ m}^{1/2}$  and a moment of  $1.18 \text{ m}^{1/2}$  over the support (as the total moment of  $1.6 \text{ m}^{1/2}$  requires. The (as the total moment of 1 6 mt requires). Presuch a case the steel over the rapper's will be greatly overstressed, and cracks will occur over the supports, and the beau approach the condition of a simple beau, provided, of course, that the ends are supported Firstly, it can be said that it is impossible to obtain and distributions. any desired distribution at centre and supports by the simple variation of reinforcement. The laws of mechanics govern these things, not the whims and disires of the

The effect of eccentric loading on columns should be considered, but to arrive at a mathematically correct solution of the problem is practically impossible, on account of the number of variables which must necessarily be considered. Ordinarily, in buildings where the extent of the live load severy definite it will generally be found satisfied. factory to reduce the unit stress in exterior columns to, say, \( \frac{2}{3} \) of the average unit stress used for interior columns, depending upon the type of construction, for to compute the stresses due to eccentricity for the great variety of conditions of loading which might ocenr is not justifiable. In structures in which a definite condition of live load is to be maintained at all times the effect of eccentricity should be carefully looked into. The lest treatment of the subject of exect. tric loading considerations on columns, in the writer's opinion, is found in "Reinforced Concrete Design," by Faber and Bowie.

When a beam centres a wall column and is considered to be continuous or partially so, the result is that additional bending is thrown into the column, or, in other words, the eccentricity is increased, and privious should be made therefor in the design of the

column.

In regard to the last question, the has practically been answered in the for 2002. If a beam is considered as freely suggested and designed as such (there is no rainforcement placed in top of supports, the contribution columns will not be so great as a tricity on columns will not be so great as if the beam is lesigned as continuous, or partially so. Therefore, if no provision is to be made in column to care for the bead ig due to eccentricity, the beam should not be designed as continuous or ten dy continuous at the support. It is, the ever, is not good or economical design, for it would probably, in most cases, not not to more steel to design beams as cert to as and to strengthen the columns at the arc for the eccentric load imposed, that to design the beams as simply supported at 1 arc strengthen the columns. Religious decided as a mosoluthic or continuous, and therefore, crone, from 18 very 1450re, 19638 in monolithic or continuous, and therefore, wherever possible, advantage should be taken of this characteristic, for this is the distur-guishing mark of the most advantal refe-forced concrete lesign

At a meeting of the town cannot for Mar

#### THE PANAMA-PACIFIC INTER-NATIONAL EXPOSITION, SAN FRAN C18CO.

The vast exhibit palaces, which contain the vast exhibit paraces, which contains more than 400,000 displays, are being eagerly inspected by the visitors. From the thunder-ing Palace of Machinery, with its giant engines, pumping plants, dynamos, printing presses, and Linotype machines in action, through the vast Palace of Transportation. where the earliest types of locomotives con-trast with the Great Mogul engines of the present day, where sections of large oceanic liners are seen in contrast with tiny models into the great Palace of Agriculture, where threshing machines. harvesting machines. reapers, sowers, are beheld in operation, into the Palace of Food Products.

Wherever practicable, machinery is shown in operation, and all steps in the processes of production are illustrated A giant laundry, operated by latest methods, a knitting machine, a broom factory, a fire liose factory, a coin-stamping machine are among the many operating plants in the Palace of Manufactures.

There are upon the grounds no less than fitty tour moving picture shows, wherein are daily displayed, without charge, in the exhibit palaces and in State and national pavilions well selected and attractive scenes revealing the activities of the various states and countries. Lectures accompany many of the displays, and the visitor is enabled to enjoy scenes from Argentine, China, Japan, the Philippines, the Netherlands, Cuba, Sweden, and forty-three other lands, while cinematographs of important works, such as the Panama Canal, the New York State Lock Canal, the manufactories of the great corporations of the United States are displayed without charge.

The free pyrotechnics as night, which ar part of the spectacular illumination of the Exposition, draw thousands of visitors to cha-marina upon the shore of San Francisco harmarina upon the shore of the same hour. Here thunder and lightning are simulated with a vividly realistic effect, and a grant battery of forty-eight searchlight projectors, with 2.600,000,000 candle power, the wishaits of coloured light upon great jets of steam or clouds of smoke liberated high in the heavens. The brilliant shafts are visible at a distance of sixty miles from the Exposition grounds. Here thunder and lightning are simu-

In the Persian exhibit in the Palace of Manufactures many bits of old pottery, paces of ancient armour, silver briefa brief, and woven rigs are on exhibition. In the Royal pottery collection are 150 pieces with a total value of not less than a quarter of a million dollars. This in Jules the celebrated Bowl of Contemplation, 9.0 years old, and one that of Contemplation, 9.9 years old, and one that could not be hip cated by any collector. The famous Possible school of weaving and embroidery. There are velvels, brocades, and cashineres of every century from the minth to the fixefith. There is the cloth of gold of the Adam. Eve, the tree of life, the cypress, and the apple, a rare bit of embroidery that has been sought by every collector in the world, but with still r mains in the possession of the Shah of Person. The Royal rug of camel's wool that has been used but once each year during the past two centuries, during the Royal reception, is on exhibition.

The Balkan States, which, in their strug-gles for independence, have been the centre goes or independence, have been the centre about which have evolved many interna-tional conflicts, display a collection of gar-ments, hand wover and ambroil red by the Bulkan massaits. Plant. ments, hand woven and embroid red by the Bulkan persants. There are numerous examples of decorative art, including many curbs and fabrics made by the children in the Royal School of Roumana, as well as a set of table dishes and glass ware used 100 years (20 at State dinners). The famous Prince Starza actually used many of these houself, and it is said that the glass ware is of a find that has never been duplicated, or even successfully imitated. There is a hammered silver set that was used by the Bulgar an royal fundles.

bile parts, textiles, portery, and the like Located in the Palace of Manufactures is the Dickens china ware, bearing characteristic Dickens scenes, with excerpts from the Royal Dirulton ware and Devon pottery, bits of bric-à-brac, jars, vases, lamps,

and jasper ware are displayed.

In the Italian Pavilion, in the Italian section of the Palace of Varied Industries, and in the Palace of Manufactures is a display of one of the two finest collections of laces in the world. There is a point de Venice tablecloth of the fourteenth century, valued at 15,000 dols.; a Burano lace scart of the thirteenth century, with a foundation of tulle and a border of Rosselina lace; and a teacloth of the seventeenth century, repre-senting Raffael's painting of the Twelve Hours in point de Venice and filet; a small Hours in point de Venice and filet; a small lace cushion top, about 20 by 30 ins., depicts Botticelli's 'Spring,' and is valued at 400 dols. Another beautiful teacloth represents Guido Reni's 'Aurora.' In addition, Italy displays many valuable bronzes, marbles, specimens of carved furniture, painted velvets, silks, hats, musical instruments, motorars wines and food products. A large and cars, wines, and food products. A large and beautiful collection of modern Italian sculptures by many of the foremost sculptors of the day is displayed in the Palace of Manu factures. These include the famous statue Christ Emerging from the Pagan Temple. by Professor Raffaelo Romanelli; "The Fountain with the Frog." by the same sculptor; "Napoleon at Moscow," by Professor Vanetti; "The Pompeiian Girl and Algerian Girl." "Maternal Love," and other striking groups. The beautiful Italian pavilions, which won the grand prix for foreign pavilions at the Exposition, is always crowded with eager and enthusiastic sight seers. In the pavilion, which is in reality not one but eight interconnecting structures grouped around Italian courts, one finds the architecture of typical cities at the height of the Italian Renaissance.

Switzerland, which, although a neutral nation, has 350,000 men in arms guarding her borders, exhibits the chief watchmaking companies of the Republic, as also hundreds of displays illustrating the household hand-crafts. The Berner Woodcarvers' Association of Marrigen has an exhibit of the wares which the Swiss, in their winter nights, have learned to execute.

The displays of the Scandinavian nations, Norway, Sweden, and Denmark, are shown in a pavilion in characteristic architecture. The art exhibit of Norway occupies five rooms devoted to painting and sculpture, and two rooms to graphic art. The Norwegian Pavilion is filled with dioramas and panorams portraying the scenic charms of the country, the northern fiords, the lofty spruce-clad mountains, the fishing industry; and there are many models of ships of the fleet of merchant steamers which carry the traffic of the kingdom. Duplicates in miniature of ancient war craft used by the berserkers of early days and ancient galleys

Another European display of extraordinary Another European display of extraordinary interest is that of the French Republic. This is largely portrayed in the French National Pavilion, although France has made an elaborate display of art works in the exhibit palaces, including the Palace of Fine Arts, and is notably represented with her wines, her machinery, and laces in the Palace of Mannfactures. One of the in-teresting exhibits in the latter palace is a new type of rapid firing gun now employed by the Legions of France. In the French Pavilion are many priceless relics and an-tiques, as well as displays of modern com-mercial art, the latter including remarkable exhibits of life-size models, draped in the latest Parisian fashions. Included in the French display are models of the famous Freuch dolls, priceless Gobelin tapestries of Louis XIV., relies of Rochambeau, Lafay-ette, Balzac, Victor Hugo, and other Freuch ette, Balzac, Victor Hugo, and orner connected to the four great tapestries which, with many modern tapestries, are in the Pavilion belong to a suite of eleven, the car toons for which were the works of Le Brun, Bulgar an royal fundles

The substantial English representation at the Exposition includes machinery, automotif Louis XIV. They were made between

the years 1668 and 1683, and represent different scenes in the life of Alexander the Great, the conquests of the wild tribes of Asia being the theme of the scenes, a theme which lends itself to graphic portrayal because of the slaves, elephants, and mighty, though crude, implements of war employed at that time.

In the Netherlands Pavilion, with its giant towers rising far into the air and surmounted by many flagstaffs, fishing scenes in Holland are reproduced in panoramas and dioramas, Models of railway cars, of steamships, displays of tin and rubber and sugar from the Netherlands' opulent possessions in the East Indies, together with illuminated dioramic scenes with alcoves, from which the sight-seer may gaze down upon apparently distant fields dotted with tiny factories, great irrigation flumes: while nearer, as though npon the edge of some frowning cliff, is seen the tropic foliage of the country, and further away rise the lofty mountains indented by ricefields that rise like steps in terraces up their precipitous sides. One is here borne into a far country, into the Orient of spices, of rich mines, and vast plantations, with all

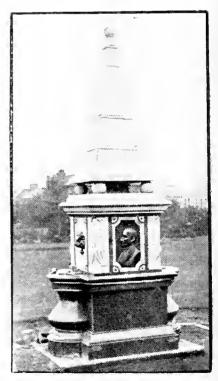
or men imnes, and vast plantations, with an its fascination and strange life.

Portugal is represented by an attractive pavilion: and Belgium, through the cooperation of France, has a great section entirely its own in the French national pavilion. Spain is represented with many priceless paintings and works of art, and in the commercial section by her wines, tapestries, and

valuable antiques.

# THE DEWAR MEMORIAL DRINKING FOUNTAIN. PORTOBELLO.

Last week (on page 309) we gave some particulars of this memorial to Dr. Dewar, which has just been erected in the Abercorn



Gardens. Portobello, from the design of Mr. T. Currie Bell. Synod Hall. Castle Terrace, Edinburgh. We now give a view of the monument, which is carried out in grey Aberdeen granite, and has a height of 14 ft.

#### ---RIVINGTON'S NOTES ON BUILDING CONSTRICTION.\*

No text-book of our time has so deservedly enjoyed so continuously the high position at once taken by it when the first edition of this manual first appeared, some forty years since. It exactly met its purpose, which was to help students preparing for the examination in building construction held by the Board of Trade at South Kensington.

but its popularity, through that and many | subsequent editions, among architects, builders, and the various members of the architects. trades interested has been unequalled.

Naturally, after the lapse of ten years, during which changes in building construction have revolutionized methods of construction it was felt that more than mere revision was needed to bring the work up to date.

Under the editorship of Mr. W. Nobbe
Twelvetrees, therefore, the whole has been re-written by well-known architects and others. New chapters on Building Regulaothers. New chapters on Building Regula-tions, Damp and Sound-Resisting Construc-tion, Steel Skeleton Buildings, Reinforced Concrete and Brickwork, Concrete Blocks, and Fire-Resisting Construction have been introduced, and an appendix contains selected examination questions from papers set by the B.I.B.A. and other educational There are 484 illustrations. bodies.

Part 1. contains eighteen chapters devoted subjects demanding attention before a building is commenced, and to forms of con struction by means of which structures of different types are carried up from foundation to roof level. Part H. deals first with roofs and then with various branches of domestic engineering and sanitary equipment.

The subject matter is no longer based on a single course of study, but "a purely logical sequence" is followed in arranging the order of the subjects treated. Mr. Reginald Blom-field, R.A., contributes an introduction, in which, while emphasizing the value of practical knowledge, he points out that such a foundation, though indispensable, is only part of an architect's training, and that the student must never forget that architecture must include in its purpose the appeal to the imagination and the sesthetic sense

The list of contributors includes Mr. W. E. Riley, the superintending architect to the London County Council: Mr. W. Douglas Caröe; Mr. Brook Kitchin, the architect to the Local Government Board; Mr. H. V. Lanchester, Professor Beresford P.te, Mr. Herbert Phillips Fletcher, Mr. Matt Garbutt, Mr. W. Kaye Parry, Mr. A. W. S. Cross, and others.

#### THE NEW PARLIAMENT BUILDINGS FOR MANITOBA.

The Royal Commission appointed to investigate the charges made in regard to the new Parliament buildings at Winnipeg for Manitoba issued an important interim report on August 24. The buildings were erected Manitoba issued an important merini reput on August 24. The buildings were erected from plans by Mr. F. W. Simon, of Liverpool, in conjunction with Mr. Boddington, and in July, 1913, the contract was let to Messrs. Thomas Kelly and Sons. In July last an allegation that the contractors conspired with members of the late Government to obtain over-payments was the subject of an action brought before Chief Justice Mathers by the Attorney-General, and led to the appointment of a Royal Commission, with Chief Justice Mathers as Chairman, the other members being Sir Hugh John Macdonald and Judge D. A. Macdonald. The interim findings of the Commission were made public on the 25th ult. The Commission unanimously found that there was a "fraudulent scheme or con-spiracy" entered into prior to the letting of the contract, and that the scheme or conspiracy was formed for the purpose of getting a campaign fund out of extras on the contract. The report names Thomas Kelly, George R. Coldwell, and Sir Rodmond Roblin as partners to the scheme in its inception, and states that "at least some of Kelly's sons," Dr. R. M. Simpson, V. W. Horwood, James H. Howden, ex-Attorney General, and Dr. W. H. Montague, ex-Minister of Works, later on became parties to and acquiesced in the plot. The Commission further found that Thomas Kelly was fraudulently overpaid \$892 098 10c., that steel contracts were inflated, and that the caisson foundations should have cost less than the piles for which they were substituted. The Commission state that they find all of the charges made by the Hon. A. B. Hudson on the floor of the Legislative Chamber, and in the memorial presented to the Lightenant Courser, base presented to the Lieutenant-Governor, have been fully proven. In connection with con-nivance in a scheme for keeping a witness

named William Salt on holiday" in the United States, the Commission names George United States, the Commission names vising R. Coldwell, V. W. Horwood (Provincial Architect), Ir. R. M. Sampson, James H. Howden (Attorney General), W. A. Ellhott (Chief Inspector of Buildings), M. G. Hook, and Harry W. Whitla, K.C. The report is and Harry W. Whitla, K.C. The report is particularly drastic with regard to James H. flowden, whom it accuses of making many untrue statements under oath with regard to marge statements under oath with regard to various sums of money involved in his testimony. It finds that he helped G. R. Coldwell to raise \$10,000 to keep William Salt away from Winnipeg For the \$24,000 expended on Salt's Winnipeg For the \$24,000 expended on Salt's blobday. Dr. R. M. Sanpson was the finan cial ageir.

to the contractors, the Commission find that Thomas Kelly and Sons were informed of certain contemplated changes in the plans be fore tenders were due. That the tender put in by the Peter Lyall Company, being the only one received by the Department of Public Works on July 2, 1913, within the time advertised, was on that day either shown to Thomas Kelly, or its contents were made known to him, and on the following day a tender was received from Kelly's firm for \$3,250 less than the Lyall tender. All the circumstances point to Sir Rodmond Roblin as the person through whom or by whose authority Thomas Kelly obtained the advance knowledge of the Lyall tender schemi

That a frauditient conspiracy formed before the tract was entered into to obtain from the extras an election fund was afterwards continued and carried out. For this purpose Dr. R. M. Simpson, V. W. Horwood, the provincial architect, and, at least, some of the other members of Thomas Kelly and Sons be other members of thomas New participants in carrying it out, in addition to those by whom the original conspiracy was formed. There the original conspiracy was formed. There is no direct evidence that J. H. Howden, the Attorney-General, was a party to the conspiracy at its inception, but his subsequent conduct convinces us that he early became a party to it. We believe that Dr. Montague, for some time after be became Minister of Public Works, did not become a party to the fraudulent scheme entered into by his colleagues, but that he was informed of its ex istence and purpose by Dr. Simpson in January or February, 1914, and that he then became a party to it." The Commission conhecame a party to it. The Commission contime that they find that the contractors. Thomas Kelly and Sons, were paid by the Government five sums of money amounting to a total of \$892,098 10c.; that in three of these cases, the north wing steel contract for \$331,100, the south wing grillage for \$215,000, and the superstructure steel for a southern central portion and dome for \$802,650, Sir Rodmond Roblin and Kelly and Sons well knew that prices were inflated by the inclusion therein of large sums for an election fund, while there had been no plans prepared for the dome and no honest estimate of the steel required could be made. Further, "That Sir Rodmond Roblin and Montagne, some time after October 18. 1914, and before January 1, 1915, fearing the consequences which might result from the discovery of the aforesaid \$802,650 contract. destroyed the Order in Council passed on July 4, 1914, authorising the execution of said contract and the several copies thereof, together with the said contract and every proof and record known to them by which its exist ence could be traced. That Dr. Montague agreed with the contractors, Thomas Kelly and Sons, to recoup them out of the dome con struction to the extent of \$75,000, at least, for the loss they sustained in the destruction of he destroyed contract, and that he sent Mr Horwood to Chicago in company with Thomas Kelly to airinge with Mr. to increase the weight of steel in the dome, plans then being prepared by him to the exent necessary to accomplish this purpose hat Mr. Horwood did so arrange with tent necessary to accompan this purpose; that Mr. Horwood did so arrange with Mr. Shankland, who did increase the weight of the steel as required. That the steel plans for the dome prepared by E. C. Shankland were overloaded to the extent of 407 tons, representing a possible overpayment to the contractors of upwards of \$20,000. That the Government agreed to pay extent of 467 tons, representing a possible overpayment to the contractors of upwards of \$30,000. That the Government agreed to pay the said E. C. Shankland five per cent, on the take place at Golder's Green to-morrow contract price of the dome to be erected from (Thursday).

his pains, and in December 25, 1914, paid him \$15,000 on acount. This was more than double what his remuneration would have double what his remuneration would have been, based upon the necessary tonnage of steel in dome at reasonable ten prices. That during the session of the Public Accounts Committee in March, 1915, W. A. Elliott, the thier inspector, at the request of V. W. Horwood, certified the yurdage of concrete on the last three applications for payment in respect of the caissons, and William Salt, also at Horwood's remest, aboved to records of at Horwood's request, altered his records of the depth of the caissons for the purpose in each case of deceiving the said committee. each case of deceiving the said committee, and that in each case Mr. Horwood acted on the instructions of Mr. Co.dwell. That when Mr. Horwood and Mr. Coldwell found that William Salt would not falsely swear to the accuracy of the said altered depths of the caissons, he was by them sent out of the province beyond the by them sent out of the previous beyond the reach of the said committee, and was paid large sums to remain beyond the jurisdiction of your Commissioners.—Finally, the Com-mission find that after giving the contractors credit for all work done and the value of materials on the site and or stell tabil cated but not delivered until the work was stopped in May last, the said contractors were overpaid to the extent of \$701,035,59.

The preliminary investigation as to charges of conspiracy against Sir R. Rob, a and Messrs. Montagne, Howden, and Coldwell, ex-Cabinet Ministers, opened at White peg on Friday. Mr. Horwood, the provin ready. Mr. Horwood, the provincial architect, stated that Mr. Coldwell told him to be guided by Dr. R. M. Simpson, president of the Conservative Party, so that a campaign fund might be raised from the money expended on the new Parliament He gave details of amounts which were added to various contracts, aggregating six figures, and he declared that Dr. Same son dictated the sums needed.

The work of construction at the Parliament buildings has been resumed under the direct supervision of Mr. F. W. Simon, F.R.I.B.A., Liverpool, whose plans were successful in the competition, but who was not allowed to take charge by the late Government.

#### ---OBITUARY.

The death took place, suddenly, on Saturday, of Mr. George Grey, of Milfield, Wooler, a well-known north country land agent. He was born at Milfield in 1851, and cated abroad and at Cheltenham College. The late Mr. Grey had the oversight of many large estates, including those of Earl Grey, the Marquis of Waterford, the Hon. F. W. Lambton. Sir F. D. Blake, and the trustees of the Blackett Ord Estates. He was a justice of the peace for Northumberland, having been appointed in 1886, and was chair man for many years of Glendale Board of Guardians and of Glendale Rural District Council. He was a member of the Northumberland County Council for the first six years after its institution.

We regret to announce the death, at the We regret to announce the death, at the comparatively early age of 44, of Mr. Graham Nicholas, F.R.I.B.A., of Pilgrim House, High Street, Lymington, Mr. Nicholas, who joined the Royal Institute of British Archivery, 1770 tects as a Fellow in 1906, passed away at his residence on Sunday week after a long ill His remains were cremated at Woking ness. His remains on Wednesday last.

on Wednesday last.

Mr. Philip Arthur Cawte Wilkinson,
L.R.I.B.A., of Craven House, Kingsway,
W.C., died very suddenly early on Monday
morning at the flat he occupied at 64, Glencester Place, Baker Street, W. Mr. Wilkinson,
who was 52 years of age and unmarried,
was the third son of the Late Mr. Ph.lip
Wilkinson, F.P.J.P.A. of Prop. 11, 101. who was 52 years of age and numarried, was the third son of the Lite Mr. Philip Wilkinson, F.R.I.B.A., of Grenville Place N.W., with whom, after having served his articles with Messrs, Wimperis and Arber he was associated in practice for many years in Lincoln's Inn Fields. His practice lay chiefly in domestic with and in surveying. He had been a member of the Architectural Association since 1884, and joined the Royal Testic

#### Our Illustrations.

BOARDROOM CANADIANBANK OF COMMERCE: HEAD OFFICE AND BANKING ROOM, UNION BANK OF CANADA. TORONTO, ONT.

These two notable commercial buildings erected in Toronto are excellent examples of the work designed by Mr. Frank Darling, F.R.I B.A. Royal Gold Medallist, 1915), and carried out by Messrs. Frank Darling and John A. Pearson, the well-known architects, of Toronto. We selected this pair of photographs now reproduced from the series of views placed at our disposal by Mr. Darling on the occasion of their exhibition at the Royal Institute of British Architects a short time since, when the Royal Gold Medal was presented to him in recognition of his ability and for the high character of his buildings The top picture on the accompanying plate Ellustrates the Board-room of the Canadian Bank of Commerce, Head Office, Toronto, The oak panelling, which lines the apartment, was carried out by Messrs. J. C. Scott and Co., and the decorations were done by Messrs. Jos. McCausland and Son, both firms being in Toronto. The lower photograph she interior of the Banking room of the The lower photograph shows the Bank of Canada, Toronto. Messrs. Wright and Co. executed the ornamental plastering. The bronze work was furnished by the Architectural Bronze and Iron Works, Toronto, and the Lautz Company of that city were employed for the marble work. All the executants belong to Toronto. cutants belong to Toronto.

#### " PEMBURY RIDGE," PEMBURY. KENT.

The views we publish show the entrance and garden fronts of a simple country house planned to give comfortable rooms and easy service. It was designed by Mr. W. Henry

White, F.R.I.B.A., of No. 14A, Cavendish Place, Cavendish Square, London, W., and the building is now being erected by Messrs. G. and F. Penn, builders, of Pembury, Tun-bridge Wells. The ground-floor story is finished on the outside with white rough-east, and the upper story is hung with red sand-faced tiles, the roof also being covered with similar tiles. The gardens have been laid out to the architect's designs.

#### A MOSQUE DOORWAY, CAIRO.

With regard to the drawing of the Mosque Doorway, Cairo, I am sorry I am unable to give any particulars of the mosque-except that it is near the old city gate, known as the Bab Zuweilah, and is one of the lesser of the many Carrene mosques. It is typical of a great many dooways, colour being used freely in the shape of tiles, mosaics, and different marbles. It is still used, and has been kept in very good repair by the "Comité de Con-servation des Monuments de l'Art Arabe." The drawing is a lithograph done on transfer paper from one of my water-colours, and after the drawing was on the stone some further work was done upon it.

W. J. Palmer-Jones.

CHURCH OF ST. MICHAEL AND ST GEORGE, HESWALL, CHESHIRE.

The site for this church is on the crest of a hill stoping steeply towards the east, and advantage has been taken of this to place the vestries, church-room, and some class-rooms beneath the eastern portion of the church. The plan has been arranged on the passage aisle principle, with a wide nave and chancel (32 ft.) and a side chapel. The altar will be in view of practically the whole congregation. There is no chancel arch, but the junction of the chancel and nave is marked by wider piers, with niches for statues of baint Michael and Saint George. It is proposed to erect the eastern portion of the church first, but not until peace is declared. The walls are to be

of local red sandstone, the roofs covered with grey Welsh slates, and the floors paved with oak blocks. The drawing was hung at the Royal Academy. Mr. R. T. Beckett, of Chester, is the architect.

# THE OLD MILL HOUSE, FITTLE-WORTH, SUSSEX.

The Old Mill at Fittleworth is well known to artists, its quiet grey stone walls and simple shape harmonising with the twin bridges near by. The accompanying drawing was in this year's Royal Academy exhibition. The Mill House itself and its adjacent cottages were marred by more modern additions and by the sheds and stables which were the necessary if ugly adjuncts of the various activities of the owner. When two or three years ago the Mill became the property of the late Sir Frederick Mirrielees it was decided to re-front the Mill House, to alter its internal arrangements somewhat, and to add to the accommodation. The modern brick front was replaced with a simple front of Pitbingdean stone. A large hall with covered way and porch were planned to link the house and cottages in one composition. The narrow central staircase was removed to make way for a long living room in the old front of the house, and replaced by a wide circular stair with solid oak winding steps and a solid brick newel. This staircase is placed in the angle between the hall and living room, and opens into the garden entrance vestibule in the internal angle. The over-hanging upper story of the back part of hall is hung with old tiles of a fine rough surface. The roof has also been covered with old tiles. The chimneys are of narrow bricks and stone. The windows have mullions of Pithingdean stone, with iron casements and leaded lights. The fireplaces are open-hearth fires of very simple design. English oak was used for the moulded beamed ceilings in the living room and hall, as well as for the framing of the roof to of English oak, with moulded boards and square ledges. The general contractor was Mr. Job Euxford, of Forest Row, Sussex. The unnecessary sheds were removed during the progress of the work, and the garden is now being formed with a simple terrace, linking the new lawn to the old garden on the higher ground in rear. The whole forms a group of considerable interest. Mr. L. Rome Guthrie, A.R.I.B.A., is the architect.

# LATE 17TH CENTURY ENGLISH BRICK-WORK FROM A HOUSE AT ENFIELD NOW PULLED DOWN.

This sheet of details was measured and drawn by Mr. Walter W. Hitchins, of Reading University College, from the front of this old building as now rebuilt in the large archi-tectural gallery of the Victoria and Albert Museum. South Kensington. The house formed part of the brick front which was previously a celebrated school at which the poet John Keats, the composer Edward Holmes, and the writer C. Cowden, were educated. Quite apart, therefore, from its special value as a piece of historic building in brickwork, the composition of the control of the composition of the control of the composition of the co the example is one of particular interest. The bricks are of light red colour and are soft handmade ones set with fine joints. carvings were executed in situ, irrespective of the joint courses. The sections of the mouldings add value to the general elevation of the portal.



"PEMBURY RIDGE," PEMBURY. KENT. Mr. W. HENRY WHITE, F.R.I.B.A., Architect.

Mr. II. Wood, the deputy city engineer of orwich, has received a commission as Norwich, has received a comm lieutenant in the Royal Engineers.

The new Technical College at Doncaster. opened last week, has cost £13,000, and was erected on the site of the old Vicarage from plans by Mr. W. P. Schofield, A.R.I.B.A., Park Row, Leeds. The contractors were Messrs. Paul Rhodes and Co., also of Leeds.

The Church of the Sacred Hearts, Talbot Road, Blackpool, was solemnly opened on Sunday week, after restoration at a cost of £4,000. Other improvements are the enlarge-24,000. Other improvements are the energy ment of the organ gallery, the division of the organ, and a new stained-glass window. The work has been carried out by Messrs, J. Fielding and Sons, of Blackpool.



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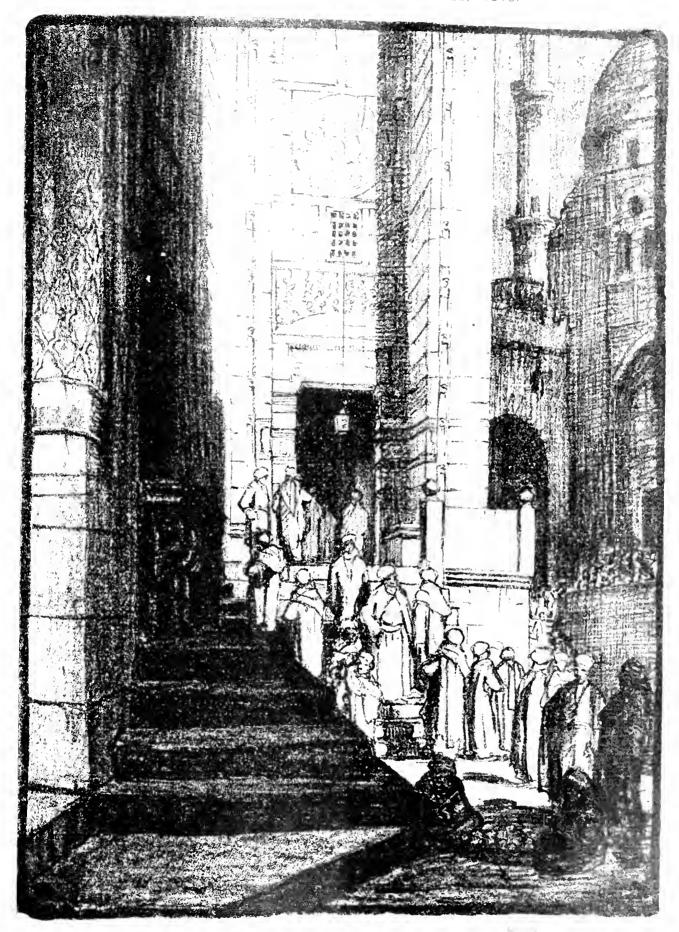
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SEPTEMBER

BUILDING NEWS,

THE

ST. GEORGE, HESWALL, CHESHIRE.—Mr. RICHARD T. BECKETT, Architect. ST. MICHAEL AND CHURCH OF

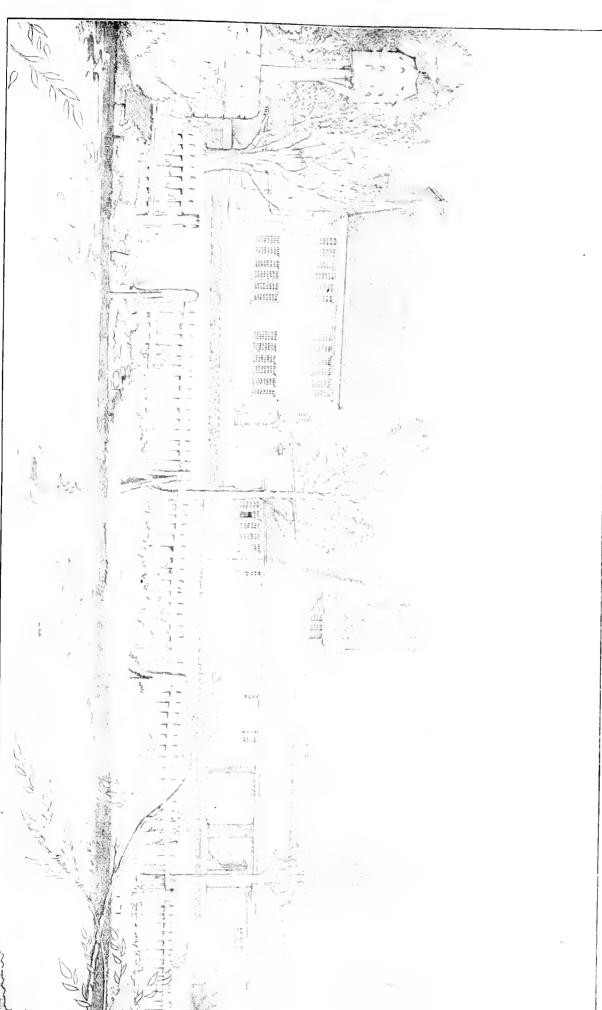


A MOSQUE DOORWAY CAIRO.

A LITHOGRAPH FROM THE ROYAL ACADEMY EXHIBITION, By Mr. W. J. Partille-Jones, Architect.



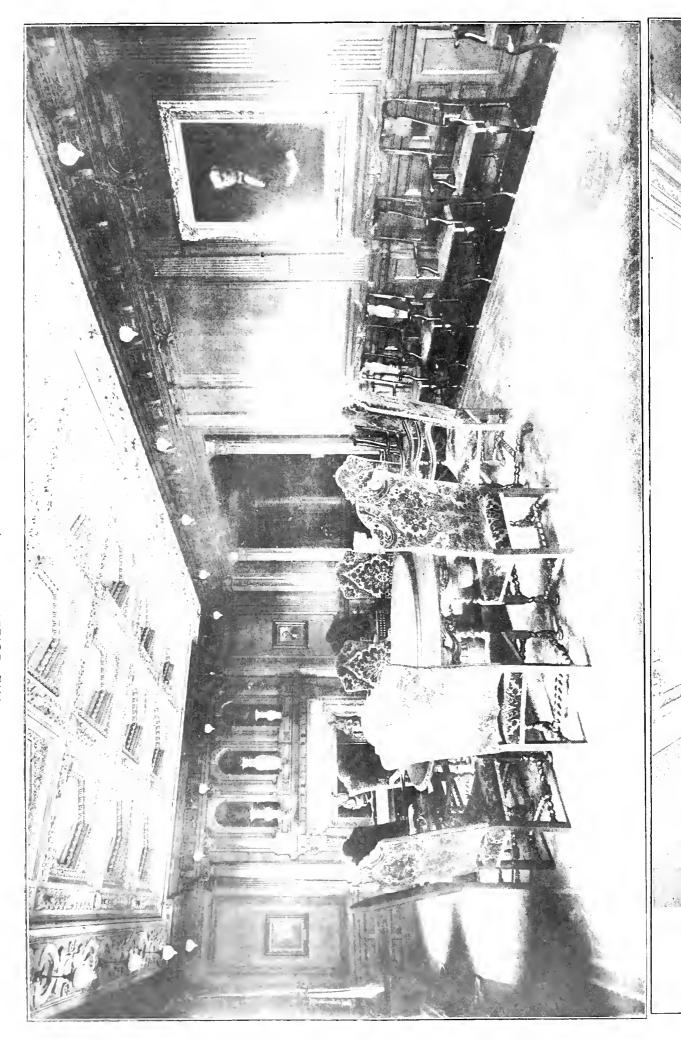
THE BUILDING NEWS, SEPTEMBER 22, 1915.

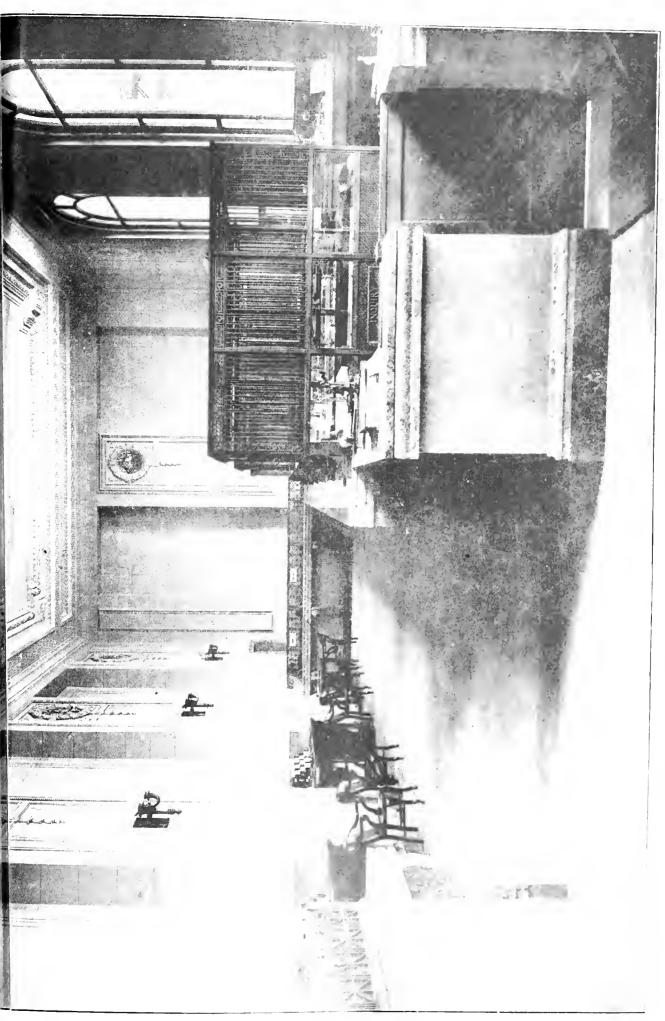


THE OLD MILL HOUSE, FITTLEWORTH, SUSSEX.—Mr. L. Rome Guthrie, A.R.I.B.A., Architect.





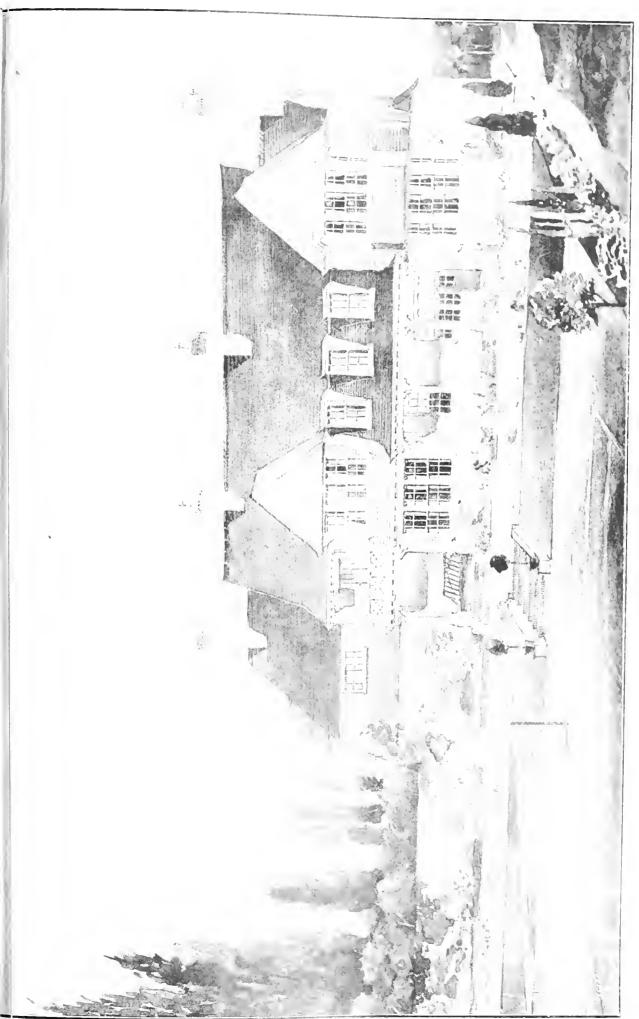








THE BUILDING NEWS, SEPTEMBER 22, 1915.



PEMBERS RIPOLD PEMBERS, NENE M. W. Hook Weed, PREDGA

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# Currente Calamo.

Readers have been acquainted in notes on this page in past numbers of the circumstances with regard to the scandal that has arisen in connection with the contracts for the erection of the New Parliament Buildings for the province of Manitoba at Winniper, of which Mr. F. W. Simon, F.R.I.B.A., was the architect, and whose design was illustrated in our issue of September 22, 1912. As we intimated on this page in our issue of April 30 last a Royal Commission was then appointed to investigate the charges made by the Opposition, and on another page to-day will be found the Royal Commission's interim report. The charges are found to be substantially true, and there is said to have been frand and much overpayment since the contract was let to Thomas Kelly and Sons over three years ago. The overpayments amounted to \$701,093 59c. Unfavonrable inferences are drawn from the actions of G. D. Coldwell, J. H. Howden, Thomas Kelly, V. W. Horwood, Dr. R. M. Simpson, W. A. Elliott, M. G. Hook, and Harry Whitla, K.C. It will also be seen that the preliminary investigation of the charges against three ex-Cabinet Ministers commenced last Friday, and that work has been resumed under the direction of Mr. F. W. Simon.

A change with regard to the contract for the new head offices of the Metropolitan Water Board, in Rosebery Avenue, appears to be contemplated. On the agenda of the meeting held last Friday a Report of the General Purposes Committee appears as follows :- "At the special meeting of the Board held on August 27 last, we presented a report (Board Minutes, page 347) with reference to the contract for the erection of the new head offices in Rosebery Avenue, and recommended, for reasons stated, that notice should be given to determine the contract. Our recommendations were referred back with authority to take connsel's opinion or such other steps as might be necessary to enable us to present a further report. Since that occasion the building contractors and Messrs. Rice and Son, a well-known firm of London builders, have approached us with a suggestion that the contract should be transferred to that firm. If this were agreed to, Messrs. Rice and Son would at once assume control of the works, pay any sums due to the sub-contractors, remove charges on the existing contract, and reorganise the building contract so as to complete the structure within eighteen months from the date of transfer. As, however, Messrs. Rice and Son find that some of the prices in the bills of quantities are unremunerative in the conditions that now prevail and would, in fact, entail a loss, they stipulate that various sums amounting in the aggregate to £4,132 should be added to the contract price of £110,004. The fact that it has been considered desirable to submit the proposed transfer for our consideration confirms the view contained in our last report that the present arrangements are not working satisfactorily. It, therefore, being obvious that a rearrangement is desirable, we are advised by the architect that the Board could not in such circumstances have the building completed otherwise upon is favourable terms as the ones proposed. ınd, after a careful review of all the cirumstances, we recommend them for the Board's acceptance, subject to the immediate xecution by the parties concerned of a formal locument to be prepared by the Board's of campa 2n " amon; householders generally, sculptor and the President of the Royal

solicitor, which, amongs, other things, would contain a suitable indemnity by the new building confractors protecting the Board from claims made by the present contractors or persons claiming through them.

"The proposed addition to the contract price will still leave that sum under the amount, including mahogany, of the second lowest compet (we tender, viz , that of Mr J. Carmichael, in £116,082, and less than Messrs. Rice and Son's competitive tender of £117,659 8s. 8d We have made inquiries as to the status of Messis. Rice and Son, and find them to be a firm of high repute in the London building trade, their senior partner. Mr. F G. R.ce, being a past president of the London Master Builders. Association and president of the Institute of Builders. The Board now hold the sum of £6,040 in respect of retention moneys under the contract Under the terms of the proposed transfer. and subject to the satisfactory completion of the contract, this sum would ustimately become payable to Messrs. Rice and Son, but meanwhile, with additions thereto in respect of future work, would be retained by the Board as security against the assignees of the contract just as it has hitherto been against the present contractors. We have forwarded the necessary estimate to the Finance Committee, and recommend: 'That the estimate of £4,152, to be submitted by the Finance Committee, be approved; that, subject to the solicitor taking all necessary steps for the Board's protection, the Board do assent to the transfer to Messrs. Rice and Son of Messrs. Heath and Son's contract for the erection of the new head offices in Rosebery Avenue, E.C. subject to the terms set out in the foregoing report; and that the seal of the Board he affixed to all documents in the matter requiring the same.' The report of the Finance Committee is to the following effect: The Finance Committee, having considered in its financial bearings the above estimate, submit the same as chargeable to capital account " We are informed, on inquiry, that further consideration of the matter was postponed.

Numerous expedients are being devised by the clerks and surveyors to local authorities to meet the awkward situations evolved by the decision of the Local Government Board and the Treasury to cancel sanctions already granted for executing organtly needed huilding and engineering works. In several cases, notably the police station at Reigate and county conneil offices at Dundalk, the assessors' decisions had been adopted in competitions, in which many architects have fruitlessly expended much labour, time, and money in endeavouring to solve problems, and the successful man has the mortification of learning that the entire enterprise is abandoned "until after the war"; in many others contracts have been entered into with builders. These will involve the councils in considerable and absolutely unremunerative losses, and they will be well advised if they negotiate with the agarieved architects and contractors to make the best terms possible rather than sink more of the ratepayers' money in mitating and always unsatisfactory

The rise in rents in many towns is seriously pressing all Lousedachets. It is, of course, in no small dogres due to the shortage of houses, and, very slightly, to rising rates. Thes was emphasized had week at a meeting held in Manchester to inaugurate a " plan-

situata special comming and Mr. Mo is the ceretary of the Salfert Trades Council, decared emperitorly that is thorisands of cases rents have reen record to contach greater extent than is a removed by the inergy of the edge of the pound," he seek "an increase of a sering a week would cover the landler but the one of a house reado for 5 . Yes an inner every a hoise reaction of the anomalous very case the meaning means a return of 15s and the for about 3s of the anomalous to the control of the control of the control of the control of the rented at 11s of an increase of the control of t he mulmposed in a large sient whereas 3d would be soften. handbord." Thus, for an additional expedifferent and the state of the state of about 11s (6d. ) year of a tree, less than 52s, as personal of the cape Ligher rents. The has to be a member of he added, "that many new soller not shared in war b no -wages, and higher rents, added to the great wages, and nighter rents, added the tree greating increased cost of living, contact needed without much hardshap." It has, added, but the silent sufferers of the professional classes will get little redress while at Government stops building.

At a meeting of the Britley Purish Contactl last Wednesday, Mr. B. Bolam reported that he had been officially informed that a certain firm which was at present erecting large works in the township would in the near future be employing 6,000 workprople, for whom housing accommodation would have to be provided. A Local Government Board inspector had recently visited Birtley, and had stated that at least 500 houses would have to be built almost at once, as a commencement, No builder could think of building houses on a specualtive basis at the present time, as they cost 33 per cent, more than a year ago. He, therefore, moved that they ask the Chester-le-Street Rural District Council to build a reasonable number of houses, for which he had every reason to believe the Local Government Board would provide all nevessary facilities. Mr. A. S. Bolam, in supporting, said a Local Government B and inspector had been at Chester le-Street that day, and he had informed a representative of the Urban Conneil that the Local Government B and would favourably consider the question of lending money for the erection of 500 houses at Chester le Street for this purpose on favourable terms. The resolution was agreed to. So, if the application is granted, and the facts are truly stated, the ratepayers will have to pay the difference between the cost now and that for which, in all probability, private en terprise would have supplied the need had it not been for war and strikes.

The dispute about the Gladstene Memor al site at Elinburgh, to which we reported on this page in our issue of August II, seems still unsettled. At a previous meeting, the town council had agreed to offer a site at Saughton Gardens, but 118th works by a majority of 27 to 11, the more was disapproved of. The Lord Provess 1 in a Lovel that If the Pelmos Sees seed at been selected, with the statue foliagit marsis Princes Street, it would have been been mously accepted. The vey, or in a half disc everything they possibly could. It did to He with the town council to say where the statue was to be put. They had given a site each time it had been asked, and he was quite sure the citizens free I them from any blame. It was entirely the fault of the

s A man, that this statue had big savere is used of an urban site. He and a great dear of trouble in connecthe matter, and he miged them s i Ballie Rose asked where some vas just now, and how much it state cay for lying where it was Led Privest replied that the statue. 12 September of Sr M Matchell ers on was aya g in the Caledonian Rad a year, encludy packed away. No doubt amatter would have to pay demun a reges It had been there for say w The Town Clerk said the or enter to decide was simply als upperval of the unusues.

Ma Leod asked if it was not Gladstee Committee would Street with the Lord Provost: very superative on that. Mr Lorie Mr. Lord So that we are really deter er to statue is to be placed in Programme Treasurer M. Michael asked in the source at a fact that since the district of the resont on the Memorial mustbe of not and rejected the Princes or a opted the Saughton site, id of pumin sated that fact to the Lord of Committee. The Lord Provost: That To asurer M'Michael: Then all we As to 1 - to approve or disapprove of And the majority, as before - Policy amptly disapproved.

So tobers must really be careful. Themas Ress, architect, 6, Cobing Place, Eduleirgh, appeared before Sherift Armour Hannay at Cupar last week, charged with having made a sketch at Burntisland showing Burn't san 't dal harbour, the Firth of Forth. and the vessels lying in the harbour. The Fiscal said accused was a very respectable man, and there was no suggestion that he had made the sketch with any ulterior motive. The seemed to have a great fancy for sketching old castles. Accused said it was purely the beauty of the scene which he was sketching. It was not an architectural drawing. He asked that the sketch, which had heen retained by the police, should be retirn-lichim, as some of the details were the Royal Society for the Preof value : setvation i Ancient Monuments. The Sheriff said is was necessary that a permit should be taken out. One never knew when sket hes might be of value. He had seen that the German aviators flying over the trust of Finand had been much aided by sketches which the Kaiser had made when one a visit to the Tsur. He imposed a modifield hise of 5s , and directed that the sketch should be retirned to accused

By a periter's error last week it was stated on the page that the deposit asked of competitive in the York town planning scheme was ten guineas. It should have been the gainers

At a strate set of a St. Goorg I. Garmon C. at When the rest Strates incorring. Bright of General T. F. Bushe involved two as a range plans the set of certain to the common of the late of near Common ording the first, and the other common ording the first, and versary of the deduction of the course.

The first of the Corporation housing scheme, so that the set 114 houses projected as proceed as a first property of the W. Harput, the city engineer, is soon as the contact of the many schemes, but however, and the contact of the second partial than planning schemes, but however, it is soon as a first and dependent upon a boundary of the contact of

# THE PERCENTAGE OF WATER IN CONCRETE.

In a paper read before the Connecticut Society of Engineers, results are given of a sories of careful tests made to determine the effect of varying the percentage of water in concrete

Although the percentage of water has d rect bearing muon the strength of concrete, at is the exception rather than the rule that the engineer concerns himself with the quesson of mixing beyond seeing that the proper proportions of sand, stone, and cement are used and the contractor is generally allowed to mix these materials as he thinks fit preparing the specimens for his tests, author found it necssary, when making mix of water, to increase the proportions 10 per cent, in order to fill the moulds. This in-dicates an increase in density which was obsamed at a loss of strength. However, in some cases this as highly desirable. Often tained at a loss of strength. bulk and impermeability are the two requisite features. In reinforced concrete structures a moderately wet mixture is far more practhan a dry one; but it must not be facotten that the use of wet mixures increases the cost of materials. An increase in density means a corresponding increase in raw materials. The additional water weakens the concrete, and, therefore, a richer mix ture or lower unit stresses must be used. The corner is preferable, for the beams and columns in concrete building are always heavier chan the corresponding members of steel or wooden structures. If a wet mix ture is used, the engineer should be cautious in permitting the removal of the forms at an early date. In some of the tests the wet mixings were very slow to develop their strength. The use of such consistencies in would necessitate extreme care. It might be a month or more before the forms could be struck with any security. The question of consistency is not altogether a laboratory question. The increased cost of materials due to the use of wet mixtures may balanced by the saving in more than placing; but the engineer should bear mind that consistency has a direct relation to strength, and if he permits a wet mixture he should provide the same in his design.

# SHRINKAGE AND TIME EFFECTS IN REINFORCED CONCRETE.

In the extensive investigations of the properties and behaviour of reinforced concrete that have been made in recent years very little has been done in establishing the effects of loads sustained for long periods of time. This seems the more remarkable in view of the fact that a progressive sagging or cracking has been noticed in many structures. That these changes have not received more attention in the past is probably due to the suspicion of poor construction or Inadequate design that is usually raised at the suggestion of such behaviour, a suspicion unfortunately too often justified.

In the tests cited in a bulletin of the University of Minnesota it has been found that certain changes do take place that are chargeable neither to poor construction nor inadequate design, but rather to the nature of the material itself-its tendency to shrink and yield under load. It is in recognition of the importance of these changes that this bulletin is issued; for, while no attempt is made even to suggest a solution to the problems presented by these shrinkage and time it is felt that the facts presented are oftents of sufficient importance to warrant their pub lication. With materials and mixtures used in these tests it is safe to predict a shrinkage of from three-fourths to one inch or more in 100 ft, when exposed to the ordi-nary dry air of a heated building. The we'ding of the concrete under compressive stress with time, a phenomenon similar to the yielding of ductile metals when stressed beyond the yield point, is greater as the unit stress is greater and seems to go on indefinitely. In these tests the deformation due to yielding was found to be from three

to five times that produced immediately

upon the application of the load.

A few of the possible results that may be looked for where these twin changes are in progress are suggested. The production of cracks in floors, ceilings, and partitions, even though in no sense indicating a structural weakness, is an undesirable feature. And in certain places with some types of structures or details cracks might leave the reinforcement accessible to moisture and thus prove a source of danger. Sagging of the structural framework may cause the hending of doors in positions, a feature that is both expensive and annoying. The tilting of columns by the inequal shrinkage in the different floors might be a source of high bending moments and column stress. But of far more importance than these may be mentioned the two following possible effects, both of which might in certain instance, be of serious consequence:—

First, the continued yielding of the apper fibres of a beam, coupled with the gradual breaking down of the concrete in tension, may result in a progressive destruction of the bond from the centre toward the supports, similar to that occurring with the progressive loading of a beam as shown by Mr. D. A. Abrams (Bulletin 71, University of Illinois). Also the drying-out incident to the large shrinkage movement may assist in this destruction of the bond.

Second, the possibility of high stresses in

Second, the possibility of high stresses in the longitudinal steel of compression members seems to be the most important conclusion to be drawn from these tests. The time yielding of the concrete under stress, combined with the excessive shortening due to shrinkage, may result in deformations from five to fifteen times those expected from the ordinary calculations. In columns of the ordinary ratio of vertical steel in which no allowance has been made for spirals, the resulting steel stress is probably well within the elastic limit, but in those columns designed on the assumption of large loads being carried by the hooping the steel stresses may approach dangerously near the yield point.

Mr. Lionel Williams, of Torquay, has been appointed by the urban district council of Buckfastleigh to the position of surveyor and sanitary inspector.

In the City of London Sheriff's Court on Wednesday, Messrs, T. and A. W. Norris, builders and decorators, Old Street, E.C., were awarded £75 damages against Mr. T. W. Hancock, of Berwick Villa, Langdale Road, Hove, in respect of certain statements which, it was alleged, reflected on the plaintiff's business probity.

A number of paving-stones have arrived at Middlesbrough for shipment to America to be used in repairing the portico at George Washington's old home at Mount Vernon. A committee of ladies from nearly every State in the Union have undertaken to maintain the home of the first President of the Republic, and it was their desire to have the restoration earried out with stones from the quarry at Whitehaven that supplied the original building.

Hutton Castle, Berwickshire, and adjoining properties belonging to Lord Tweedmouth, were offered for sale in Edinburgh on Wednesday by Messrs, Curtis and Henson, of London. The property is 4,615 acres in extent and the rental is £5,006. There was no purchaser for the property as a whole, and it was then offered in six lots. The first lot, comprising Hutton Castle and estate of 162 acres, was sold for £23,000, the name of the purchaser not being disclosed.

An institute provided by the Young Men's Christian Association for the benefit of the men of the Royal Navy and of those employed in the service of the Government at the Royah Naval Base was opened on Friday by Lady Beatty, wife of Vices Admiral Sir David Beatty. The institute is of temporary character, and will be replaced later on by a more substantial building. It has been erected to plans by Licatenant Stewart Kaye, Dunfermline, by Messrs, J. and R. Watson, Edinburgh. The main hall is 135 ft. by 30 ft., and there is a platform at the west end. The building is of timber framing, with weather-boarding outside and lined inside, with red rubberoid roofing. Heating is provided for by the installation of authracite stoves, and the lighting is by electricity.

# Building Intelligence.

DANYCOED.—The Red Cross Hospital, Danycoed, near Swansca, is being prepared for the reception of wounded soldiers. The residence is being adapted for this purpose, and will accommodate, with the addition of open-air wards, sixty five patients. The architect for this work Glendinning Moxham, F.R.I.B.A. Swansea, who has made a special feature in connection with this Red Cross hospital. The outside wards are being adapted either as open-air wards or closed-in wards at a moment's notice, and it is believed that when these wards are complete they will form a model for other military Red Cross hospitals. The work generally is being carried out by Messrs. J. and F. Weaver, contractors.

GALASHIELS .- A well-equipped range of public baths and a public park and children's playground have been presented to the burgh by Mr. and Mrs. A. A. Dickson. The baths (of which Mr. Jehn Hall is the architect) have a trontage to Wilderhaugh of about 80 ft., and are faced with rock-faced red freestone, with a rusticated entrance doorway. The rest of the building is of brick, rough east, with cement. In the plunge bathroom there are six plungs baths, and there is also a spray bathroom with footbath sprays. The swimming pond is situated in a hall 92 it, by 53 ft., the pond itself measuring 75 ft. by 35 ft., and varying in depth from 7 ft. to 3 ft. All the usual appliances are provided-dress ing-boxes, diving ladders, trapeze-ring, springboards, water-shute, polo-posts, etc., the water being steam-heated before entering the pond The other accommodation includes a laundry. with washing-machine, hydro extractor, and drying closets, and office accommodation for the staff. The playground and park, which extend to an acre, are being laid out with a shelter, rockeries, shrubl eries, and with scats, swings, and a seaside sand-pit.

NEWCASTLE-ON-TVNE.—On Saturday Bishop Ormsby dedicated the recent additions to St. Aidan's Church, Newcastle, which include the north and south porches and the lower portion of the tower, forming a bapwhich is carried up to the level of the ringing room floor. A five-light window at the west end and a smaller window on the south side of the tower greatly add to the efficient lightline. the efficient lighting of the church. The new work is in conformity with the rest of the church, of 15th Century type, built with hammer-dressed stone throughout, with ashlar dressings. The church was commenced ashlar dressings. The church was commenced in 1838, and it was dedicated by Bishop Wilberforce on December 15, 1839. The recent work has been carried out in accordance with the original design of the late Mr. W. S. Hicks by the present firm of Messrs. Hicks and Charlewood, architects, of Newcastle. The builder is Mr. G. H. Mauchlen, also of Newcastle.

SHREWSBURY,-At the last meeting of Shrewsbury Town Council the Housing Committee reported on the cost of the Wingfield Gardens housing scheme, and also submitted a new housing scheme to provide 100 houses for the working classes of the borough. The total cost of the first scheme, which provided sixty-three houses, and of which Mr. A. E. Williams was the architect, was £13,616, and, owing to the adoption of the instalment system of repayment, there was a deficiency on the first year of £114. The new scheme submitted is in Castle Fields, and will connect up several streets already in existence. Plans and estimated the streets already in existence. mates prepared by the borough engineer, Mr. A. W. Ward, were submitted by the committee. Provision is made for houses rented at from 4s. 6d. to 7s. 6d. per week. The total cost, including land and sewerage, is set down at £22,030, and it is estimated that there will be a total annual income of £1,300, and after meeting all annual payments there will be a credit balance of £26 7s. 3d. Alderman Deakin, in moving the adoption of the report, said there was very great shortage of houses in the town. Some of the results of that shortage were that rents had gone up, and

hundreds or work at more ere paying more then a quarter of there eggs in tent, and others were living in an amitary dwellings. After some criticism the report was adopted, 

#### LEGAL INTELLIGENCE.

E. J. JONES TRADING AS JONES BROS., OF KENSINGTON A meeting of creditors of Mr. Edward Jones, builder, of Oakwood Court, Kensington, who had traded as Jones Bros., was held at the Court of Bankruptey on September 15. The grees liabilities were stated to be £368,127, and the assets, as valued by the debtor, £65,624 Failure is ascribed to pessure by mortgagers and inability to realise. Mr. F. S. Salaman was appointed trustee. was appointed unstee.

The late Mr. Mel arrice Edward Futt, of Oxford Road, Rending, builder and contractor, h-fr £25,789.

The first completed section of the Church of The first completed section of the Unirch of the Holy Trimity, situated at the junction of Merrylea Road and Broomhall Road, Newlands, Glasgow, has been formally opened. The cost of the portion completed is a little over £7 000.

An altar, creesed in reparation for the outrages committed in Belgium by the German Army, was unveiled on Sainday in St. Saviour's Roman Catholic Church, Lewisham, Is is built of marble, and its construction was superintended by Mr. Claude Kelly, of Oxford Street, W.

At Cheff eduan, on Saturday, a brass was un-yerled an the College Chapel and a life-seze portrait in she College library to the memory portrait in she College literry to the memory of Dr. Edward Adrian Wilson, who perished with Caption Scott in the Authretic expolition. The portrait of the explorer was painted by Mr. Hugh Riviere and linea in this year's Royal Academy.

Mr. A. D. Parham, who has been appointed Works Department of Ceylon, has just commenced his duties, fle will start on the Public Works Department of Ceylon, has just commenced his duties, fle will start on the salary of a district engineer—2300 per animum. The new officer will be an additional assistant to Mr. A. Woodeson, the other assistant being Mr. E. W. Barthalamore. Mr. A. Weodesen, the Mr. E. W. Bartholomew

The Great Northern Railway Company are about to begin the construction of the first secabout to begin the construction of the first ser-tions of their authorised new radway from their transtone branch at Walth in on-the-Wold to their main line at High Dyke, four unless courh of Grantham. The total length of the radway is twelve unless with a branch of one unle. The section to be first undertaken will be that be-tween High Dyke and Stamby.

A new Conneil school has been erected on Crown Road, Dereliam, for elder boys and oirs. The school, which provides accommoda-Crown Road, Detension for the school, which provides accommodation for 200 children, is a red brick structure, having roots covered with red Roman tile. The architect is Mr. J. E. Burton, of Norwich, and the contractor Mr. R. Shanks, of Charteris. The school has been constructed on an open site, and all the classrooms have windows the each facing south.

facing south.

The spleadid new buildings of King's College for Women, Campiden Hill Road, Kensington, are almost ready for the students. They are Early Georgian in style, and are bush of red sand-faced bushs, with Portland coment dressings. The buildings are grouped round a rentral quadrangle, and have cost over £100,000. The architects are Messis, II Percy Adams and Holden, whose plane and deagns were illustrated in our issue of August I, 1915.

were illustrated in our issue of August 1, 1915.

Pioneer-Sergeant W. J. Warman, 7th South
Staffords, formerly a builder and contractor in
Lichfield Street, Walsall, has been killed at
Gallipoli. Quartermaster Sergeant E, Walker
bas written stating that part of the battalion
had got cut off, and Sergeant Warman was
shot dead whilst trying to find his way back to
the British lines. Mr. Warman came to Walsall
from Cardeff, and leaves a walow and four
children, who are now living in Darlaston
Road, Wodnesbury. children, who are Road, Wednesbury.

COMPETITIONS.
HASTINGS NEW ZEALAND I competition for new manager formal estatuted by the corporate of Harris and instituted by the corporate of Haster M.Z., the first promium has been as used to to Messis. Statiley Hill and A. Carlott, architects practise, a that Point in The estimated outlay is £14.7%.

#### STATUES AND MEMORIALS.

STATUES AND MEMORIALS.

KING ELWARD MEMORIAL. At a cong in the Mans on House of the Common the King Elward Memorial Figure Allows Sir Very Steing moderate in 12% Figure 12%. That the fund amount into 2% Figure 12% that the fund amount into 2% Figure 12% and 172,000 and beck expended in 2% Figure 12% and the Corporation of the 8% face. Memorials a public park for the Est Emold I done in the Corporation of the 8% face. Memorials a public park for the Est Emold I done in the appropriate of the internal control of the internal form of the internal form of the processed cost of materials and the second the river wall during the work of the second financials and the second financial and the second financial form of the processed cost of materials and the second financial for the processed cost of the second for extending the processed cost of the year. Alberna ---

#### TRADE NOTES.

Boyle's latest patent "An Pan of vorth-have been applied to the board meeting of the Penicuk Parish Council, Midlotares -> 0 0 -<

East Kerrier Runal Dietrie Conversions appointed Mr. S. T. Moenell, of Historic hy as their surveyor, at a salary of £20, 000120 £10 a year.

The foundation stone of a new Roman Cati-lie school in Holy Sayrour's parish Nelse Lames, has been formally In L. Messis W. Cunson and Son, of Manchester are the end tests. The cost is estimated at £2.5

A because on the first ry and area, test is of the Church of Sr. Barthelomew (for Goldan, Smithfield, will be given on Saturity the ber 9, and repeated on October 10 at 2.7 given. No tickets are required, but a celle (so as a comade to defray the heavy cost of colorady Rahere's tomb from Zeppel a beause

The sewage disposal works belong to be to arban district council of Single as set or rendered more efficient by the costst action a grit tank with a capacity of 25 mooth and other improvements critical control of the first direction of Mr. d. N. Neidels at M. P. S. F. of Bradford, consulting engineer to the lower

The death is announced, at 0 - age of error five, of Mr. Frederick Smardhead ARWS retired), who in the latter half of the retienth century was a well-known painted of figure pactures. He was a frequent synchology to the Royal Academy and the Grosvener G. kery. By a painting in oils he is represented to the Mainchest or Art Gilbery and by die to be the Royal Comwall Institute at Trunco.

At the last meeting of the Irvine and District At the last meeting of the kryme and District Water Board at Kilwinning a letter was read from the Scottish Command agreeing to the terms offered by the Board for a water super to Gailes Camp, and it was remitted to the manager to arrange for the work bettig carrier out at once. The Public Works Lean Board have saretioned a loan of £50,770 to meet the cost of the new filtering plant installation of the pipe from Monnoch to the filters.

the fillowing wash is recommended as effortive waterproofing for eisterns, silos and similar structures. A stock solution is made of 1 ke, 5 lbs alum, and 2 quarts of water. A silos addition is added to a bucket of vitor and 10 lbs, of cement, making a paint ike row time to be applied with a brush. This is a modification of the Sylvester process and depends on the production with a brush in the poles of the concrete of insoluble alum solution of the This is a modification with a brush in the poles of the concrete of insoluble alum solutions.

There has been erected in the "tile" s, is cometery of Lyme Regis an imposite member alto the vicious of the crew of the locally. Formulable, which was tornel of the locally man submarine last January. The memoral, which takes the form of a granite Celtic Cross on three massive bases, stands immediately over the graves of six of the nine men who died from exposure as the result of the gale in which they were buffeted about in their boat for twenty hours after leaving the battleship. There has been erected in the "tile

## Our Office Cable.

At the last meeting of the City Council of B: stella discusse in arcse on a proposition by a member to determine, on December 31, the a memoer to determine, on December 51, the appointment of Mr. Girdlestone, for nearly 1 rty years the docks engineer, as consultative engineer to the Docks Committee, at 275 lpci annum. Mr. Girdlestone, the mover aversel, and is thing to do, as the present docks manager was quite capable to perform has dather; to close the engagement at the end of this year would be, he contended, too generous, as Mr. Girdlestone was appointed in 1878 at \$5.8% and for many years received £1.20% ps. annum. In the course of the debate it was explained that when Mr. Girdlestone received his appointment as part of a scheme if reconstruction recommended by a special committee, he was told that while the committee or the Council had no right to make a life appointment, he might accept the assurance that it was intended to be a lasting one. There were strong complaints that this fact was not disclosed to the Council when the appointment was made, and the explanation did not alter the attitude of many members towards the resolution. An amendment to refer the matter to the Docks Committee to refer the matter to the position was defeated, and when the tesolution was put to the vote it was defeated by the narrow majority of three, the numbers being 21 for and 24

At a recent meeting of the Committee Management of the Dundee Free Library Mr. A. B. Crichton said it was proposed to have an exhibition of the prints secured in connection with the photographic survey which has been completed by the Dundee and East of Scotland Photographic Associa tion of Dandee at the beginning of the twentieth century. The town council, he explained, had advanced about £200 to the plained, had advanced about \$250 to the members of the association who had made the survey. Glasgow was forming such a collection, but they were paying thousands of pounds for it. The Dundee collection of pounds for it. The Dundee collection consisted of about 2,000 prints in duplicate. It was intended to bind the photographs into volumes, one set to be kept in the Charter Room of the Town House and the other in be kept in the Charter  $\mathrm{Room}_{\cdot}$ the Albert Institute. The committee agreed to grant the use of one of the galleries for the free exhibition of the collection, which in years to come will possess great historical

The prospectus of the Manchester Muni-cipal 8 hool of Technology, giving particulars the part or time courses in municipal and sanitary engineering, architecture, and and sanitary engineering, architecture, and building for the ensuing session, has just been published. The principal of the school is Mr. J. C. Maxwell Garnett, M.A., and the vice-principal Mr. J. P. Wrapson, A.B.C.S.L. B.A. M.Sc., and the secretary and registrar Mr. H. Williams, Mr. J. Radcliffe, M.Sc., is the head of the municipal came, M.Sc., is the head of the municipal and sanitary eigeneeting department. Mr. Archibald C. Dierge, M.A., A.R.L.B.A., is the professor of architecture, Mr. J. Lindsay Grant the letter in architecture, and Mr. W. Leessee, M.S.A., the lecturer in build ite constructor. The various courses begin on Monday work, the 27th inst.

The Monobla Tro-Pross, published at Winnipez on August 30, states that a refund of \$9.50 between was received two days not associated by Millian Reportment of iso ( ) A Mandoba Department of Webs for overpayments to contractors made by the late provincial government. An in-testization by the present Minister of Public Works have the accounts for the Agricultural Congression of the estates committee recommended that the corporation should contribute £150 to the purchase of a house in Bootham to expect a round tower on the Abbey wall, probabilities a second for \$3.370 60 cents, and a place of the purchase of cost, and on condition that the property be conveyed to the corporation free of cost, and on condition that they be not requested to pull it that they be not requested to pull it that they be not requested to pull it down for five years, the corporation meanwhile receiving the rents. Companion of the contractors, they have always that in at least one case they declife the extension of the property be conveyed to the planning scheme across of land, of the property of the property of the planning scheme across of land, of the property of the property of the planning scheme across of land, of the property of the property of the planning scheme across of land, of the property of the property of the property of the planning scheme across of land, of the property of the property of the property of the scheme across of land, of the property of the property of the property of the scheme across of land, of the property of the prope

another bill against the Government on a second contract still unsettled.

The city of Winnipeg has just adopted a by-law limiting the height of buildings. Its provisions were formulated by a joint comprovisions were formulated by a joint committee representing a number of organisations, architectural, town planning, real estate, and building, and it was passed without opposition from any quarter. It provides that no building shall exceed one and three towards towards the width of the street, nor quarters times the width of the street, nor in any case be more than 198 ft. high, nor contain more than twelve stories. Cornices, tools and parapets are included in these heights, but the roof may be covered with a roof garden, and pent houses, etc., one story high, set back 20 ft, from the street, may cover 25 per cent, of the roof area. Towers, with restrictions as to area and position, may be 300 tt, high. Winnipeg has three main streets, each 132 ft, wide. On these the amulation of twelve stories would make the ordinary commercial building about 165 ft. high, while for department stores, requiring high ceilings, 198 ft, is allowed for twelve stories, which is only one and one-half times the width of the street. Practically all other streets are 60 ft. wide, so that the rule would give a limit of height of 115 ft. 6 in., or about

A report has just been issued by the United A report has just been issued by the United States Geological Survey showing that the value of brick and tile produced in the United States during the year 1914 was less by \$13,707.935 than the production of 1913, a falling off at the rate of nearly 10 per cent, in one year. The value of common brick production in 1914, above a less are converted. in one year. The value of common brick produced in 1914 shows a loss, as compared to 1913, of \$6,365.233, or more than 11 per cent, in one year. It was the worst year in the recorded history of the department, the records going back to 1903 inclusive. In addition to the drop in the quantity produced, there was a drop in price—the average falling from \$6.20 per thousand in 1913 to 56.12 per thousand in 1914. Face-brick production fell off in value to the extent of about \$324,515 as against 1913. This is a loss of only 3 per cent., and shows that face-brick only 5 per cent, and shows that face-brick withstood the pressure of competition and hard times better than its less aristocratic brother-in-clay. Paving-brick is the only important clay product that increased its output in 1914, the gain being \$362,345, or a little less than 5 per cent, better than 1913. Fire-brick sustained a loss of \$4,199,575. The value of the 1914 output was \$16,427,547, while that of 1913 was \$20,627,122. There will be that of 1913 was \$20,627,122. while that of 1913 was \$20,627,122. This is close to 2) per cent. The diminution is due to the almost complete stagnation of the iron and steel industries during the early months in the year.

11 Fitzmaurice, the British Vice-Consul at Bangkok, reports that the bulk of the cement now imported into Siam comes from Denmark and French Indo-China. Recently, however, a firm at Bangsue, near Banglook, commenced the manufacture of cement, and the annual output of this new works is estimated at 120,000 barrels, or 20,000,000 kilogs, (about 44,092,000 lb.), a quantity very nearly equal to the average importation of cement into Bangkok during the last five years. The British Vice-Consul adds that if this local factory is able to pro-The British Vice-Consul duce the quantity and quality of coment its promoters expect (as to which some doubt is expressed, and at the same time to compete in price with the cheap cement now imported non French Indo-China, the importation of cement into Siam may practically cease to

At the last meeting of the York City Council the estates committee recommended that

would cost another £150 to build up the gable of the adjoining house. That would mean that they would have to spend £300. Alderman Birch seconded. He did not think the house was worth £400, and it was built on land that had probably been pinched. The amendment was defeated by 26 votes to 18, and eventually a picturesque circular tower will be revealed to view.

#### MEETINGS FOR THE ENSUING WEEK

THURSDAY AND FRIDAY.—Iron and Steel Institute,
Autumn Meeting at the Institution
of Civil Engineers, Great George
Street, S.W. 10.30 a.m.
FRIDAY (Sept. 24).—Glasgow Architectural Crafts-

men's Society. Presidential Address by Robert Moon Wright, College Buildings, Glasgow. 7.45 p.m.

Buildings, Glasgow, 7.45 p.m.

Town Planning Institute, Opening Address by Raymond Unwin, F.R.I.B.A., Presidure, 92, Victoria Street, Westminster, 8 p.m.

SMURDAY.—Institution of Municipal and County Engineers, South-Eastern District Meeting at Bognor, Paper on "Bogner Municipal Undertakings," by Oswald A. Bridges, Surveyor, 11.30

a.m. Visits to the various works (new housing scheme, new sea-defence scheme, site of new sewage works, hospital and underground convenience) described in the paper, 3 p.m.

Royal Photographic Society's Exhibition, "Some Village Homes and Cots," by Arthur E. Morton, Suffolk Street Galleries, Haymarket, S.W. s.30 p.m.

Tuesday (Sept. 28).—Royal Photographic Society's

8.30 p.m. .

1. 28)—Royal Photographic Society's Exhibition. "Mont S. Michel, the Abbey of the Archangel and its Seagirt Town," by H. W. Fincham, Suffolk Street Galleries, Haymarket, S.W. 8.30 p.m. TUESDAY (Sept

Mr. Andrew Warren, the borough surveyor of Totnes, having been refused permission to obst by the corporation, has accepted a commission in the Territorial Cadet Corps at Totnes.

Mr. George Ley Pearce Butler has died at his residence, Oaklands, Lichfield Road, Four Oaks, in his 79th year. Mr. Butler was a Darlaston nan, and formerly carried on an extensive business as builder and contractor.

A new pavilion, erected for the accommoda-A new pavilion, erected for the accommodation of scarlet fever patients at the burgh hospital. Motherwell, N.B., at a cost of about £3,600, was formally opened last week. It consists of two wards of ten and twelve beds respectively, with five one-bed side rooms—in all, twenty-seven beds with a space of 2,000 cubic feet for each. The walls have been constructed of carrugated iron on a brick foundation in order to minimise the risk from underground workings.

From returns obtained by the American Rail-From returns obtained by the American Railway Bridge and Building Association, it appears that of fifty-four leading railways in the United States and Canada only thirteen have not made use of reinforced concrete. The unitend of the forty-one systems on which this insterial is employed amounts to 138,784 miles, the reinforced concrete structures in use comprising arch bridges, trestle bridges, arch and box culverts, hollow and solid bridge abutments, bridge piers, decking slabs, retaining walls, and city subways.

One of the recent Canadian developments in the way of builders' hardware is a screwless the way of builders' hardware is a screwless mage, which has two steel projections on each cond. On the end next to the door stop there is a straight steel projection that enters the wood, and on the other end of the hinge there is a clamp projection that enters the door exising. These projections or hooks counteract and offer the same resisting and holding force that the screw offers to the hinges. Besides doing away with the use of nails and screws, the statement is made that it gives the hinge he statement is made that it gives the hinge much neater appearance than those of ordinary construction.

At Grimsby Mr. George L. Pepler, spector of the Local Government Board, has held an inquiry into an application by the rural held an inquiry into an application by the rural district council for sanction to prepare a town-planning scheme to deal with an area of 5,865 acres of land, of which 1,935 acres are under the jurisdiction of the Glanford Brigg Rural District Council. The Earl of Yarborough, the principal landowner affected (2,359 acres), regards the scheme as essential for the proper development of the place. The town clerk of Grimsby said that the corporation was most concerned that proper and adequate road communication should be made between Grimsby and Immingham.

White Besched 2d per feet consextra-THES.

OILS

GLASS (IN CRATES)

### LATEST PRICES.

N.B.-All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

#### TIMBER.

Owing to stoppage of supplies all prices have advanced considerably.

have advanced considerably.	
IRON. Per ton. Per ton.	- 1
Rolled Steel Joists, English£13 10 0 to £13 15 0 Wrought-Iron Girder Plates 13 10 0 ,, 13 12 6	
Steel Girder Plates	
Steel Strip	
Basic Bars	1
Square	1
Do., Staffordshire Crown 14 0 0 ,. 14 10 0 Boiler Plates, Iron—	1
South Staffs 8 0 0 8 15 n	
Best Snedshill	1
Builders' Hoop Iron, for honding, £13 5s. to £13 15s.	}
Ditto galvanised, £20 to £20 los. per ton.  Galvanised Corrugated Sheet Iron—	-
No. 18 to 20. No. 22 to 24.	
No. 18 to 20. No. 22 to 24.  6ft. to 8ft. long, inclusive Per ton. Per ton gauge	ŀ
Best ditto	ĺ
Porton Dorton	
Cast-Iron Columns       £7       7       6 to £9       0       0         Cast-Iron Stanchions       7       7       6       0       £9       0       0	-
Rolled-Iron Fencing Wire 8 15 0 9 5 0	
Rolled-Steel Fencing Wire 7 15 0 ,, 8 0 0 Galvanised 6 5 0 ,, 6 15 0	
Cast-Iron Sash Weights 6 5 0 6 15 0	
Ont Floor Brads	
Galvanised Wire Strand, 7 ply,	
B.B. Drawn Telegraph Wire, Galvanised-	
Galvanised Wire Strand, 7 ply,  14 B, W.G	
Coot.Iron Socket Pines -	
3 in, diumeter	
7 in. to 24 in. (all sizes) 7 7 6 7 12 6	
[Coated with composition, 5s. 0d. per ton extra.	ı
Turned and bored joints, 5s. per ton extra.]	
Iron Per ton.	1
Cold Blast, Lillieshall 137s. Od. to 142s. 6d.	-
Cold Blast, Lillieshall 137s. Od. to 142s. 6d. Hot Blast, ditto 100s. Od. ,, 107s. Od.	
Cold Blast, Lillieshall	
Cold Blast, Lillieshall 137s. 0d. to 142s. 6d. Hot B.ast, ditto 100s. 0d. , 107s. 0d. Wrought-Iron Tabes and Fittings—Discount off Standard Lists f.o.b. (plus 2½ per cent.)—  63? pc. 63? pc. 63? pc.	
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Cold Blast, Lillieshall	

## I BUY **SCRAP METALS**

#### ARTHUR P. COLLINS, Snow Hill, BIRMINGHAM.

Phone: Central 1020. Telegrams. "Metalise, Burningham. Bankers: The National Provincial Bank of England Ltd., Bennett's Hill, Birmingham.

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of Guild Court plans were submitted by Messrs, M. C. Thomson and Co. Ltd., and were approved, for an extension to their factory at Wardmill Works. The additions will comprise a fresh block 90 ft. by 35 ft. The architect is Mr. Hugh Gavin.

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correspondents.

It is particularly requested that all drawings and all communications respecting illustrations or literary matter, books for review, etc., should be addressed to the Editor of the BUIDING NEWS, Effingham House, I. Arundd Street, Strand, W.C., and not to members of the staff by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributions' risks, and the Editor will not undertake to pay for, or be hable for, unsought contributions.

for, unsought contributions.

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Telephone: Gerrard 1221. Telegrams: "Timeserver, Estrand, London."

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Advertisements for the current week must reach the office not later than 3 p.m. on Tuesday. Front page advertisements and afterations or stop orders for serial advertisements must reach the office by first post on Monday to secure attention.

RECLIVED. L. F. Co., Ltd.-W. C. W. H. S. and Son. W. F. S. and Co., Lod. F. L. P., Ltd.-S. H. B. Ltd. W. Bros.-Dr. K.

Posteo Air Zirro. Thanks, no

Acs, if you mean a measured drawing, C. You can see some very good samples of art metal door furname, and all British made, at keye's, 93. High Holborn, W.C.

metal door infrature, and all British made, at Krye's, 93. High Holborn, W.C.

IIN. The best system for your purpose is the simpley led glazing made by Brover and Co., 11d., Whill Road, C.T., Road, N. There is no core, from or putty used with it.

B. (Cheltenham), Illustrations of the arms of the cria's and boroughs of England and Wales are given in a volume of election statistics published by Hobrit (Bean And Son, Fleet Street, E.C.). Minnepal coats of arms, more particularly the modelin ones, are often estimated in artistic, and unfactation. Many have been assumed without official authorisation. A list of the mottoes of municipalities, universities, and City companies is given in Jick's Reference Book, pp. 807-10; but it is meomplete. Among the omissions we observe that of Ipswich.

observe that of Ipswich.

Post 1444 to Vul's Doon.—The interruption of regutur and punctual transac and unavoidable shortage of below in the distributive facilities of the
in we trade is causing much disappointment to
readers of our own and similar pormals. Wherever this is so and difficulty is experienced in
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#### TO ARMS!

#### 4th Baltalion ("Architects") Central London Regiment Volunteers.

Boronts are ingently needed for the Regulars, Territorials, and Volunteers. Intending recrints should apply to Battalion Headquarters, where they will be advised as to the branch of the Service for which they are hest smed.

[KINLES FOR THE WEEK BY LIEUTLNANT-COLONEL A. W. WARDEN.—SPECIAL PARADE

OLONEL A. W. WARDEN.—SPECIAL PARADE Wednesday, 22nd inst., the Corps will parade at nw. 10nH. He dolpratures. Chister House, Leeb ston thee, 8 W., 7 Li to 7.15 and 6.15 to 8.15.

Place, S.W., 7-15 to 7.15 and 6.15 to 8.15, GENERAL PARADE, Scienday, 25th inst., at the new Headquarters, Chesici House, Eiselecton Place, at 3 p.m., DBILLS AND PARADES AND Company - Tuesdays, Muniature Range, Gas Light and tok Companys promises, Montk Street, Westmanster, 5 to 8.30 p.m., Immediays—Sumading at Chester House Seconders from Acting Battalion Signature Sergeant Cheside.

"B" Company—Miniature Range and Company Parades is for "A" Company, See orders at local Headquarters, "tompony—see orders local Headquarters.

Headquarters "Strongenry-See orders local Headquarters, Paydon AA Athletic Ground, Borcham Wood "D" Company -Platnen and Section Dull at Mercer's School, Holborn, "Inesdays and Thursdays, Althorn

SCHOOL OF ARMS.

SCHOOL OF ARMS.

Special note—After date of these orders the School of Arms will be held at new Dr.II H Q.'s. Chester House, Leeleston Place, Westmuster, Instruction in beyond highling, gynnastics, physical drill, beying, and single sticks on Tuesdays from 6 to 8 arms.

#### RECRUIT DRILLS

RECRUIT DRILLS

"A" Company—Chester House, 5.15 and 6.15
Wednesday and Friday.

"B" Company—Dalwich College, Mondays 8 to
10 pcm and Thursdays 6 to 8 pcm.

"C" Company—Boreham Wood and Elstree distinel. He departers AA, Athletic Ground, Borcham
Wood. For full particulars apply to Alan Potter,
for a Coldes, Borcham Wood, Herts

"D" Commany—Mercer's School, Tuesdays and
Thursdays, 6.45 pcm.

"CORRESPONDENCE

Special attention of members is drawn to the fact
that correspondence—should be answered by return.
It this is not attended to the office work of the
Corps is immonsely increased. Enrolment forms of
rew members and all correspondence not referring
to retruiting for the Army or to financial matters
must be addressed to the Adintant, 10, Conduit
Street, W., and regarding recriming for the Army
to the Recruiting Officer at Battahon Headquarters,
old regarding accounts and subscriptions to the Psymeister, W. R. Hughes, 146, Dishwood House, L.C.

By Order,

1 R. CUTHRIE, Adminut
Experiment Battaton Headquarters

STREEDN STREEL MESTMINSTER, 8 W.

EXPLATION HEADQUARTERS.

18. TUFION STREET, WESTMINSTER, S.W.

The opening meeting of the twentieth session Fire opening meeting of the twentien session, if the G'eg on Vichitectical Crestianen's Society will be held at the Royal Technical College, Glasgow on Friday evening at 7.45 p.m., when Mr. Robert Moor Wright will deliver his presidential address.

#### Olivers' Seasoned Hardwoods.

APPLY TO-

WM, OLIVER & SONS, Itd., 120, Bunhill Row, London, E.C.

#### TENDERS.

\*.\* Correspondents would in all cases oblige by giving the addresses of the parties tendering—at any rate, of the accepted tender: it adds to the value of the information.

(Accepted; seven tenders received)

For flooring materials at same bindings:— King and Scarborough . . . £212 0 0 (Accepted) five tenders received .

(Accepted; Ave tenders received:

Burnes, S.W.—For the supply of wrought-iron
unclimable fenency at Barnes reservor, for the
Metropolitian Water Board:—

Bayliss, Joines and Bayliss,

Ltd. (accepted ..., 6274-17-6

BEDLINGTON.—For the supply and erection of a
steam pumping engine, Hantord Mill pumping station, for the Bedlingtonshire Urban District Coun-

Evans, J., and Co., Ltd., Culwell Works,
Wolverhampton caccepted).

PHFEST.—For providing a covered way from
nurses' home to the paython at the institution.
Demmarg, for the tuberculous committee. Messrs,
Kaye, Parry, and Boss, architects:—

M'Kenna and Sons (accepted) ... 2247 10 0

BETHAUL GREEN, N.E.—For the supply of electric
lamps, for the guardians. Accepted tenders:—

Metal-filament lamps:

Pope's Electric Lamp Co., Ltd. 700 at
1s. 3'd, each.

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FINSBIRY, E.C.—For installing heating apparatus t the Winehester Street School, for the London at the Wincheste County Council —

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HARRIMATE.—For repairs to roof at the winter gar-ers for the town council— Stendard Patent Glazing Co., Howsbury (accepted) . . . . £4:0-16 2

HILLHELD, N.B.—For alterations and repairs to welling-house. Mr. W. Davidson, Ellon, architect. Hilberto, N.B.—For alterations at dwelding-house. Mr. W. Davidson, Ell Accepted tenders:—

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LONDON, E.C.—For constructing an external iron starrense to the crypt at the Guildhall, for the City Corporation:—

925 0 0

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

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about this matter, as all will agree who have visited the devastated districts in London everybody knows of but nobody must mention. The first idea that presents itself in the way of protection against aerial bombs takes the form of herizontal strata of steel netting. In diagram Fig. 1 are

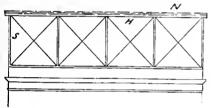
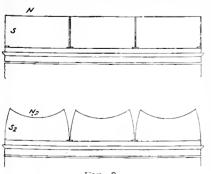


Fig. 1.

stanchions, S, carrying beams. H, that support several layers of steel lattice, N. A suitable bearing upon copings, etc., must be found for a sole-plate, the stanchions riveted and bolted up, with, say, dia-gonal strutting as indicated. The netting offers a more or less elastic reception to a falling body. The possible methods of resisting impact seem to resolve themselves into the armour-plate method, the elastic netting, and the earthworks system, as used in defence against gun and rifle. To meet mere impact the principle of elastic reception seems sound. A man may jump from the roof of the Crystal Palace into a net—we have ourselves witnessed the feat—and receive no hurt. The stanchions rig. 1 are assumed to be rigid, and the netting firmly held, but this latter might conceivably be loosely held and so offer an



increased "give" to any falling mass; and the idea suggests itself (Fig. 2) that in place of rigid stanchions such might be arranged to yield somewhat, as diagrammatically indicated, so that the original position of stanchions S, holding netting N, might on impacting force assume posi-

... 550 Let of Competitions Open ... 567 List of Tenders Open THE PROTECTION OF BUILDINGS trons such as S. N. Somewhat similarly, the netting N. Fig. 3, stretched over the secretarily time to think seriously rollers, R.R. in the frame, F. is kept taut by springs, SS, and on impact of mass at No the netting gives much as in the case of the acrobat jumping from a height into a rope net. Again, following the elastic idea, in Fig. 3, the assumed bomb-proof platform, B, is directly supported by helical springs. If H, descending with gradually increased resistance, as in licated at B., on impact of fulling mass. In this last example of elastic reception for a falling body the impact is met in a manner very similar to that in which recoil

forces are absorbed in modern guns. The next idea is associated with the principle on which military earthworks are constructed. The employment of earth or sand in sufficient layer is an obvious recourse, and must be esteemed one of the most practical. The projectile is arrested by a braking action, gradually—if we magnify infinitesimals for easier mental conception of what occurs per short time

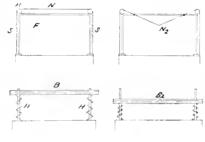


FIG. 3.

interval—compacting the earth and in part lesing energy by conversion into vibration and agitation among earthy particles. Fig 4 shows two rews of sand bags. S. supported by strong steel mesh or netting, N If the top of a building has many and varied excres rences, as suggested in the diagram, such a bomb-resisting platform would need to be raised up on stanchions, much as indicated, finding suitable bearing on copings, etc., and, in this case, a considerable weight of sand would have to be provided for. stanchions are secured to suitable longitudinal bearers, or sole plates, and diagonally strutted, with beams care suitable strong steel mesh or lattice. beams carrying

However interesting it may be to specilate or special clustic systems of receiving falling bodies, such an arrangement ing falling bodies, such an irrangement as sketched in diagram Fig. 4 strikes one as practical. In providing such a protective covering for a building, the points of support for stanchions would have to be carefully selected, and the whole designed to support the dead load of sand, etc., and an assumed force.

Strand, W.C.

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OUT ILLUSTEATIONS OUP HALUSTEATIONS

The Lidter Reom, "Da y Chronich or Licturer the United New paper, I refed Meser to Regnide Fattew, A ETBA or S. R. Turner, Architect.

Soam Mediclien and Travelling Student hip Systems in Italy Interior of Sinta Minarco Florence, and the Villa di Papa Guille, Bone in Varioda, Architect Drawn by Mr. Abek G. Horsnell, Soams Medillist and Tite Prizemain of The New House? Arribe Gardens, Campden Hell, W. View and Pan. Mr. H. M. Eletcher M.A. Contab, P.E.F.B.A., Architect.

Overway, Tillord, Surrey, View and Jean. Mr. H. M. Fletcher, M.A. Cantab, F.E.F.B.A., Architect.

Overway, Tillord, Surrey, View and Jean. Mr. H. M. Fletcher, M.A. Cantab, F.E.F.B.A. Architect.

\* Overwey: Tillord, Surrey, view and pewer of H. M. Pletcher, M. Velantab, F. B. I. B. V. Velin teet.

William and Mary Hautbors. From Fritzen Mahor, Baibary, Ovon, and other pieces of Old Lughish Furniture drawn by Mr. W. J. W. J.

of impact. The stanchions, plates, beams, etc., would be riveted and helted up so as to form a suitable framing to receive one or more layers of strong steel lattice.
On these general lines Fig. 5 is a sug-

gestion for a bomb-protecting covering for a theatre. Stanchions are carried on suitable sole-plates on the copings, etc.,

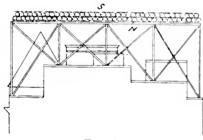
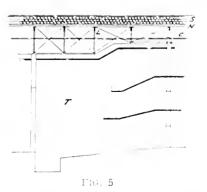


FIG. 4.

and lattice girders, L. suggest themselves to bridge over at right angles to the line of section as taken to represent, in diagram, the theatre auditorium, T. The girders and beams, it is suggested, would uphold one or more layers of stout steel netting, N, to carry a sufficient depth of sandbag defence, S, against impact. Sand is a cheap material to provide for the purpose. At somewhat greater cest, but well repaid by its many advantages, we should suggest slag-wood, the fire-resisting product of waste from blast furnaces. Quite incombustible, it presents a means of resisting fire outbreak. Where saidbags are provided for receiving impact, they should have some adequate protection from rain, in order that the material may not be washed away. Although in the sketches shown in Figs 4 and 5 the



s, we, used, it r that the energy-absorbing a sort an process le inv lved

the tracker have reviewed and determined all sails at special devices for mg. Side the proof platforms, it would want to the most practical idea is to simplest; and this seems to be acceptant to suitable steel posts. and this supported a layer of steel tottings upon which rests the slag-wor er sail is defence. In arranging for so, help to two roof overing, the first release to ascertain the points leave a carrying the plants are the the carrying the platform, and as possible distribute the y means of careful placing of we get by means of careful placify of satural streets of a part 2 of satural streets in must be absolutely to reserve must be as nearly to produce as possible and, in passing, the idea of an matic water spray or "sprinklers," as used to too quenching installations. might prive useful, any impact up in the plact rin at one crusing with to be distributed freely over the bomb resisting straing, and, assuming a partial supture i the first line of defence, a further layer r layers of stee lattice might form a kind of subsidiary debas catcher. Where a strong concrete flat root exists at suggests assect that such maght be covered deeply a sand or s'agewell and some way alove this possibly, a plain but strong stratum if s'el meshing. If we accept the principle of earthworks defence, as sisted by a measure of elasticity, as the simplest, in a suitable, and most effective means it arresting an acrial bomb. resisting explosive force, and quenching possible fire atbreak, the mere protection against impact is a question for expects who would be able to lay down the need ful strength and depth and details of pro-tession in the general assumption of a mass is certain assumed weight falling under the constant accelerating force of gravity is r an assumed number of seconds From these data an estimate of the needful strength in the steel construction and nott nice all be made.

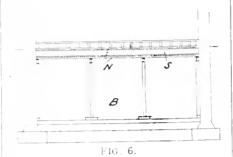
Ender this general system of bomb-proofing buildings, the standhion constructhen would estrong and rigid, well field, stayed, and signification it seems essential that the base supporting the slag-wool or and should hold intage under any impaisive force that might be comnumicated to the beams by way of the strata of the soul - and fire-resisting material. That the platform itself, carrying the netting and the fireproof energy-absorbing material, might be sustained by some form of clastic straints seems a possible improvement; but it would appear esential that the main steel framework, necessary, no doubt, as a rule, to carry the bomb proof platferm above the various upper features of a building, should be of such strength as to remain intact under all stress and circumstance. It is conceivable, possibly, that a defence might be designed to suffer, designedly, a certain distorion the partial wrecking of the defence saying the object to be defended. A bicyclist, having a "spill," and anxiously examining his machine for damage, may take heart if he discovers that the handle-bar is turned round in its which the an eventuality generally means no damage to the bicyclet for the reason that the force of impact is absorted in the work of turning round the harlf our against a considerable friction. tional resistance. Again, as bearing upon the same ilea some years back a tional paistance. transference.

Transference.

It is a likely through a slate roof entressystical below. He received little injury conditions to look at the posi-santary inspector for Aberfeldy.

tun a ancher light, holded not injure the greener occause his impact was mainly a sorrow in smashing the roof. It would be preferable to suffer the destruction of a detente it by so doing we saved the build-

The individual is advised to resort to the tasement. He might reinforce his the rasement. He might reinforce his basement premises. Fig. 6 shows a stratum of slag-wool, S, between light neurica. N, and held up by one or more livers of strong steel lattice, sustained by sina he stall joists and stanchions wedged



up from the asement floor, B; and, in Fig. 7, we are thinking of a fre-preof thear courtain. S. unrolled from drim D. over roller, R. and shielding a whole hous-front, or over windows, as 5; but musmuch as brick walls stop scattered deans, it seems to result that any nervous houseowner might put isolated window servins, S. as protecting vital parts, and effect all that any such general curtain as a might accomplish. After reviewing the various theories above put forward, it would seem that all that might be necessary can be accomplished with slag-wool and steel netting. Discarding as not obviously adaptable or practical purely elastic means of bomb-catching, we arrive at the conclusion that stout steel framings carrying strong steel lattice covered with slag-wood are practical means of protection. We need the right kind of steel

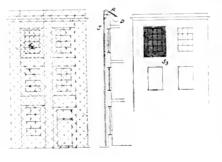


FIG. 7.

netting and the right kind of slag-wool, a material hable to variation in quality. The first requisite is that it should absolutely from combustible elements McNeill's slag-wool is a suitable material of the highest repute, perfectly incombustible, and peculiarly adapted for the The slag-wool is lightly present duty. compacted and sustained over voids by very strong steel lattice. From the suspended steel netting we gain elasticity; from the slag-wool that condensing and packing action characteristic of bullet-Stopping in earth; so that the combination is most excellently suited for the reception and absorption of impulsive force while, moreover, slag-wool is the bestknown protection against fire and heat ticansference.

DUTCH PHOTOGRAPHS CAMERA CLUB.

A select and very interesting collection or photographs by members of the Netherlandsche Chub, brought together by the secretary, Mr. F. L. Verster, of Amsterdam, is on view at the Camera Club, 17, John Street, Adelphi, W.C. The subjects are varied-ill-lighted courtyards. Old Amsterdam (no fewer than seven exhibits are shown under this title), peasant girls and women with white headdresses and ample petticoats and skirts, maids at work in scrupulously clean kitchens, tulips and roses, farmyards, canals and fields, all provide topics. One of the best pictures is No. 3, a gum bichromate by J. Zeegers, a courtyard opening into a narrow line in Amsterdam, which has the effect of a fine photogravure. No. 1. "Veere," shows a fourteenth-century village church with stumpy western tower finished with a flat cupola; in front of this is an irregular line of grey cottages, and on the common in the foreground are a woman and children, their faces turned from the camera in natural attitudes. "The Shepherdess," No. 4. by Adrian Boer, is a woman with a couple of milch goats in an avenue reminiscent of Hobbema's masterpiece in Trafalgar Square. The same artist photographer shows some clever gam prints of rural landscapes in Nos. 12, 14 and 16. Rembrandtesque effects of illumination of a single feature in an Amsterdam street by a street gas-lamp are obtained by J. Huysen in Nos. 9 and 10, who dexterously manages to evade the technical difficulty of the intense glare of newly fallen snow on readways and roofs in his No. 5. "A Dutch Village. A well-composed picture is "Refugees." No. 15, a gum print by 1. S. Weinberg. Crouching beside a rvined house in the rain a woman tightly holds her child, while far to the right, across a desolate flat landscape, is seen the tower of a village church. A similar subject has been selected by H. Berssenbrugge in "Brabant." Here the velvet-like texture of the brickwork in the cottage sets off the impressionist character of the fields to the right. Of the three costume portraits by R. Polak. Nos. 20, 21 and 22. the best is the first-named, the head of a woman wearing an elaborate white linen cap and gophered ruff of Elizabethan dimensions, and pearl pendant. Two bromoils of "Bruges," by J. Huysen, Nos. 27 and 44, give unfamiliar aspects of the city, and an attractive bromoil by B. Zweers, No. 31, one of two in Rome by this photographer, is a felicitous rendering of the "Porta Maggiore." Of the kitchen interiors by G. C. Kooyker, No. 39. a servant girl ironing, is the best; near by is "Washing Day," No. 34, by A. B. Slier, who, in No. 35. "Old Amersfoort," makes a taking picture of the church steeple of that stagnant old-world town on the Eem. Among the still life photographs, each as direct, clear and well-defined as the drawings in a botani-cal guide, are "Double Tulips," No. 2, cal guide, are "Double Tulips," No. 2, by J. Zeegers, and "Leaves," No. 45, by G. C. Kooyker. The exhibition, which will well repay a visit, will be open every day from 11 till 5 until October 23.

H.M. the King, as Emperor of India, has made a permanent loan to the Victoria Memorial Building at Calcutta, built from the designs of Sir William Emerson, past-prethe designs of Sir William Emerson, past-president, R.I.B.A., two of his Oriental oil paintings of great value and interest, the subject of one being "Shah Zameen, King of Oude, Receiving Tribute," painted by Robert Hone, and the other "Nawab Walazah Mahomed Ali of Arcot," by G. Willison. The dimensions of these works of art are 96 by 62 and 95 by 57 inches respectively. The pictures are expectively to agriculty ways shortly. by 57 inches respectively. The pictures are pected to arrive in Calcuta very shortly.

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MONT S. MICHEL, THE ABBEY 038 THE ARCHANGEL, AND ITS SEA GIRT TOWN.

At the Royal Photographic Society's Exhibition in the gallery of the Royal Society of British Artists, in Suffolk Street, Haymarket, S.W., yesterday (Tuesday) evening an interesting lecture on the abbey and town of Mont S. Michel,\* on the eastern vergo of the Normandy coast, was given by Mr. H. W. Fincham. The chair was occupied by Mr. A. Harbort Light, E.P. S. The gold. W. Fincham. The chair was occupied by Mr. A. Herbert Lisett, F.R.P.S. The address was illustrated by one hundred and twenty admin able slides from photographs, taken by the lecturer, by special permission of M. Enlart, on the recommendation of M. Paul Gout, the Government architect to the fabric.

Robert Louis Stevenson said :- "Mankind was never so happily inspired as when it made a cathedral. . . . Tis the best preacher a cathedral. . . . Tis the best preacher itself, and preaches day and night; not only telling you of man's art and aspirations in the but convicting your own soul of ardent sympathies, or rather like all good preachers. it sets you preaching to yourself and every man is his own doctor of divinity in the last resort." To-night I want to show you some photographs I have made and tell you something about one of the most picturesque of these sermons in stone—Mont S. Michel, the Abbey of the Archangel. And while I show you some pictures of its varying aspect from the beat. from the bay, I will give you a very brief account of its history. It stands in the great bay of Cancale off the coats of Normandy and Brittany, and is easily reached by crossing from Southampton in one of the fine hoats of the London and South-Western Railway to the French port of St. Malo, and thence by rail to Pontorson, where we change on to a light railway, and after a few miles run to the coast we cross the three miles of embankment built over the sand and alight just out-side the fortifications at the foot of the rock. Long before any buildings appeared upon the rock it was known to the Romans, who called it Mors Jovis, standing in the Forest of Scissy, about three miles from the sea. Constant erosion and subsidence with tradition says, an earthquake drove the coast line back until the forest disappeared, and the rock stood alone, surrounded by the sea, which at low tide left bare miles of dangerons quicksand so that the rock became known as Mont S Michel "in periculo maris, or, in peril of the sea. Tradition tells us how, early eighth century, the Archangel appeared to Aubert, the Bishop of Avranches, and ordered him to build a sanctuary on the rock in his honour, and in the autumn of the year 709 the Abbey was started with twelve canons in residence. This original building lasted until 992, when much rebuilding took place, and the Abbey was enlarged. And so through the centuries the Abbey continued to grow, and thousands of pilgrims brought wealth and fame to the monks. Here on the north side we see the face of the rock covered with a Here on the north side little wood, the sole remaining relic of the ancient Forest of Scissy. Towering above i we see the building of the 13th century Towering above it which to this day has been known as "The Marvel." so wonderfully has it grown up Marvel." so wonderfully has it grown up from the rock, and such beautiful halls does it contain. At the foot of the wood we see a little building which covers the well of St Aubert, which until the seventeenth century yielded the only water supply to the Abbey, and was reached from above by a fortified The Abbev buildings themselves were strongly fortified, but as the little town grew at its foot and the aggressive Englishmen were ravishing the neighbouring coast and constantly threatening the Mount, it

the following the continues the continues the following range of the continues the continues the continues the continues the continues the continues the continues the continues and strongly guarded gate the continues and strongly guarded gate the continues Aid so as many enemies, and the following the following the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continues the continu aspect of the rock from a distance, let us take advantage of the low tide to ramble round its foat and examine the faitifications before we enter the town. And at the south west corner we see the Tower of the Windmills, where the abhot ground his corn and kept the main store of the provisions of the moinstery. The array square building was effected as a barrayks, when, the great Revolution maying divisor of the monks, the whole place was turned into a mison. At the place was turned into a prison. At the western point of the rock adjoining the but racks stands the Gabriel Tower, with its many wide monthed embrasines for cannon and a little stone sentry hox, now used as a lighthouse, overhanging the battlements; in lighthouse, overhanging the battlements; in the middle of the tower is a hollow shaft for the purpose of carrying off the fumes of gim powder. And in the deeply shadowed angle of the wall is a strongly guarded little sally port, from which the defenders could issue and take in the rear any enemy attacking the walls. As we turn to the south we come upon the little Chapel of St. Aubert perched high upon a great rock, its only approach being a flight of stone steps from the sandy beach, and entirely inaccessible at high tide When St. Aubert started to build his church upon the summit he was much troubled by great rock too large to remove, and which obstructed the commencement of the work But one day the Archangel appeared in the guise of a little child, and with one lift of his bare foot sent the rock hurtling down to the sands below, and this chapel was built on the top of it in memory of the deed, and possibly to prevent any more such dangerous flights. From the little platform at the top of the steps we are able to look into this miniature chapel. When St. Michael ordered Aubert to build the church on the rock the Bishop expressed considerable reluctance to make a start, and the Archangel, to convince him that it would be dangerous to delay the job, touched him on the head with his finger and made a great hole in his skull. This settled the matter, and the Bishop set to work at once. At Avranches Cathedra' across the bay there is still preserved with great veneration the skull of St. Anbert, and you can see the hole where the Archangel's fin ger entered. The currous thing about it is that however the hole was made it shows clearly that the owner of the skull lived for many years after, for you can distinctly see the thickening of the bone around the edge of the hide as mature tried to repair the damage From the rock of St. Aubert's Chapel we reach the north side of the mount, with its little wood growing down to the water's edge. and looking out across the bay to the north we see another rock somewhat smaller than the Mount known as Tombelaine. As the tide receibs we can walk across the hard sand the bare two miles which separate the rocks. Care must be taken over this walk. for when the tide turns it rushes across the sand with nearvellors speed, the sands become unick, and there is little hope for anyone who should be caucht in this way. But having smoot or canonic in ins way. But having reached the resk we scramble to the summit, and here we find the remains of the fortifications which the English built and used as their headquarters during the many years of the fourteenth and fifteenth centuries when they were trying, without success, to cap ture the Mourt. Returning from Tembe laine, we can the eastern corner of the Mount close to the North Tower, the most pictur close to the Neth Lower, the most facture esque of the many towers which stand at intervals a and the massive wall of the town. All along the too fithe walls you will notice how the Lottlewests are corbelled out, increasing the width of the walk on the walls, and forming what are known as machicela, and forming what we show complete is a slot tions, for between such stone corbel is a slot open above of me which the defenders could pour more I had, boiling oil, café au hit, or any other attractive fluid upon the heads of

~1 .I or the tance. You so how to house one right on to the way who come right on to the war which to many of them forms a peasant premer is four their back dears. Another bit of the virollar killed by the Lower of Loberty and topped by the pleasant little Hotel of the White to with its salesm level with the top of the warm where one can sit at direct and carbot to where ere can sat at dimer and can be wanted where ere can sat at dimer and wanted of the many lights and shades or the research sands, and as the singles deviates the shad well the rock cropping to a research two towers close together. The letter of the King and the Arade Trees. The entire to a stein dwarfed in height by the critical to in stein causeway, which here rock to the exact the Mount 20 ft, above the evol of the sand; which, although it gives a constance as to the Mount, is causing the sand of the king to silt up so rapidly that in a feet rock to Mount will be standing in given he dainstead of heir given the periloit the sear. I understand that the French to crimers have at last recognised this danger, and in have at last recognised this danger, and or tend to remove a portion of the digneral order that the sea may again circulate is got bound

the rock.

And now we have arrived at the outer gate of the town, known as the A ance. At high tide the sea washes right up into this gateway, and one has to enter the town in a boat. On the rocks above a great boulder sticks out in a threatening manner, although it has been so for many centuries. It is called La Gire, and to this day the fishermen of the Mount salute the stone as they go out to sea, and again on their safe return with their catch. Passing through the jate, we turn to see the little guardhouse up the steps, and the embattled wall on the right from which guns could cover the entrunce to the torus. the town. This gateway was closed by a massive oak door, hinged at the top so that when lowered its weight would be a great when lowered its weight would be a great assistance in its defence. On our right as we enter the gate we pass two currents old guns, which are called the Little Mobaels. On June 17, 1454, the English, under the Earl of Somerset and Lord Soiles, with a 000 men attacked the Mount, but after a terrific fight they were driven oft and lobe behind them these two great cannon, of which the Montois are still very proud. By a few yards further on we come to the Borbeau, or Boulevard Gate, the second of the three gates which guard the entrance to the town. Here every visitor, be he pilgt more system. gates which guard the entrance to the town. Here every visitor, be he pligt mere seder, beneath the rank of a Prince of France had to leave all arms he carried before be could approach the last defence of the estrate. This third gate is known as the Gate of the King, and it was very strongly fortified; before it was a meat and drawla lige, and then it had an iron portcullis, which stell hangs in the arch, while above a covered passage had machicolations down when the defenders could pour unpleasing the jate. The most is now filled up, and on a their selection the hoods of these attacking the jate. The ment is now filled up, and on either's leave the hotel buildings of the Poular L Conner v. once kept by the Widow Poulard. It is soft the most popular and expensive house of the last street there are several small and out for tall a hostels still carrying the old sizes of the mildle ages, such as The Syen, The Whote Golden Sword, and The Whote Short. Some of those have the advantage of the design rooms being on the cry wall, end any fother can toss you among the case good as the five which old Midame. For feed was so long famous. Passing through these last gate we enter the only street of the fown, and turn to see the inner side of the great gate, with its guard room above, now used as the Comits guard nom above, now used as the munal School and for the meetings of the town council. On the left is an interesting half timbered house, beneath which is the first llight of steps to the ramparts. And we see

<sup>\*</sup> Illustrations and plans of the Abbey and Mount of S. Michel, by the late Viollet-le-Puc, appeared in the Building News for July 14 and August 4, 1871, and a plan of the Mount, a sketch of entrance to the churchyard, and general view by L. J. Jickson, in our issue of July 25, 1834; a double-page sheet of sketches, by Francis Massy, in that for October 14, 1887; La Grande Porte, a drawing by W. S. Betts (accompanying a description of a visit of the Mount by the Society of Architects Sketching Club), April 8, 1910; the Crypte d'Aquilon, from a photograph, September 23, 1892; measured drawing, photograph, and details of cloisters, June 17, 1910; sketch of a crocket from the cloisters, by A. J. Knott, April 8, 190; and drawing of a leaf capital in the Salle des Chevaliers, by G. A. T. Middleton, September 28, 1906, p. 424.

say and the taxe, wall and a pictur contains and a picture of called the Tourelle of attention to were of the watch, story of the town contains many In the street of the fown contains many referestic, medical houses and hostelries, with the roll signs still projecting across the jath. Apart from the hotels, the only distincts of the seems to be the sale of solveries to the visitors and pilgrims. And hardy of the shops have for centuries continued the sale of beads and shells and other objects of purty to the crowds of strangers who pass between them. During the day in the helidity season there may be four or five the body season mere may be considered vistors, but with the departure of the last from at six o'clock they are nearly many and the latte town of 200 inhabiall good, and the little town of 200 inhabitants is very quiet indeed. What they do in the water I cannot say, for as all the laundry work goes to Pontorson they can't we as a me of the seaside towns are sup posel to do by taking in each other's washing. At the shops sell the pilgrim's badge of a metal scallop shell with a figure of St. Michael upon it; but the principal article nowadays is the picture post ard. As the street climbs the rock it narrows like a deep rayine until one can almost touch both sides at once. There is a little hostel which has at once. There is a little hostel which has hardly changed at all since it was built in the fourteeith century. Its interior is most picturesque, and in the dusk of the even ing you can see perhaps a score of fishermer and women settly remain and women sitting round a long table with basins of "eroute-au pot," while a woman is tossing implettes at an enormous stone fire while a woman lace, with a big fire on the low open hearth. The flakering firelight and the deep, dancing The flickering firelight and the deep, dancing shadows have an effect which is quite Rembrandtesque. The ancient parish church, dedicated to St. Peter, stands halfway up the street, with its chancel carried on an arch properting over the path. It is an interesting old church of the fourteenth century, as discontains some quaint tombs, all carved in the local granite; these are very simple, in character, just the deceased's simple in character, just the deceased's name in bold capitals, with a date, or a chalice and cross standing up about half an inch high, the remaining surface of the stone beirts sunk below. Here also is the Black Madonna that used to be in the crypt of the Abbey Church, the successor of the statue that miraculously escaped the great fire of 1112. A passage under the chancel leads up to the little churchyard, and close by is the house in which lived Tiphane de Rugnenal. the accomplished wife of the great defender of Brittany, Bertrand du Gueselin. This house, although much restored, is very preturesque, and stands in a charming garden perched on a shelf of the rock.

Now we will take a little ramble along the

Now we will take a little ramble along the top of the town wall, and climbing the steps by the Kin, state we pass on to the ramparts, where we can look down into the street, and on the left we see the little Tourelle du Guet, and the steen pitched roof of the Tower of the Arcade still retains its ancient roof and massive tumbers, and the only light comes through the little embrashes and loopholes in the walls. This is a part of the public walk around the walls, and as there is no public lighting of any kind on the rock, it gets very dark in here quite early in the evening. If the visitor takes a walk after dark he is furnished with a paper lantern with a candle in it, which does not help you much as you stumble up and down the many flights of steps which branch off the main street. Here we see the little covered way above the Gate of the King, which hid and throtested the defenders while preparing the molten lead and helling oil which they nouned through the machinelations at their feet on to the attackers of the gate below. All the large towers appear to have been roofed similar to the Tower of the Arcade, and here inside the Great Tower we see the upper it on now here to the sky, but still contain it, a great fireplace round which the guard most have sneat many a carousal on withit wights with the Island of Tombelvine across the bay. You can see the corbels in the walk with a carried the roof timbers, and the walk with a carried the roof timbers, and the walk with a carried the roof timbers, and the walk which carried the roof timbers, and the walk with a carried the roof timbers, and the walk with a carried the roof timbers, and the walk with a carried the roof timbers, and the walk with a carried the roof timbers, and the walk with a carried the roof timbers, and the walk with a carried the roof timbers, and the walk grees and the tell page to the carried the roof timbers and the walk grees and the tell page to the carried the walk grees and the walk grees and the carries of the carried the roof timbers and

Here from the top of the North Tower we look d wn on to the Creat Tower, and the length of wall between, and here we can see the inside and outside of the machicolarous. It you look closely on the path against the will you can see a row of slots, each of which opens straight down the wall between the corbels on the outer side. Here the old houses are built close against the wall, the other side being in the street two or three stories below. High up on the rock we can look down on to the top of the Gabriel Lower, and beyond we see the little river lonesnon, with its granite embankment, running away inland and forming the boundary between Normandy and Brittany. In the old days this river ran round the east side of the rock, and so included Mont S. Michel in Brittany; now that the river has changed its course the Mount stands in Normandy. From another point we look down on to the town with its charming old houses and little gardens wherever they can obtain a foothold on the solid granite of the rock. Every one of the httle gardens is very fully cultivated. and the many granite walls are covered with fruit trees which bear splendidly, owing to their complete protection from the north. And turning we see l'Avancée Gate, with the fishermen's beats awaiting the arrival of the tide. Every cranny of the rock gives a hold to a profusion of wild flowers and shrubs, which cover with glowing colour the warm-toned granite which crops out between. Nestling under the wall of the Abbey is the ancient Anberge, the haunt of the hired soldiers of the middle ages, brought in to soldiers of the middle ages, brought in to assist the monks in their defence of the Mount. The sign of the inn is "La Trui qui File." or, "Sow that Spins," an ancient sign somewhat akin to our "Pig and Whistle." July 4 is the great festival of the coronation of St. Michael, and as the Abbey Church has long been desecrated and unused, a solemn mass is celebrated on a piece of waste ground close to the Abbey piere of waste ground close to the Abbey wall. It is attended by all the clergy for many miles round, and pilgrims come in crowds. At this one there was present the Archbishop of Bourges, with four bishops and some hundreds of priests. After the mass there was a grand procession all round the walls and up the street. The previous night, the eve of the festival, there was another procession after dark, and everyone carried a paper lautern on the end of a stick The effect was most picturesque, with the many banners and long row of swinging lights as the choir and pilgrims marched along singing "Ora pro nobis, bon S Michel." All the hotels were crowded, as each village priest brought with him his old lady housekeeper and several of his most im-portant parishioners, and a curious lot of Norman and Breton peasants they are. On the morning of the festival the most ram shackle old vehicles came across the saids from all directions loaded with peasants from the neighbouring villages all bent on getting a blessing from the great archbishop. The suisse, or bendle, at the head of the proces sines, or header, at the head of the procession is a most geogreous individual in a crimson uniform and golden sword-sash, carrying a silver made and a great golden halberd; then come the choir, with banners of Joan of Arc and St. Michael, incense and candles. The inhabitants of the town decorate their houses with green boughs and flowers. In the little wood on the north side of the rock the ground ivy spreads over the rocks in close grown masses, and this is torn up and hung in the fronts of the houses like curtains. Festoons of flags are hung across the street, and as the procession slowly wends its way up the steep street the whole appearance is very charming. The principal figure is the Archbishop of Bourges. a great personage, and the pilgrims flock to kiss his hand and receive his blessing as he passes by. Turning from the last of the procession as it passes us on the ramparts of the Great Tower, we look up to the Abbey towering high above the houses of the town; on the right is the eastern end of the building called the Maryel, and then we see the manybuttressed church with its tall and graceful fleche, and in front is the dwelling of the ablot. From the North Tower we see the Marvel alone, and the great flight of steps

which lead up to the entrance to the Abbey This is its north castern end, and you see the tall windows which light the three stories of wonderful halls it contains. From the north west we see the opposite end of the Marvel, with the walls which are the beginning of a great chapter house which was never built. The three arches in the wall of the top story are in the cloister, and the middle one was to be the door into the pro posed chapter house. The gabled building just below the great tower is one of the dor mitories of the monks. I am not showing you any plans of the buildings this evening. because it would require a great many to show the arrangement at various levels, they become very complicated; but these two sections give us a very good idea of the way the buildings cluster around the rock. The Abbey itself was strongly fortified long before the town walls were built. This long flight of steps is its only access, and this is protected by the terrace above. I found very amusing on a hot afternoon sitting in the shadow of the wall, to watch the amazement of the fat old Frenchwomen who. after toiling up the steep street, turned the corner and saw this great flight of steps between them and their goal. They would stop and puff awhile, and then bravely struggle on in blissful ignorance of the hundreds more steps to be climbed before they reached the top of the rock and the As we near the top of the Abbey church. steps we pass through the Gate of the Barbican, and the actual entrance to the Abbey This is called the Châtelet, rises before us. a tall building flanked by two massive cylindrical towers. It was built by Abbot Pierre le Roy about 1390, and it marks an earlier entrance known as Belle Chaise. The Châtelet, was closed by a heavy portcullis, the machinery for which still exists in the room above the arch. The military governor, who was a separate official to the abbot, was always getting into trouble on the ground that he vexatiously shut the gate too early in the evening and opened it too late in the morning. The entrance hall, or Salle des Gardes, is a fine hall with an enormous fireplace, round which the soldiers of the guard must have spent many a jovial evenguard must have spent many a jovial evening in the old days with a great log fire roaring up the chimney. The steps lead up from the hall to the passage to the Almonry, and in the other direction to the long flight of steps to the abbot's house and church. The guides who conduct the visitors over the Abbey have a waiting-room immediately behind this fireplace; they are officials of the French Government, and although they are not above accepting a tip, the whole place is open to visitors every day without any charge. This little passage day without any charge. This little passage leads to the Almoury in the bottom story of the Marvel, and here the visitors assemble while waiting for the official guides; but as I am the guide this evening we turn from the Salle des Gardes to the great steps which separate the abbot's outlined and monastery. The bridge you see was a short cut from the abbot's house to the crypt of the church, and so by a spiral the choir. This bridge is separate the abbot's buildings from the stair direct into the choir. This bridge is about the last of the many fortifications protecting the Abbey, for you see it is machi colated in the same manner as the ramparts. The abbot's house and other offices are in a tall range of buildings on the left of this passage, quite distinct from the rest of the buildings; it contains many fine rooms, most of which are in a bad state of ruin, and filled with rubbish and debris, only a few of the upper rooms being in use as the dwellings of the guides attached to the Abbey. On the next landing we see an ancient fountain, and a curious mass of the actual rock sticking up through the payement. There are several of these masses of projecting rock in various parts of the earlier buildings, and one wonders whether the monks attached some peculiar sentiment to them, as there is no apparent reason why they should not otherwise have cleared them away. On the next flight of steps we reach the cistern of the Almonry, a great stone tank built to hold the rainwater from the roofs for use when besiegers made it too risky to get water from the well of St. Anbert at the foot of the

rock. The covered bridge you see was a direct approach from the abbot's house to the choir of the church. At this level we can pass into the earlier buildings of the monastery. And we pass directly into the little Chapel of St. Martin. This is early 12th Century work, and although on its outer side it is lit by a little window, and also in its eastern apse, its north side is still the solid rock which rises considerably higher as it tapers to the summit. On the north side is the twin chapel dedicated to Symphorien, and much of its southern wall is natural rock, and against it we see a rough lump projecting as we saw it near the cistern of the Almonry. These steps lead up from the chapel we have just left, and here how the rock has been allowed to remain, although it blocks a large portion of the stairway. At this level are a number of massive arches and passages which formed the Chapel of Our Lady Underground, and much of the masonry is of an extremely early date. It was here that the earlier early date. It was here that the earlier monks were buried in shallow graves cut in the solid rock and in quicklime to ensure their rapid dissolution. Here you see clearly the early character of the masonry which, if not the work of St. Aubert himself, can be but very little later. Here also was the Chapel of the Thirty Candles, and the Chanel chroniclers speak of it as the berceau, or cradle, of the Abbey. The reason of the great height of the arches is to obtain a level platform for the buildings above. In one of these passages are the prison cells of the Abbey, some of the most awful dungeons it was possible to devise, and said to be the work of that prince of dungeons, Louis XI Here are two cells side by side, known as La Jamelle, or twins; this outer door en-closes a kind of lobby, and the two cells you see beyond each have a tightly fitting door. and when they are closed not a gleam of and when they are closed not a gream of light can enter, and very little ventilation, and yet prisoners have lived in them for years at a stretch. I had, of course, to photograph them by magnesium light so that you could see the interior. Here is another. called the Iron Cage, although it is mostly of wood, with a great iron shackle still bolted to the floor in its further corner. Here a revolutionary pamphleteer named Duborg was imprisoned in 1745, and died a raving lunatic in a year and twelve days. Close by is this enormous wheel, which was used by the monks to haul up the stores from the granary at the foot of the rock. It was worked by several men walking inside, and thus winding up the rope you see on the axle, this pulled up a wooden sledge. axle, this pulled up a wooden sledge. The sledge sliding up this stone inclined plane, called the Poulain; this has rebates on the outside edges in which the runners of the sledge fitted, and so kept it in posi-Near the wheel is the Chapel of Stephen, which you see is of early 13th Century architecture, with a very graceful vaulting springing from carved corbels on the wall. There are traces here of some interesting fresco painting of the same date as the building. This chapel was used by the as the building. This chapel was used by the novices of the Benedictine monks, and a vaulted chamber below was their dormitory. From a small door in a corner of the Chapel of St. Martin we saw just now we enter the crypt beneath the choir of the church. It is called the Crypt of the Great Pillars, a most appropriate name, for the pillars are truly great and many. At first sight the great diameter of the columns leads one to think that the crypt is of early date, but it late, being the work of Abbot really quite William d'Estoutville, before 1450. Its massiveness is owing to its having to carry the great weight of the choir above. the vaulting ribs die into the columns with out any capitals as we would expect to find in England. The play of light in this crypt gives some very beautiful effects as the sunshine moves round the rock as the day advances.

(To be continued.) ---

The corporation of Huntingdon have decided to proceed forthwith with the erection of forty artisans' dwellings on a site at Stoney Cross, adjoining the late Militia Barracks. THE ARTISTS RIFLES.

The chief wor, or the Artists' Rifles is train officers. The fact is not so well nown as it in 2'it be - X - Territorial corps to train officers. The known as at might be known as at m 2 at be — No Territorial corps has a finer history — For mine years in succession they proved tremselves, at the Royal Xaval and Viantary Terreamont, the champions in bayonet filtering, first of the Auxiliary and afterwards at the Territorial Forces, to come a minimum of the territorial Forces. In 1905 it was suggested that the winners of the Navy and Army bayonet fighting competition should have a special combat with the winners of the Anxiliary Ferros com-petition the Artists—The Artists won.

Petition the Artists. The Artists won.
They landed in the firm, are in France last autumn. Sir John French then took them back to Headquarters to reim a 8-hood of Instruction. The men were gazetted to different regiments in the firing line and distinguished themselves as officers. Eleven members of the corps have been mentioned in despatches, and seven have been awarded the Military Cross for "conspicuous gallantry and devotion to duty," whilst all have gained the praise of their superior officers.

The total number of commissions gained by members of the Artists exceeds 1,600, and out of this number over 500 have been gazetted to Regular regiments. At the start (according to Sir John French's despatch of February 2, 1915) the training school in France was able to turn out officers at the rate of 75 a month. This has since been increased to 100. It must be remembered that these men are gazetted from the School of Instruction alone, and that many com-missions are gained by men in England

before they ever get to France.

The Third Battalion of the Artists' Rifles is in training at a picturesque Essex camp under Lieut. Colonel Shirley, an Instructor at Sandhurst for five years, assisted by a staff of officers many of whom have been on the Western front during the early months of the campaign. The men go through an the Western front during .... of the campaign. The men go through an extremely interesting course. There are special courses in Field Engineering, Signalling, Map Making, and the Machine Gun, under experts in the different subjects. The men live as ordinary soldiers do, and the "fatigno" work of the corps is carried the "fatigno" work of the corps is carried them. out entirely by them. Practically all the officers and all the N CO.'s have been officers and all the N CO.'s through the ranks of the Artists.

The corps is open to educated men of all professions and pursuits. The connection between the Architectural profession and the Artists is well known, and there are members known in art, music, literature, commercial men, engineers, famous sportsmen and men from overseas who in pre-war days were prespectors, miners, ranchers, and fruit-farmers. At the corps headquarters in Duke's Road, Euston, the recruits are prepared for camp life. There are caprille officers and N.C.O.'s, and the newly-enlisted man is quickly versed in the art

of drilling.

The stay in London is quite brief, but by the time the recruit joins the battalion in camp he knows all the rudiments of drul and is able in a short time to delve further into the mysterics of a soldier's training. camp is never impleasantly overcrowded, for the obvious reason that men are constantly being gazetted to other regi ments. It is a difficult matter to regulate the supply and demand, but Colonel Sharley has apparently succeeded to a high degree No man receives uscless training, and so soom as he is efficient he is permitted to take his departure in order to accept a commission Trained as a soldier first and as an officer afterwards, he becomes a man who is sought after by Commanding Officers with vacancies in their commissioned ranks. The name is a magic word; it is the "open "Artist" is a magic word; it is the special sesame "to many a military door that would sesame "to many a military door that would be seamly natural. sesame otherwise be closed. And it is only natural Out in France and in the Dardanelles artist officers are winning honour for themselves and honour for their regiments, and their men will follow them anywhere, for an Artist appropriates a soldier's difficulties and knows exactly what he has to ordure.

T. HAROLD HUGHES, A.R.L.B A

\* From the Journal of the Boyal Institute of British

ASSOCIATED PORTLAND CEMENT

MANUFACIA RERS 1946 LID The report of the director of the united to the steadth orders so and meeting father edges, to be seen that the chester House, Oal Broad Street Land r = M - hchester House, Old Bond Stoot, Latter, E.C., to fay a 17 or a property that branche or only torogard at Jacob 114 ows £151 570 1 - 54 1 e profit attended it is a wind in a constant of the profit attended it is as wind in a constant of the profit attended it is a sum of the £455,711 3s. (If may refer not 2.1 for repairs and refer a mean to 2.355,711 3s. (If may refer not be sufficient to the following the following terms that the following the sum of the profit is and single to 1s. £51 201 15 4d. (making £270,590 1 s. 74) and waving £328,655 3s. (If An interim divided on the preference shares to December 31 101 was paid on March 51 105, amount not £62,829 16s.) and eaving a brance of the general reserve and depressition count, £50,000; to the payment of a final dividend on the preference states to Jus-30, 1915, at the rate of 5, per cert, per annum, amounting to £62,229 16s; maxing £112,829 16s., and leaving to be carried forward £153,025 11s. 4d.

The company's operations in all ceput ments have been seriously aftered by ti been seriously aftered by war conditions which prevailed during prawar conditions which prevaled during platically the whole period covered by the accounts, with the result that the profit earned shows a great reduction on that of the previous year. For reasons directly attributible to the war the demand for cement was considerably to dead which the proposed at the considerably to dead which the proposed at the considerably to dead which the proposed at the considerably to dead the considerably to dead the considerably to dead the considerably to dead the considerably to the considerably to dead the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the considerable to the consid duced, while the manufacture was conducted under difficulties due to the same cause Cost of production mercised, and although as time went on the selling price was raised, this was in respect to new business and did not affect the major portion of the year's trade. Consequently the directors con-sider that the results are as satisfactory as could reasonably have been expected recommend the payment of the dividend the preference strives at its due date on the 30th inst.

Although, having regard to the general state of business, a satisfactory return was made during the past year by the company's investments, the directors record with regret that quite apart from the soute political disturbance in Mexico which has affected all enterprise in that country, the works abroad in which the company is interested are suffering increasingly from the adverse ditions brought about by the war, and their aggregate production has been greatly curtailed. The South African works, however, are now running on a commercial scale, and the directors are able to report that the local conditions in that country are so far satis factory that steps are being taken to inclease substantially the productive capacity of the

Provision has been made in the profit and loss account for the annual instalments required for the redemption of the lebenture stocks, as well as for sundry other charges for depreciation and sinking funds. These items amount in all to £51,261 17s 4d. The directors recommend that, in addition to this, a sum of  $\mathfrak{L}50,000$  be carried to the general reserve and depreciation account. general reserve and depreciation account, bringing the amount of that account to £435,000. The total charge for the year for depreciation and sinking fineds will ther amount to £101,261–17s, 4d

First mortgage dehenture stock to an amount of £20,584 was redeemed and car celled during the year, bringing the total redemption of that stock to Jane 50 last to

Of the second debenture stock ±26.10 was also redeemed and cancelled, maker the total redemption of that stock to June 30 last £49,341. The discount and other expenses come ted with the issue of this stock stood at £174,623 6s. 1d. in the company's hooks at June 30, 1914. It has been thought The discount and other exwell to liquidate this amount by an appropriation from reserves accumulated in past years out of revenue by the operation of the sinking funds of the debenture stocks.

#### MALVERN PRIORY CHURCH.

MALVERN PRIORY CHURCH.

I and the total the Ecolesiastical Comters, Mr. W. D. Ciron, M.A., F.S.A.

As write not established Malvern Priory
total the coot, aninversary of its founrate will be immemorated to day (Wedrestay) states that a great deal of money
has been labeled ut upon works of repair has been laid out upon works of repair of the work budget of the work budget of the work is of mediavil massing to the spanness of which methods we owe in the schamess of which methods we owe in the name the extraor highly perminnence of our ancest churches, is far to seek among the majerity of to-day's craftsmen, and was sold in part of the equipment of even our most distinguished Victorian restorers. The greater are cut of the decayed stone belongs towirk of the last century. There are, for the dely, only a few points where the structhe dely, only a few points where the structure freeds strengthening. Weak places exist chaffy in some of the cracked Norman pillars of the nave, and in two long fissures starting in the Norman wall over each of the arst pillurs from the west end, and extend or and above the supericial decay, which exterds over a large area of the sarface, some

of the buttresses have crucked considerably, and must be dealt with.

Mr. Caron all is that the security of the windows is of first importance when they sustain so much invaluable glass. At present the protection of the glass is dealt with in a very haphagual and unsightly manner, and the glassian description of the glassian description. the playing of the rorth choir elerestory in a somewhat precarious condition. in a somewhat precarious condition. Mr Caron's examination of the tower leads to the conclusion that no grounds whatever exist for refraining from ringing the bells, provided they are hing in a properly de-signed frame and some cricks in the tower walls are made sound. He anticipates that an expenditure of £2.146 will be sufficient. Of this sum £591 is exclusively set aside for the proper protection of the ancient glazing. quite apart from the necessary repair of the quite apart from the increasary repair of the stonework of the windows. It is proposed to effect the repairs year by year until the fabric is in a thoroughly sound condition, at d to appeal for annual subscriptions to a

fabric fund.

#### THE PROFESSIONAL CLASSES BELIEF FUND . CHRISTMAS-IN WARTIME SALE

We appealed on p. 231 of our issue of September 1 for help for the Architects' Com mitter of the Professional Classes Relief Fund which is organisms a Christmas-in-Wartimos ale at the Albert Hall in the second week of December of Christmas gifts to the men at the front and to friends at home, the proceeds of which will be devoted to the relief of the professional classes who have been so sorely hit by the war, and we desire to urge all who are able to lose no time in co-operating. No morey is asked for, but art elss which the Committee can sell for five shelling each who a boundary of the articles which the Committee can sell for five shillings each, such as knitted goods, needle-work of all sorts, all articles pertaining to the various handicrafts, games, toys, and woodwork, jams, sweets, tockles, plum pud-dings, etc. A full list of the articles desired, and all other particulars, may be had by application to the Gifts Secretary, Profes-sional Classes War Relné Fund, 13 and 14,

sional Classes Wir Rehe' Fund, 13 and 14, Prince's Gate, Lendon, S.W.

There will be a series of prize competitions in connectine with the exhibition. Special prizes will be given for the best presents for Class as the fightent forces. Class the the wounded, Class to British priseners of war. Prizes to the value of £5, £3, and £2 will be awarded for those three articles undoreach of the above class s which are adjudged to be the nest suitable of the best made.

There is also a special prize competition for the provided. Three special prizes of £ 5, for the wounded. Three special prizes of 4.5, £3, and £2 will be awarded for the arthurst counter any class made by wounded sold in which are advoiged the best, any disability

which are an ingentine best, any disability of the competitive leng taken into considerative by the indges.

As at least 10,000 articles are required wider circulation can be ensured if everyone who reads this will tell their friends all about it and get them to he'p too.

OBITUARY

A architect, artist, archaeologist, and writer of considerable ability has passed away in the person of Mr. John Tavenor Perry, late of John Street, Adelphi, and The eve. The Boltons, Konsington who died Thursday last at 3, Burlington Gardens, Chiswi k, aged seventy-five years. He was a favourite pupil of the late Professor T. Hayter Lewis, and on the retirement of the Professor, continued to carry on his practice in the same offices in partnership his fellow pupil, Mr. Reed. Messrs. I and Read executed extensive structural alterations at the Alhambra, in Leicester extensive structural Square, and after its destruction by fire rebuilt the theatre on novel principles, the first serious attempt made to construct a place of amusement wholly of fire-resisting material The firm also built the north wing of University College, Gower Street, in con-Peter Jones's drapery establishment at Chelsea: the Chapter Hall, schools and vestry at the Chapel Royal, Sayoy, buildings on the Salisbury estate, Strand, and schools for the Deans and Chapters of Rochester and Worcester. As surveyors to the Union Assurance Office the firm executed many works of reinstatement as well as branch works of reinstatement as well as branch offices, including those for the company in the Whomestrasse, Berlin, Mr. favenor Perry was awarded in 1864 the Instituto Silver Medal for drawings, and the following year became the first holder of the Pugin Studentship. Among the drawings from his Studentship. Among the drawings from his pencil reproduced in our pages was one depicting the tower walls in the great church of Prenzlau in the Uckermark, which appeared in our issue of September 22, 1905. Widely read, widely travelled, and possessing keen powers of observation and a retentive memory. Mr. Perry wrote many papers on architectural and antiquarian topics, and frequently lectured in earlier years before the Royal Institute of British Architects and the Architectural Association. Quite recently he adduced specious, but to some of us unconvincing, arguments in sup-St. Bartholomew the Great. Smithfield, originally terminated in a square east end, and that Sir Aston Webb had insufficient authority for his formation of an apse with ambulatory on the lines of the chape White Tower, but the evidences of the bases of piliars ir situ were too strong for his theory. We gave Mr. Perry's portrait in our issue of July 4, 1890.

Mr. Henry Charles Pullin, L.R.LB.A Quarrendon Street, Parsons Green, S.W., of the R.fle Brigade, was until recently stated to be missing, but is now reported to have been killed in action on April 26. Aged 46 years. Mr. Pullin served a four years' term of articles with Mr. F. B. Wade, F.R.I B A. and remained in his office as assistant for six years. He afterwards assisted other archi-tects, chiefly in London and Brighton, and did competition and other small works on his covn account.

A verdict of accidental death was returned at an inquest at Marylebone on Thursday on the body of Pullip Arthur C Wilkenson. fifty-two, architect, of Craven House, Kings way, who was killed by falling from the roof of a house in which he was a boarder at Murylebone. Evidence was given by Mr. H. W. Wilkinson, deceased's brother, Mr. C. W. Turner, and others. The late Mr. Wilkinson, who, in addition to his professional practice, had a substantial private income, was a special constable in the Marylebone vision, and before retiring at night had been in the habit of going on to the roof of the house from his bedroom. It was on the occu-sion of such a visit that the accident occurred which resulted in his death.

The Local Government Board have given authority for the preparation of four further town planning schemes under the Housing Town Planning Act, 1909. Schemes are authors it the prepared by the corporations of Crowdon, Mansfield, and Nottingham, and the control of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the pro the urban district council of Scaton Delaval, and relate to areas of about 800, 3,300, 500, and 2,400 acres respectively.

## Currente Calamo.

Taken as a whole, the Budget dors credit to Mr. McKenna, whose businesslike exposition last week was a welcome contrast to Mr. Lloyd George's gassy and prolific Budget speeches, which left the House of Commons tired out with endeavouring to find out what was meant. Mr. McKenna has taken front rank in the Cabinet at a bound, much as Mr. Gladstone did in the fifties, when he was called on to mend the holes in the nation's moneybags made by the Crimean War. May it be Mr. McKenna's good fortune to start us all by-and-by on the return road to solvency and prosperity with some such a series of Budgets as those Gladstone shaped, and with as good results! Having said this, and at the risk of seeming ungracious, we must have a few grumbles. It would have cost little to put builders on the same level as the rest of the taxpayers, as Mr. Lloyd George and Mr. Asquith promised should be done-we mean, of course, with regard to the increment duty which has been so unfairly levied in the Lumsden and Walker cases. The other mistake is the Walker cases. abolition of the halfpenny postage rates on postcards and newspapers. It will bring comparatively little into the Treasury, but will harass many trades. It will, of course, delight the postal authorities, who are reactionary by nature, and unamenable to grace; and who might have contented themselves with the restrictions of the penny letter rate to one ounce, to which we have little objection, so bored is everybody with the big parcels of circulars and samples crowded in on us by the latitude given by the fourounce limit

In the course of the trial for conspiracy in regard to the contracts for building the new Parliament Buildings at Winnipeg for Manitoba, now being heard, and in which are indicated Sir Rodmond P. Roblin, ex-President of Council: Dr. W. H. Montague, ex-Minister of Works: Mr. James H. Howden, ex-Attorney-General; and Mr. George R. Coldwell, another Cabinet Minister, counsel for the Crown announced last Wednesday that further charges will be preferred. Mr. V. W. Horwood, the provincial architect, the first witness in the preliminary investigation of the charges, underwent a severe cross-examination at the hands of Mr. E. F. B. Johnson, of Toronto, but he adhered to his previous statements. Referring to some alleged inaccuracies in a speech made by Dr. Montague in the Legislature defending the contracts that are the subject of the present charges, witness declared that Dr. Montague asked him to write a letter taking the blame for the incorrect statements made.

The scheme of temporary assistance for architects whose practice has fallen off owing to the war, devised by the Council of the Royal Institute of British Architects, and already experimentally adopted in London, is being applied to South-West Lancashire. To each architect employed the task will be assigned of preparing for an allotted area a series of ordinance maps, in order to demonstrate from available data the density of population, the infantile mortality, the general mortality, the mortality from specific diseases, the amount of local and through traffic, the proportion and distribution of open spaces, the places of outdoor and indoor recreation, as well as the vacant or convertible sites suitable for artisans' dwellings,

playgrounds, terraced parks, factories, and remained meaning and compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to the compared to t plans, especially, for example, those relating to Manchester and the contiguous group of boroughs, a county scheme of town-planning and supplementary arterial roads will be prepared in anticipation of combined action, with the support of the Roads Board, soon after the close of the war. The harmonising of the many conflicting or isolated schemes long in embryo will be essayed, and independent suggestions, as far as practicable, incorporated. By this means it is hoped to promote economy and efficiency, and to save time when county expenditure on a large scale can be undertaken.

The machinery of the University of Liverpool's department of civic design in the School of Architecture has been requisitioned to be the centre for organisation, and Professor Patrick Abercrombie is acting as technical director. The founder of the school (Sir William H. Lever, Bart.). Vice-Chancellor Dale, Professor C. H. Reilly (architecture), Associate-Professor J A. Brodie (civic engineering), Professor E. W. Hope (civic hygiene), Mr. H. Chaloner Dowdall (civic law lecturer), and others offi cially associated, or to be associated, with the school, will certainly lend their and. The school has given a signal lead to work of the kind in contemplation by the pioneer plans of Professor Adshead and its yearly competitions for schemes of city reconstruction and improvement. In the lectures delivered semi-publicly before the Liverpool Engineering Society, Mr. Brodie and other experts have outlined schemes of road traffic which depend for their development on a county continuance of the new highways formed or projected in the city area. Professor Abercrombie has addressed all the South Lancashire urban authorities on the subject of immediate co-operation in the contemplated town-planning, and he is receiving favourable

Mr. William Woodward's letter in another column is another grave indictment of some of the workers in our own industries. We fear there is no doubt that the eminent authority he quotes is an unbiassed and accurate observer. That similar shameful slackers are in great part responsible for the sickness and hardships endured by our soldiers seems but too likely, if the report of the special correspondent of the Times as to the behaviour of thousands of men employed during the past nine months on Salisbury Plain for the new army is well-founded. Of the still urgent need for more accommodation for the troops who are hadly overcrowded in some parts we have, ourselves, personal The Times correspondent knowledge. says :-

"Take first the need for economy. When the construction of a certain camp which lies over a hill some distance from the railway was begun the Government bought up for the purposes of transport a large number of farm wagons. The price paid for the wagons could hardly be described as a competitive one, but they had not been long in see when it was found that the steepness of the load to the camp made horse transport undesirable, fraction engines were then hired for the work at a price 60 per cent, higher than would be asked in formal times. These engines drawing heavy loads juickly mined the road, and repeated repairs have ost the local authorities nearly £40,000. Now, when the camp is practically completed, work has seen started on a light railway which will connect with the main line. People are asking why the ailway could not have been built at the outset. While there is discontent upon this matter, feeling ams highest over the apparent waste of money incurred in the building of huts for the troops. It has admitted in Parliament early this year that such of the labour employed on this work was of n unsatisfactory character, and if one-half the lories I bave heard of idleness and a determination to make an easy and well-paid job last as long a possible are true, then the labour engaged has

We are as odd too the west suckers ire unmarried men of so it ity age, and that tuen lazines, i estrem. He saw himself groups where one may caked and several others booked on and coafted while he leismely carried through his job. Study young fellows pushed whee barrows or carried planks with almost Indied cowness. He

containes.

"A farmal upon ells find many sa the hurs have been circled fied in that the man engaged on the plot with a visual the events. It was quit a common practice among them to turn up for work in home and made them to turn up for work in home and made at the which had gene "I could not fell you," he edd d, "how many times I have seen them a kep und to he hope when they were supposed to he working, and when they were hung pard for working. They are detailed an small ging, and then have not be notingly formed home to look after the major to the enterty of bournam. Hills deven in my the desort of taking a nep one day, and when they were hand differently do they are they are had done enough. The trust it was over look 4. Another former told me of two carp interstream Scotland who were heard to say, "Ingland's eggined fire They give you all day to do in hour's work here, and you go, a handful of money to doing." The It was old son of one of his munician home after his hist day on the work and sold fine one. I he rid of one enstance of exultation meet the cisine's of the job which brought well-merited junishing at A lebour to happen a sud the Keser was the best friend they had done A form hand discipled with him and kneek dimin down."

And while all this is going on, the winter is approaching, and men will die of discuse presently, as they did lait winter and spring, whom we shall want hadly at the front by and by, and we shall have plausible explanations in Parliament, and the usual assurances that it was all anavoidable as long as the nation will accept them, and pay through the mose for laid management and the shame ful treachery of clackers to their fellow men whose exemplary devotion to the Empire and the Homeland they are too cowardly to emulate and too lazy to second.

Last writer mode as familiar with " Jock Johnsons," "Black Marias," and a whole vocabulary of humorous nomenclature for German shells and for the topography of the trenches, from the oater line, or "drawingroom," to the inner line, or "reception room," and the grim "dormitory" in the rear where the dead are buried. Possibly it was an architect or a decorator who first called a body belt." the dado round the dining-room. Among the various comestibles that find their way into the dining-room 'tornedoes'' stand for sausage rolls and " shells " for twopenny meat pies. In training camps plenty of satire flies about if the eakes are smaller than usual-as, for example, "This is not up to chest measurement." or "This is below standard height." "Somewhere in France" (says the Munichester Guardian) it became the custom to call French matches "Asquiths," because you have to "wait and see" what bappens when you strike one.

"I like a bit of ham and bacon as well as anybody, but it is the first time I have known of an architect being called in to build piggeries, said Alderman Binns, at the Knaresborough Guardians meeting, on Friday, when it was decided to pay a fee of three guineas to Mr. Illingworth for plan and specification for new piggeries on the workhouse farm. Let us hope Binns will never have to eat his ham and bacon as a welcome guest of the terrordians. If misfortune drives him to the workhouse with the rest of us, he will soon learn to appreciate the superior flavour of the product of pigs provided with I properly planned piggeries.

# Our Illustrations.

EDITOR'S ROOM CHRONICLE, OFFILE J. C.

The room to the Royal Academy he eng. Royar Academy hosts, as a construction of Royar Academy hosts, as a construction amazinal power forces as a construction of the best period of the Lie (E. g. in Rerasance). It is pare at the construct 8 from an quartered sold. 20 I time 4 and waxed, the fregren as the 2 attractor future monal designation of a construction of the parter central of the parter central of the parter central of the parter central and associations of the parter central of the parter central of the parter central of the parter central of the parter of the parter central of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of disperse because of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of the parter of series a summarion from a series of dispersely exerting to a series of dispersely exerting to a series of and preasing each of the electronic method of the energy of familiarity above and the energy of a series of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the electronic method of the ele which cover these wind as a radio in the space of the transomes. The flow of the space of the transomes. The flower eventoom is of purpose, toned do version is place panelling. The above and occurs to less are in overseal solver. The first results specially dosigned by the architects to much the room, and keeping all, by data is of a should and harmonic distribute. simple and harmonious character. The object aimed at in carrying out this room has been aimed at in carrying out this room has been to give an effect of dign'y and confort befitting the directorship of a great news paper, without losing sight of the rightest ments of an office and work of administration. The decorations and furniture while exerted by Messrs, Robersons, Ltd., of 85, Knightshridge, 8 W. The electric fittings are by Messrs, Verity; the door furniture and metal work by Messrs, Comyn Ching and Col, Ltd. Messrs, G. Reginal Farrew and S. R. Turrier are the architects. Co., Ltd. Messrs, G. Regam, C. S. R. Turner are the architects

SOANE MEDALLIONS AND TRAVEL-LING STUDENTSHIP SKETCHES IN ITALY.

THE VILLA DI PAPA GIULIO, ROME: DI VIG-NOLA, AMERICA

Barozzio Giacomo, les des læng an eminent architect, was a brilliant engineer, and is better known universally is di Vignola. On almost equal terms he represented with Pillodio the academic and tetrograde tiste of his time, and both these architects are rightly accounted leaders of the school with which their names are associated. Notwith standing his strong predilection for books and a fancy for rigid architectural rules. Vignola displayed considerable taste. He was not actually a letter man, and so kept clear of becoming a slave to his texts. His work, indeed, was distinguished by a marked originality. Moreover, he succeeded in impressing his imaginative conceptions with no little freshness of minner, while he observed a more strict compliance with propriety in design than prevailed amon, his followers who flourished so abundantly Juring the enassume the summarished so abundantly turing the en-sing century, when architects, in emulating fashion, threw over triturated control with all its principles of decorum, and conse-quently their productions degenerated into the offentity their productions degenerated in a one Baroque. The lambent architectural vogue of to-day, commonly designated the "Free Classic Movement," less tended to the revival of Vignola's methods, and it is tendency has been encouraged by the recent pre-dominance of a cult of schools en and pedagozy in studios occupied by professional tuition classes. Students are induced to be on the abert for precedents, and copies are sought for as recapitulations V and is works in this way appear to be laid under contribu-In this way appear to be laid under contribu-tion for the time being, if not as the goal of achievement. The well-kn in Villy di-Papa Giulio, which Vienela designed for Pope Julius III (1550-1555), and herb in Rome, is for these purposes, perhaps, one of his best buildings, by presenting advantable suggestions as a model of an available type, and it ranks in that respect better than some of Vienela's more ambitious and distinof Vignola's more ambitions and distinguished undertakings. Every invarial student of architecture must recognise the charm of its grand cortile, finely bill out with the handsome semicircular colonnade which so ably distinguishes the larger Casino,

THE BUILDING NEWS: No. 3169.

The Grand Manner's secontinually in the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enable to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to dery "the united Fig. chan arising the city was enabled to the city was enabled to the city was enabled to the city was The terand Manner see continually insisted in by a memberary profess rs of our some Time and induced ment of imposing a after in the design of this example is see, adhered by the disposition of the fantam of this court, which helps to emasse the battere and importance of its out testaral continuance. Very much need to be measured to be adapted by the Villa di Papa Gullous to a good by the Villa di Papa Gullous to a good to be a good become somewhat does is the and I whose become somewhat doasdard, its glory having departed, and so t stands in str he contrast to the time when his palace was celebrated by its Papal splen-The inner wan of i ar and circumstance. The circle, as may still be seen, was hand mely decorated in the Pompeian style I've line apartments, possessing exceedingly stricted grammental centings, occupy the gram of flor. The details of the structure throughout are in keeping with its general acception, and are characteristic of the capable artist who here, as elsewhere, exhibits the influence of Michael Angelo, and in his identification of the designs of Peruzzi in Rome. The accompanying admirable sketch of the Villa di Papa Guilio has been lent us by Mr. Alick G. Horsnell. Some Medallist and Tite Prizeman of the Royal Institute of British Architects. It formed part of the series of foreign studies which this artist made when holding the Same Travelling Studentship. The committee considered these drawings is highly that the Council was induced, when the studies were submitted for tine apartments, presessing exceedingly duced, when the studies were submitted for approval, to agree to their exhibition to the members of the Institute, and in consequence the whole set was recently shown in the big callery at C induit Street. There can be no question as to their thoroughness and highly interesting character, and we have been allowed to make a selection for publication in the BUILDING NEWS, where they will be much appreciated by our readers.

The Villa di Papa is reached by way of the

Pente Molle and proceeding to the left of the Tiber for about a mile and a half past the Acqua. A cross (with its famous wellhouse designs I by Bernard in 1616, and from thence turning to the right and passing along the road which loads through the vineyards on ther hand and so on towards the long saulted gateway, called the Arco Oscuro, roung the numediate approach to an open space where this building by Vignoli stands on a stacious site extending its frontage along the left side of the piazza. Barozzio Gacem, who was been in 1507, diel in 1573. His name of Vignola resulted from his father having tiken refuge in the obscure village of Vignola, near Modera, whose the boy was for ught one and it was not till he was 28 years old that he went to try his fortimes in Rine. The young architect soon became ther hand and so on towards the long R no. The young architect soon became may under Papal pathenage. He built the masy under Papal patronage. He built the famous Parto dei Branchi at Bologna during the northeast of Pas IV. He was made their architect to Julius III. and succeeded Machael Argo has architect to St. Peter's at Bane. Various linested the reconstruction of the aquaduct Aqua Virgo, built 45 n.c. We be not propose to give a list of his many works, but at will be remembered that Variola designed the great pentagonal Palace of Captarola near Viredo, and he was the architect of the new destroyed ducal rulace of Pialetza. The Porta del Popolo in Rome was his work, at I the late Charles Gain er the well known Parts architect, who has award by the Levinte Royal gold medal in 1856, as ribed by Virtuala the design of the rules of the Fattery Palace. Various like the first serified to Vigoda the design of the ribe of the Fattese Palace. Vigoda like wase as summered to Lice here employed by Michael Ariget. Burnett, as I some of his master's design base here attributed to Vigoda.

INTERLOG OF THE CHUICH OF SANIA MINIMO

We also reproduce to the same double page that an interior sketch of the Leantin art to discuss Minute. Flores The

the city was enable to dety "the united powers of Pope and Casar." Who that repowers of Pope and Cesar. Who that remembers Florence does not remember well the San Miniato in Monte, towering on its letty enumence above the city, and visible along the Lung Arno from the Ponte alle Grazie to the Ponte alla Carraja? and the inchanting views of the Valley of the Arno as seen from the marble steps of the ancient and the old, dismantled fortress i by Michael Angelo against the defended by Media, and the long avenue of cypresses, and the declivities robed in vineyards and of we grounds between the Gate of San Manate and the lofty heights above. At las been pointed out that the façade of this chinch resembles that of the church of S. Maria Novella. Now the interior is employed as a sort of Campo Santo for Florence. Ancient frescoes cover the side walls: the roof is of timber, and in the apse is a Greek mosaic representing the Christ with the Vagin and St. John on one side, and on the other St. Maniato wearing a regal crown and mantle, and holding the Greek cross. In front of the lofty raised choir is the picturesque chand built in 1448 by Michelozzo for Piero de Medici. The pictures it contains are attri-buted to Spinello Arctino, and here the miraculous crucifix of St. Giovanni Gualberto was at one time preserved. Above the steps of the choir are an exquisitely wrought screen and pulpit. The door to the right leads to the sacristy, built in 1587 by Nerozzo degli Alberti, and decorated with frescoes illustrating the story of St. Benedict, by Spinello Aretino. At the end of the nave on the left aretino. At the end of the have on the left is a chapel built by Antonio Rossellino for Cardinal Jacopo of Portugal, with his tomb of 1427. Though only 26 at the time of his death, he had received a Cardinal's hat from Pape Calixtus III., and had been appointed Ambassador from the Florentine Republic to Ambassator from the Florenthe Republic to the Court of Spain. St. Mimato may be approached from the Porta Romana by the enchanting drive of Le Colle with its ever-varying views. The pavement its ever-varying views. The pavement in St Miniato was illustrated from a m St Miniato was illustrated from a Pugin Studentship drawing by S. G. Follett in our issue of January 15, 1909, and from another set of Pugin drawings by William Dawson in 1977 William Dawson in our numbers for March 18 and April 15, 1904. The pulpit was shown from a National drawing by Robert Atkinson in the BUILDING News for February 22, 1907.

"OVERWEY," TILFORD, SURREY
We reproduce the architect's Royal
Academy drawing of this house, which stands on rising ground over the River Wey, with a fine view across Frensham Common and the open heather country to Handhead be The nature of the site, sloping sharply down from north to south, dictated the long harrow plan, and we show both the main floors. The drawing-room was an addition to the original scheme, in which the hall formed the principal sitting-room, with a large window for the westward view over Tufor I village. The walls, which are hollow. or account of the exposed position, are fared with local stock bricks of a varied purplebrown colour, and the roofs are covered with orown concur, and the roots are covered with the chandsmake tiles from the Nyewood kills. The verandah is of oak, and the builders were Messrs, Coddurd and Sons, of Feenium and Dorking. Mr. H. M. Fletcher, M.A.C. intab. F.R.I.R.A. of 2, Gray's Inn. Squate, is the architect.

THE NEW HOUSE," AIRLIE, GAR-DENS, W. DENS. W.
This house has lately been built on a site

This house has lately been built on a site at the southeast angle of Airlie Girdens, formed by the junction of Campden Hill. The walls are faced with brick and Portland stone. The belows for the basement are of a deep purple, in I were supplied by Messrs. Tucker and Sons, Ltd., of Loughborough. Those for the upper part came from Mossrs. Thomas Lawrence and Sons, of Bracknell. The general willing of rough brownish bricks, with smoother dark red bricks for window dressings. The roof is covered with Westmoreland. In the 2 belongs to the same series already of all ded to and shown by Mr. Albit G. Herstoff to summer at the Boya Institute of Britis Architects. This building was founded to are the Florent to matter who said by Messrs. Ames and Hunter. The architect for the third contray under Decids and F. R. F. M. Fletcher, M.A.Cantab., F. R. F. L. F. f. f. rifections of ah Michael. F. R. F. B. V. f. Z. Gray's Inn. Square, and

is figured on the separate illustration page with the plans of "Overwey. Tilford, with the plans of "Overwey," Tilford, Surrey. This perspective was exhibited this year at the Royal Academy.

WILLIAM AND MARY HAUTBOIS, FROM FRITWELL MANOR, BANBURY, OXON, AND OTHER OLD PIECES OF ENGLISH FURNITURE

These examples of Old English furniture need no explanation. They are all genuine pieces, and have somewhat recently been exhib.ted in London. The oak chest, or hautbois, consists of three long and two short drawers, with secret drawer above, on a handsome stand fitted with three drawers on baluster legs and shaped stretcher rails supported on ball feet. The brass furniture is original. The piece is 5 ft. 6 in, wide. The remainder of the sketches on the sheet represent Chippendale furniture, all typical, restrained detail, and good in form.

NATIONAL COMPETITION, EXAMINA-TIONS IN ART, AND AWARDS IN ART, 1916.

In view of the urgent need for national economy and other circumstances arising out of the war, the Board of Education find it necessary to give notice of the following changes in their arrangements for the National Competition. Examinations in Art, and Awards in Art. 1916:-

NATIONAL COMPETITION.

1. The Board will not hold a National Competition in 1916.

Examinations in Art.

2. The Board hope to be able to hold the Examinations in Art as usual, and have issued regulations for 1916 accordingly. They desire, however, to give notice that it may prove necessary at a later date to suspend the examinations. In that event they will endeavour to give as long notice of the change as possible. AWARDS IN ART.

5. The interim regulations for scholarships, exhibitions, free studentships, and other awards in art applicable to the year 1914 are provisionally continued in force subject to the following modifications:—

(a) The Royal Exhibitions. National Scholarships, free studentships and local

scholarships to be awarded in 1916 may be restricted to numbers less than those stated

paragraph 1 of the regulations.
(b) The Board may find it necessary to restrict the number of new Local Exhibitions in Art to be added under the provisions of

hapter ii. of the regulations
(c) The award of Princess of Scholarships may be suspended for 1916, or, if continued, will be made on conditions to be announced later

(d) The Board will not hold short courses instruction in art at the Royal College

in 1916. (1) The grants in aid of visits to museums and centres of art instruction will be sus-

pended until further notice. Special Examination.

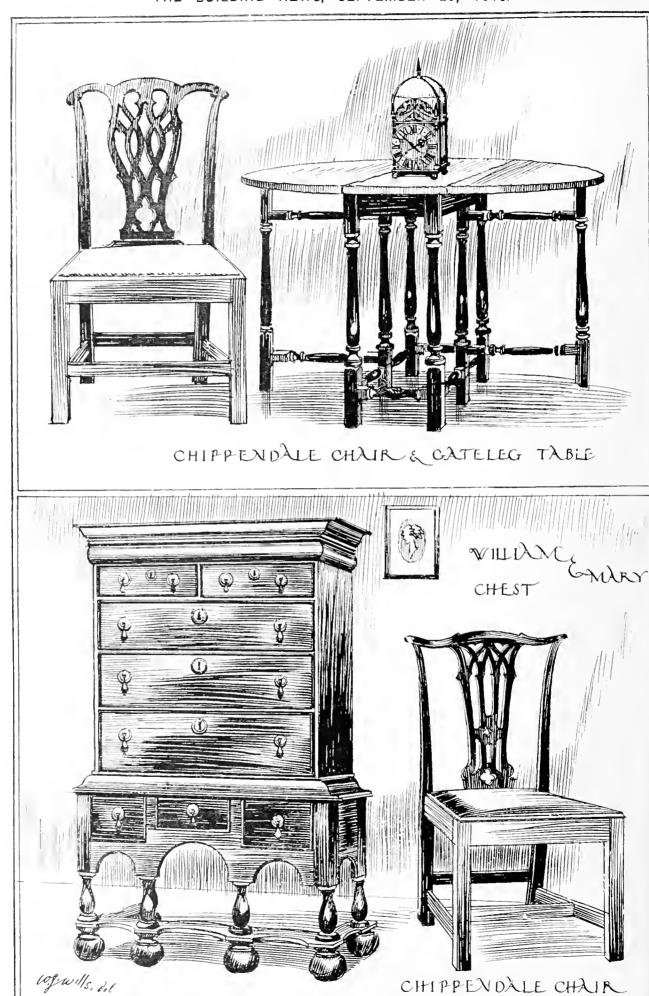
4 The Board lesire to take this opportunity of giving notice that at some future date after the conclusion of the war they propose to hold one further special examination for the benefit of candidates who had almost completed the requirements for the art class teachers' certificate and the art master's certificate when the old regulations expired. Provision will be made for the re examination

(a) Persons who were examined in 1914 in subjects necessary to complete an art class teachers certificate or an art master's certificate, as the case may be, but failed in one

more of those subjects:

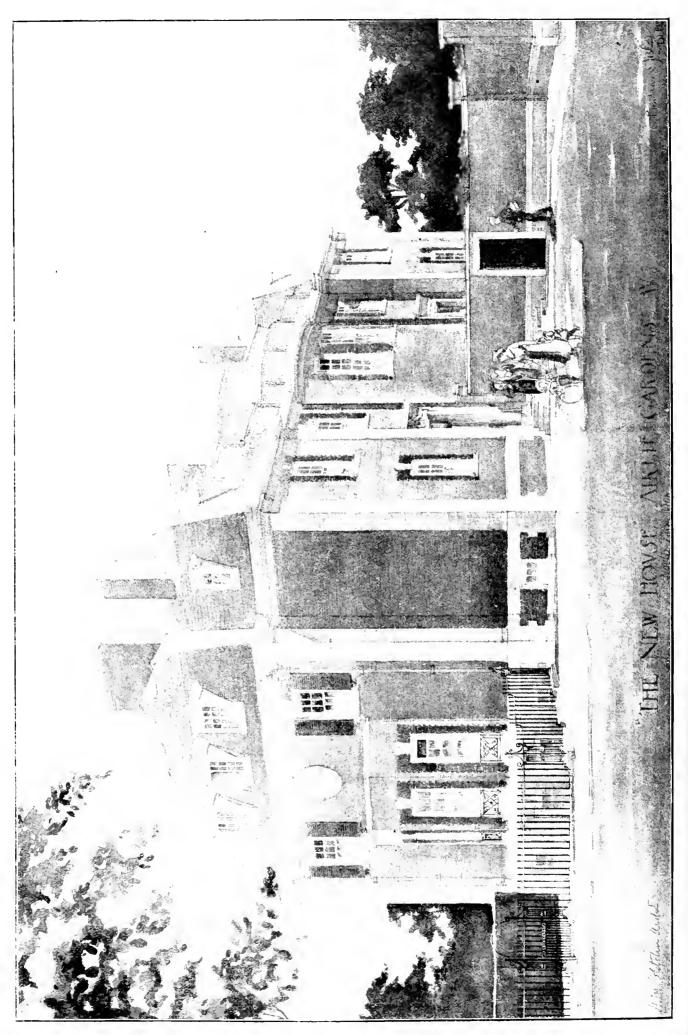
the Persons who, having the art class teacher's certificate, were examined in 1914 in drawing from the life or drawing from the antique, and have obtained, then or previously, at least a second class in each of these subjects.

The detailed arrangements will be amounced in his course, and at least three months' notice will be given of the special examination.

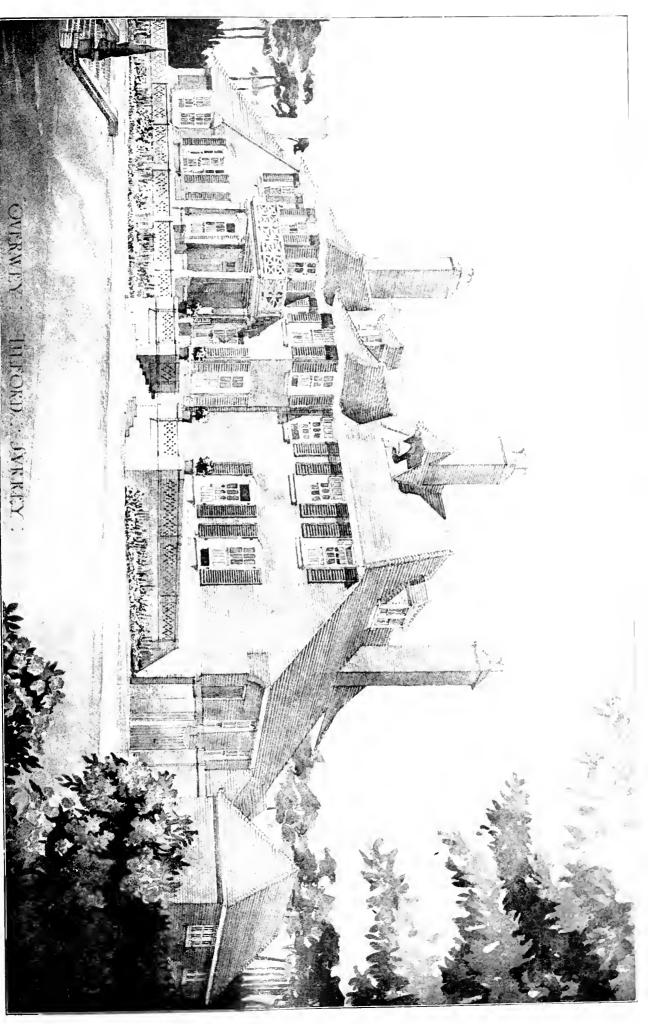


WILLIAM AND MARY HAUTBOIS FROM FRITWELL MANOR, BANBURY, OXON, AND OTHER PIECES OF OLD ENGLISH FURNITURE.—Drawn by Mr. W. J. Wills.

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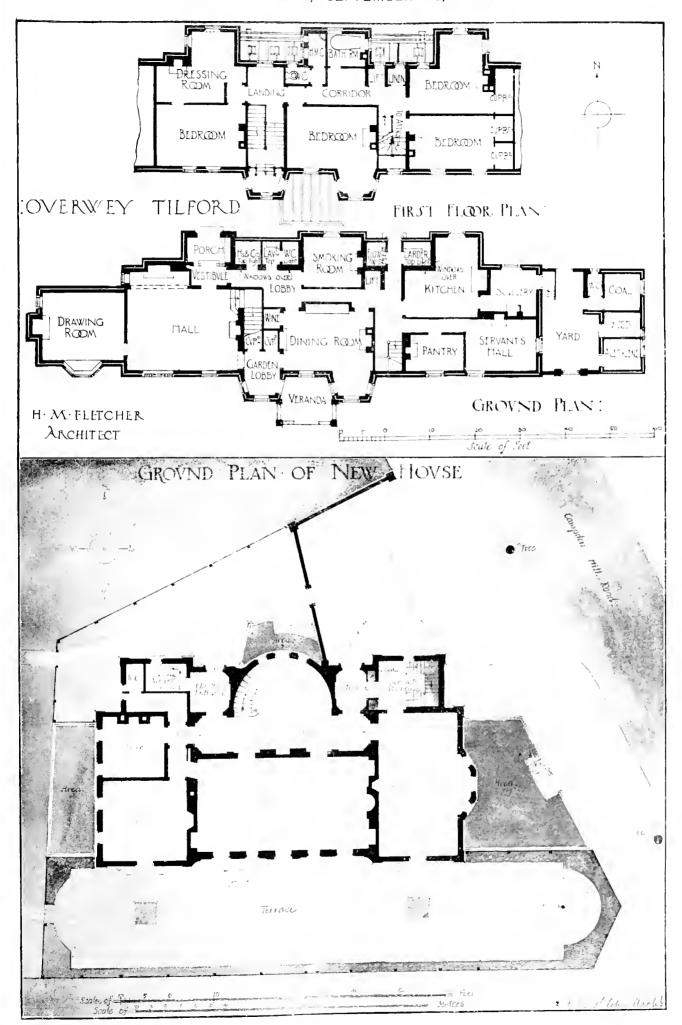


"THE NEW HOUSE," AIRLIE GARDENS, CAMPDEN HILL, W Mr. Henry M. Fletcher, M.A.Cantab, F.R.I.B.A., Architect.

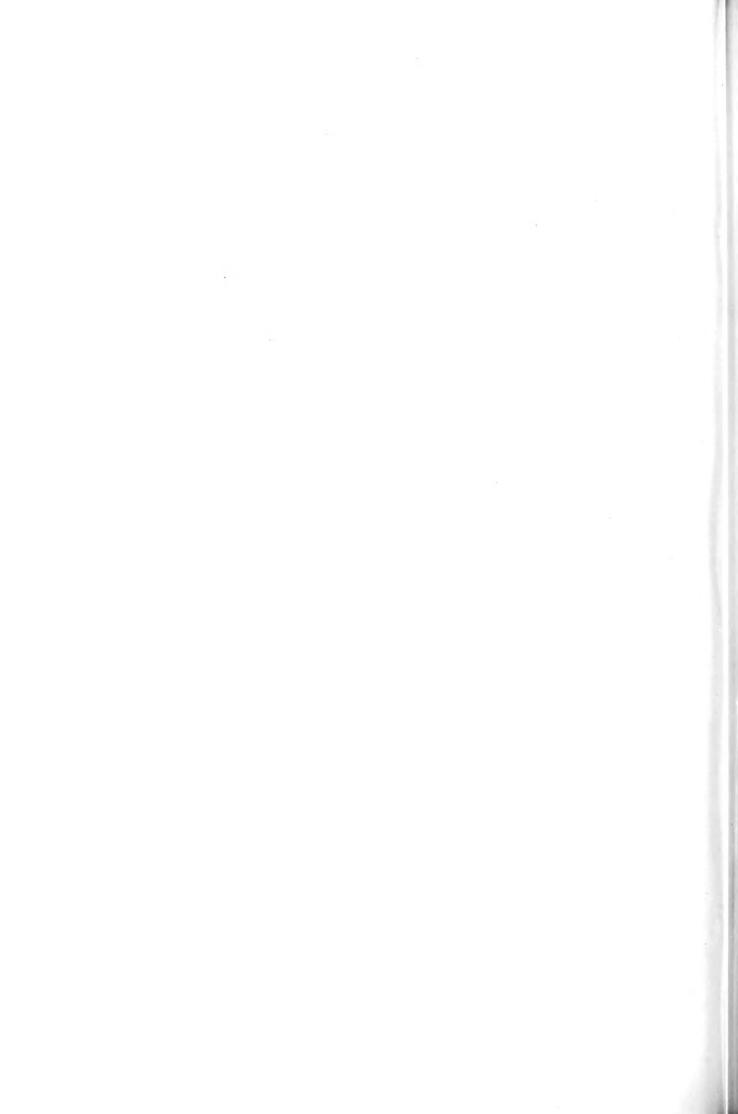


"OVERWEY," TILFORD, SURREY. Mr. HENRY M. Fletcher, M.A.Cantab, F.R.I.B.A., Architect.

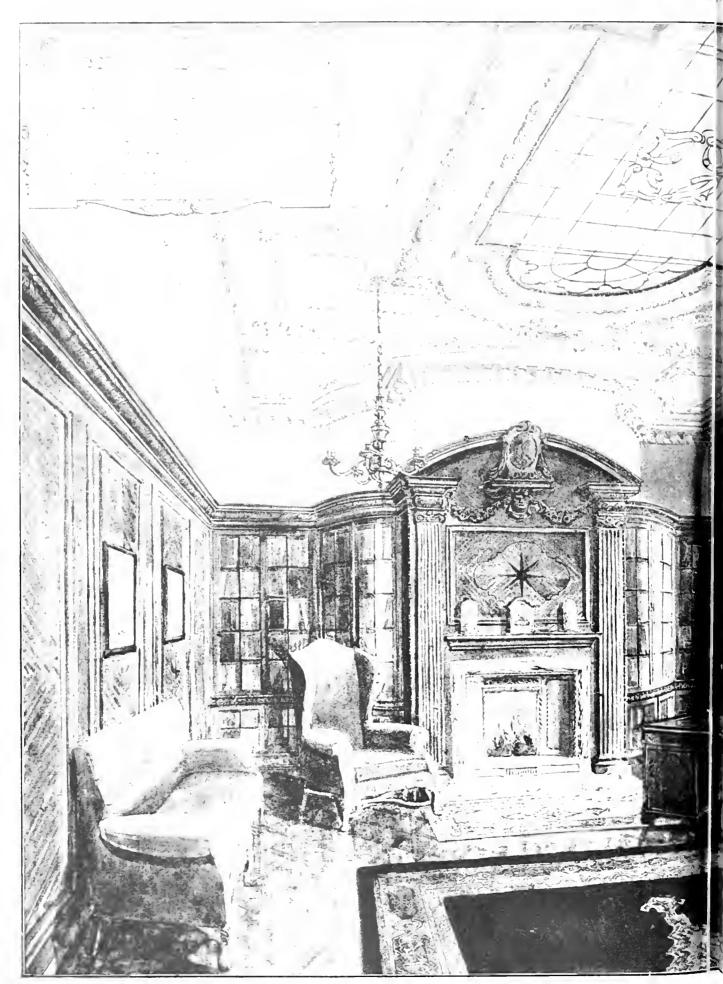




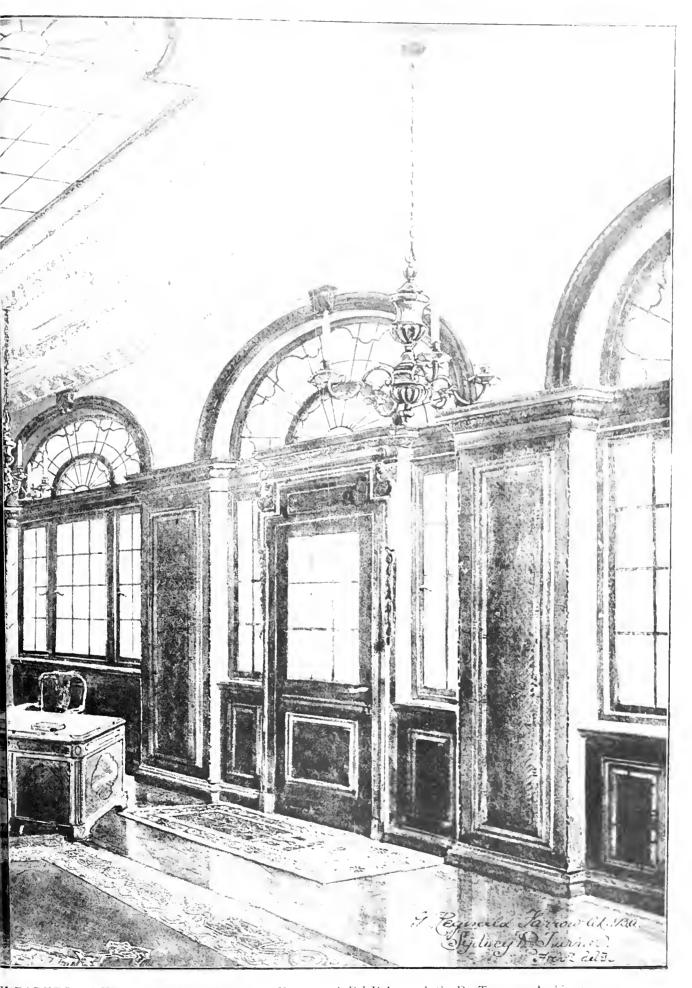
"THE NEW HOUSE," AIRLIE GARDENS, CAMPDEN HILL, W.-Mr. H. M. FLETCHER, Architect.



OCT 1 1915 CANVIDENT OF TORSES



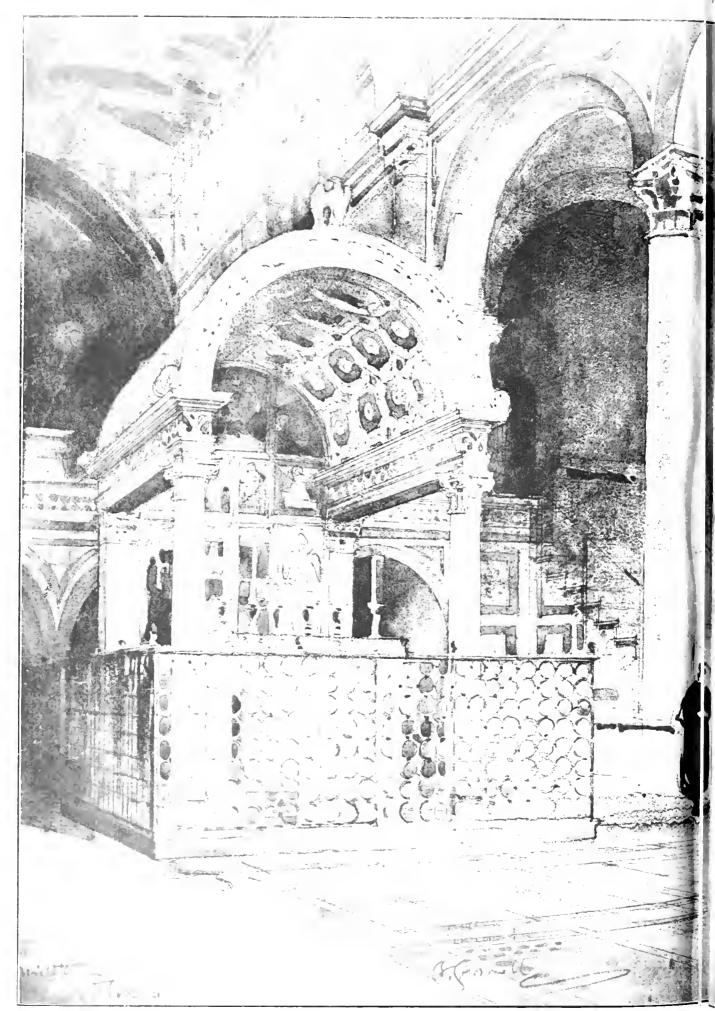
THE EDITOR'S ROOM, "DAILY CHRONICLE" OFFICE, E.C.: FOR THE UNITH.



WPAPERS, LTD.- Messrs. G. REGINALD FARKOW, A.R.I.B.A., and S. R. TURNER, Architects.

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SOANE MEDALLION AND TRAVELLING STUDERS



SKETCHES IN HTALY, By Mr. At H. Stell.

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### A YEAR'S BUILDING IN GLASGOW

The effect of the war on the building tradedming the past year, and the probable reaction on the Glasgow district of the vast amount of reconstruction work that will be necessary in the devastated areas of Europe when beace comes were referred to by Mr. J. D. Hedderwick, Dean of Guild, in submitting D. Hedderwick, Dean of Gulld, in should his annual statement at a sitting of Glasgow Dean of Gulld Court on Thursday. The Dean of Gulld said that the magnitude and rain fications of the war had interfered with every interest and inset all ordinary cond tions With the conditions which had obtained at was not to be expected that the increase of work which showed itself in the second year of the extended city would be maintained dur ing the third year just closed. But in the figures of the past year the decrease in the total work was not so great as one might have prophesied in August, 1914. To a large ex-tent that had been due to the increased requirements of Government contractors, and in lesser degree to the operations of the School Board and the Corporation. One remarkable feature was that whereas under the prevailing conditions the bulk of the work might have heen expected to be merely alterations or additions and not new buildings, yet the former class of work showed a decrease of about per cent, from the previous year, and reached the lowest figures since 1889 90, while the new work showed a decrease of only about 12 per cent. In the year just closed the number of linings had fallen to 381, estimated to cost \$8816.636, against 542 linings costing £1.052,147 £816.636, against 542 linings costing £1.052.147 in the previous year. In that sum of £816.636 no less a sum than £753.842 was for new work, and only £62.794 for alterations and additions. For public buildings there were 36 linings. 21 being for new buildings and 15 for alterations and additions, representing respectively £184.075 and £6.575. In the previous year the valuation of picture houses authorised was £57.523. In the previous three years the average valuation for nicture houses was £45.706. In the year picture houses was £45,706. In the year under review the valuation had dropped to £5,536. In contrast with those of the previous year, this year's figures showed there vious year, this year's figures showed therewere decreases of £169.889. £85.924, and £14.582 respectively in the work authorised as regards (1) warehouses, shops, and offices; (2) workshops, etc.; (3) churches and halls; whereas there were increases of £51.935 aregards schools, and £2,165 as regards public huildings. There had again been a fall in the value of the linings in connection with houses and shops, the figures of the past year showing a decrease of £9.141 under the year showing a decrease of £9.141 under the figures of 1913-14, which in turn showed a decrease of 24.864 under the figures of 1912 13. In 1912-13 there was only one house of one apartment authorised. In 1913-14 there were apartment authorised. In 1915-14 there were 15. In the past year there were 63. So long as such houses conformed to the building regulations the Court could not interfere. The objections to such houses were obvious. The remedy was not so plain. It was a some what difficult problem, for an large cities there were always likely to be a number of single persons who did not want more than one room. In the past year there were authorised 156 houses of two apartments, 120 of three, 32 of four, 35 of five, and 48 of six and more apartments. Seven single and three double shops were also authorised. A very remarkable reduction had taken place in the remarkance reduction had taken place in the number of nulet houses during the year ended Whit-Sunday. 1915—i.e., from 18,341 to 13,178, a reduction of 5,163. The average rental of unlet houses in the previous year was £14 4s. 4d.; it was now £14 6s. 8d.

>-----The export of wood goods from Norway during the first six months of this year amounted to 797,000 cubic metres, against 462,000 cubic metres during January-June, 1914, and 587,000 cubic metres in same period in 1915. Over 740,000 cubic metres went to Great Paisein.

St. Catherine's oak, a giant tree on the estate St. Catherme's oak, a giant tree on the estate of the late Captain Guy Hopton, has just been demolished and brought into Hereford, having been purchased by Messus. R. Groom and Sons. Measured from the point at which it was 15 ins. in diameter, the trunk measures 72 ft., and had a circumference 5 ft. from the butt of 12 ft. 7 ms.

## Correspondence.

## SLACKERS

I the Far car Inc Britishs Niws Since I can Harry had 16th mst com 

I have me do bt that ever an outest and the builder who has pead any attention whatever to the workmen on the building, and in the employ of public bodies, will endorse every word the Professor uses with regard to the the trades in on ts, apart a together from the malienous tyranny which they exercise on the faulding and in the workshop.

It you can find room to user this communication I shall be much obliged, and am,

Your obedient servant.

WM WOODWARD, FRIBA. Southampton Street, Strand, W.C. September 20, 1915

Professor Funders Pliebon " Slackers DAMBING IN WORKING HOURS,

In the course of an article contributed by Professor Fluiders Petrie, president of the Hampstead Scientific Society, to the Papers of the British Constitution Association by describes the enormous waste of life by deliberate dawdling in working hours as being perhaps, the most serious loss to England in the present age. He estimates that this dawdling involves a much larger loss of life and wealth within four or five years than the enormous losses of the present war. Among a number of examples that he gives he says: a number of examples that he gives he says:
In a public institution I watched men digging shallow drain trenches. They did in a week what the same number of Egyptians at a quarter of the pay would do in a day. Effective work, one-sixth. In a coast town I watched, day by day, four men employed to lay water papes. They played so successfully that they took about a week to do what they might have done in a day. A further reason for the delay was that a sark of coke was brought up every day for the night watchman's fire in Angust and the whole sackful disappears I each morning. Effective work, one sixth. In a Government institution a mason whom I watched during a week or two spun out his work so well that he kept or two spun out his work so well that he kept himself quite fresh to hurry off at four o'clock, atter which, as he said, he had "a mee little lusiness at home in funeral work," Effect ve work, between a lifth, and a tenth. In the work, between a after and a tenth. In the same institution a gang of men and foremon, supposed to be cleaning, carefully got into effective attitudes which were restful, but allowed of instant action. There they conversed until they heard some official approach. versed until they heard some official approaching, when they all swing into inclient to be irrested again as soon as observation was over. Certainly not over one hour's real work was done in the day. Effect we work, one tenth, or less. In ordinary policing carpentry work the time occupied by a man at 1s, an hour from a good firm, was from say to ten times what I could do the same work in, and it was spoiled by ridiculous blanders of using wood wrong side out. Effective work, one-tenth or less. In a public institution some ready prepared littings were brought to be fixed. or less in a purific institution some recognition prepared fittings were brought to be fixed. The work to be done was putting in six screws, attaching four hinges, and two locks. Three hours would be ample for a good man alone; a smart one would do t in two hours or less. By skilful use of conversation, mes-sages, fetching refreshment, an hour for tea. and other devices three men succeeded a spending two whole days, which works out at about one and a half hours for each screw put about one and a half hours for each screw put in. Effective work, one-twentieth. In house hold carpentry, a highly recommended man and his so were ergaged at 1s, 5d, an house together, on shelving in an empty house. I did a lathe headwork of planning, and gave a list of heights to be cut out of each board. They stacked the boards on trestles, so as a tenth breast high and gently sawed with only the weight or the saw and no pressure. In three days they did one half the plain cuts, and then give up for a rest. As the matter was argued a misself off the other half of the work in two hours alone. Effective works one-th right.

met, the enderty of the Lkn words who can be at the greater part of the greater part of the greater part of the greater part of the Everything and of the thing time the greater as ordered as problem institutions is that hadly provided for the strongly high, in order the keep of the whole interest on by huge half at they deterring requisite for direction by huge half at a by deterring requisite for and by running the normal workers. Housing is territional to buy larger at high used to bay, and having high they formerly had. Unless we analysis of attificial training a descript to perish as a national many will go where they in meserve to perish as a total () I men will go where they in () is by entareed checks on their princest will largely be starved out I erists or war. They will desire

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Sa. William Indian to the months to Red tross Determined may been formed a contract Architectural Association 1. Architectural Assessing 2011 full strength of the detailer of the detailer of the detailer of the strength are stell required. Any First Assessment that the strength part of the strength part of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strengt

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### PROFESSIONAL AND TRADE SOCIETIES.

SESSIONAL PAPERS, 1915-16. The Light contribution theorem is session R yearless to of British Architects in the management of the following

A Min. Stry for Architecture and the A ... to ture, " by Professor W. R.

A. War, Hospital in France," by

1 Housing of the Labouring Barty Parker The Werk of Philip Webb," by W

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To Business A to the London, II at the West, The Carlo ann. Thy Professor A. Bere

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TBA COUNCIL APPOINTMENTS STANDING COMMITTEES Two for the four standing to the Standing by the Cone; BIBA n betters I we been made by the Concerned Region 11st not of British Architects it better By- et al. 14tt. H. P. Barke Dies and R. Harry Sur, Ray mond Urwin, W. A. Webb. Literature H. G. Itanason, A. R. Jenimett, Herbert A. Sat hell, H. H. Wigglessvorth, C. E. Saver et al. W. Gillber Scott, W. Henry White Scott, W. Gillber Scott, W. Henry White Scott, C. E. Varndell, Herbert A. Welch.

12(OPURTY PROBLEMS AND LIVER

PROPURTY PROBLEMS IN LIVER OF LATER Divergood Property Owners Peril -Te Liverpool 13: 10:00 met at the Law Rooms in that c'y a Fralay, and tentatively discussed two Asteresta - paestro s. Alderman Taggart presided over a large attendance. The Chairman and Mr. G. B. Daniels reported the waiting of a deputation upon the Estate Committee of the Laverpool Corpora-Estable Committee of the Enverpool Corpora-tion. The object was to secure equitable treatment with regard to dilapidations on houses held under corporation seventy-five years! I less in such neighbourhoods as the southern side of Islangton, Pitt Street, Park Line, and Kempston Street. In each case original lessee had signed covenants for houses at that time occupied by high-class tenarts, some being of the merchant tenants, some being of the merchant prince type. Under numerous successive prince—type, tader numerous successive lessees the property had gradually changed in the eter, and was now largely used, for example, as workshops for foreign cabinet-makers. The contention of the deputation was that to strictly enforce covenants re-quiring the houses to be restored to their original cond-tion of interior decoration would be both unjust and most wasteful, seeing that workshops at low rents and not superior residences at high rents were in the specified areas alone in demand. If the present lessees were not equitably frested it was probable that the property would pass into the hands " med of straw," a contingency not de strable in the interest of any of the parties concerned. The Estate Committee, however had realised the situation, and a satisfactory arrangement was anticipated. On the subject of the increased rate of interest de On the submanded since the issue of the 42 per cent War Loan, for mortgages, it was resolved that where "undue" interest was demanded the Federation of Associations of Property Owners be asked to bring the matter before Parliament with a view to legislation.

At present Lochgelly Parish Church is being demolished preparatory to being rebuilt, and in interesting discovery has been made. In the foundation stone was found a tin box, in which was a glass jar containing two local reastrapers dated June 29, 1855, a small phial field and one of wine.

At the meeting on Thursday of the School A the meeting on Thursday of the School Beard for Gasgow the Property Committee called attention to the additions to be made to Alan, Glen's School. The committee had examined commercial sengthles for the work, which involved a total sum of £17,476. Along with the Master of Works, they had, in consultation with the architects, gone over the specification, and by cutting off universary frills aid field of a saving of £3,287 without altering the result arrangements. The report was

### COMPETITIONS.

PLYMOUTH.-- Smety six sets of designs have been submitted for the new and extensive buildings to be erected by the Plymouth Mutual Cooperative and Industrial Society, Limited, on the fine open site, bounded by courtenay, Raleigh, and Frankfort Streets, in a ymouth, opposite the present premises of the society. The drawings will be exhibited in the Co-operative Large Hall, but the date for that has not yet been decided. Premiums of £75, £50, and £25 will be Premiums of £75, £50, and £25 will be awarded. Mr. Paul Waterhouse, M.A., F.R.L.B.A., is the assessor. The proper display of goods in the ground floor windows an essential part of the function of the building, and any idea that the architectural style should ignore this purpose will be entirely discouraged. This condition males the problem particularly interesting, as the premises are to accord with the best modern practice of shop architecture. Cost is to competition, but no sum is fixed and no price for, cube is stipulated. We hear that and put doubley is between £90,000 £100,000. Ref brick and Portland are suggested as the materials, added to fire roof construction.

## WATER SUPPLY AND SANITARY MATTERS.

At an early date the town council PERTH will consider a report by the special water and sewige committee as to the water supply and swige disposal questions. The estimated and sware disposal questions. The estimated est of the various water schemes reported on is as follows: Rertha scheme No. 1, £101,000; Bortha scheme No. 2, £30,000; Stormontfield scheme, £105,250; and Water of May scheme, £192,500.

SEWAGE DISPOSAL WORKS AT DAL KEITH The condition of the rivers North in I South Esk has occupied the attention both of the Mid othian County Council and the burghal authorities for a number of years. The Benbugh burn, which runs through Bonn rig; and Dalkeith, was until recently used by both towns as a main sewer, and in view of this it was at first thought that a joint scheme of sewage purification might be convenient. But at Delkeith, where the joint works would have been situated, it was found difficult to get suitable ground of sufficient area, and deemed advisable to act independently. Bonny, site, and the works there were completed some time ago. A site for the Dilkeith scheme was evertually secured at Newmills, on the New-bittle estate of the Marquis of Lothian. In a one respects the site is ideal, being convenient for the read and the river, with suitable levels and an open gravelly soil. With the completion of the Dalketh operations a large volume of sewage which reached the Esk will now be Messis. Gilbert Thomson and Fergu purified. Messis, Gilbert Thomson and Ferguson, civil engineers, Glasgow, designed and supervised the works; and Mr. John Monteith, Diskeith, was the contractor. The estimated cost was £9.350, exclusive of the cost of land

Mr. William Willett the younger, of The Codars, Camden Park, Chislehurst, Kent, head of the firm of Willett and Co., builders, Chelsea and Hove, the promoter of the Daylight Saving Bill, who died on March 4, aged 58, left Bill, wh £557,150.

Glasgow City Council has remitted to a Special Committee to consider and report as to the necessity for, and the expediency of, the corporation building, upon ground belonging to it, or mon suitable ground to be purchased or feued, dwelling-houses of not less than one rosen and kitchen, with bathroom.

or and kitchen, with bathroom.

Mr. Thomas Moulding, M.I.C.E., the city engineer of Exeter, reports to his cornection that in the two years ended March 31 lest 133 miles of road were repaired in Exeter, the stone used amounting to 18,637 tons. During the same period 243 miles of roads, covering an area of 295,466 source varils, were tar sprayed at a cost of £1.264.

At the last marting of the Gelligaer Urban D stret Council Messrs, Willeox and Ruikes, ong neers, submitted plans and specifications for the construction of a sewer in the Cylla and Deri Valleys to link up with the unin crunk sewerage scheme for the Rhymney Valley now the treatment of the property of the sewerage to the construction of the Rhymney Valley now the coverage of the way decided to write to the on progress. It was decided to write to the Local Government Board asking if it would send on the cost of preparing the plans and

### PARLIAMENTARY NOTES.

COMMISSIONS FOR CIVIL ENGINEERS.—Asked by Mr. Watt wnether an application was made in July by his Department to the Institution of Civil Engineers, to procure for them officers for the Royal Engineers who a knowledge of heavy construction work. Tennant has stated that the facts were Mr. Tennant has stated that the facts were substantially accurate. The result had been that nineteen gentlemen had already received commissions in the R.E., and the consideration of the qualifications of others was proceeding, with a view to the filling of further vacancies which might occur.

ECONOMIES BY HM. OFFICE OF WORKS.—Mr. Harcourt, First Commissioner of Works, has informed Sir E. Cornwall that the whole of the Votes taken for the Office of Works for 1915-16 had been carefully reviewed on the basis that nothing was to be done that was not absolutely necessary, that was, for reasons of health, to avoid actual deterioration of buildings, or to allow of the efficient working of departments. Practically all new works not subject to running contracts had been postponed. The reductions applied to all departments except the Convalescent Hospital at Osborne, where obviously no economy was possible. By this action it was hoped to save about £250,000 this year and a further saving of over £500,000 on next year's Estimates.

THE GOVERNMENT'S TIMBER CONTRACTS.—In the House of Commons on Thursday Mr. C. T. Needham asked the First Commisstoner of Works whether, having regard to the special conditions in the new Government contract for building work in respect of the com-pulsory purchase of supplies of timber from His Majesty's Office of Works, it is the intention to majesty's Omee of Works, it is the intention to take over all the existing stocks of timber in the merchants' hands? If not, what is the reason for the condition that timber must be hought from His Majesty's Office of Works, thus excluding the competition by timber merchants and importers? And, why must contractors take delivery of timber as and where it lies, in view of the existing close relations of the Government and the railways?—Mr. Harcourt replied: The The answer to the first question is in the negative.

The answer to the second is that the object of the contracts is to benefit the taxpayer by restricting the sphere in which private profit oper-ates, and by extending, with that object, the arrangement under which any department supplies certain classes of timber to the War Office. The answer to the third question is that the arrangement was judged most convenient. I may add that, in view of the urgency of this particular requirement and the heavy demands Government stock for other needs, it is proposed to arrange that those stocks are only to be drawn on for this purpose by certain contractors near defined ports of entry, and that other contractors will obtain their own supplies.

The Passmore Edwards Museum at Newton Abbot, which was gutted by fire on Thursday, when a yaluable collection of antiquities and geological and mineral specimens was totally destroyed, was built, together with the adjoining Technical Schools (which also suffered from the flames), from designs by the late Mr. Silvanus Trevail, and was illustrated in a suffered flames of black 1999. Mr. Silvanus Trevail, and was illustrated our issue of July 1, 1902.

The death has taken place at Brighton of the "golden dustman," Mr. Charles Murrell, of Blackfriars Bridge Wharves, contractor for the removal of dust to many London boroughs and district councils, including the City of Westminster, Southwark, Lambeth, Richmond, Mortlake and Wimbledon, Mr. Murrell succeeded to his father's business in Bermondsey as a coal merchant and street and house refuse contractor, and eventually remove labout 250,000 tons of refuse every year.

The forty-fifth autumn exhibition at the Wilker Art Gallery will be opened on October 9, and centinue open until Saturday. January 8 next. This year's collection of pictures is representative of the art movement of the day, besides having several novel features of especial interest. Prominent among these is the collection illustrating modern Belgian art. An effort has been made to provide a reart. An effort has been made to provide a representative collection, including examples of some of the great artists of the immediace past, such as Baron Henry Levs, Alfred Stevens, P. J. Clavs, and Henriette Romer. The customary "one-man" room this year is devoted to Burmese pictures by Mr. Gerald Festus Kelly. There is a special collective exhibit by the Royal Society of Miniature Painters, and for the Black and White Room a very representative selection has been obtained, a special feature being made of the etchings of Mr. James M. Bev

# Building Intelligence.

BRISTOL.—A group of building course of erection in Cooncester Road to a Bristol North District Baths. The school The school provides for a series of slipper baths and a laundry department, in addition to a swima family department, in admitton to a swim-ming bath, but only a portion is being pro-ceeded with for the present. There are to be eight first-class and ten second class-slipper baths, eighteen needle and shower baths for men, and eight slipper baths and a like number of baths for women. The a like number of baths for women. The plans were prepared in the office of the city engineer. Mr. Lessel S. Mackenzac, C.E. The walls are of local brickwork, the front to Gloucester Road being of red pressed facings, with Bath stone dressings. The portion of the buildings containing the symming bath consists of a ball 100 ft. by 54 ft. and the water area of the bath is 75 ft. by 30 ft., the depth varying from 4 ft. to 7 ft. Galleries will be provided on two sides, 8 ft. 6 in. wide, and at one end 12 ft. wide. The swimming pool is constructed with feement concrete, lined with asphalte and faced with white glazed bracks, while the gangways are to be paved with Ruahon corrugated paving tiles. There will be four exits communicating with the street and four staircases leading from the galleries. There will also be competitors' rooms each 15 ft. by 16 ft. 6 in., a club room 17 ft. by 15 ft. 6 in., two dressing-rooms, and kitchen There are also the usual lavatories, attendant's office, and shower bath.

HONLEY.—On Wednesday HONLEY.—On Wednesday Mr W. Brooke, J.P., laid the last stone in connection with the widening of Honley Bridge, and Councillor Elon Crowther, J.P., charman of the urban district council, performed the opening ceremony of the new council offices. Not only has Honley Bridge been widened, but Eastgate also. The existing bridge consists of two spans of stone arches, and was 24 ft. 6 in, wide. The improvement now makes the bridge 36 ft. wide, comprising 6 ft. for the footpath and 30 ft for the carriageway. The approaches at either end of the bridge have also been consider end of the bridge have also been considerably improved. The work has been carried out by Mr. Alfred Firth, contractor. Shepley. Eastgate was formerly very narrow and steep, and the bend was most difficult for traffic to negotiate. In this improvement the sharp bend has disappeared. the old buildings standing on the ground required for widening have been pulled down, and a wide road with a gradual sweep round the corner has been made, varying in width from 30 ft, at its narrowest point in width from 30 ft, at its narrowest point to 49 ft, at the widest point at the bend. The work has been carried out by Messis. S. and S. Sykes, Golcar. The plans for both works were prepared by the architects to the Honley Urban District Connect, Messis. J. Berry and Sons, Huddersfield, and the work has been carried out under their supervision at a total outlay of £7,500.

NUNEATON.—Owing to the rapid industrial and municipal progress of Nuneaton, the London and North-Western Bailway Company is carrying out an improvement in railway facilities. An extensive reconstrution scheme, embracing the building of new offices and waiting rooms, new bays for branch line trains, and new refreshment and luncheon rooms is being executed. The general alterations to the station include the provision of a new bay for the Ashby-de-la-Zouch branch trains and the extension of the bay for the Coventry and Leicester trains.

ROSYTH.-Dunfermline town-planning scheme has developed so far as to permit of the immediate erection of houses on the new area at Rosyth. At Friday's Dean of Guild Court there were presented by the Guild Court there were presented by the Scottish National Housing Company, Ltd., four petitions for warrant to erect 292 houses of four different types, the estimated cost of each house ranging from £250 to £318. A petition was also lodged for the laying-out of new streets, at an estimated cost of £3,000. The representatives of the company present included Mr. Alfred Greig, consulting architect, and Mr. A. H. Mot-

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YOBK=TrMatchart Advance Correspond Arck, Mr. Goo, Crades Concentrated his first M) Goo. Craft to encounted his first year of office by the restoration of the Ingle year of office by the resonation of the Ingle Near fuspers of the admittee room. He has marked by so red year as Governor of the company by truther embellishing the room with the least of two stained glass windows. The true off soft windows love been replaced by eisement windows constructed in own. Of the stained glass panels in the upper ones one shows a York Merchant Adverturers' ship leaving the part of Vecre, in Holland; beaund the stathe the imposing town hall, with its tower, stands out preminently. The corresponding panel shows the arrival and tallending of the ship at Ouse Bridge. The work has been done under the Bridge. The work his been done under the direction of Mr. George Benson, A R.I B.A. A new oak floor has been laid, whilst the old carved Jarchean table from the large hall has been cleaned and placed in the committee room.

### TRADE NOTES.

TRADE NOTES.

Boyle's latest patent "Air Pump" ventilator at the research teach Prinaity Michael. Chippel, Lower With a uguen, Chesh reference on that there has this week been an important alteration in prices in the brick trade being 10s, per 1,000 advance on seconds quality white, salt, and coloured glazed bricks.

The premises of Messes, E. J. Burr. Sor, and Norm late Rickman and Burr, chartered sitivevers, in Queen Square, having been damaged, they have now opened fresh offices at Byron House, offices of the street, E.C. The new teacher is the best material for factores and workshops where exiter is used for fleading the fleats? At Plymouth the inpure floor of a garage used for motor washing has been made wet repellent by a waterproof coment rendering. It was most important this if a sould be waterproof, as the futing and lathe shops were directly under each. The manufactures of Pullo inform is that the architect is pleased with the result.

of Pullo inform is that the architect is pleased with the result.

Mesors This Privity and Sons and the editostibusised basers sor Mutching and 315. Oxford Street are the subject of an interesting article in this morph's Advertising Word. It is entitled "A Proposition in Paint," and it illustrates several regression in Paint," and it illustrates several regression the booklets issued by the funding the demonstrate that they have the highest grade thirty of its kind to affect in I that by specificity. Parsons one can obtain absolutely the highest grade thirty of its kind to affect in I that by specificity. Parsons one can obtain absolutely the highest grades are in question.

## STATUES AND MEMORIALS.

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### CHIPS

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Belling Hall famed in the hest-ford was formally opened in The proposed for Bradford by Sir Action G. W. H. Brockleharst fatter in ford Act Galbery Committee in field out the work of restoration building, which lates from the finity, was a wrick when the contained by the had been sport on the sewage in the Cape Town sit in the swage in the Cape Town sit in the fatter of the formal that the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count o

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## Bur Office Cable.

M: Ed and Ber, the well-known pubsie i as setter a volume on the "Architectus I Ascient Egypt," which will be published by I is farm, Messrs, G. Bell and Sons, Limited Y & House, Portugal Street, Kingsway, Leiden, W.C., next week. The main way. Let den. W.C., next week. The main best of this value is to give, in a manner alapted to general renders, a connected his terical outline of the architecture of the against Egyptians, from their earliest dynastic period; and to show in the light of recent research to what extent it forms a place in the general history of the art. Some prace if the general ingoly of the art. Some or art is also given of the later periods, to which is charge a proportion of the existing remains are due. About 180 illustrations, maps, and plans will, it is hoped, give the be a some interest to travellers, as a supplement, so far as the chief architectural monuments are concerned, to the undispensable

The hand Steel Instante at the autumn meeting had on Thursday at the Instant on of Civil Enginers, dealt without hesitat a with the problem of alien members. Subject to confirmation at the annual meeting in May next, a new rule was adopted providing that in the event of a state of existing between this and any other country, all members, honorary members, and how new vice-presidents who are subjects of such enemy country shall rease to be members, but shall be eligible for election after the war. Another rule adopted gave the council alsolute authority to occure the bary member from the list of mem-

Statt\_at, which was treated by French aviators to a visit on Wednesday morning last, is pleasantly situated in the little valley of the Neschaela about a couple of niles above the confluence of that stream with the Neckar. The palace which was bombarded was begun in 1746, but was not completed until 1895, when the status of the Grand Duke of Wurtemberg was raised by Napoleon to that of King. It is a dull Baroque edifice of free-tone with two projecting wings meshane I on plan, of three stories and an attic. the central grand entrance being surmounted by a high gilt crown. The palace contains by a high gift crown. The palace contains 565 apa timents. The large square in front is planted with trees, and contains two circular functions, and in the centre a tall round Counthran column of white stone surmounted by a waged figure of Victory. On the opposite side of this square, facing the palace. but in the Schloss-strasse, is the great railway station, which also received attention from the French airmen.

In recent years not a few picturesque and arcent bits of Haddington have disappeared before the march of improvement, and one of the most interesting is now in process of demilition in the removal of the old Skinners' Close in Hardgate. The buildings, constituting what was a most picture-que close of tiled roofs and hard d walls, stretched from Hardgate to the River Tyne. They were full of grains interiors, who low roofs and walls. apparently clustered together on the principle a puzzle for later days of advanced public health ideas. In their time they had served many purposes. Within the memory of old inhabitants they were occupied as an old history known far and near as the "White The sign was doubtless drawn from Tyne swans, a supposition which is out by the following quant couplet which embellished the house: "As swans do blie the water clear. Step in here and drink which embed, here the make the water clear, Step in here and drink 2 od heer." Many a povial burghal and other gathering was held in the old premises. The locality obtained the name of the Samers' Close through being connected with with where skinners were long employed. Latterly the place had been in use for lodging are numeries and dwellings of a poor and was largely in a tumble down condition. The Berkenhead Corporation's scheme for

ere the working-class houses and flats on the Calbrook estate, at the north-end of the

that the sum proposed to be borrowed in conmeetian with the scheme was £08,500, and under the Housing Act there had already been expended £50,000. The desire of the conneil to proceed with a more comprehensive scheme than any lutherto undertaken had been intensified in recent years owing to the falling off of private building which followed the passing of the Finance Act and to the rapidly increasing industrial population due to a large accession of work in connection with Messis. Cammell, Laird's, which was the principal labour employing firm in the borough. There was no doubt that even before the beginning of the war the supply of small houses fell considerably short of the demand, and this position had been accentuated within the last twelve months. The corporation at the same time had in mind that to some extent the accession of popula-tion might be temporary. The site intended to be used for the housing scheme was a portion of the unsold land on the Gilbrook estate, acquired in 1845, consisting of nearly eight acres, including street sites. In May, 1914, the Health Committee formulated a scheme for erecting 200 houses at the north end, 100 houses in a central area, and 100 at the south end. The present scheme was the first instalment of that proposal. Plans for the houses to be erected on the Gilbrook site were prepared by Mr. T. Taleisin Rees. Dr. Sydney Marsden, medical officer of health, spoke of the necessity of providing a large number of working-class dwellings in the borough, and observed that 80 houses had been demolished at the north end. Mr. T. T. Rees, F.R.I.B.A., of Birkenhead, gave details of the scheme. No opposition was offered to the application.

The Committee on Ancient Earthworks and Fortified Enclosures, in connection with the Congress of Archaeological Societies, in their annual report state that, in regard to the entrenching, hutting, and other work going on all over the country, no complaints have been received of damage or destruction of ancient earthworks by those engaged in con-structing modern ones. That the soldiers structing modern ones. That the soldiers were alive to the possibilities of their work was shown amusingly by some North Country officers employed in the Midlands, who carved and set up epigraphic records of their trenchands of their trenchanges. ing in imitation of Roman inscriptions. The war has caused the suspension of archieological work in many parts of the country The committee express their regret that Balsham (or Heam) Dyke and the Devil's Dyke, n Cambridgeshire, are still being used as chalk quarries, and that the destruction of hill fortress of Penmaenmawr conthe great timies. Bossuce, the only carthwork in West Cornwall, which has yielded an appreciable quantity of Roman remains, and many other quantity of romain remains, and many other earthworks in the county, are suffering gradual destruction through ploughing, and the destruction of Lee Hill Camp, a loose rampart in Yorkshire, continues by stones being carted away.

In recording an orlination service by the Bishop of Birmingham in St. James's Courch, Ashsted, a correspondent of the Guardian writes:—"A hundred and twenty years ago Ashsted was a pleasant suburb of Birmingham, in which the wealthiest citizens lived. nam, in which the weatthest cutzens fixed, and among them a notable physician, Dr John Ash. He can claim the gratitude of generations of Birmingham people, as having been the main cause of the founding of the General Hospital. On his death his large private house was turned into a church of the best of the foundation. The whole of the interior was removed, some new windows were inserted, galleries were built, and the result was an ugly, but useful, building that scated some thirteen hun Ired people. There have been two fairly thorough restorations since its adaptation to the purposes of worship, and now there are hardly any marks left of its origin, apart from a few windows which show unmistak-able signs of the dwelling-house"

"The Practical Design of Steel framed Sheds," by Albert S. Spencer (London: Constable and Co., Limited, 10s. 6d. net), is a Stable and Co., Limited, 10s. 6d. net), is a fortunate recovery of these working disable. The Hall on Tuesday evening in useful addition to the by no means scanty made it possible to set about the correct made it possible to set about the correct restoration of the interior and to replace the

Chitton, M.Inst.C.E., an inspector of the Local recognise that mere proficiency in the design Government Board. The Town Clerk stated of the various units is not unseldom gained at the sacrifice of due regard to the units as a whole. It is entirely true, as the author says, that the had effect of the contrary is visible in present drawing-office practice, and we hope his book will recall the advisability of preparing more coherent and consistent drawings, and the payment of more atten-tion to the stability of the structure as a whole. Mr. Spencer has also our sympathy with his attempt to offer a rational solution of the difficulty of providing fixity for stanchion bases, which, with reasonable care, may be safely adopted, and which, in our judgment, is far better than ignoring the problem, as most of the text-books do, or suggesting solutions which, on the face of them, are commercially impracticable.

The ninety-third report of the Commissioners of Woods, Forests, and Land Revenues has been issued, and states that, exclusive of land let for building purposes, the Crown property under their charge extends to 346,935 acres, of which 69.103 acres are under the growth of timber. The income amounted to £727,350, and the expenditure to £192,157, the corresponding figures for the previous year being £730,319 and £186,660. The area of agricultural lands under the Commissioners at the end of March last was 73.375 acres, an increase of 860 acres, attributable to the purchase of the Dymock Estate in Gloucester-shire and of estates in Lincolnshire. The area converted by the Crown into small holdings within the year was 584 acres, bringing the area so converted since the policy of encouraging the creation of small holdings and contaging the creation of small hottings and allotments on Crown land was inaugurated nine years ago up to 7,827 acres. During these nine years there have been erected on these 7,827 acres 87 new cottages and 70 new sets of farm buildings; 43 cottages have sets of farm buildings; 43 cottages have been substantially altered and improved, and the homesteads and buildings which were on the nomesteaus and bundings which were on the farms divided into small holdings have been remodelled to fit them for the use of 92 smallholders. In order to meet urgent requirements of the military authorities large quantities of fuelwood for the Expeditionary orce in France and Flanders were supplied from New Forest and the Wood Distillation Works, Dean Forest, and a small quantity from Tintern Woods. Charcoal burning was carried on in New Forest, Bere, Parkhurst, and Alice Holt Woods, Dean Forest, and Highmeadow, and Tintern Woods, and large quantities of charcoal supplied for use in the trenches. Increased quantities of pit timber have been sold from Dean Forest and Tintern nave been sold from Dean Forest and Tintern Woods. It is intended to use Dean Forest, about 18,700 acres, and the Highmeadow, Abhotswood, and Clearwell Woodlands, as a forestry demonstration area. A school for forest students and an office for the deputy surveyor and director, Mr. L. S. Osmaston, are being erected, and the school for woodmen students at Parkend has been extended.

French Artists and the War is the subject of one of the opening exhibitions of the the Leicester Galleries, autumn season at the Leicester Galleries, Leicester Square. Among those contributing appear such famous names as Forain, Steinlen, Leandre, Hermann-Paul, and Willette; but perhaus the most novel feature will be a number of sketches sent direct from the front by artists now serving in the trenches. This exhibition will open on October 2, and on the same date a series of fifty war cartoons, entitled "The Kaiser's Garland," by Mr. Edmund J. Sullivan, will be shown in these

In 1908 there were discovered in the archives of the New York Historical Society the original drawings by John McComb from which the New York City Hall was erected. While the exterior of this retable building has withstood the hand of vandals in all of the more important features, the interior has not been so fortunate, says the American Architect. Every passing a lministration had, up to recent years, worked its will until little. was left of the finely designed if anything. interior detail that was as correct in its essential qualities as is that of the exterior. fortunate recovery of these working drawings garish and peorly executed work that had found ledgment there with an exact replica of the original. Through the generosity and public spirit of Mrs. Russell Sage, funds were provided some three years ago for a complete restoration of the Governor's Room on the second floor. This work was executed, under the direction of Mr. Grosvenor Atterbury, and completely fulfilled the expectations of those who had the project in charge. A second in stalment of restoration, also under the direct tion of Mr. Atterbury, has just been finished. Under the supervision of the Municipal Art Commission there has been going forward for some time a complete overhauling of the City Hall, with the intention to restore it, as far as possible, to its original state. The Mayor's office, reception room, and that part in the easterly wing on the first floor has been completed.

At the meeting on Saturday of Bettwsy coed Urban District Council a letter was read from Private W. O. Hughes, the sanitary inspector, who recently joined the Army, applying that half his salary as the inspector be paid during the war, council's as he had to keep a widowed mother. Mr. Faichney: We made him an offer of \$10 per annum during the war, but he refused it and left without any arrangement being arrived at. The Chairman: We have thousands of men in the trenches, in France and the Dardanelles who are fighting for their country without any other remunera-tion than their wages as soldiers. Why should Hughes be paid more than the others. The times are too hard to pay for nothing. It was decided to repeat the offer of £10 per annum during the war.

In the Journal of the Royal Institute of British Architects there is published this week a sixteenth list of members, licentiates and students who have joined H.M. norces for the period of war, the total to date being 45 Fellows, 334 Associates, 165 Licen-tiates, and 212 Students. There are also given the following particulars of architects who have been wounded:

Albert E. Kirk, F.R.I.B.A., lieutenant-colonel commanding 7th Bn. West Yorks Regiment. Wounded in the trenches in France on August 28. In hospital in London

and progressing favourably.

Cecil Grellier, student, 2nd Lieut, 10th Bn. Hampshire Regiment. Wounded in Gallipoli on August 10. In hospital at Alexandria and progressing favourably.

Basil White Ridley, student, Captain, 7th South Lancashire Regiment. Wounded in the trenches in Flanders on September 3. Now in England and going on well.

Geoffrey William Ridley, A.R.I.B.A.. Lieut., 4th Royal Sussex Regiment (brother of Capt. B. W. Ridley above mentioned). Wounded in the Dardanelles on August 15 and sent home. Recovering, and hopes to return to the front very shortly.

Robert William Pite, student, Lance Corp., R.E. (son of Mr. W. A. Pite F.R.I.B.A.). Seriously wounded in Galli poli on August 7. In hospital at Cairo.

Sub-Lieutenant Aldersey Ducken, L.R.I.B.A., f the R.N.V.R. Drake Battalion, died on the 12th inst. while on service.

A picture house is to be built at the corner of Caledonian Street and Dumbarton Road. Dalmuir, from plans by Mr. William Inglis, irchitect, West George Street, Glasgow.

Mr. Arthur Race, borough engineer and surveyor, Barrow-in-Furness, has been appointed to a similar post at Blackburn at a salary of £800 a year, in succession to Mr. W. Stubbs, retired. There were fifty applicants for the post.

The work begun in 1913 for the electrifica-ion of the London and South-Western Rail-ay suburban lines within fifteen miles of way suburban lines within fifteen miles of Waterloo Station is nearly completed, and the section from Waterloo, via Southfields, to Wimbledon, and thence by the circular route through Kingston and Richmond to East Putney, will be ready for traffic in two or three vetes. The Shepperton section will be opcued to the same time. Those will be followed by the Hounslow loop line and the Hampton Pourt and Claygate branches. The length of hese routes is about forty-seven miles.

### 10 CORRESPONDENTS.

We do not hold ourselves responsible for the opinions of our correspondent. All communications should be drawn up as briefly as possible, as there are many claimants upon the space allotted to correspondents.

correspondents.

It is particularly requested that all drawings and all communications respecting illustrations or iterary matter, books for review, etc., should be addressed to the Editor of the BUIDING NEWS, Ellimphan House, I. Arundel Street, Strand, W.C., and not to members of the stall by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributors' risks, and the Editor will not undertake to pay for, or be hable for, unsought contributions.

for, unsought contributions.

""" Prawings of selected competition designs, im portant public and private buildings, details of old and new work, and good sketches are always well come, and for such no charge is made for insertion off more commonplace subjects, small churches chapels, houses, etc. we have usually far more sent than we can insert, but are glad to do so when space permits, on mutually advantageous terms, which may be ascertained on application.

When favouring us with drawness or photographs,

When favouring us with drawings or photographs, architects are asked kindly to state how long the huilding has been creeted. It does neither them nor us much good to illustrate buildings which have been some time executed, except under special circumstances. stances.

Telephone: Gerrard 1291. Telegrams: "Timescryer, Estrand, London."

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line counting as two, the minimum charge being 5s for four lines.

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Advertisements for the current week must reach the office not later than 3 p.m. on Tuesday. Front page advertisements and alterations or stop orders for serial advertisements must reach the office by first post on Monday to secure attention.

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## TO ARMS!

### 4th Battalion ' Architects") Central London Regiment Volunteers.

London Regiment Volunteers.

Recents are urgent on the forthe form the form and Voluntee. Intering recent should apply to first along the departer of the service for which the advised acto the bounds of the service for which they are best inted.

ORDERS FOR THE WITH BY LIFTTINANT COLONER VW. WARDEN COMMITTEE MELL ING.

A meeting of the trivial and Military Committee, is called for 715 this evening (Welne Lacourt But talled Headquarter Virial attendance) requested (GENERVE PARVIE).

tanen Headquarter - Vin Lattendane i request of Bell GLMERAE PARADE.

Saturday, October 2 as new hirs. Headquarter, Chester Hone, Leckston Place, at a jein 1 NIRENCHING.

Members who have voluntered for the wall ceive written instructions regarding hour of jer de, etc. etc.

DRILLS AND PARADLS

"A "Company, Tuesday, Manuature Range, Gas-Light and Cole Company's premiers, Mon & Street, Westmuster, a to 8.20 pcm.

Wednesday, Cempany Parades 5.15 to 7.15 and 6.15 to 8.25 at new Drift Headquarters, Chester House, S.W.

Tunisdays, Signalling, at Chester "Condenses and Cole for the Street, Westman Cole for the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons of the Street, Chester Torons

at new room.

Signalling at Che ter House Second Signalling Sergeant from Jeting Battahon Signathing

orders from Acting Battahon Signaling Sergeant Cheadle.
"B Company Minature Bange and Company Parades as for "A Company See orders at 1 cal Headquarters.

neadquarters
C Company, See orders local Headquarters,
Pavilion AA Abhletic Ground, Borcham Wood,
"B" Company, Platon and Section Drill &
Wereers' School, Holburn, Tuesdays, and Thursdays,
6.45 p.m. Company, Parades, Wednesdays as for
"A Company,

SCHOOL OF ARMS

SCHOOL OF ARMS

Drill Headquarters, Chester House, Feeleston
Place, 8 W. Instruction in bayone highting, gymmastics, physical drill, boxing and single sticks on
Thesdays from 6 to 8 him

RECRITI DRILLS

"A" Company, thester House, 545 and 6.45
Wednesdays and Fridays,

"B" Company, -Dulwich College, Mondays 6
to 40 him, and Thursdays 6 to 8 him
"C" Company, Borcham Wood and Elstree District, Headquarters, A A Athleta Ground, Borcham
Wood, For Intl particulars apply to Van Potter,
Grey Gables, Borcham Wood, Herts
"D" Company, Mercers' School, Anodays and
Thursdays, 6.45 p.m.

trict. Heave,
Wood. For null pais.
Grey Gables, Borcham W. es.,
"D. Company, Mercers' School, ...
Thursdays, 6.45 p.m.

Special attention of members is drawn to the fact that correspondence should be answered by return. If this is not attended to the other work of the Corps is immensely increased. Enrollment terms of new members and all correspondence not referring to recruiting for the Army to linancial matters must be addressed to the Adjutant, ?1. Condint street, W., and regarding recruiting for the Army to the Recruiting Officer at Battaleon He adjutantify, and legarding seconds and subscriptions to the Pay mister, W. Bughes, 146, Bashwood Bouse, E.C.
By Orler,
L. R. GUTHRIE, Adjutant.

### MEETINGS FOR THE ENSUING WEEK

THERSBAY Royal Photographic Society's LVab-tion "Good estar Cathedral," by Henry W. bennett. Suffolk Steet Gallery, Haymarket, SW 8 30 p.m. 

A mission hall is about to be built in Blacts avon in connection with St. Paul's Crawl from plans by Mr. G. A. Treberto, of A ser

Since the passing of the Edm ation Act, 1 79, a sum of £1,008,349 13s 1d, has been experited in providing school accommodation and epupment in Leeds.

ment in Leeds.

The North-Eastern Railway directors have decided not to appoint a dicks engineer in succession to the late Mr. Charles Watson at present. Mr. Charles F. Bengough, the chief engineer of the company, will for the time being take charge of the dock engineering work, in addition to his own work.

b. P. F.- Lattle demand just now

S. S. There are some very good classes near you at
the City of London College, Woorhelds, I.C.

TIMLY RIMINIER. Vicinitiests, builders, and
others are feminded that the BRIDING News
is now published on Wednesdays instead of
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R. S.-We prefer flange joints for large gutters
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They are a little dearer than sockets, but well

If the country of the charge of the dock engineering
work, in addition to his own work.

A Hull firm of architects sent in a fall for
the firm replied flowy would accept twenty
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to in settlement of the charges for plans
and specifications. A guardian remarked that
the City of London College, Woorhelds, I.C.

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### PRICES. LATEST

N.B.—All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases falling us.

### TIMBER.

Owing to stoppage of supplies all prices have advanced considerably.

IRON. Per ton. Per ton.
Holled Seed Josts, English £13 10 0 to £13 15 0 Mrought fron Ginder Plates
Stee. Strip
Space 24 0 0 — D.s., Saff rishire Crown 14 0 0 14 10 0 Boiler Plates, Ron—
South Stat's 8 0 0 8 15 0 Best Snedshil 9 0 0 9 10 0 Angles, 10s , Tees 20s, per ton ext.a.
Builders' Hoop Iron, for bonding, £13 5s. to £13 15s. Ditto galvanised, £20 to £20 10s. per ton. Galvanised Coringated Sheet Iron—
No. 18 to 20 No. 22 to 24.  Eft. to 8ft. long, inclusive   Ferton   Perton
Per ton.   Per ton.   Per ton.   Cast-Iron Columns   £7   7   6   to £9   0   0
Galvanised 6 5 0 , 6 15 0 Cast-Iron Sash Weights 6 5 0 , 6 15 0 Cut Floor Brads 15 0 0 , 15 5 0 Corrugated Iron, 24 gauge 16 0 0 , — Galvanised Wire Strand, 7 ply, 14 B.W.G. 14 5 0 , — B.B. Drawn Telegraph Wire, Galvanised—
0 to 8 9 10 11 12 B.W.G. £10 12s, £10 15s, £11 0s, £11 5s, £11 15s, per top.
Cast-Iron Socket Pipes— 3 in. dismeter
Iron
Wrought-Iron Tubes and Fittings—Discount off         Standard Lists f.o.b. plus 2; per cent.)—         Gas-Tubes       61; pc.         Water-Tubes       57; c.         Steam-Tubes       53; c.         Galvanised Gas-Tubes       50         Galvanised Water-Tubes       47; c.         Galvanised Steam-Tubes       40
OTHER METALS. Perton. Perton.
Lead Water Pipe, Town £*31 0 0 to -
Lead Barrel Pipe, Town

OTHER MET.	OTHER METALS.						
				Per ton	١.		
Lead Water Pipe, Town	E*31	0	0 to	_			
Country	*32	0	0 ,,	_			
		0	0 ,,	_			
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Country	-34	0	0	_			
Lead Pipe, tinned inside and			- "				
outsideTown	* 35	10	0 .,	_			
Country	-36		0.,	_			
Composition Gas Pipe, Town	*34		0 .,	_			
Lead Sul-pipe up to Ajin.: Town	*35		0 ,,	_			
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Lead, Common Brands	17	17	6	£ 8 12	6		
Lead Shot, in 28th, higs	24	15	0		•		
Copper sheets, sheathing & rods	95	U	0 ,,	96 0	0		
Copper, British Cake and Ingot	76	0	0 ,,		0		
Tin. English logots	150	0		151 0	0		
Do., Bars	157	0	0 ,.	158 0	0		
Piz Lea i, in l.wt. Pigs, Town	23	0	0 ,,	24 0	0		
Sheet Lead, Town	*30	10	0 ,,	_			
Genuine White Lead	*38		0	_			
Refined Red Lead	38	0	0	_			
Sheet Z:nc	110	Ö	0	_			
Old Lead, against account		Ŏ	0	_			
Tinper owt.	- 8	10	0 .,	_			
Cut nails (per cwt. ba-is, ordinary							
brand)	0	14	6 ,,	_			
* For 5 ewt. lot- and	nba	ard	S.				
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# I BUY SCRAP METALS

ARTHUR P. COLLINS, Snow Hill, BIRMINGHAM.

Central (2) Telegram Metal of Lern nights Bankers The National Provincial Bank of England, Ltl., Bennett's Hill, Birmingham.

SLATES								
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Blue Portma loc	20 ×	10	12 2	6	1,200 at r. stn			
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	Plinth 5d.	each	4d.	eacl	1	6d.	ead	ch	- 60	i, es	ach -	5d.	s 8⊍	e h
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# to London Stations. Thames Sand 7 6 per yard, delivered. Prt Sand 7 0 " Thames Ballast 6 0 " S. d. S. d. Per ton, Best Portland Cement 36 0 to 41 0 delivered. Ground Blue Lass Lime 21 0 per ton, delivered. Exclusive of charge for sacks.

STONE.*			
Red Mansfield, in blocks per foot cube .	£0		4
Darley Dale, ditto	0		6
Red Corsehill, ditto	0		6
Cleseburn Red Freestone, ditto ,,	0		2
Ancaster, ditto	0	_	11
Greenshill, ditto		2	0
Beer, ditto		1	7.3
Chilmark, ditto (in truck at Nine Elms)		1	103
Hard Carly divis		2	
Do. do. 6 in. sawn both sides,		4	
landings, random sizes per foot sup.	0	2	8
Do. do. 3 m. slab sawn two			
🛕 gides, random sizes	0	1	3
* All F.O.E. London			

39.	SEPT.	. :	29,	19	15	ó.	
Bath Stone-Delivered way trucks at Wes	thourne	·			£	3.	d.
Park, Paddington (G or South Lambeth (G	.W.R.) I	per	loot cu	be	0	1	7
at Nine Elms (L. & S.	trucks W.R.)		**		0	1	83
Delivered on road v	vaggons				0	1	
at Nine Elms Depot Portland Stone—Brown	n Whit-		1.5		U	1	91
bed in random blocks average, delivered in							
trucks at Westbourn	ie Park						
(G.W.R.), South L. (G.W.R.), or Nine	Elms						
(L. & S.W.R.) Delivered on road was			31		0	2	51
Pimlico Wharf or Nu	ne Elms				0	2	61
White Basebed—2d. po	er foot o	eub	e e <b>x</b> tra	١.	U	2	63
	TILES.						
Plain red roofing tiles		s. 42	d. O per	1,00			at sn.
Hip and Valley tiles Broseley tiles		3 50	7 per 0 per			81	
Ornamental tiles		52	6	7 1		91	
Hip and Valley tiles Ruabon red, brown, or		4	0 per	dez	•	91	٠
ditto (Edwards)		57 60	6 per	1,00	0	91	
Ornamental ditto Hip tiles		4	0 0 per	doz		91	
Valley tiles	roofing	3	0	* *		91	
tiles: Plain tiles (Pe	ake's)	46	0 per	1,00	0	9 5	r
Ornamental ditto Hip tiles		48	6 10}per	doz			
Valley tiles		3 48	4½ 0 per	. 11		91	
Ornamental tiles		50	0	11		91	
Hip tiles Valley tiles		4	0 per 8	doz		9:	
Staffordshire (Hanley)	Reds or	42	£ 200=		۸		
brindled tiles Hand-made sand-face		45	6 per 0	17		91	
Hap tiles		4	0 per	doz		91	
"Hartshill" brand pla	in tiles,	-	•		_	91	
sand-faced		45 42	0 per 6	1,00	U	1.	
Ornamental ditto		47	6 0 per	. 11	,	*	
Hip tiles Valley tiles		3	6 per	11		91	
	OILS						

Eoglish Sheet Glass:     15 oz.     21 oz.     26 oz.       Fourths     —     5‡d.     5‡d.       Thirds     —     5‡d.     6‡d.       Fluted Sheet     5‡d.     6‡d.     —	7d. 8d.
Hartley's English Rolled lin. lin. lin. Plate	41d.
White. Ti	
Figured Rolled 4½d	
Reponssine 4id	
Rolled Sheet	

VARNISHES, Etc.	Pe.	r ga.	Hon	١,
Fine Pale Oak Varoish		03	8 (	
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Superfine Hard-drying Oak, for seats				
churches			4 6	
Fine Elastic Carriage		0 1		
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Fine Pale Maple		0 1		6
Finest Pale Durable Copal		0.1		9
Extra Fine French Oil		1	8	
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Best Black Japan				9
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French and Brush Polish	• •	0 1		

Mr. Osmond Cattlin, assistant borough surveyor of Holborn, has been gazetted as heutenant in the London Sanitary Company of the R.A.M.C. (T.).

Doneaster Rural District Council have decided to make application to the Local Government Board for authority to prepare a town-planning scheme with respect to lands and premises comprising portions of the parisms of Armthorpe and Kirk Sandall, having a total area of 4,560 acres.

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

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### OUR HALISTE CHONS

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Holmest Couran, Dorset, Restoration V plan Mr. Edward C. B. Maidner, I R.E.B.A., Arabitect.

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## THE PLYMOUTH MUTUAL CO-OPERATIVE AND INDUSTRIAL SOCIETY COMPETITION

Obitnary

Although doubtless the designing of a large block of buildings for commercial purposes has not the same fascination for the architect as public undertakings which call for a more monumental treatment, such as municipal buildings or museums and art galleries, yet there are nevertheless many interesting problems to be encountered, some of them still awaiting a thoroughly satisfactory solution, in grappling with the design of commercial premises such as the Plymouth Mutual Co-operative and Industrial Society are now proposing to erect. It is interesting to note, by the bye, that the committee of the society, whilst committed to the principles of co-operation as regards their own trading, did not scruple to adopt those of competition for the design of their new buildings, and it may be admitted at once, as some at least of the drawings show, that this departure was fully justified. Possibly the modest deposit of five shillings required for the conditions was responsible for the fact that many able architects, who would otherwise certainly have sent in designs, refrained from doing so, under the erroneous impression that the magnitude of the work was on a level with the amount of this deposit.

The necessity for the maximum of show or window space for the display of goods, and the minimum of ground-floor piers in order to give little more than a bare pretence of support, dictated a treatment on the upper floors which should not appear unduly solid and overweighty. As a consequence it was a foregone conclusion that competitors would develop in many cases a columnar treatment, now so much in vogue for big emporiums. The present competi-tion has, however, brought forth a great variety of styles, varying from Early Georgian down to the most advanced forms of Neo-Gree, whilst there are also examples of the usual nondescript Picture Palace or Twelfth Cake styles, which every competition brings forth, quite irrespective of the character of the building r.quired. With regard to the planning involved, a reference to the block plan will show that the competitors were faced by unusual difficulties in the shape of a right of way, and two properties at the corner cutting into the island, or rather peninsula, owned by the Society, which portion of the land they are unable to purchase at present. This necessarily made a connection between the north and south blocks very difficult. Competitors, however, had to bear in mind in their planning the possibility of these pro-perties being included at a later date, and

to allow provision for such a contingency. The assessor, Mr. Paul Waterhouse, M.A., F.R.I.B.A., in the conditions suggested a sloping cartway of I in 12 from Ruleigh Street West over the right of way into the basement of the building, to emble motors and vans to descend and circulate, thus providing a rendezvous for picking up directly from the stores of each department the goods for delivery. This proved a stumbling block to the competitors, many of whom apparently were unable to find a mean course between a cartway literally ranging all over the basement from Dan to Beersheba, or one so cramped that turns and repassings would be all but impossible, although in some cases the difficulty was well met. Another great stumbling block was the provision of a good area for adequate lighting and ventilation. This was clearly stipulated in the conditions, yet



SITE OF NEW CO OPERATIVE PREMISES, PLYMOUTH.

very few realised it properly in their prospective plans'. It is also rather difficult to understand why the r staurant floor should apparently have given such trouble in planning; but the fact remains that not many of the designs provided a good clear floor space, without angles or old shapes, possibly totalling the necessary area in the aggregate, but far less direct and simple for working than a plain refectory of the required size. The reports and estimates of the winning design and the three premiated schemes were not available, but in the majority of cases the latter varied between £80,000 and £90,000, being based on the stipulated figure of 1s. 1d. per

## THE SELICIED DESIGN.

Coming to the actual designs, the assessor has placed No 54, by Messrs, Halliday and Paters on, and C. Gustave Agate, AA.R.I.B.A., of 14, John Dalton Street, Manchester, first, and few will be found to

satisfactory solution of all the inflictities. The planning of the basement with its cartway admirably placed for enculation and loading, is both compact and practical, whilst the connection between the north and south blocks is made as much of as possible. The proximity of the cartway to the Courtenay Street pavement lights ensures proper lighting on that side, and whilst it is not clear from the plans as to how the extra-wide portion is intended to be lit, no doubt it could be arranged from the floor over. The stairs and lifts are all well placed, and the right of light of the Star Hall has been fully considered. The width of 35 ft adopted for the open area is adequate, and will admit full and ample light to all departments. Again, the restrurant floor is given a fine clear space, admirably lighted and ventilated, with kitchens, etc., all planned most conveniently close by, on the third floor. It should be remarked that the position was left to the option of competitors, who were at liberty to use the second floor if they wished, but in the event of the third floor being adopted, the space thus left on the second floor was to be frankly given over as unalletted. The treatment of the elevations, although simple and unpretentions, is thoroughly dignified and very satisfying. The great lines of the mansard roof, unbroken by dormers, all of which face on to the area. give a business-like and broad effect to the building, whils: the general distribution of the piers and columns is stately and well-considered. The advancing of the ground floor glass fronts 9 in. in front of the superincumbent masoury is claimed by the authors to provide a counterfoil to the appearance the buildings would otherwise present of being inadequately supported, so that the free is that of a screen in front of the to a sup-Altogether this design is no st suitable, and ought to wirk out in a very pleasing and appropriate manner

## THE £75 PREMIATED DESIGN

The first premium of £75 is availed design No. 57, by Mr. H. R. Garliner. Lie,R.I.B. A., of Leutherheid 1 is the scheme alternative plans are shown, and in one of them the strong way is contrived to enter from Releigh Street South. The planning generally is straight forward and satisfactory, with a good large area and excellent short m. The roof garden, however, is pined with the kitchen on the third floor above the residence. taurant, with the consequence that service is less simple than in the winning design. The lighting generally is go I, the direct air and light to the basement in the alterquestion the award. Taken all round, native scheme being distinctly a point, this design appears to provide the most. The elevation to Courtenay Street is plain and anoffensive, but those to Raleigh Street and branktort Street show an excess if glass and non-treatment which is uncalled for, and surely a judicious comparins introducing a little more mas may might have been adopted. This is, however, a well-thought-out scheme with many good points to recommend it.

### 1 RE 250 PREMIATED DESIGN

The main individuality which characterises design No. 10, by Mr. II S. East, of Gray's lun, awarded £50, is the radiation of the internal walls to tally with the converging lines of Raleigh Street and Frankfort Street. This is an arrangement which cann it be said to look well on paper and in view of the endless obliquities in volved, it certainly would not work out satisfactorily in practice. The departments, to a in some cases are rather badly cut up, notably the drapery and furnishing, but the restaurant is well managed on the second floor, with practically no waste space. The elevations show a continuous ground floor of plate glass with narrow metal uprights, devoid of a vestige of masonry and surmounted by a series of piers and arches running through two stories, filled in with iron wimlows. A cornice and brick blocking course over this is crowned by a two-story mansard roof-line thickly studded with dormers, suggesting that the building is divided into three distinct portions in a not overpleasing manner; but the elevations to the area have had much care and thought expended on them, and many other details have been very well considered.

## THE £25 PREMIATED DISTON.

Messrs, Frank Bethell, M.S.A., and C. M. Swannell, of Broad Street, London, have secured the third premium of £25, with design No. 27. These architects have approached the problem from quite a different standpoint, and provide a great circular staircase and light well, with areas on each side. The shops present ample opportunities for the display of goods, but there is a falling-off in the arrangement of the basement and stores, whilst the upper floors make doubtful solution of the problem. The elevations also are lacking in the restraint necessary for such a building; they do not not convey the "business idea embodied by the winner, the Neo-Gree on which their scheme is based, with a suspicion of Recess in its lines, being somewhat unpalarable.

Before passing on to a few of the other 92 designs submitted at may be remarked that many of the competitors appear to have lavished their best efforts on the Raleigh Street South elevation, apparently because the asses r, merely for convenience, suggested this front for the detail drawing. This was everrly on account of size only the important elevations, if either need emphasis, are these facing Frankfort Street and Courtenay Street,

With ref rence to the remaining designs, the nance of the connections were not dis-closed, and they can only be referred to under their distinguishing numbers; acress to them, mereover, was extremely difficult owing to the fact that they are at present hullful together in a small room. It is therefore no or than in bubble that some of the better sets could not be seen; but among the visible ones No. 12 stood out strongly with a very well worked out refined Classic treatment and a nicely designed green tile roof. The basement realway is well arranged, although possibly the lighting is not perfect. The restaurant floor is also excellently well disposed, and the elevations are of onit exceptional merit, the show

difficult to understand why this design was overlooked in making the awards, as it appears to be amply deserving of a pre-

Other designs which struck us as being worth more attention were Nos. 4, 2, 30, 25 (with a good double slope to counteract the trouble of vans meeting from different directions), 96 and 95; but in the absence of any information as to the authors' names, further criticism would be somewhat pointless, and impossible of identification by our readers. ---

" BUILDING NEWS " DESIGNING CLUB. AWARD OF PRIZES FOR SESSION 1914-1915.

The record of our Designing Club has been continuous since it was started forty years ago, and even during the present war time its work has proved an almost unqualified success. The numbers of our competitors naturally fell somewhat short of those of previous years, and, for obvious reasons, towards the close of the session 1914-5 competitors failed to reach the high level invariably maintained hitherto in normal times Business could not be "as usual with so many students, assistants, and young architects fighting for their country or gone on active service. But we are able to say that in spite of this depletion in numbers the standard of merit, which has all through our Club's career distinguished the designs submitted, has been upheld, for the contests month by month were each excellent and showing sustained effort against odds. Eight subjects were set in the following periodical sequence, and each subject was illustrated the order of the dates enumerated after the titles of the subjects, as printed in the following table:—October, 1914—A, "Gatefollowing table:—October, 1914—A, "Gate-house in a Street" (illustrated November 20, 1914). November, 1914—B, "A Small Market House" (December 18, 1914). Pecember, 1914—C, "Headquarters and Drill Hall for a Country Town" (January 22, 1914). January, 1915—D, "A Small Labour Exchange" (March 5, 1915). February—E, "A Co-operative Hostel for a Garden Suburb" (April 2, 1915). March—F, "A Small Social Club for Airmen and their Friends" (May 28, 1915). April—G, "Church Christ Scientist" (June 16, 1915). May—H, "A Garden Payilion and Boat-May—H. Garden Pavilion and Boat A house " (July 21, 1915).

In these competitions "September Morn"

submitted designs each time, and also always scored a place—twice first, four times second, and twice third—thus gaining "Walbroke" was once first to was once first, twice second. and three times third, scoring 20 marks, "Penwith" runs him closely by taking the first place twice, once second, and once third, giving a record of 18 marks. "Why" was twice first and twice fifth. "Bournemouth Queen "stood once second, once fourth, and once fifth. "Thistle" and "Kitch" both on one occasion, but their won " first place names do not occur again among the premier ranks. "Tonnelier" we thought would have ranks. 'Tonnelier'' we thought would not better, judging by his evidence ability, but somehow he only figures third once and fifth once. "Thistle" joined in one competition, and then he took the first isition, like a flash in the pan.

This tabulation decides the results, and

position.

is evident that the awards must stand as

First prize of £10 10s.; September lore—Mr. H. W. Smith, care of Mr. W. Allfrey, M.A., 57, High Street, Мот E. W. Or ford.

Second prize of £5 5s.: "Walbroke" Mr. W. Brooke, care of Messrs, B. Castle and Son, architects, London City and Mid-

uel Bruk Chambers, Cleckheaton, Yorks. Third prize of £3 3s.: "Penwith"—Mr Messrs. Cowell and J. Cark, care of Messrs, Cowell and Drewitt, architects, Lennard's Chambers, Penzance.

Hon, mention is awarded to "Why" and

Bournemonth Queen.

Cheques for prizes, after verification, will be forwarded about October 30. Any alteraspace be a comple, and the reants of support to the property of the prize with the prize with the addresses of the prize-winners of the prize-winners of the first prize feeling of security. It is rather one, meanwhile, to be sent to the Editor.

MONT S. MICHEL, THE ABBEY OF THE ARCHANGEL, AND ITS SEA-GIRT TOWN

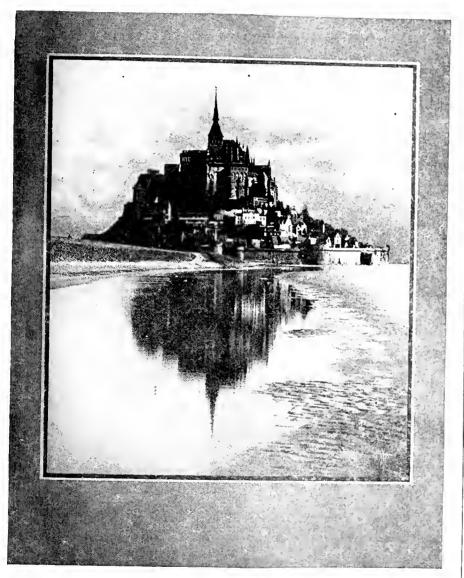
(Concluded from last week, p. 347.)

The eastern apse of the Crypt of the Great Pillars is deeply recessed, and has two windows with raised window seats. The door by the side leads down into a large hall which was the Justice Chamber of the abbot, but at present its fine timber roof is hidden by a flat ceiling put in when the Abbey was a prison, and the room is full of rubbish. On he north side of the rock, at about the same level as the substructures, is this fine crypt of the North Wind, as it is called. It was built by Abbot Roger II. soon after a great fire which destroyed much of the Abbey in 1112. It was used as the Almonry until the large one was built in the Marvel. The capitals and bases of the columns have a rugged simplicity and directness about them which is particularly charming, and at the further end you can see another mass of the original rock still left above the floor for no apparent reason. Much of the right hand wall in this crypt is the native rock cut to a flat face, against which the massive piers which carry the vaulting are built, and the stairs we see lead up to the room above, called The Promenade. This was the original cloister of the same date as the crypt below. Very different to any other cloister we know, this is but just one long gallery, with high windows looking away over the sea to the north. It consists of two aisles about 97 ft. in length. The columns originally supported a wooden roof which carried the floor of the dormitories above, and this graceful vaulting The caps was added about a century later. of the columns are carved with plain bold leaves, with the exception of one near the middle of the room. And on this one the carver-monk has done his best to perpetuate his idea of a twelfth century Mr. Nobody. And now we have arrived at the top of the great flight of steps to a platform level with the floor of the church. This platform, from which we can get a grand view southward, is called the Saut-Gualtier, or Walter's Leap. Walter was a young sculptor, who, in a fit of madness, threw himself down the rock from the parapet here. Here is the south door of the church at the western end of the nave. It is of the 13th Century, with a deeply moulded arch, the tympanum of which once held a carving of St. Michael slaying the dragon. Just round the corner is the great western platform, beneath which is the Chapel of Our Lady Underground. This west front of the church was built in 1776. The church had extended three bays more to the west, but they were taken down owing to their ruinous condition; and here, in what had been the floor of the western nave, were found the graves of two of the carlier abbots, one of whom, Robert de Torigni, did so much for the building of the Abbey. And here was buried that Duke Conan of Brittany who refused to do homage to Duke William, so that he, with Harold and his followers, set off to the Mount to munish him, with the result that many of his knights were lost in the quicksands, as we see portrayed in the Bayeux tapestry. Entering the west door we look along the whole length of the church to the east. The whole length of the church to the east. nave is now of four bays, three of which have the top of the rock immediately below the prevenent. This nave is very early in date, for it was begun by Abbot Hildebrand II. in the year 1023. The church is no longer used, and while it was part of the State prison it was robbed of its monuments. screens, and other decorations which we expect to find in every great church. So that as we stand in the chancel we see that we have only the bare walls and an uninter-rupted floor space. The great piers at the crossing which carry the tower were built in 1058. The nave was never vaulted in stone, and the present wooden waggon vaulted roof is of quite recent date. As we look along the nave areading it has quite a familiar appearance, being very similar to

By H. W. Fincham; a lecture, illustrated by 120 photographs by the author, delivered at the Exhibition of the Royal Photographic Society in the Suffolk Street Gallery, Haymarket, S.W., Sept. 28, 1915.

several of our Norman cathedral naves, but we must remember that it is nearly 100 years earlier than most of our great Norman churches. The piers, simple, with a great vaulting shaft running up the face of each to the roof. The triforium is small and heavy, and in the clerestory we have one simple round arched window in each bary. Up in the triforium we see how each bary is divided into two round arches with a central pier, and again subdivided with a little round column and simply carved caps. The south aisle of the nave looks quite home-like to an Englishman, and this picture would do almost equally well for the south aisle of Ely nave; the vaulting is almost identical, but instead of the great round columns we have here a square pier with a half-round

until hold that the choice was completed. It has a very noble effect with its bitty arches, and the line and many lines of the mouldings running right round the arches without an capitals such as we should find at home. The trajorium is not by any means a blind stay, and the clerestory is very high, and its vendows are as graceful as can be. This traphoto pacture shows us the capital of one of the great piers of the tower of 1053, and by its safe we see the beautiful detail of the traforum. Although the material is the hard granific used all over the building, this tracery is as finely wrought as if it had been cut in a fine soft stone. The choir aide runs entirely round the apset forming an ambulatory from which a number of little chapels open out. Here you see the



MONT S. MICHEL, FROM THE SOUTH (From a photograph by Mr. II, W. Finchain.)

shaft on each face. And all the time we must remember that this is about eighty years earlier than Ely Cathedral. On the right of this picture we have a little chaped on the east side of the south transept, which at one time held many relics of St. John the Evangelist; and then we look along the south aisle of the choir, with its vaulting of the latest period of Gothic architecture. The north transept is of the same style as the nave, but the window is of the 13th Century, and the circles in the head show that tentative feeling towards some means of lightening the upper part of the window the result of which we shall see in the beautiful Flamboyant windows of the choir. The old Romanesque choir fell down in 1421, and this present choir was a long time building. They had first to construct the Crypt of the Great Pillars below, and it was not

And all the time we this is about eighty Cathedral. On the very have a little chapel south transept, which relics of St. John the ve look along the south this vaulting of the beautiful bases of the piers very high, as we look along the south this vaulting of the beautiful bases of the piers very high, as we get them an our own Late Gothic, with the horizontal mouldings intersecting the bases of the same style as the is of the 13th Century, the head show that ards some means of the great piers of the choir. Against the middle pier we see a holy water stoup, not an after thought, but designed and built into the pier while the work was rising. In the little chapel we see the vaulting ribs dying into the wall without any of the vaulting ribs dying the wall without any of the vaulting ribs dying into the wall without any of the vaulting ribs dying into the wall without any of the vaulting ribs dying into the wall without any of the deorations of the church have disappeared, there are still left in one of the northern chapels two carved panels of Renaissance character.

They are carried to him to be They are current or more than the meaning soft as the of Carry and Fire been richly concerned. I have one represented the Expulsion the Carden et Eder, with the Serpent. from the Garden et Eder, with the Serpent, in human of the booking from the tree And the the represents the Review team. And the the represents the Review team who see one Lord receiving the tree as they use from the grayer while the bookin are find the Decrease a diagon represent the fail of the world. In a south chaper did cared to Our Lody of Pity was pained of the four Evargency without the Garden to Our Lody of Pity was a pained of the four Evargency withing the Gaspuls continued the right St. Marthew has a charming little ange, helding his inkpet; the next, St. Luke, mode his own mispet, while his winged built takes no interest in the business; the third, St. John, has his carge minding the third. the third, St. John, has his eager minding the ink, while on the left St. Mark has no inkpot, and either us's a fountain pen or horrows an occasional dip from one of the others. Almost the only other object left behind at the clearance is this boant ful rad across the entrance to the east chapel. across the entrance to the east chapel. It is very delicately carved in oak of Late Gothic or almost Renaissance character. The gates are very rich in carving with shie'ds of the see and some of the abbots. This great hell, which blocks up a large portion of the east chapel, was given to the church by Karg de Rebambourg, a German baron, whom Louis XIV, made abbot in 1703. It was specially used to guide the pilgrims and fishermen across the sands in foggy weather This telephotograph shows us the apex of the vaulting of the apse, the boss of which is carved with the Royal Arms of France, our rounded with the collar of the Saint Esprit; then we have a representation of St. Michael slaying the dragon; and the lower shield bears the arms of the Abbey, with the fleur de lis of France and the scallops of Brittany. We will now visit that grand building on the north side of the rock, which from its earliest time has been known as The Marvel, so wonderfully has it grown up from the rock, and such magnificent halls does it contain. It consists of three floors, each of which is divided into two halls. This western room of the bottom story is the cellar of the monastery, and dates about 1120; it has been called the Mentgomerie in memory of a dark deed that happened here in 1591. The Abbey was being besieged by the Huguen ts, under the Sieur de Montgomery. He had bribed an inmate of the Abbey to admit his soldiers by hauling them up to this room by means of a great wheel similar to the one I showed you just now, but which was used on this side to hand up water from the well of St. Aubert. On the night of the Feast of Michaelmas, when the monks were chanting their office, the besiegers crept up the face of the rock and were handed up in two and threes to this room. where they were quietly led within and stabbed to death Seventy eight of the Huguenots thus went to their doom, one only being kept alive, by name Rablotiere. At last Montgomery, hearing no noise of fighting above, became anxious, and cried out if all was we'l. The Governor led Rabbotiere to the wheel, and promised him freedom if he would entice the others up, but the brave man shouted down that they were betrayed, and the herror strickon Huguerots hurried away. It is pleasant to know that the Governor, touched to the heart by this the Covernor, touched to the heart by this splendid act, gave Rabiliters his life and freedom. The eastern ball is the Almoury: here the monks daily dispensed food and alms to near pilgrims. You see it is a fine violed hall of two aisles divided by well proper tioned columns, and, like the ollowing dates from the early part of the twift extury. Here the present day pilgrims well entire for the guides, and while away the families for the guides, and while away the families addressing pestends with they can buy it a counter at the end of the half. The second addressing pestanets we consider the second a counter at the end of the half. The second story is also divided into two, this cast the Guesten Half. The work story is also devided into two, it is eastern half being the Guesten Hall. The work is approximately of the last decade of the twelfth century, and is much in really and graceful than the halfs below. Unfortunately, at the time of my visit the half was being restored, and was filled with scaffold. ing. At one end of the hall me two enormous fireplaces side by side, which must have been very welcome to the guests arriving on a wintry day. This picturesque passage con-

Gosten Ha. aith the western since floor. This is known as Kinghis, for King Louis XI. This is known as of the Knights of St. . J. at I gave them this room as what It consists of four fire a dy ded by taken rows It consists of four finely s 13 and by taken lows of the S Habof the Knights one of the the halls in the world. On the corth as between the wind ws. are two corth as between the wind ws. are two corts means as which, filled with blazing as mess are looked very noble. See the graceta, to these of the vanlying and the farm a little shafts rising from the top of the great pyramida, chimney. The pictures to be abanted in this wonderful half are offess, and this one gives you an idea of the period for 1,2% ng effects one gets as the setting sin streams in at the western windows. Betwee the creation of the Knights of St Michael this hall was the Scriptorium, where the artist in iks worked at these gloriously illuminated missals and service books which were used in the churches, and which are now the prizes of the millionaire collector. Here in detail is one of the capitals of the columns. and when we remember that they are wrought in hard and claims grante, we wonder at the skill of the carver who produced so high graceful work in such a difficult material. On the north side are delightful balcomes, corbelled out from the wall, where the monks sould look out over the top of the little word and away out to Tombelaine and the open son. And now we have arrived at the top story of this marvellous building: the easter, half is this great hall, the Refectory, andming hall of the monks. It was not violed in stone as the others were, for there is a smooth above to carry, and vault there is a coverght above to carry, and vaulting would greatly increase the weight on that below. The lighting of the half is most brilliant, actionized its many windows, tall and narrow, are almost invisible, being placed on the outer face of the wall; here on the left is the pulpit, an important item in the Refectory. For here a monk read from the Lives of the Saints or some other holy book while his brathren direct. This was intended to prevent their to nights being led away to wildly things, but probably the drone of the reader only bejond to cover the inevitthe reader only he poel to cover the inevitable chatter of a large differ party. The Refectory opens immediately into the Constant, a crowning given on all the many wonders of the Mount, one of the most per feet and beautiful closters in the world. This really wenderful closter was built between the years 1220 and 1228. The argade easists of two parallel rows of columns and arches the healternate with or overlap each arenes to heliternate with or overlap each other, and are connected by diagonal ribs forming a triangular vauliting which is unique, and most beautiful in design. The cloister garth, it stoad of being of grass-grown earth, is a grante floor, covering the Hall of the Knights in molately below. This view of the north wark gives you some idea of the beaution for alternating areading which on the interest is a covered with the most defination of the alternating areading which on the interest is a covered with the most defination of the alternating areading which on the interest is a covered with the most defination of the local granite, for this areading is all carvoid in the soft and fine grained. Chen, is all carvoid in the soft and fine grained. Chen, is all carvoid in the soft and fine grained. Chen, is all carvoid helicate work. The to fine a simple barrel would in wood, doubtless for the need of keeping the masonry of this great helph as light as possible. This more wars helph as a new of small and simple one light windows set deeply in the thickness of the wall, which look away over the vast other, and are connected by diagonal ribs the wall, which look away over the vast expanse of sands and the open son. The outer valls are all digrante, and the or himouldings of the arcading open them are of singular death and bounty outs design the hardness of the material. The small door in the corner is that of the Chartria or Muniment Reson; it is now a little museum of interesting objects found about the Abbey, and contains beautiful vesticerts, rings, and half is from the graves of the earlier abbots In the south walk, against the wall of the hurch, are the layatories of the micks, and the square holes in the lower part were for the eremodal feet washing on Thursdays, and especially on H by Thursday, when the

abilist washed the feet of all the monks, and here he also washed the body of a deceased monk before its burial. In the west walk is and don't was intended for the Chapter He aser which I told you was contemplated on the west side of the Marvel, but never built. There are three very richly moulded collest and they would have made a most amposing entrance to a great Chapter House They are now filled with glass, and we can look down and wonder at the boldness of the one eption which proposed to carry up the mas any nearly 300 ft. from the base of the rock. Standing at the south east angle we sok along the areading at the charming offect of the alternating columns and the delightful vaulting ribs between them. The slymms and caps are of a kind of red marble called grantelle from a quarry on the main land near by, and were presented by the abbot of the old and celebrated Abbey of Luzerne, to whom the quarry belonged These columns and capitals are, as you see quite simple and plain, and so help to throw into great relief the beautiful work in the prindrels above. Every spandrel between the arches is most richly carved in the highest possible relief, and here opposite the Refec tony door was a crucifix, now much mutilated. but on either side is a beautiful mass of foliage. the nearest one is a lovely vine with vine tender in its midst. The cornice is filled by richly carved bosses or pateræ, every one different, and of most charming conception. Originally this wonderful carving was all richly painted and gilded, of which faint traces are still to be seen; but my own opinion is that we prefer to see the stone in its natural creamy-white colour. Opposite the door of the proposed Chapter House is a throned figure of Christ with censing angels. and up in the cornice are four little heads. where the carvers, in the prode of their work have commemorated their portraits, and in another part they have carved their names It is pleasant to think that they each under took the carving of a walk, and we can see how their striving to emulate each other resulted in this magnificent display of the very finest carving of the thirteenth century. These next three sides show still more of the varied and beautiful ornaments carved upon the spandrels, and the row of little rose like hosses ale ve. The relief is as high as possible, and the undercutting is so complete that one wonders how some of the petals stand against the wind that whistles through the Cloister, and yet here it is after nearly's ven centuries. Look in the cornice where the carver, tiring for a moment of regular shaped ornaments, has popped in that charming little owl, and in another place is a fine sea anemone with all its tentacles displayed and twisted into a circular pattern The outside roof covering of the Cl of glazed tiles in alternating bands of black and yellow, modern, but said to be a faithful of the original tiling. Above we see end of the north transept of the church and the great Romanesque tower. A tele-photo pature of the cast end of the church slows us the ferest of pinnacles which cap shows us the forest of punnacles which cap the buttresses of the apse, and the many flying buttresses which carry the weight of the vaulting over the roofs of the aisle channels to the outer walls. Standing on the roof of the chapels we can see at close quarters these graceful flying buttresses which rise above us in three stages; one of these at the top of the picture carries a little stair ase to the upper roof. Its charming open work trajeried parapets has given it the name of the Escalier Dentelle or Lace Stair as: I wish I could show you more of it but although I made several rather perilons climbs across the roofs to get a good view-point for the camera, I quite failed, and the best pictures of it were taken from a scaffold 12 some years ago. Another telephotograph shows us the detail of the graceful fleche or spire which caps the great tower; this is of wood covered with lead, and is all modern work, being completed in 1899 from the designs of the architect, M. Petitgrand from the Right on the summit stands this magnificent figure of St. Michael slaving the dragon. Nearly 14 ft. in height, it is made in beaten copper from the design of the eminent French

sculptor, M. Frémiet, and it stands 500 ft. above the level of the sands. And now on the highest ramparts let us look over the 100 square miles of the bay and watch the setting sun. The tide is low, and the river Couesnon, with the little streams of water running off the sands, make a wonderful pattern of curving lines, while the sun lights up the great expanse of the bay until the whole is like a blazing o al. An old custom was that no one was allowed to enter the church at night, as they believed that the angels met there and sing in the choir at midnight, while their effulgence illuminated the place. And one summer night as we strolled across the sands and saw the church standing out dimly against the midnight sky, we watched the long windows of the choir slowly lighting up until every pane was a blaze of brilliance, and one could almost 77.3.5 think they heard the angels singing. Of course, it was but the rising moon reflected on the glass, while the wind hummed across on the glass, while the wind hindined across the sand; but we could well understand how such a scene would appeal to the pilgrims trudging along in peril of the ever-changing quicksands.

And now that you have seen my pictures of this wonderful rock and the glorious Abbey of the Archangel. I think that you will agree with my quotation from Robert Louis Stevenson, that "mankind was never so happily inspired as when it built a cathedral," and that no more impressive site for such a building could be found as this little splinter of a rock in the midst of the great

TOWN PLANNING AT SALFORD.

Mr. George L. Pepler, representing the Local Government Board, sat at the Town Hall. Salford, on Wednesday last, to hear the application of the borough corporation for permission to put into power the Housing and Town Planning Act of 1909.

Mr. L. C. Evans, Town Clerk, appeared for the corporation, and the scheme was strongly opposed on behalf of the Manchester Ship Canal Company, the Trustees of Booth's Charity, the Lancashire and Yorkshire Railway Company, and various landowners.

Mr Evans said that the corporation were anxious to put the town-planning scheme into operation, and the land they proposed to include covered about 2.290 acres. It was situated in various parts of the borough, and was all land likely to be developed.

Mr. F. W. Platt, building surveyor to the corporation, in support of the application, said that had the Salford Corporation had the powers they now possessed forty years ago, Salford would have been a very different place. Apart from secondary streets, the main thoroughfares would have been made much wider and the people would have enjoyed three times the breathing-space they had to-day. Mr. Platt explained that since the opening of the Ship Canal there had been a considerable growth in the huilding of property, especially warehouses and workshops, and when normal times were reached again a much bigger growth was anticipate. On the Crescent area, where property belonging to the Booth's Charity was situated, there were some thirty-four different owners, and for uniformity alone it was necessary that the corporation should enjoy the powers given by the Act. This was once a residential district, but in course of time it would the all occupied by warehouses. In the north the development would be of a residential character.

The borough engineer, Mr. E. B. Martin, said the corporation was most anxious to assist landowners, and no obstacle would be put in the way of developing any of the plots. In other towns, he had found that owners had benefited considerably by the provisions of the Act.

For the opposition, Mr. Wallis, land agent and valuer to the Ship Canal Company, contended that the land belonging to the company, and shown on the plan, was already developed. The Canal Company had powers of their own, which he contended ought not to be interfered with.

# THE BRITISH FIRE PREVENTION COM MITTEE'S FIRE WARNINGS.

We have from time to time called attention to the various "fire warnings" that have been issued by this committee in connection with the war emergency, but it does not seem to be generally understood that not seem to be generally understood that they can be obtained gratuitously within reasonable limits, nor are the various types of "warnings" available apparently known as well as they should be.

The "fire warnings" obtainable in poster form, printed in red, 8 in. wide, are as follows, and the reference number, which

follows, and the reference number must be given in all communications regarding them:

For military and auxiliary military hospitals (No. 10

For private hospitals, convalescent homes and hostels (No. 11).

For hospitals taking Belgian wounded: in French (No. 11a), in Flemish (No. 11b).

For Indian hospitals and depots: in Pun-

jabi (No. 11c), in Urdu (No. 11d).

For refugee hostels (No. 12): in French (No. 12a), in Flemish (No. 12b).

For farmers (No. 14)

For troops billeted (No. 15).
For works and factories engaged on

Government orders (No. 16). For elementary and secondary schools, reair raids (No. 20).

For public schools and boarding schools, re air raids (No. 20a).

Re fires due to air raids (No. 17), for hous?

holders, etc

Re fires due to air raids (No. 17a), as to

the fires due to air raids (No. 11a), as to dealing with incendiary bombs, etc.

All Government departments and military authorities receive the supplies of the "warnings" free.

Supplies of any "warning" are issued free to police forces upon the written request of the chief constable. Applications from constables or special constables connected with such forces cannot be considered. with such forces cannot be considered.

A suitable number of copies of "warnings" No. 10, 11, 11a-11d, or 17a are obtainable free from the British Fire Prevention Committee by officers, doctors, or matrous of naval, military, auxiliary military, Red Gross, or St. John hospitals and civil hospitals or convalescent homes taking militar; patients, upon writter application addressed to the registrar at 8, Waterloo Place, London, S.W., giving the full name of the institution, the number of beds contained, and the postal address.

Local authorities and school or refugee committees—as also the clergy and head-masters or headmistresses—requiring "warn-ings" No. 20 and 20a (for schools) or Nos. 12, 12a, and 12b (for refugees) will receive a suitable number of copies free upon written as a statement in the registrar, giving the full name and postal address of the institution for which they are required, the number of pupils or refugees, subject to their enclosing a large-sized, addressed, and properly stamped envelope for despatching the necessary posters.

Factory owners, estate owners, farmers, shopkeepers, and householders requiring copies of the British Fire Prevention Committee's "warnings" must similarly enclose large-sized stamped and addressed controlled the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the velopes for reply, but only receive a strictly limited number. Their communications can not be attended to unless the return stamped and addressed envelope is provided, and in any case they are only dealt with in rota-tion of application after the requirements of

the authorities have been met.

All communications as to "warnings" should be in writing addressed to the registrar, the British Fire Prevention Committee, 8, Waterloo Place, London, S.W., and not by caller or telephone. Over a quarter of a million posters have already been quarter of a million posters have already been issued by the committee gratuitously.

## FIRES DUE TO AIR RAIDS

Don't wait until a fire occurs to find the best way out in the dark. Think of a way out beforehand.

Buckets of water (supplemented where feasible by ordinary hand pumps) are recomfeasible by ordinary hand pumps) are recommended as the most suitable and economical fire appliances, and, where oil or spirit is a metal handle at the apex (see A).

used, also some onckets of sand. All buckets should be kept fided ready for use.

Pitchers and other minor household vessels should be kept filled ready for use, and where there are baths, wash tubs, etc., these should be kept filled so that a supply of water may be available independently of the water mains. Where there are garden utensils, such as syringes, garden pumps, etc., they should readily accessible

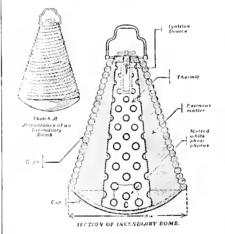
On no account should money be expended on powder extinguishers (tubes), glass hand grenades, or similar types of minor fire apphances at present being hawked about, and if previded they should not be relied upon.

Squirts or extinguishers containing carbon tetrachloride or similar chemicals, which are liable to form noxions gases, are unsuitable.

porcable liquid chemical guishers are desired, they should be of two or three-gallon capacity, and a written warranty should be obtained that they comply either with the specifications of the Board of Trade, H.M. Office of Works, the Metro-politan Police, or of this Committee, these specifications being mainly intended to prevent accidents from bursting

Occupants should know how to use the available fire appliances efficiently.

Ascertain the quickest means of obtaining assistance from the fire brigade and police: post up the necessary particulars, nearest fire alarm, etc., on the ground floor, and do not



fail to notify any outbreak of fire imme-

The ordinary explosive bombs employed by the enemy rarely cause a fire per se, but where a building is injured or collapses, fires are frequently caused by open lights or fires, etc., and their spread is assisted by escaping gas from broken mains or arcs from broken lectric cables.

Fires thus caused indirectly by explosive bombs can, as a rule, be dealt with as ordinary fires in their incipient stage. Any gas or electrical supply not cut off prior to the outbreak should, if possible, however, be cut

off at the earliest possible moment.

The incendiary bombs employed by the enemy readily fire buildings and their con tents owing to the fierce nature of the flames and the molten metal generated by the chemicals used

Fires caused by incendiary bombs may be prevented from spreaching, r gardless of the high temperature generated at the actual seat of the outbreak, if water be promptly applied in fair bulk, force and continuity, say, from a series of buckets energetically thrown, or hand pumps vigorously worked Sand or loose soil similarly thrown might be useful in the absence of water, lost would not have the necessary cooling effect. The application of single buckets of water, single shovels of sand, etc., would be comparatively valuables. valueless, a concentration of the available liquid first aid appliances being required to obtain the necessary result.

In order to deal with fires from incendiary bombs, their make should be understood, and the following describes one of the types frequently used .--

Hat cup, on pierced metal tunnel is fitted have going ign ion desice and handle fitted at the top-

The funnel is generally filled with Thermit which, up on guitton, generates interse heat and by the '.m' of the concussion has taked the form of mosten metal of the extra e line, high temperature of over 5306. Fair. T molten metal is spread by the concussion

Outside the funner is a paliding of a highly inflammable or residens material bound with an inflammable form of rope. It residens material creates a pungont smoke

There is generally some melted white phos phorous in the bottom of the cup which deve lops nauseous fumes (see C). In some case: celluloid chippings are added and occasionally a small quantity of petrol. The fumes from bombs are generally paid

gent. When poison gas is used it is often irritating and has a peculiar smell. A simple form of respirator that will cover the nose as well as the mouth, and can be readily damped, should be kept handy. Such a respirator can be made of a pad of cotton waste contained in gauze to tic round the head, the gauze to be of sufficient depth to also protect the eyes. The Metropolitan Police recommend that the cotton waste should be saturated in a strong solution of socia. Fare men and others whose duty it is to attend mendiary ares would do well to carry simple respirators in their uniform.

Further useful instructions are given Warning 17a, which, as we have said above, can be obtained free from the Registrar of the Committee at the address given above, and should be posted conspicuously in every build ing in the Kingdom where danger is appre hended

### THE CASE FOR TOWN PLANNING!

This volume, intended for the use of councillors, officers, and others engaged or interested in the preparation of town planning schemes, contains the complete text of the schemes passed by Parliament for the Quinton, Harborne and Edgbaston, the East Birmingham, and the Ruislip-Northwood schemes, together with a complete explanation of the complete explanation. tion of the last mentioned scheme, supplied by the chairman and clerk of that council; a complete set of the forms and notices to be used by the officers of local authorities m all stages of town planning administration, together with the text of the Town Planning Procedure Regulations, both for England and Wales and Scotland; the annotated text of the Act, and the rules as to the Compulsory Purchase of Land.

A detailed description of the various stages of town planning administration follows: one to this, and the following points are considered:—Section 1. The preparation of the prima facile case for application to the Leval Government Board for permission to prepare a scheme: II. The points to be considered in close detail when permission to prepare a scheme has been given by the Local Govern-ment Board, and the work of actual prepara-tion has been placed in hand; III. The cost of a town planning scheme; IV. Co-operation with owners and the adoption of owners plans; V. The preparation of the maps of the scheme; VI. The final stages of a town plan ning scheme; and VII The administration of the Act in Scotland

A history of the town planning movement. occupying a hundred pages, is followed by a consideration of various special points, including the fundamental principles of town planning, the desirability of town planning from the point of view of the landowner and the land developer, the cost of land development under town planning schemes, the cost of cottage building under town planning schemes, the possibilities of providing cotschemes, the possibilities of preclaing cottages for workmen under town planning schemes, the growth of the garden saluarb movement and of public utility (or co-partnership) societies, the effect of town planning legislation on housing finance, municipal the control of the saluar possibility of the saluar possibility of the saluar possibilities and the saluar possibilities are saluar possibilities. action in regard to the development estates and the building of houses by muni-

"The Case for Town Planning." 679 pages, 4to (National Housing and Town Planning Council, 41, Russell Square, W.C. 15s. net.)

cipacities, public utility societies and private

enterprise, public utility societies and private enterprise, and the case for obligatory planning in urban and rural areas.

I pwards of forty illustrations are included in the book, including copies of maps No. 1 and No. 3, prepared in connection with actual scheme-

## Currente Calamo.

Anything off the Budget is so much to the good, and we are not disposed to find fault with Mr. McKenna's remission of the plate-glass duty, especially as it saves us the trouble of analysing a sheaf of protests against the proposed duty of 9s. 6d. per cwt., which have gone to the waste paper basket. In this case it seems that the monopolist of the trade here was a Tariff' Reformer, and that he as comfortably shed his own opinions as any Free Trader would, when they conflicted with his personal interests! It is perfectly true, of course, that most of our plate-glass comes from Belgium. It is equally true that more of it might and ought to be made here if makers were more enterprising. There is a field in this industry which is well worth the attention of capitalists who will spend time and money on up-to-date methods and make their existence known. Till then, we suppose, the Tariff Reformer will swear imported plateglass is "raw material," as we all should if our own pet corn was crushed by the Protectionist boot.

There seems some likelihood that the conditions of the York Town Planning Competition will be amended, at any rate in some particulars, on the lines of the suggestions submitted by the Society of Architects. It will be remembered that the main lines embodied in these were:-That the deposit paid should be refunded to architects who decide not to compete, and that ordnauce maps, etc., should be supplied to competitors free of charge; that the name of the assessor or assessors should be made known at once, and that the jury system of assessing should be adopted; that the premiums should be increased, and the successful competitor be employed on the present and future schemes at adequate fees, and that other competitors whose ideas are utilised should be properly remunerated. Although the council have not barred the competition, they anticipate that the views they have expressed and the action they have taken will commend themselves to the members. We hear that the deposits will be refunded, an assessor appointed at an early date, and Clause 14 amended by the omission of the author's nom de plume on the drawings. So far the premiums have not been increased, but the society's further communication on this point is still umler consideration.

The Bankruptcy Report for the whole of last year gives a t tal of 215 failures of builders through the court and under deeds, as compared with 296 in 1913, showing a decrease of 81. Perhaps the most surprising thing is that there were so many builders left who thought it worth while to call their creditors together. Then it should be noted that the new Bankruptcy Law came into force on April 1, 1914, so that for eight months of last year conditions were different. Again, the Emergency Legislation, owing to the war, prevented many creditors from proceeding with their petitions, who were held up accordingly: The International Society will open its cythough, of course, debtors could always make libition on the 16th instant, and Mr. John

themselves bankrupt, and the improved procedure under deeds of arrangement afforded the best facilities for a winding up to go on People are now wanting houses at again. about £30 a year very generally, while flats, at fair rentals, can be let before they are unished. Meanwhile the Government and the local authorities, in their strange perversity. discourage building. There is land everywhere tipe and ready for development, and there are builders willing to risk the high wages and prices; but capitalists are still shy of financing, and so private enterprise is stagnant. Old houses are fetching better rents than ever, and property all round is rising in value during this close time for builders.

There are numbers of interned enemy aliens still carrying on their business as usual in our midst, and, doubtless, doing so in the building trades. It may seem startling to the man in the street that a prisoner of war here can legally enter into contracts and make valid agreements, which, if necessary, he can enforce by action in our courts. Yet the judgment of Mr. Justice Younger in the important case of Schaffenius v. Goldberg (September 29) makes these points quite clear. The plaintiff had agreed to finance the defendant, a pictureframe maker, up to £500, with a view to his manufacturing their mouldings, of which the plaintiff was to have the exclusive supply. The plan was to capture German trade in this market, which, before the war, had controlled 98 per cent, of the whole output. They fell out in some way, and when the plaintiff was interned on July 1, the defendant refused to deal any longer with him as an enemy alien. Then plaintiff sued for damages for breach of contract, and defendant raised the point that plaintiff, being an enemy alien, and a prisoner of war, could not maintain an action in our courts. The judge held that, as he could legally enter into this agreement, he could also enforce it through the law. The Act against enemy trading only applied where this was done in an enemy country, which alone gave enemy character to the dealing. The plaintiff had a right to trade here, where he had acquired a commercial domicile, and his internment did not affect his civilian's right to make contracts, and, consequently, to enforce them in our Law Courts

The new lighting regulations in London have led to a great rush for dark blinds, and many people have had much difficulty in getting either the blinds or the men to put them up. The increasing use of casement curtains in place of Venetian blinds means that many people have had to go to considerable expense in making provision to meet the police requirements, for casement curtains are of little use in screening lights. It is possible for householders with electric light to put on slipshades which throw the light down and prevent an outside glow, but where gas is used this cannot be done effectually or safely, nor can it in shop windows. As offenders can be fined any amount up to £100, the comparatively small expenditure to provide blinds for a fairly small house is an insurance likely to prove profitable, and should not be neglected.

The winter art exhibitions this year will mostly be held as usual. The Royal Academy have several suggestions before them, one being to exhibit a number of French pictures, including some from the Luxemburg.

Lavery, Mr. William Strang, and other wellknown members will be represented. Some of the portrait busts which M. Mestrovic, the Serbian sculptor, has done in England will be shown there, including the busts of Mr. Thomas Beecham and Lady Cunard. It. was the International Society that first intraduced M. Mestrovic's art generally to the London public, although some of his work had previously been shown in the art gallery of many of the Earl's Court exhibitions.

Bognor appears to have scored as regards. the erection of cheap, decent cottages, according to a paper read at the South-Eastern District meeting of the Institution of Municipal and County Engineers by Mr. Oswald A. Bridges, the surveyor to the council. They are let at 4s. 6d. per week, and contain living room, scullery, pantry, coals and watercloset on the ground floor, and three bedrooms on the first floor. The amount granted by the Local Government Board for the erection of this block of cottages was £150 each, but the lowest tender received was £179 2s., and the council therefore decided to do the work departmentally, and it was satisfactorily carried out for less than the estimated sum. Sixteen cottages of the same type were next built in two blocks in the same road by direct labour, but, owing to the extra foundations required in difficulties met with on the site, and the war breaking out before the completion of the work, the cost rose to-£160 per cottage, for which an excess loan was granted by the Local Government Board. The council were fortunate in securing the land upon which these houses have been builtat the low price of £5 10s. per plot of 15 ft., with a depth of 100 it. The cottages are of decent elevation, with neatly paved fore-courts, and it seems a pity that, "owing to a change in the policy of the local authority," no more are to be erected "for a time."

Whitechapel Parish Church, where a German bomb, rendered innocuous, as we are reminded by the Manchester Guardian, has been presented to the rector for preservation as a memorial of the war, possessed a still more incongruous ecclesiastical ornament two centuries ago. In 1710 Dr. Welton, the High Church and Jacobite rector of Whitechapel, wished to be revenged on White Kennett, the Whig pamphleteer, who had received high preferment for his political apostasy. So he persuaded Sir James Thornhill to paint an altar-piece of the Last Supper in which Kennett, arrayed in full canonicals, was made to represent Judas Iscariot. That there might be no mistake the artist painted. even the large black patch Kennett wore to-conceal a scar, and Welton wrote beneath the portrait, "This is Judas." All London flocked to laugh at the libellous picture, until the Bishop intervened and ordered the removal of the altar-piece, which was afterwards re-erected in more decorous form at St. Alban's Abbey.

Some time ago a special committee of Glasgow Corporation were appointed to consider claims for alterations in contracts or prices in consequence of the war. About fifty applications for increases of various kinds have been considered, but the majority have been re-fused, and the remainder continued for further consideration.

In connection with the Deeping water supply scheme it has been reported to the rural district council of Spalding that water has been tapped at a depth of 343 ft., and there is an overflow amounting to 40,000 gallous a

# Our Illustrations.

ADDITIONS TO ROWLEY HALL. STAFFORD.

This house is now nearing completion, and the accompanying plans show the extent of the considerable additions which have been made to the buildings. The walls are of made to the buildings. The walls are of Hollington stone, and the roofs are covered with Dolemaen slates. We also give a view of Rowley Hall and an elevation of the entrance front facing north. The general contractors are Messrs. T. Lowe and Sons, Burton-on-Trent, and the architects are Messrs. Woolfall and Eccles, FF.R.I.B.A., 660, Castle Street, Livermood. 60, Castle Street, Liverpool.

### HOLNEST CHURCH RESTORATION, DORSET.

for the work is Mr. Edward C. H. Maidman, Lie.R.I.B.A., of Sherborne, Dorset, whose drawing we reproduce to-day.

HISTORIC BUILDINGS IN BELGIUM DEMOLISHED BY THE GERMANS.
These sketches from Ypres were made by Mr. Robert C. Kennard, of Kilburn, when resident in Belgium before the invasion of the Communication of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of t Germans, whereupon, as he says, Ypres became "a war storm spot, and now the whole of the beautiful little town is in ruins," so the subjects of our illustrations have in all probability been denolished with the rest of the architectural treasures of the place.

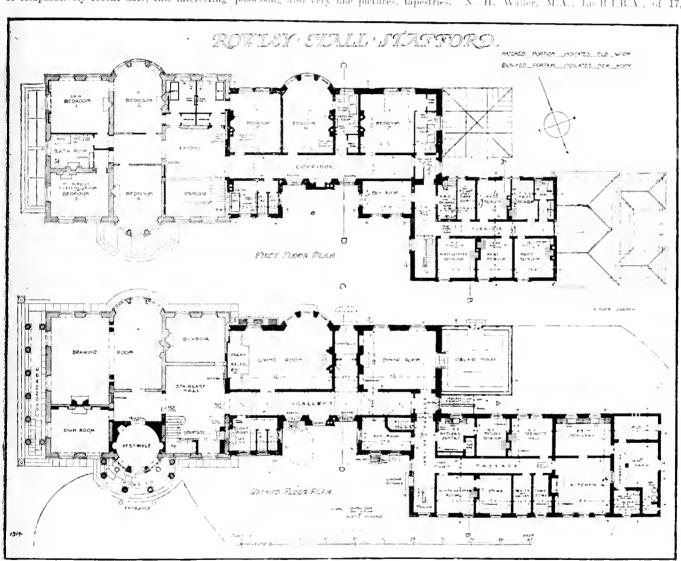
### THE MIRGHERINGE " MUSEUM," YPRES.

This may be hardly the right name to use or call it a museum, and yet no other word quite expresses its use. The house formerly belonged to a rich burgher of Ypres, and it With the exception of the nave, which is was furnished in the most exquisite taste, of comparatively recent date, this interesting possessing also very fine pictures, tapestries, was furnished in the most exquisite taste.

it is a remaint of the Ypres that once had a population of 200,000 with 4,000 looms at work. Presions to the war Ypres had a population of 16,000.

# LLOYDS BANK, ST. JAMES'S STREET, S.W.

The building was designed in accordance with the requirements of the Crown authorities in such a way that it is ght form part of a complete scheme from King Street to Ryder Street, and from St. James's Street to Bury Street, when the preparties on either side of the bank come to be rebuilt. The materials used are Pertiand stone, with Westmorlan's green slates and lead ridge for roof, the materials used and bank and lead ridge for roof, the materials used and bank and bank and bank and same ball studies. moran't green states and lead ridge for roof, the entrance doors and banking hall windows heing of bronze. The vestibules and banking hall are treated in marble and bronze, with teak doors and fittings. The architects were Messes. F. W. Waller, F.R.I.B.A., and N. H. Waller, M.A., Lie R.I.B.A., of 17,



EMESSIS, WOOLFALL and ECCLES, FF.R.I.B.A., Architects.

little country church in Dorsetshire, within a few miles of Sherborne on the Dorchester Road, is of the Perpendicular period of architecture. As the small sketch plan indicates, the building consists of a nave with north aisle with a barrel plastered roof. raison d'être of the restoration is occasioned by the insufficient strength of the north wall of the nave to uphold its present lead-covered roof. It is proposed to rebuild the wall to an increased thickness, adding stability to the buttresses and rebuilding the existing win-dows in slightly altered positions to improve the lighting, adding also a small new window near the pulpit. An old country practice is to be resorted to in regard to the lead from roof in order to meet the financial diffiroulty: as the aisle roof is stone-covered, the nave will be treated in the same way to enable the cost of the repairs being partially met by the sale of the old lead. The architect

and carpets, besides choice furniture and china. The garden also was most attractive, being laid out in harmony with the same period as the house, and set off with fountains and architectural features all in accord. People were freely admitted on introduction to see the collection, and practically the arrangement of the whole of its interesting arrangement of the whole of its interesting interior was made the subject of attraction. The entire house, both externally and internally, was typical of an excellent example of a wealthy burgh e's house of the early part of the eighteenth century.

## CORNER OF THE GRAND PLACE, YPRES.

This second sketch forms part of the group of bindings adjoining the elaborate and famous historic Cloth Hall. The archel colon nade forms part of the Town Hall, whilst the

College Green, Gloncester, and the general contra tors Messrs, Trollope and Colls, et Pimlico, S.W. We gave a double page showing a detail view of the south west corner of the block on June 7, 1912, with a descriptive note. Our illustration to day is from the original shown at the R yal Academy.

### DECORATIONS OF THE CHAPEL. CHRISTS I HOSPITAL, HORSHAM, SUSSEX.

These two tempera panels form part of a most interesting series of historic paintings forming a notable scheme of mural decorations, just now completed, or nearly so, by Mr. Frank Brangwyn, A.R.A., for the en-r hment of Christ Church Hospital School Chapel, near Horsham, Sussex, The panels famous historic Cloth Hall. The archel color nade forms part of the Town Hall, whilst the building adjoining some is part of a series of houses with seventeenth-century gabled ends. ar in situ they will have the effect of frize rarring round the chapel. The ar of the scheme consists of blues, old it and warm grey, but the effect is of the sky extending along the top of all a pictures, and so londing the whole thing tether. To give the effect desired the scale time figures, clours, etc., have been carried it in call panel. They are light in key, also give lightness to the walls. We are instead to the arrival for the loan of the photographs reproduced. Others will follow, illustrables reproduced. Others will follow, illustrables. graphs reproduced. Others will follow, illus trating further designs, next week and in of the first numbers. The subjects given to day represent the Martyrd on of St. Stephen "Lord," ay not this sin to their charge" and the Arrival of St. Paul at Rome "The tranked God and took courage." Their spien

ind scheme of colour, which is characteristical Mr. Brangwyn's masterly compositions s handled in a thoroughly broad and decora the manner. This essential quality of colour wever, with its relative value of tones, can the manner. sarcely be conveyed by any monochrome illustration, and photography, of course, has ts limitations, which are well understood. This being recognised when examining these ex ellent photographs, it goes without saying that to be enabled to thoroughly appreing that to be enabled to thoroughly appre-late the work of the painter a visit to Hor-sham is obviously necessary. These repro-ductions, nevertheless, will be valued by all who are more or less familiar with Mr. Brangwyn's beautiful designs, both at home and abroad. The present architect of the school chapel and the adjacent extensive range of educational buildings at Horsham is Sir Aston Webb, R.A. but the late Mr. Ingress Bell was for many years joint archi-test with him. We gave their competition design on Jane 22, 1694, and a bindiseye view of the whole group of buildings attended in if the whole group of buildings appeared in THE BUILDING NEWS October 22, 1897, the lay prior to the foundation stone being laid by the late King Edward VII, when he was Prince of Wales.

Mr. Jean Williams, survey r to the Abertura Urban D strict Connell, has had his salary user as d by £85 to is year, with annual most hours of £5 to £87 a year.

Mr. Charles Newel, C.E., Dungannon, assistant county surveyor for Tyrone for the past syyars, has received an appointment as First Licentenant in the Royal Engineers.

The foundation state of a Baptist chine, as the foundation of the Buildey, near Diemster, The arthurst as Mr. H. E. Illing of the filters. The system of the £1.050.

Mr. L. J. Stavets, assistant surveyor to the

as r. The arrivate is an in a line of the set of less in the set of the £1050.

Mr. L. J. Stovers, assistant surveyor to the Harry. Urban D'stret Council, has been traited permissive by his coincil to take upon maissive, in the Kent Fortess Enrincers.

The ratio a start council of Doneaser have led to a ratio type prepare a towngolarit nassive me with essential area of 4.550 acres in the targets of A. to the and K. K. Su Lill.

Yesterian Thesian a Local Government Reard inquiry was about at Pembroke into an application by the correction for permission to be grow £17-2 for waters stuply works, insider that ensured a structure, not works in the parish of Carew.

Carew.

The death has taken place in Glasgow of Mr The death has taken thate in Glasgrow of Mr Archibald M'Farlane S'antion, an Associate of the Royal S ettish Actiony. He abandoned resinces to study art at device and the Dam Memoria. Foretain at Prisley, the status is Lord Kelvin, anyelled two years ago in Kelvingrove Purk Glasgrow, and the status of Mrs. Fig. at Gayron.

The installation we The installation meeting of the Science of Architect Lodge of Free in a 18 will be field that Hebert Restaurant on Wednesday. Nevenber 11, at 5 pm. Members of other dris who would be to attend are finited to community to with the Science are 128 Bed ford Spaces W.C. The Werschaff Method Foot - Mr. Herbert W.L. Leiter, of New chaffer to

A new church of St. Nich das has been built A rewich rich of St. Nich das has been built. Hessle Common, near Hu. It provides after accommodation for 70 persons and as a lefty tower at the west ord. The architect was Mr. John B Ison F S.A., F.R.I B.A., P.R. 1 means Street, Hul. The current content to King Edward VII. Hes been built to be extracted to the stray of £57.11, borne by Mr. and Mrsunstepher Pickering, who have also provided Chiroloff England home for forty orphances of Hessle.

### A DICTIONARY OF ESSEX.\*

Year by year the south-western area Essex becomes more densely inhabited the overflow from the metropolis, and the number of people who are interested in the county is steadily increasing. Mr. G. Worley has written a little work on the ecclesiological and antiquarian features of Essex, arranged in two sections, relating to the archdeacouries of Essex and Colchester respectively, and in each of these short notes dealing with the parishes are arranged a phabetically. The author remarks that, with the exception of the remains at hoster. Hadleigh and Castle Hedingham, i-re - scarcely a stone left in Essex of the fortresses which the Norman barons in the throughout the country. Neither an the county boast of any cathedral hurches of that period, nnless the famous Abbey at Waltham may be quoted as an example. But the Norman builders have left abundant evidence of their activity in many of the parish churches, where, how ever, they have not hesitated to appropriate ready-made materials as they found to hand in the Roman tiles which they have meorporated in their walls and towers. A few fragments of Saxon work are here and there imbedded in structures of the twelfth and thirteenth centuries, and, as the author and thirteenth centuries, and, as the authorsing gests, doubtless in churches built after the loyalist Saxon workmen were employed in the work of building. If we look for magnificence of structure we still find it in the county at Coggeshall. Thaxted, Saffron Walden and elsewhere, in the Perpendicular style. Mr. Worley remarks:—

The peculiar charm of the Esex churches des not be in the exhibition of any given style in its purity, so much as in the intermixture of one with another in a whole which is seldom displeasing, and always instructive as an historical lesson, even where we have to regret the acts of vandalism committed at every stage by innovators on work done before them. It would be an interesting study for an antiquary of lesure to trace the sources of the various materials employed in Essex church-building. and the means by which they were brought to their destination. On the Kentish border, for ratstone, we find abundant use made of the ratstone which occurs in the neighbouring county, and could easily be conveyed by water. county, and could easily be conveyed by water. An exception which seems to prove the rule is the fine 15th Century tower at South Weald, built entirely of Kentish rag, and said to be using the instance of Kentish rag, and said to be using the instance of the control of the usual means of conveyance. In common with the other eastern counties, Essex can said a good deal of flint in its church-walls, where there is also an abundance of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the piscine, and decoration. But the scarcity of building-stone in the county itself will account for a mere extensive use of timber than elsewhere, extensive use of the process, and beliries. In the notable case of Greenst and the nave-walls consist entirely of the bisected tranks of forest-trees, and at Shenfield the arcading between the nave and north aisless an admirable indication in oak of 15th Century stonework. The nine square nulses of almost supposten woodland which survive in Century stonework. The pine square index of almost upbroken woodland which survive in Herring Fores and the adjacent fragment of Hoinault remind us of the time when the whole interior was covered with trees, a refuge in wirfare, and an inexhaustible source of indistry in peace. Brick appears in the Tudor read the churches at East Horndon and little Chignal fotherwise significantly called Brok Chignal fotherwise significantly called Brok Chignal fotherwise significantly called the chignal fotherwise significantly called Brok Chignal fotherwise at East Horndon and Little Chignal fotherwise strainformatic material through strain while herek towers are seen as conjugate the dimarks at Ingatestone, Fryering a bother places.

The author briefly describes the remains of the more important pre-Reformation reli-

The author briefly describes the remains of the more important pre-Reformation religious houses still to be found in the county. The resent selection of St. Mary's Church. Chah sford, as the Cathedral of the new discuss and the boundaries of the East Action sees as fixed by the Order in Council of April 7, 1914, are referred to. A useful hibilography of works of the architecture and ecclesiology of Essex is given, but a view of the separation of the parishes in the two archideaconries a sketch map of the county would have added immensely to the county would have added immensely to

Essex: A luctionary of the County, mainly Ecclesiological By G. Worley 106 pages. Cloth bound, 5s. net. London, G. Bell and Sons, Ltd. Te.

the value of the volume. A few illustra-tions would have been acceptable, and although we are now halfway between the taking of the censuses it would have been helpful and an inexpensive matter of compilation to have inserted after the name of each parish the number of the population as ascertained in April, 1911.

### ---OBITUARY.

We regret to learn that Captain Douglas Carmichael, B.A., of the 9th Buttalion, Rifle Brigade, was killed in action in Flanders in action of September 25. Captain Carmichael, who was only twenty-one years of age, was the elder son of Mr. and Mrs. James age, was the elder son of Mr. and Mrs. James Carmichael, of Redelyffe, Streatham Park, S.W. He was educated at Leys School and Jesus College, Cambridge, and passed out of the University with honours. He had just entered his father's business at Trinity Road, Wandstand out the way broke out. He oband with entered by Road worth, when the war broke out. He obtained a commission as second lieutenant from the Officers' Training Corps in September of last year, was promoted to First Lieutenant in October, and to Captain in March last, being placed in charge of the machinegun section. Colonel W. Villiers Stuart writes to his father:—"Douglas was killed on September 25 in action near Belle Waarde Farm. His bravery is a byword in the divi-sion. He fought that day with infinite conrage. I have no words and no one else could find any to express his magnificent bravery. I shall never see a soldier like him again; it is quite impossible that anyone so fearless could be found. He carried four lines of trenches with his company under a most desperate artillery and machinegun fire, and when masses of Germans came against him, by his wonderful personality he kept his men, now reduced to a handful, in good spirits, and led them again and again to the attack. He was wounded early in the day, about 5 a.m., but made nothing of He was killed instantaneously by a bullet in the forehead as he was once more leading a bomb charge." Mr. Carmichael has also received a letter from Sergeant W. Walker, machine-gan section, who writes:—" He was in command of the attack on the morning of the 25th, and right well did he lead us until he was hit in the leg. Then we pushed forward alone, as he refused to have any assistance: but just after I saw him hopping on one leg towards the next line of German trenches under a murderous fire. Your son was still in command, absolutely refusing to he taken back. Your son was killed with a machine-gun, and I was twice wounded at the same time. It was instantaneous, and his last words were. For God's sake, boys, hold them back. He earned the V.C. fifty

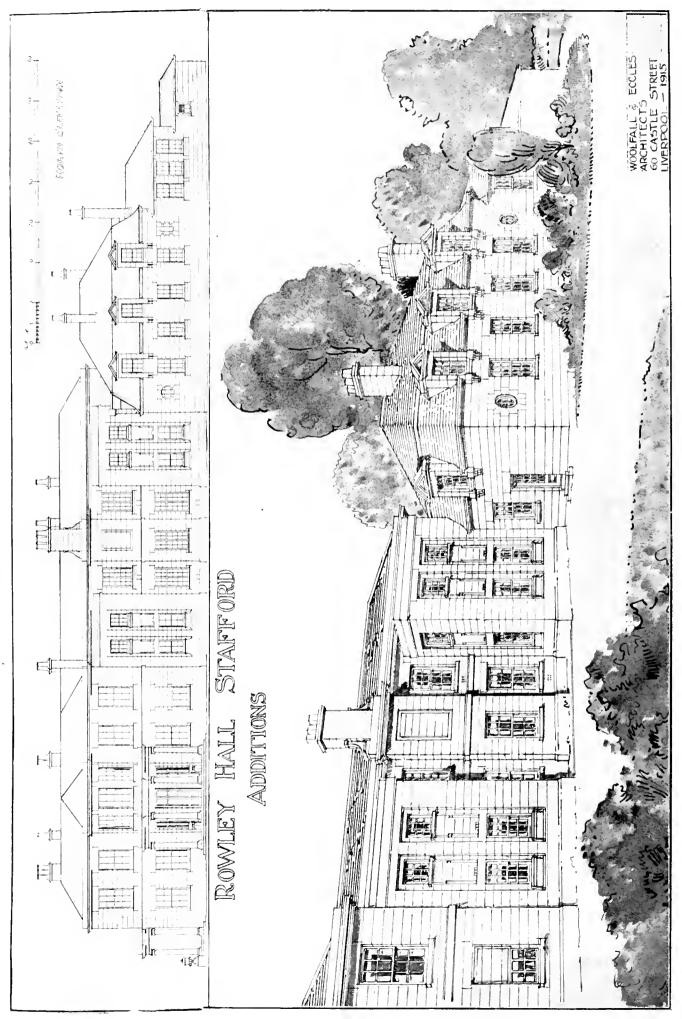
We also regret to hear that Mr. Henry We also regret to hear that Jif. Henry Holloway, of Burntwood Grange, Upper Tooting, and of Messrs, Holloway Brothers, Bridge Whart, Grosvenor Whart, Pimlico, sustained a similar bereavement on the same day, his third son, Captain Bernard Henry Holloway, B.A., of the Royal Sussex Regiment, having been killed in the same engagement. Captain Holloway, who was twenty-seven years of age, was also educated at Leys School and Jesus College. Cambridge. He was not a member of his father's firm.

A vestry, 45 ft. by 20 ft., is about to be added to St. James's Church, Southampton, from plans by Mr. Nesbitt, architect, of Southamp-

The opening of a new elementary school at the small hamlet of Marishes, near Pickering, took place on Wednesday. The school accommodates sixty children, and cost £552. The walls are of red bricks and rough-cast. Mr. William Gamble, of Butterw oth and Nawton, was the builder.

A group of twenty two residential flats have been built in Recorder Road, off Prince of Wales Road, Norwich, as a memorial of the late Right Hon, James Stuart, M.P., by the Misses Colman. They are of red brickwork, with stone dressings, and are sixteenth-century Dutch in style. Messes, Edward Boardman and Son, of Norwich, were the arch't its.





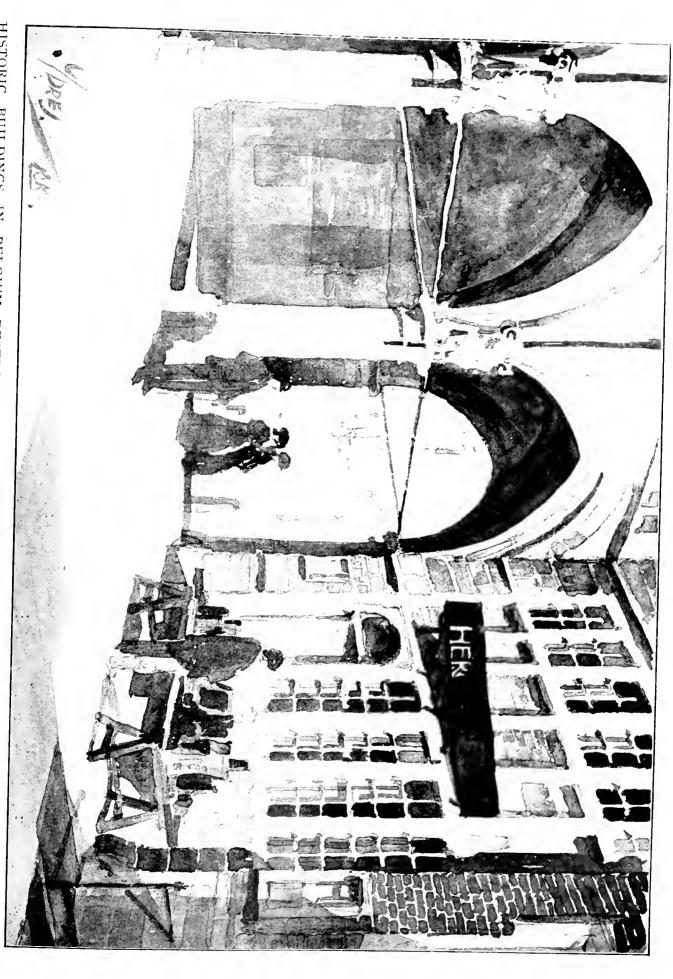
ROWLEY HALL, STAFFORD: ADDITIONS IN COURSE OF COMPLETION. Messrs, Woolfall and Ecces, PURLEA, Architects.

THE MERGHELINCK "MUSEUM," YPRES. THE GERMANS: Sketched by Mr. Robert C. Kennard. HISTORIC BUILDINGS IN BELGIUM DESTROYED BY



THE BUILDING NEWS, OCTOBER 6, 1915.

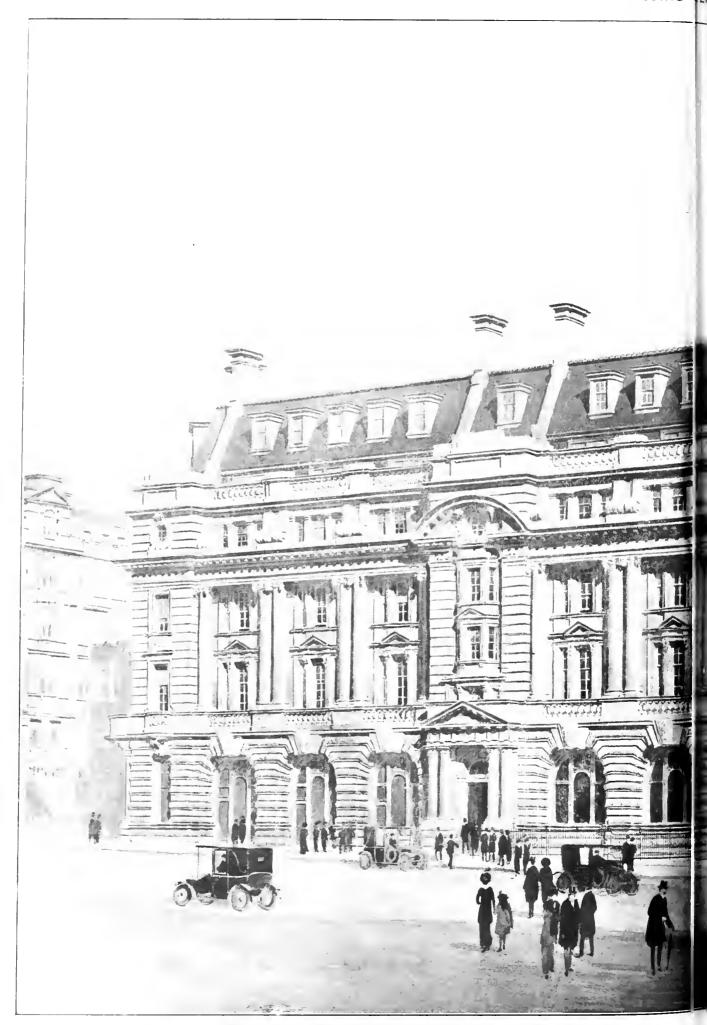
THE BUILDING NEWS, OCTOBER 6, 1915.



HISTORIC BUILDINGS IN BELGIUM DESTROYED BY THE GERMANS: A CORNER OF THE GRANDE PLACE VPRES







MESSRS, LLOYDS NEW BANK, ST. JAMES'S STREET, S.W.-1'ssre



F. V. Waller, F.R.I.B.A., and N. H. W. L. R.I.B.A., And ite is.

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#### LEGAL INTELLIGENCE.

LEGAL INTELLIGENCE.

ANCIENT LIGHTS.—On Wednesday, in the Chancery Division, the adjourned motion for an injunction to restrain Messrs. John Barker and Sons from erecting a building in Townwell Fold, Wolverhampton, so as to cause a nuisance or illegal obstruction to the plaintill, Mr. S. W. Page, in the enjoyment of certain ancient lights in his buildings at No. 30, Lichfield Street, came on for hearing before Mr. Justice Younger. It was admitted that the plaintiff's lights were ancient lights, and the Judge ordered the motion to stand over till the trial, the defendants to be at liberty to carry up their wall so far as necessary to complete the roof, but not exceeding three fect over the present height, they undertaking to abide by any order the Court might make at the hearing as to pulling down or altering anything erected by the defendants since September 15.

ARCHITECT V. MILLOWNERS.—Litiga-

ARCHITECT v. MILLOWNERS,-Litiga ARCHITECT V. SHLLOWNERS.—Litigation has been in progress between the Ross Spinning Company, Bacup, and Mr. A. Stott, of the firm of Stott and Sons, who were the architects of the mill. The litigation was in the nature of writs demanding payment of calls, Mr. Stott being a shareholder in the company to the extent of £7,500. Mr. Stott entered a counter-claim against the company demanding £12,207 for services rendered under an alleged agreement of September, 1903. The action should have come on at the Manchester action should have come on at the Manchester Assizes, but for the convenience of the parties was ordered by the judge to be tried at the Imperial Hydro, St. Annes, by Mr. Arthur J. Ashton, K.C., as referee. The action was part heard when a settlement was reached by which Mr. Stott and his firm withdrew all claims against the company and the company abandoned their claim against Mr. Stott in respect of the calls. Mr. Stott was to release to the company the whole of his shareholding amounting to £7,500 and give up all papers relating to the mill in his possession. The sum of £300 which Mr. Stott had paid into court was to be equally divided between the parties, and the which Mr. Stott had pand into court was to be equally divided between the parties, and the parties were to pay their own cests and half the costs of the referee. These terms were subsequently embodied in an award made by the

DISPUTED USE OF A SEWERAGE OUT-LET.—In the Vacation Court on Wednesday, before Mr. Justice Younger, the case of the Wapentake of Ouse and Derwent Commissioners and Fletohers (Shipley). Limited, was again mentioned, it having been standing over for negotiation. We reported the case in our issue of September 8, p. 278. Plaintiffs claimed at injunction restraining the defendants from continuing the use of an outfall recently concontinuing the use of an outfall recently con structed, which it was alleged allowed sewage and other foul matter from defendants' works to flow into the Cherry Orchard drain of the plaintiffs' system of drainage. Mr. H. Terrell, K.C., for plaintiffs, said there had been negotiations between the parties, but no agreement had been come to The Life Levit levit. negotiations between the parties, but no agreement had been come to. The defendants had built certain works and cottages, and were pouring the sewage direct into the plaintiffs drain. Defendants said they had not caused a nnisance, and were prepared to move all the sewage in expectation of a drainage system sewage in expectation of a dramage which had not been carried out by the local authority from motives of economy. Plaintiffs which had not been carried out by the local authority from motives of economy. Plaintiffs now suggested that without prejudice to the legal rights of the parties defendants should agree to an undertaking until the trial or further order to cleanse and scour the Cherry Orchard drain, so far as the same was fouled by the sewage or effluent coming from the dependants' sewars or cottages and to remove any by the sewage or effluent coming from the de-fendants' sewers or cottages, and to remove any obstruction to the free and natural flow of the frain caused by such sewage or effluent being lischarged therein, pending construction by the ocal authority of their intended drainage cheme for Barlby, when they would forthwith connect or Barlby, when they would forthwith connect with the proposed main drain. Costs to be costs in the action. Mr. Mathew, K.C. or defendants, asked his lordship to reserve he costs, because his case was that the motion was quite misconceived. He agreed to the indertaking suggested on the clear understanding that he offered it merely as a matter of eace, and without prejudice to defendants lights. He objected to the words in the undertaking "fonled by sewage or effluent coming aking aking "fouled by sewage or effluent coming om defendants." After some discussion it was greed to retain all the words objected to with he exception of the word "effluent," and the ase stood over for speedy trial, costs being

WREXHAM BUILDING DISPUTE.—At Jrexham County Court, on Wednesday, his noore of his noore of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the

architect, Wrexham. Plaintiff claimed 5.237 lbs. 7d., balance due under a building contract and for extras. There was a counter claim of \$109 14s. od., which included a penalty of £120 for delay in completing the work, and there was an alternative claim for damages amounting to £69 6s. od. His Honour said with the exception of one or two smal, it ms p aintiff's claim was substantially admitted, and the assumed had been as to whether defendant could set off against the claim the sum of £103 claimed by way of counter claim. Messix, Lewis Bees, built a honce for Mr. Swanson. The tender was sent in and accepted on defendant's specification and quantities. I was admitted that in the course of the work defendant made many alterations from the plan of the building, which delayed the work. An order for new many alterations from the plan of the building, which delayed the work. An order for new work was given after the time limit had actually express. He held that defendant was not entitled to the penalty he claimed for delay, and his claim for damages was alto gether too remote, and it seemed as if it was an afterthought. He was alluding to the hotel expenses, loss of interest, etc., which in law defendant could not possibly sustain. With regard to defendant's claim in respect of the painting work, his Honour said the contract provided for the calling in of an umplie in case of dispute. This was not done. Defendant summarily handed over the painting work to a third parity, which he was not entitled to do. Therefore he was not entitled to claim the difference between the price he paid for painting and the price set down in the contract. Defendant's claim of £22 17s, bd. in respect of the builders' failure to do the work was grossly exaggerated. The correspondence showed that in respect of this item on February 23 defendant only claimed £7 10s. But this was not the only answer to it. The builders were bound to keep the building in proper repair for six months after completion. During this period the architect made certain complaints, and the builders did the work. After the expiration of the six months following the completion of the building, and until the defendant was threatened with proceedings, there was nothing in the correspondence to show that he comwhich delayed the work. An order for new work was given after the time limit had of the building, and intil the defendant was threatened with proceedings, there was nothing in the correspondence to show that he complained as to the various defects in respect of which he claimed. He had come to the conclusion that the plaintiff was entitled to the amount for which he sued, and that the set-off defendant had endeavoured to raise tailed. Judgment was then entered for plaintiff, with costs and allowances. costs and allowances.

#### PROFESSIONAL AND TRADE SOCIETIES

SOCIETY OF ENGINEERS. = On the 4th inst., at a meeting of the Society of Engineers (fincorporated), Mr. Sydney G. Turner, A.M. Inst.C.E., barrister at-law, read a paper entitled 'Law and Engineering—Some Points of Contact.' The general object of the author was to show that in almost every branch of engineering practice the provinces of the engineer and the lawyer overlap, and of the engineer and the lawyer overlap, and to advocate the establishment of some periodical meeting, open to the members of both professions, at which subjects of common interest could be discussed. In the section dealing with municipal engineering, the special topics selected were sewerage and drawage, and the execution of works of priodical services. vate street improvement. In regard to the former, the decision of the House of Lords in the case of the Wood Green Urlan District Connell v. Joseph was discussed: and in regard to the latter the author dealt more particularly with the duties of the engineer in connection with the apportionment. In the section dealing with water engineering the question of underground supplies was suggested as a subject for discussion.

The Red Cross Fund which is being raised by members of the Timber Trades Federation has now reached £3,320.

For the erection of a convalescent home of Grange-over Sands. Lanes, the Workmen's Club Umon has voted £20,0.0.

Mr. G. A. T. Middleton, A.R.I.B.A., the first secretary of the Society of Architects and a past vice president, has been elected an homorary member of the society in recognity n of his services to the society and the profession more particularly in the cause of registration Mr. Middleton's health is, unfortunately, such that he is compelled for the present to take a compiled extest from all professional engagements.

#### COMPETITIONS

PLYMOUTH The competition six designs obmitted for the new binners to be created by the Plymouting to the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the competition of the com Matina Coloperative and Industrial Solity of tenay Street has been thus settled [1]. to any Street has been thus settled 1 and ressail do the above mean by the above. Mr. Paul Waterhouse, M.A., F.R.I.B.A. to Messrs, James T. Huilday and Cando Paterson, AAR, I.A.B.A., and C.G. and A2ate Lee, R.I.B.A., No. 13. John Dulton Street, Manchester. The first premains of £75 accorded to the chaine about of by Mr. H. R. Gardher, L.A.R.I.B.A., of Reigate Read, Leaterhoad, Survey. The second prize of £50 is given to Mr. H. nort S.E.st, A.R.I.B.A., 14. South Square, Gray Inn., and the third premains of £25 to Mr. Frank Bethell, M.S.A., and C.M. Seminel A.R.I.B.A., Broad Street Buldings E.C. A review of the competition decrees all be found in our first article this wee found in our best article this was

A hospital for wounded - deliters is about be built at Coombe Park, Bath Missis Wilkins and Son, of Bishop Street Burson. the builders.

A chematograph hall is to be exceed in Commercial Road, Stephey, from pears be Messis, Adams and Coles, of Crayen Screet Charing Cross,

A convalescent home for men is also at a be-built at Deganwy, near blandedness from plans by Mr. II. A. Brown, F.R.I.B.A. of Brazenness Street, Manchester, from plans

The Hollingbourne Rural District Council have appointed Mr. G. R. Buchridge as surveyor, at a salary of £110 a year, in succession to Mr. Roper, retired.

The streets committee of he Parlinger-Corporation have resolved to prepare a town-planning scheme as soon as the town clerk and borough surveyor can find a staff

The new public baths in Market zate, to wards the cost of which Mr. Carnegue continued £7,000, have been formally opened. The plans were by Mr. Hugh Gavin, of Arbooath.

The annual conference of the Santary Association will be held at Carpenters' Hall, Lender Wall, E.C. on the 28th, 29th, and 30th mst, under the presidency of Sir James Craute Browne, M.D., F.R.S.

A Salvation Army hall in Parker Street, Whiteineh, N.B., has been formally opened. The plans were by Messes, John Hamilton and Son. St. Ameeut Street, Glasgow, and the builders were Messes, Marshall and Ratchie.

At the meeting of the urbin a strathering cil for Wolstamon, North Staffs, it was reported that tenders had been received for altering a bridge in Knutton Lane varying it amount from £22.5s to £100° 1s was deaded to invite feet tenders.

of Buccleuch at Dunchurch has recreed after thirty six years of service. He has served as agent under three dukes. On behalf of the tenants on the Dunchurch estate Mc. Bolam, has been presented with a silver teaped, cream-jug, sugar basin, and entree dishes, a W. Leate-bond and an easy civic. bond, and an easy chair,

At the Venerable Bede's Church, terreshe At the Venerable Bedels Chinch, tracksheed on Sunday, a stained glass wiredow, created by her husband and family to the memory of Ellier both Ternent, was unveiled by the view. The window, designed and eye ned by Messis Thompson and Snee, Bankwell Lare Gates head, is at the north end of the chance, at it consists of two lights and trace y after every serious above. antiquo glass.

antique glass.

The death occurred, on Saturdae relies estable in Burslem, of Mr. William, C. ethidze J.P. The deceased, who had been in failured to the few some time, was formed to be been estable. d.P. The deceased, who had been in fa-health for some time, was formed to a de-as a builder and contractor, her expect years ago. He resigned his peached man on the Stokeson-Treit Federal de-in October, 1914, and was previous as may of the old Buislam Corporation.

a meeting of Inverkeithing I we to an Friday night, Provest Findbar (1914) following letter from Mr. Alexarde, Grib, (2) tructor for II.M. Dockyard, R. syth. [-] L. co. tractor for H.M. Dockyard, R syth. - Large withere have been persistent runsums that ear contract here is mearing completion, and that the services of a large number of men are recing dispensed with. Instead of dismissing men, we are busily recruiting, as we have not sufficient to carry on our work according to the national requirements. We cannot find out the origin of these mischievous and untrue rumours. In all probability the work will continue for many years.

## Correspondence,

TAK BENCH, STEYNING CHURCH, SUSSEX.

- 'THE BUILDING NEWS. z \* A with some amusenent

A Sissex Man' which y it is so of the 15th inst. I

1 to your assert the 15th mat, if
1 to to your and cut; =
1 to your and 1 became Vacar of Steyror
Notice of 1,22, and not, as he states, in
1 72
Steyror, 1,22, and not, as he states, in
2 to your and the same I have been
your asserting the same I have been
your As far as I can ascertain from the
distorting the same such thing has
your to the same.

Zor to the cam h.

That I was Man " refers has nother to presented to a " museum " nor " housed the visitage" but it may interest this

the Values out it may interest this gentleman to know that on my induction to Steyning thirty-three years ago I speedily discovered that the church had highly beneated by the late year, but not the rearrage

Jeon the late vicin, but rot in reading from the hor h.

W. I "A Sussex Man" oblige me with his name and also an illustration of this "history stail" Yours truly,

ARTHUR CONGREVI-PRIDGEON.

Steyn ng Vicarage, September 27, 1915.

#### TEMPLES OF STONEHENGE AND MAGH SLECHT.

St.—Althogon the amount temple of St. herge forming part of the Amesbury estate becomes up to the late Sr Edmund Actioless has been sold for £6,000 at public another, anti-openies will be pleased to know it some only I and the Ancient Monuments A t and the new owner is merely its custodian in the ration. Fortunately, its exact position t r the notion. Fortunately, its exact position is demotely defined and beyond all question, is the stones are in situ unlike that of the Hiberno-Keltic ancient temple of Crom Criach, currounded by twelve sub-idols, sit ate at Magh Sle ht (which was destroyed by St. Patrick), and which much controversy has taken place. But it is now concern very has taken place. But it is now concern very has taken place. But it is now concern very has taken place. But it is now concern to a secretained to be situate in the level plann of Ballymagauran, in the parish of Templeport, barony of Tullyhaw, Co. Cavan, and entity the patrimony of the MacGaurans of McGoverns of Chamasticon Gaedelicum become it Tribuum Hibernia et Scotiae au Laconni +t Tribuum Hiberniae et Scottæ au Index, with electrication to the Gaelic names of places and tribes, by the Rev. Edmund Hogan, p. 550, 1910." I work of great crudit, a and invaluable to the historial -t ident

Joseph Henry McGovern, Lic.R I B A 1. verp .. September 29, 1915.

HOUSING AT LETCHWORTH. Size.—The basing problem is not solved even to garden offer. Here in Letchworth there is a great shortage of small houses and cottages, wing shiefly to the great influx of Belgian and their minimum workers. One of the chief office companies—the Garden City Tenants. Limited—Lis seized the apportunity to raise tents on average of 2d, a week, while others by the latent of the country to the Release to the country the Releases. "I have to hid against the Belgians is the wishes to remain in the The research to remain in the she have even mass, thus one estimed to have been built for £150 so it was first better 5s. 10d. a first at is 5s., plus rates. The thoroughly contains were built I shalf years ago.

. . . v strongly on the sub It it strey are in line with feels that the attitude of or our in raising rents at the

in C are alive to their canged to built 160 cor Grownings Board have

J C TERIL

#### STOFFA DI ITALIANO,

Sir. You may possibly be able to use the enclosed versus. They were sung at a recent bumplet here, when the Architects' chapter entertuned the artists and sculpt is engaged in decerative work at the Ex-post on. Am sorry I cannot say who wrote

It is some twenty-seven years ago since I as the twenty-seven years ago since is some twenty-seven years ago, since is solly note of my work in aid of the quantity system in the United States. It will one is some day." With hest wishes, Y are faithfully,

G. Alexander Wright,

354. Pine Street, Sin Francisco, Cal.

'We are sure it will, and in no small degree owing to the good work of an old friend, whom we are delighted to hear from, Eb. "B.N."]

#### STOFFA DI ITALIANO. Tune: CHRISTOFER COLUMBUS.

Time: Cinistoffic Colleges.

If your to you about some men whose names are known to list'ry.

Their works are copied right and left by men of great sophistry.

Architects, both young and old, how down to them quite Int'ly.

Their names, you know, all end in "O"—they come from sunny Italy.

#### CHORTS

Mike Angelo, Palladio, Vignola, and San Gallo. They wouldn't do a thing if they heard us sing, "Stoffa di Italiano."

Among the class of famous men was one who's named Aignold.

He could draw the Orders mesde down, while rowing his goundoln, air Callo, too, could do this track, likewise the Limbardo.

But it gave him the gour, when he found out he wisn't the only dago.

Pallaho, you must know, gave these men a great

Published you must know, gave cases men a great surprise.

When, on Della sidute, he designed a volute of most giguith size.

Bruneleschi's name shone out to fame when he built the Palazzo Pitti

But, also and alack! if he came back, he'd find one in ev'ry city.

(Chorns.)

#### (Chorus)

Another famous man you know, who built the great Saint Peter. And they do tell he did it well and didn't try hard, either.

hard, either.

O Mike, you know you were not slow to adopt Bramenti's plan.

With your glorious dome, you paralysed Rome, and hearing at famous man.

#### (Chorns.)

So, if you want to design in the classic line and draw your stode right smart. Lay in a stock of balustrades, festions, and eggs and dark.

State of the Communication of the Rendstance will some to you quite easy.

### Chorne time : TIPPFRARY.

time: Therefore,

It's a long way be k to the office,

It's a long way to go;

We're all here for a time to-night,

Io must the arcists, you know
say good-bye to the drawing board,

And forewell T square.

It's a long way back to the office,

For my heart's right here

Lieuveraya R. B. Angus, R.E., late of the Egyption Public Works Department and 17, Votern Street S.W. was killed at the Dir-ceptles of September 22.

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The first section of the restoration of the arisin church of Newton St. Cyres near Neter has just been completed at an outlay of ver £1.00. The architects were Messrs Harct le and Sons, of Exeter.

A tuberculesis hospital has been built on M. Hill for the Greenwich Borough Council, M. Viscal Roberts of Greenwich, is the archi-tage of Messys William Mills and Sons, of Westernabe Park, are the contractors

1 year and churchwarders of St. Mary's constitute from the received a report from The vector and churchwarders of St. Mary's, St. wishing in the received a report from the A. E. Llayd Oswel, of Dam Crambers, Society of the spire and the cooled received the state of the spire and the cooled the market he fall that cracks give extended during the last five years, and the a service machine has five years, and the a service machine in progress. He is matter that extends the cooled at £37 while further works must eventually be carried out.

#### PARLIAMENTARY NOTES.

LAND VALUATION STAFF REDUCED. LAND VALUATION STAFF REDUCED. The Chamcelor of the Exchequer, replying to Mr. Currie and Sir J. Rolleston, said: The stage which has been reached in the original valuation of land under Part I. of the Finance (1963-10) Act, 1910, renders it possible to dispense with the services of a number of the temperary valuation staff, and the reduction in numbers is being effected, so far as possible, by selecting for discharge men of military age. There is no intention of replacing the officers now being discharged. The number of Valuation Office officials whose employment under the Board of Inland Revenue terminated between March 1 and September 1 ployment under the Board of Inland Revenue terminated between March 1 and September 1 is 1.457. The number of new appointments in this period is 12. The number of the effective valuation staff on September 1 was 2,620, the salaries amounting to £411.150. Valuation Office premises to the rental value of £2,800 hat a sidilar already bear given up or will be Other premises to the rental value of £2,800 have either already been given up or will be given up at an early date. The number of officials employed on September I in the land values branch of the Inland Revenue Department was fifty-six, their salaries totalling £9,570,-Mr. Watt: May we take those figures as indicating that the Government have abandance of the salaries was sufficiently to the salaries of the salaries are salaries. dened the taxation of land for the future? The Chancellor of the Exchequer: No.

#### -TRADE NOTES.

The "Poyle" system of ventilation (natural), inbracing Boyle's latest patent "air-pump" ventilator and air inlets, has been applied to the board-room at the Miller General Hospital, Greenwich.

We learn that additional plant has recently been installed in the Harrogate electricity station, and that after excavations had been made there was trouble with running water. Pudlo there was trouble with running water. Fudio was then incorporated in the cement as a water-proofing medium with excellent results. Although there is a stream in close proximity, the in error of the building is perfectly dry.

A new Wesleyan chapel at Lydden, Kent, has been formally opened, Mr. S. Watson, of Caversham, Reading, was the architect.

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At Bootle new premises for the Millom Co-operative Society, Limited, have just been opened. The builder was Mr. L. Fairclough.

The town council of Luton have received the sanction of the Local Government Board to the borrowing of £2,000 for additional pumping plant at their sewage disposal works.

A Local Government Board inquiry was held Sheerness on Friday before Mr. H. S. Bidwell into an application by the urban district council for sanction to borrow £6,750 for works of additional water supply to the town.

The new town hall at Omagh, erected at a c.t. of £4,000, has been completed. The frontage of the buildings is 47 ft., and they extend back a distance of over 160 ft. The main assembly hall, which is 85 ft. long, 37 ft. wide, and 28 ft. high, will accommodate over 600 persons.

There have been completed twenty-nine workmen's dwellings, arranged in three blocks, which the corporation of Newcastle-under-Lyme started shortly before the outbreak of war. The scheme has been carried out by Mr. A. Pattison, the borough surveyor, from plans prepared by Mr. Frank Emery.

A memorial to the late Miss Braddon was uncorted at Richmond Parish Church, Surrey, on Monday by the novelist's youngest grandely idean, Mess, and Master Maxwell. The memorial is a bronze portrait in relief, on a circle of laurels and oak. It is the work of Mr. John E. Hyett. It is next to that of Edmund Kean.

Mr. J. H. Chubb, of Penryn, who passed Mr. J. H. Chubb, of Penryn, who passed away on Thursday evening at the age of sixty-six years, went to the borough many years ago as surveyor under the old Highway Board, and in 1895 became surveyor to the rural district council. An ardent Freemason, he was a member of Lodge Three Grand Principles, Penryn, and held previncial honours.

At St. Anne's Church, Upperton Garders, Eastbourne, Mr. Harry George Lav. A.R.I.B.A., son of Mr. C. W. Lay, The Laurels, Wellingborough, was married the other day to Miss Violet Peppercorn, dunghter of the late Rev. A. T. Peppercorn and Mrs. Peppercorn of Stoke Prior, Leominster. The ceremony was performed by the Rev. J. W. Peppercorn brother of the bride.

## Building Intelligence.

GREAT TOWER STREET, E.C. The office of Christ's Hospital was transferred last week from Aldersgate Street to 26 and 27. Great Tower Street, a site which came into the possession of the governors under the will of John Fowke in 1686. From the designs of Mr. Arthur Blomfield, with Messis. Howell Williams, Limited, as builders, there have been erected premises in the Queen Anne style, the predominant material being Anne style, the predominant material being red brick of cheerful hue faced with stone. The ground floor, which is approached through a wide hall, contains, in addition to the general office, separate rooms for the chief clerk and deputy clerk, a telephone moun, a waiting room, a typing office, and the re-ceiver's office. In the basement are strong rooms and general storage accommodation. rooms and general storage accommodation. Below is the heating apparatus. A lift connects the ground floor with the upper portions of the building. On the first floor is the Court Room, extending east and west the full width of the premises. It is panelled in oak, and at each end has been affixed a stained-glass window, one showing the arms stained-glass window, one snowing the arms of Edward VI., Charles II., and George V., and the other those of the Hospital itself, the City, and Sir Richard Dobbs. On the same floor are the treasurer's room, the committee room, and a waiting room. A mezzanine floor contains the caretaker's quarters, and above are two rooms, in which the entrance and competitive examinations of the two schools will be held. The historical pictures, sculptures, and other treasures have been removed to the new offices.

LIVERPOOL CATHEDRAL.-It is now beginning to be possible, says a correspondent of the Guardian, to gauge the importance of the addition of the first great transept to the choir, the fabric of which has been for some time practically complete. As the cathedral emerges into view seen by one approaching Duke Street along Hope Street from the Philharmonic Hall, the two ends of the transept already thrust themselves up finely, and give a breadth and massiveness to the building which help the imagination to picture its appearance when the huge central tower, second transept, and nave shall fill out the site. Whether any of us will live to look on this vision is another question. A party of Freemasons lately visited the Lathom Memorial Chapter House, which the Masons of Laucashire are presenting to the Diocese. It is a lofty octagonal building with a basement room beneath the Chapter-room. The stained glass is to be done at the Merton Abbey Works, and the subjects, as for the stone carving, are being chosen with special reference to the masons' craft. One of the windows is to represent the Dadiction of the dows is to represent the Dedication of the Temple of Solomon.

LONGFLEET, DORSET.-The church of St. Mary, Longfleet, near Poole, has been re opened after enlargement at a cost of £6,000. The architect was Mr. H. Kendell. The area of the church has been increased by 1,400 ft. In addition to the new nave and its aisles there are north and south transepts, clerestory windows, chancel, organ chamber, and ves-The new nave is in architectural keep tries. ing with the style of the remainder of structure. It has been constructed of Purbeck stone, with stone dressings, the inside being faced with random rubble, Purbeck piers, with dressings of stone. A tiled roof has been substituted for a slate one. The heating is by means of radiators, and electric light is installed. The north transept is fitted up as a side-chapel for weekday services. and an oak screen separates the vestry from the church. Although a gallery has been dis-pensed with, there is accommodation now altogether for between 600 and 700 people.

The question whether a draughtsman The question whether a draughtsman is a workman within the meaning of the Munitions Act, and therefore liable to all the restrictions and privileges conferred by the Act, was decided in the affirmative by the phairman of the Newcastle-on-Tyne Munitions Tribunal on Wednesday.

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#### CHIPS

Mr. Jame Blakel, cost oct surveye of Pertadow or late Mr. William W. e., trie

Mr. E. H. Comp. 1925 to the Hanckey Ustan D. John mantee a control-sion Royal Engineer. and su veyor Common has option in the

Mr. W. J., Edwird has to a appointed by the I than D. (a): Camed at Alexandra the position of surveyor and sanitary inspector in succession to Mr. M. R. Jones

A convent is to be built at Kil of the Grange, Co. Dublin, from designs by Messis, W. H. Byrne and Son, of Sutfolk Street, Dubain. The contractor is Mr. James Krernan

In spite of the large number of painters and sculptors who have enlisted, the International Society has decided to hold its aurunin exhibition, and the private view is fixed for Saturday, the title. the loth met.

A new theatre at Langley Moor, County Durham, built at a cest of £3,000 has been formally opened. The architect was Mr. J. A. Robsen, and Messes, Walton Bros., of Crook, were the contractors.

Mr. Edward Wilhams, surveyor to the Crie cieth Urban District Council, having joined H.M. forces, Mr. M. Williams (his father) has been appointed to the vacancy. He had held the position before for many years.

With a view to the augmentation of the water supply recommendations to construct a reservoir for Trenance and another for Penwithick being considered by the water committee of the rural district council of St. Austell

The Dean of Guild Court for Johnstone, N.B., have approved plans submitted by Mess.s. William Paton, Limited, Clark Street, for a new roof, boiler house, and chimney stack, which is to be 120 ft, high. These are the first parts of more extensive alterations which will be a submission of the week. carried out at the works.

Owing to the incursion of munition workers a serious scarcity of houses has arisen at Wey month, and the workers complain that land ords are unduly exploiting the war condities The town council, with the help of a free grant of £10,000 from Government, are erecting a large number of dwellings.

The scheme adopted by the corporation of Croydon in June last for increasing the water supply at a cost of £250,000 has been suspended owing to the war. In arriving at this decision the borough council were influenced by the enormous expense of the passage of a contested Bell through Parliament.

The marble busts of the King and Queen by Sir George Frampton, R.A., presented to the City Corporation by Alderman Sir Edward Cooper and Alderman Sir Charles Wakefield, were formally unveiled at the Guildhall of Wednesday by the Lord Mayor. Both bust have been exhibited at the Royal Academy. Both busts

The entrance hall of the Whitechanel Art The entrance hall of the Whitechapel Art Gallery is to be completed in accordance with plans by the architect of the building, Mr. C. Harrison Townsend, F.R.L.B.A.; but the execution of the mural decorations, designed by Mr. H. F. Garrett, who is serving with the forces at the front, will be postponed until the artist's return.

Mr. Wm, Coleman, contractor, and a member of the Keighley Town Council, was presentor, on Wednesday in last week, when Daniel Hanon Wednesday in last week, when Daniel Ham-ley, plasterer, was charged with larcony as a servant. Mr. Colemen depessed that on August 10 he advanced 2s, tol, as a "sub," to Hanley, and then gave him £4 12s, 6d, with which to purchase some laths. The man never came hack. Hanley was sent to good for three

The late John Lindsay, ironmaster, of Gar The late John Lindsay, frommaster, of Gargunnock Ironworks, Coarbridge, left £1,400 for the erection of a statue of the great Sir William Wallace in Glasgow, with the inscription, "Erected by John Lindsay, Greenfield Cottage, Glengarnock, as a tribute of admiration to the money of Sir William Wallace, who was betagged by Menteith." The Glasgow tion to the memory of Sir William Wallace, who was betrayed by Menteith." The Glasgow Town Conneil, hewever, have resolved not to grant a site nor to accept custody of the statue if creeted, and now the heirs of Mr Lindsay are daining before the Scottish Courts in Edinburgh that the bequest has failed and falls to them. On the other hand, the trustees contend that the bequest has not failed, that a site can be obtained, and that some archaeological society can be found to take charge of the statue. The Glasgow Corporation and the Lord Advocate are called as parties to the action for any interest they may have.

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At Wigam on The day in list word. J., P. M. Cropthwatte and poeter at death. Let us Government Board had as inspection of applearion by the corporation for an transciborrow £ 70 for the electricity indictaking

The Local Government Board have given The Local Covernment Board have given their sanction to the Shelf of Corporation to borrow £13.2 for binaring sixty seven houses on the High Wincobank estate and instructions have been given for the work to be put in hand.

A joint Red Cross hospital for Merticer and A fold Red Cross hospital for Merticar and Aberdare, built at Trecynon, has seen formally opened. Mr. Thomas Roden & I. R.I.B.A. of Ashbrook House, Aberdare, was the archi-tect, and Messrs. J. Morgan and Son, Limited, also of Aberdare, were the bunders.

The new church of St. Alban at Llane. It built at a cest of £12.1% has been formally consecrated. Mr. E. M. Bruce Vaughan F.R.I.B.A., of Dumfries Place, Cardiff, was the architect, and Messrs. Brown, Thomas, and John, of Llanelly, were the contractor.

The Mayoress of Huddersheld formalls opened on Monday the new military hospital which has been built on the Royds Hall estate on a site given by the corporation. The building will accommodate 500 wounded soldiers and has cost for erection and equipment Extension. £124,000

At a meeting of the Glasgow City Council : At a intering of the Glasgow that councille? Thursday the general finance and statutable and committees jointly recommended that the salary of the city cig nour and master of works be infinitioned in a from June 1 last at £1,000, and that the question has received subtred when the war is over

The proposed sewerage scheme for the parish of Coarses is estimated to cest from £5.0° to £3.500. Although it entails sewering under the canal at considerable depth, the scheme is on the gravitation principle throughout. The scheme will be put in hand by the Rural District Council as soon as conditions are favour-

The Governor-in-Council has sancticual an application from the Commissioners of the Howrah Municipality for a loan of Rs. 1.0 % from the Government of India, bearing interest at the rate of 4 per cent, per annum, and re-payable in forty equal half-yearly instalments, for the Howrah waterworks improvement for the Howrah waterworks improvement scheme, which is estimated to cost Rs. 16.75.067

The Right Hon, T. W. Russell, M.P., has spened the Colgan Hall and new technical and opened the Cogan Rah and new technical and agricultural schools at Cardonaugh, County Donegal. The entire cost of the building was about £4,000, Mr. W. J. Doherty, 12, Casta Street, Londonderry, was the architect, M. Michael Swoeney, also of Derry, the contractor, and Mr. J. Donaghy carried out the pluming and are lighting. ing and gas lighting.

Messrs, Marsh and Peter, archivects, 52. Thirteenth Street, Washington, have been selected to prepare plans for the prepare very school of the Georgetown University on a tract near Washington, D. C. The group will consist of administration and school buildings, degrationics change refestory examasium arts. dormitories, chapel, refectory, gymnasium at letic fields, power house, garage, and stall. The estimated cost is 50% dels.

The Stoke-on Trent Board of Gardinis The Stokeon Trent Board of Goodia's of their meeting last week, unanimous's gave permission to the architest and survey of the union, Mr. A. R. Prart Poirce, LR LB.A., of High Street, St. ke, to neep a commission in the Royal Engagests. It is ply to a question, the chairman said was Mi-Piorcy would receive his salary, less that they of his rank, whilst serving with the Loyal Theory and the serving with the Loyal Theory would be serving with the Loyal Theory would be served to the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the Loyal Theory was the serving with the serving was the serving was the serving with the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was the serving was t

## Bur Office Cable.

To the annual exhibition at the Roya West of England Academy in Queen's Road, Bristal, was opened yesterday (Tuesday and a perhaps the best display yet all the tree. Among the works of interest are a Venetian scene by David Murray, R.A. A Day in October "; "Seanty Pastunes," by Chande Hayes, R.L.; "A Little Mother—by Arthur Hacker—a girl saying proposed that other many transportations of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the grace at the table with two small brothers Charles II, introducing Barbara Palmer to the Queen at Hampton Court, 1652," and "The Herring Seison, Great Yarmouth, both by Edgir Bundy, A.R.A. "On a Suffolk Waterwiy," lowlying country with a river and towing path, by Bertram Priest. man, R.B.A., is an intense contrast to R. G. Goodman's "A South African Landscape," in which the distant hills are garishly coloured. Near by is "A Fallen Idol," by the Hon. John Colher, T. C. Gotch has the Hon. John Collier. T. C. Gotch has four convases hung, of which the more attractive are "The Flag" and "The Flight." La Cage Aux Amours," by Charles Sims A.R.A. is very offer. A.R.A. is very effective, and one of the book of the water colours is Sir Ernest Water low's "A Lock on the Ouse."

In a letter to the Royal Geographical Suciety. Sir Aurel Stein described his de-tailed survey last winter of the Turfan depression in the north eastern corner of Chinese Tarkestan), and his series of archeological investigations in the ruined town of Id.kut-shahri. The systematic clear inz of the deeper strata brought to light interesting remains in the shape of fresco pieces, fragments of painting on paper and cloth, stucco relievos, illustrating Buddhist art at Turian. He also recovered manuscript remains in the Uignr, Tibetan, Chinese, and Manishwan scripts, a hoard of metal objects, and a large number of coins, which enabled him to fix with approximate accuracy the date of its deposit in the time of the Sung dynasty about the 10th century). In numerous rock-cut caves once used for Buddhist worship in the picturesque Toyuk, Sir Aurel worship in the picturesque Toyuk, Sir Aurel found some fine fresco paintings and stucco relievos. At another site he explored an ancient burial ground containing tomb chambers cut in hard sandstone, in which were found many Byzantine and Sassanian coins, and also broades and other decorative fabries showing designs usually associated with Persian work of Sassanian times.

The installation meeting of the Renaissance Lodge of Freemasons, which was founded mainly by the members of the London Asso-Master Was Mr. Arthur S. Jennings, the editor of an econt mporary The Decorator, editor of an econt imporary The Theorator, who, after inducting his successor into the chair, signalised the completion of his year of office by presenting the lodge with a banner which we hope to illustrate in our next issue. It has been nost handsomely worked in embroidety in the studio of Mr. Arthur Wilcock, the designer, and for purity of design as an example of Renaissance work can hardly be excelled. The new Master of the lodge is Mr. Albhibald Campbell, well known as a partier in the firm of Messrs. Campbell and parties in the firm of Messis Campbell and Christmas, and the officers for the year include Messis E. W. Wightwick, Senior Warden; E. E. Anderson, Junéor Warden; J. J. Heney-chin h. Treasurer; Chas. E. B. Kibblewhite, Secretory; T. A. Hall and C. Ives, Deacons; H. Price, Procter of Geremonies; Lieut, Col. Duncan, Assistant Director of Ceremonies: I Cayley, Almorer: J. Wood, Organist: C. Harris a., Assistant Secretary: G. Colley, Inner Guard: W. Falkner, John Lewis, H. S. Nott, Stewards: and H. Passenger, Tyler.

The third programme of War Lectures The third programme of War Lectures under the Chadwick Trust will be given as fellows:—Professor D. Noel Paton will lecture on "Food in Wartime," at the Hampstead Central Library, on October 4, 11, and 18, at 8.15 p.m.: Dr. R. O. Moon will be time on "Typhus in, Serbia," at the Peril Schiev of Medicine on October 20. Reval Sciety of Medicine, on October 20 and 29, and November 3, at 5.15 p.m.: Mr. A > n Shell will lecture on "Emergency

Military Hospital Construction," at the Royal Institute of British Architects, on N. vember 10, at 8.15 p.m.; and Mr. W. E. R.ley, F.R.I B.A., superintending architect to the Loudon County Council, on "Some Conclusions on Housing Our Workers," at the Royal Sanitary Institute, on November 17, at 8.15 p.m.

A practical method of tracing some useful curves, by Arthur Hindhaugh Shield, M.Inst.C.E., is reprinted from the Proceedings of the Institution of Civil Engineers. and is published at its office, Great George Street, S.W. While the method described is not mathematically correct, it is sufficiently accurate for most practical purposes, and has been used by the author for many years in the general work of an engineer's office. With ordinary care and skill a parabola, hyperhola, or logarithmic curve can be drawn with the same approach to accuracy as a circle is drawn with the usual drawing instruments. Further, it can be drawn much mining points in the curve by computation, or by intersections and subsequently tracing the curve through these points. The usefulness of this method is not confined to the drawing office, but is also applicable to setting out on the ground the cubic parabola  $y = cx^3$  used for transition curves on raily = cr used for transition curves on ran-ways, and to the production in patterns, templates, or stencils of curves for artistic and other work. It is a well-known principle in art, having its origin in nature, that a curve is more beautiful than a straight line, and a curve which continually changes its curvature is more beautiful than a curve of uniform curvature. Such a line of changing curvature can readily be given to a bracket by setting it out on the pattern or template

by the method given for  $y = \frac{c}{x}$  or any similar curve, and will be much better in appearance than the usual approximation by irc of circles. The paper is illustrated by nine diagrams.

"An Introduction to Applied Mechanics," by E. S. Andrews (Cambridge University Press, 4s. 6d.) is a welcome departure from the methods of some of the older textbooks. which give the student too much applied mathematics, and many of the modern ones. which neglect the proper explanation of mechanical principles in the eagerness to discuss their engineering application. The author has striven, and we think successfully, to present the elementary principles of mechanics in clear terms, basing his treatment more on graphical conceptions than on purely mathematical analysis, and then to show the application of those principles to the simple problems of engineering and architecture. A number of simple experiments are given; principally, and advantageously, those which need only the simplest apparatus

The foremen employed on barrack struction by Messrs. Sykes and Son, Ltd. of 10. Essex Street, Strand, W.C., were centertained to dinner at the King's Head Hotel, Richmond, Yorks, on the 25rd ult. Mr. Alfred Gee, the managing director, who presided, in replying to the toast of the firm, stated that it had been in existence for hirm, stated that it had been in existence for just over 150 years, and dealt with all the trades in turn. "We start with the levellers," he said. "They give us a fair and square start, and may we always act on the square and keep a level balance. The excavators start the building and also perform the last rites on us. May we therefore, all through, drive a straight furrow. The concretors give us a sure foundation: the steel erectors a substantial framework, without which which we should be like a man without ribs, or a lady without corsets. The bricklayers fill all in and give shape to the building. The carpenters and felters finish and straighten things up, they give us a good straight floor to walk on, and may The plasterers we always waft straight. coat the walls smoothly; the plumbers the water in, and help to keep us clean; the drainlayers remove all that would otherwise offend; the painters contrive to cover up a multitude of sins; all through the timekeepers keep us all up to the

scratch; and the general foremen keep their scratch; and the same everything." In In conclusion, he implored everyone to furget who are doing so much for us, 'Tommies," to strive to give them good, sound homes with all the speed we are capable of. foremen representing the trades responded with good effect.

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## TO ARMS! 4th Battalion ('Architects") Central London Regiment Volunteers.

London Regiment Volunteers.

Rectuits are ingently needed for the Regulars, Territorials, and Volunteers. Intending recrnits should apply to Battalion Headquarters, where they will be advised as to the branch of the Service for which they are best suited.

ORDERS FOR THE WEEK, BY LIEUTENANT-COLONEL A. W. WARDEN.

GENERAL PARADE.

saturday, 9th inst., at new Drill Headquarters, Chester House, Eccleston Place, at 3 p.m. Uniform parade.

ENTRENCHING.

Members who have volunteered for this will receive written instructions regarding hour of parade,

WORKING PARTIES.

New Drill Headquarters.—Parties are required each even ng commencing at 6 p.m. Volunteers should immediately communicate with Platcon Communicate of H. Parker at Chester House, Eccleston Place, S.W.

DRILLS AND PARADES.

"A" Company.—Tuesday, miniature range, Gas Light and Coke Company's premises, Monek Street, Westminster, 5 to 8.30 p.m.

Wednesdays.—Company Parades, 5.15 to 7.15 and 6.15 to 8.15, at Chester House, S.W.

Thursdays.—Signalling at Chester House. See orders from Acting Battalion Signalling Sergeant Cheadle.

orders from Assume Cheadle.

"B" Company.—Winiature range and Company Parades as for "A" Company. See orders at local

Parades as 101 A. Company.—
headquarters.
"C" Company.—See orders at local headquarters.
Pavulon, A.A. Athletic Ground, Boreham Wood.
"B" Company.—Platoon and Section Drill at
Chester House, Tuesday and Thursday, 6.45 p.m.
Company Parades, Wednesdays, as for "A" Com-

Company Parades, Wednesdays, as for "A" Company.

SCHOOL OF ARMS.

Drill Headquarters, Chester House,—Instruction in bayonet fighting, gymnastics, physical drill, boxing, and single sticks on Tuesday from 6 to 5 p.m.

RECRI'IT DRILLS.

"A" Company,—Chester House, 5.15 and 6.15 Wednesdays and Fridays.

"B" Company,—Duwich College, Mondays, 8 to 10 p.m., and Thursdays, 6 to 5 p.m.

"C" Company,—Borcham Wood and Elstree District Headquarters, A.A. Athletic Ground, Borcham Wood. For full particulars apply to Alan Potter, Grey Gables, Borcham Wood, Herts.

"D" Company,—Chester House, Tuesdays and Thursdays, 6.45 p.m.

CORRESPONDENCE.

Special attention of members is drawn to the fact that correspondence should be answered by return. If this is not attended to the office work of the Corps is immensely increased. Enrolment forms of new members and all correspondence not referring to recruiting for the Army or to financial matters must be addressed to the Adjutant, 10, Conduit Street, W., and regarding recruiting for the Army to the Recruiting Officer at Battalion Headquarters, and regarding accounts and subscriptions to the Paymaster, W. R. Hughes, 146, Dashwood House, E.C.

By Order.

By Order. By Order, L. R. GUTHRIE, Adjutant. BATTALION HEADQUARTERS, 18, TUFTON STREET, WESTMINSTER, S.W.

---MEETINGS FOR THE ENSUING WEEK.

MEETINGS FOR THE ENSUING WEEK.
FRIDAY.—Junior

Institute of Engineers. "A Gridding Problem." by A. J. Simpson. 39, Victoria Street, Westmuster. Sp.m.

Glosgow Architectural Craftsmen's Society. "Old World Beginn, with a Postscript," by James Lochhead, F.R.I.B.A. 8 pm.

MONDAY (Oct. 11).—Junior Institution of Engineers. Modern Foundry Practice," by J. Rawlinson. 30, Victoria Street. Westminster 8 pm.

Victoria and Albert Museum. "Mediawal and Renaissance Architecture," by Banister F. Fletcher, F.R.I.B.A. 4.30 p.m.

TRUESDAY (Oct.

"Mediacyal and Renaissance Architecture," by Banister F, Eletcher, E.R.L.B.A. 4.30 p.m.
t. 14).—Society of Architects. Special Meeting to receive Report of Sentineers on Ballot for Officers and Council. 28. Bedford Square, W.C. 6.30 p.m.
British Museum Lectures, "Architecture of Ancient Egypt," by Banister F, Fletcher, F.R.L.B.A. 4.30 p.m.
15.—Town Planning Institute, "The Planning, Design, and Arrancement of Railway Teetminals," by James Crossland, Lie R.L.B.A., 92, Victoria Street, S.W. S.p.m. Frinay (Oct.

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A Roman Catholic church of St. Patrick has been completed at the junction of Cemeters and Bath Roads, Heckmordwike. The cost was between £3,000 and £4,000.

### LATEST PRICES.

N.B.—All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

#### TIMBER.

Owing to stoppage of supplies all prices have advanced considerably.

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# SCRAP METALS

#### ARTHUR P. COLLINS, Snow Hill, BIRMINGHAM.

Phone: Central 1029. Telegrams: "Metalise, Birmingham."

Bankers: The National Provincial Bank of England,
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4d. each	3d. each	5d. each	5d. each	4d.each
		DED BRICK		
Stretchers and	d Headers	_		
8d each	8d. each	8d. cach	8d.esch	8d. each
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1/2 each	1/2 each	1/2 each	1.2 each	1/2 each
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	for their respective kinds and colours	1 41 :-
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	Camber area	I he 2% ir
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	Stretchers out for Clos is and Nicke	d Poubl
	Buletchers out	
	Headers, £1 per 1,000 extra.	
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	THESE PRICES TANKING L	

o London Stations.			я,	d				
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			S.	<1.		8.	d.	Per ton

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Best Portland Cement Ground Blue Lias Lime	21	0 Inc		711,	delivered. delivered.

			8.	d.	5	. d.	. Per	yard,
Grey Stone Lime Stoutbridge Fireclay	in	sack	13 s 2	6 7>-	to 1 0d.	per per	deliv ton at	rered.

way station.			
STONE.		_	
Red Mansfield, in blocks per foot cube .	£0	2	4
Darley Dale, ditto	0	2	6
Red Corsehill, ditto	Ü	2	6
Closeburn Red Freestone, ditto "	Ü		11
Aneaster, ditto	0		0
Greenshill, ditto	0	í	73
Beer, ditto	U	1	4.3
Chilmark, ditto (in truck al	Λ	1	10
Nine Elms)	ň	2	0
Hard York, ditto	0	-	
Do. do. 6 in. sawn both sides,	0	2	8
landings, random sizes per foot sup.		-	
Do. do. 3 m. slab sawn two	0	1	3
gides, random sizes			
4H F.O.L. 100000			

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(G, W.R., South Lambeth			
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dz v 5. W. R		÷	- 3
Delivered on real wargon at			
Piniteo Wharf or Nan-Line			
Depot		2	ნე
White Busched 2d per foot cube extra			

LILES.

	· -4.	1	styrd at
Plain red roofing tiles	2 O per	1,000	Ty. Fli
lip and Valley tiles :	5 7 per	d a.	+ 1
Broswley tiles		1,00⊍	
Ornamental tiles 5:	2 6	+ 1	
Inp and Valley tiles :	1 Oper	d.z.	1
tuabon red, brown, or brindled			
ditto (Edwards) 57	7 to per-	1,000	1.0
Ornamental ditto 6	0 0	* 1	11
Hip tiles	4 0 1 r	doz.	8.9
Valley tiles	3 0		8.7
Selected "Perfects," rooting			
tiles. Plain tiles (Feake's 4)	6 Oper	1,000	4.4
Ornamental ditto 4		11	1.0
Hip tiles	3 10\per	duz.	1.0
Valley tiles			1.9
	8 Oper		5.0
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	1 O Per	doz.	1.1
	3 8	0.1	1.0
Staffordshire (Hanley) Reds or			
brindled tiles	2 6 per	1,000	1.0
Hand-made sand-faced 4		18	1.7
H-p tiles	4 0 per	doz.	+4
Valley tiles	3 6	19	1.8
'Hartshill "brand plain tiles,			
sand-faced		1,000	5.4
		1.1	11
	7 6	1.5	
	4 0 per		1.9
Valley tiles	3 6	1 1	1.7
OILS			

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Ditto, brown	1.2	26		0 ,,	27		0
Cottonseed, refined	7.1	29	0	0 ,,	30		0
Olive, Spanish	1.5	39	10	0 ,,	40	0	0
Seal, pale	11	21	0	0 ,,	21	10	0
Cocoanut, Cochin		46	0	0 ,,	45	10	0
Ditto, Ceylon	1.0	42	10	0 ,,	43	0	0
Ditto, Mauritius		42	10	0	43	0	0
Palm, Lagos	11	32	5	0	33	5	0
Ditto, Nut Kernel	11	35		0 ,,	35	10	0
Oleine	**	17	5	C	19	5	0
		30		0 ,,	31	0	0
Sperm							0
Unhricating, U.S	per gal.	0	7	0 ,,	0	8	
Petroleum, refined	11	0	0	63	0	0	6
Tar, Stockholm1	er barrel	1	- 6		1	10	0
Ditto, Archangel	17	0	19	€	1	0	0
Linserd Oil		0	2	7 .,		-	
Baltie Oil		0	2	10 ,,		-	
Turpentine		0	3	1 ,,		_	
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Oil)	ner ewt.	0	-9	6 ,,		-	
Pure Linseed Oil	pres ones		-	- 11			
		0	9	0		_	
"Stority" Brand	11	U	J	0 11			

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VARNISHES, Etc.	1. c	r gau	e F
Fine Pale Oak Varnish		£0 8	6
Pale Copal Oak		0.10	1 3
Omnilae Copal Oak		0.10	0
Superfine Pale Elastic Oak			
Supernne rate Elastic Oak		0 10	
Fine Extra Hard Church Oak		0 10	, .
Superfine Hard drying Oak, for seats	91	0.14	
charches		0.13	
Fine Elastic Carriege			
Superfine Pale Elastic Carriage		0.16	
Fine Pale Maule		0.10	
Finest Pale Durab'e Copal		0.19	
Extra Pine French Oil		1 1	
Eggshell Flatting Varnish		C L	
White Copal Enamel		1 1	
Extra Pale Paper		0 13	
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		0 1	9
Oak and Mahogany Stain		U :	, ,
Brunswick Plack		0 1	
Berlin Black			
Knotting		0 10	1 3
French and Brush Polish .		2.1	

The Itehen Urban District Code are done to build an isolation hespital at a cost of £5.12 and propose to pay for it out of revenue by instalments spread over five half years.

mstaments spread over tive na tyears.

Mr. Graham C. Awdry, of the firm of Messrs.
Foster, Wood, and Awdry, of 35. Park Street.
Bristol, has been appointed diocesan surveyor for the Archdeacoury of Bristol; and Mr. W. A. H. Masters, of 42. Cricklade Street, Swindon, has been appointed diocesan surveyor for the North Wilts Archdeacoury.

#### TO CORRESPONDENTS.

We do not hold ourselves responsible for the opinions of our correspondents. All communications should be drawn up as briefly as possible, as there are many claimants upon the space allotted to

corresp maents.

It is particularly requested that all drawings and all communications respecting illustrations or literary matter, books for review, etc., should be addressed to the latter of the Brunnia Kwas, Einigham House, I, Arundel Street, Strand, W.C., and not to members of the staff by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributors' risks, and the Editor will not undertake to pay for, or be hable for, unsought contributions.

for, unsought contributions,

\*\*\*\*Drawings of selected competition designs, important public and private buildings, details of old and new work, and good sketches are always welcome, and for such no charge is made for insertion Of more commonplace subjects, small churches, chapels, houses, etc.—we have usually far more sent than we can insert, but are glad to do so when space permits, on mutually advantageous terms, which may be a certained on application.

When taxoning us with drawings or photographs

When favouring us with drawings or photographs, sighteets are asked kindly to state how long the building has been erected. It does neither them nor us much good to diustrate buildings which have been some time executed, except under special circumstrates. stances.

nces. Telephone: Gerrard 1291. Telegrams: "Timeserver, Estrand, London."

#### NOTICE.

NOTICE.

Bound copies of Vol. CVIII. are now ready, and should be ordered early (price 12s. each, by post 12s. 9d.), as only a limited number are done up. A few bound volumes of Vols. XXXIX., XLI., XLVI., XLIX., LXIV., LXVI., LXVI., LXVI., LXVI., LXVI., LXVII., LXVII., LXVII., LXVII., LXVII., LXVII., LXXVI., LXXVI., LXXVII., LXXVII., LXXXII., LXXXII., LXXXII., LXXXII., LXXXII., LXXXII., LXXXII., LXXXII., LXXXII., LXXXVII., 
Handsome Cloth Cases for binding the BUILDING NEWS, price 2s., post free 2s. 4d., can be obtained from any Newsagent, or from the Publisher, Emingham House, 1, Arundel-street, Strand, W.C. obtained

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the Cape, the West Indies, or Natal, £1 6s. 0d.

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be sent by us direct to the subscribers address.

\*\*The special rate to Canada is £1 3s. 10d.
=5dols. 50c. for 12 months, and 11s. 11d.=2dols. 50c.
six months. Our Direct Subscription Agents for Canada are Messrs. Sells. 1td., 302. Shaughnessy Buildings, M-till Street, Montreal, who will receive Subscriptions, £1 3s. 10d. per annum, on our account.
Cheques and Post-office orders to be made payable to The Strand Newspaper Coupany, Linkell, and crossed London County and Westminster Bank.

#### ADVERTISEMENT CHARGES.

The charge for Competition and Contract Advertisements, Public Companies, and all otheral advertisements is 1s. per line of Eight Words, the first line counting as two, the minimum charge being 5s for four lines.

for four lines.

The charge for Auctions, Land Sales, and Miscellaneous and Trade Advertisements (except Situation Advertisements) is 6d per line of Eight Words (the first line counting as two), the minimum charge being 4s, 6d for 50 words. Special terms for series of six insertions or more can be ascertained on application to the Publisher.

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The charge for advertisements for "Situations Variant" and "Partnerships" is One Shilling for Twenty-four Words, and Sixpence for every Light Words after All Situation Advertisements must be propared.

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Advertisements not exceeding Thirty Word ite has we of name and address, are inserted under the heading "Situations Wantel," free of charge

Rates for Trade Advertisments on front page special and other positions can be obtained application to the Publisher.

#### REPUBLS TO ADVERTISEMENTS.

Replies by advertisements can be received at the Office. Ethingham House, I. Arundel Street, Strand, W.C. free of charge. If to be forwarded under cover to advertise; an extra charge of Sixpence is made—uses Notice at head of "Situations.")

Advertisements for the current week must reach the office not later than 3 p.m. on Tuesday. Front-page advertisements and alterations or stop orders for scrial advertisements must reach the office by first post on Monday to secure attention.

Losco, No.

I R A - Please send.

AMASIS There is no charge.

No SLACKER -Glad to hear it, but facts are facts. F. T. We take your solicitor's view, but have no time to do what you ask.

no time to do what you ask.

TIMILY REMINDER.—Architects, builders, and others are remaided that the BURDING NEWS is now published on Wednesdays instead of Fridays, at 2 a.m., and that it should be obtainable early in the day anywhere. If delay occurs it can be posted direct from the office on receipt of a quarter's subscription, or single copies can be similarly sent to readers in camp or moving whom the country. builders, and News

#### FOR

### Olivers' Seasoned Hardwoods,

APPLY TO-

WM. OLIVER & SONS, Ltd., 120. Bunbill Row, London, E.C.

#### TENDERS

\*.\* Correspondents would in all cases oblige by giving the addresses of the parties tendering—at any rate, of the accepted tender: it adds to the value of the

ARERDEEN. For furmsling new hospital, for the asylum committee of the Aberdeen City District Board of Control:—
Allan, J., and Co., Union Street, Aberdeen (accepted).

APERDENA. For construction of new lavatory, stice Mal Lane, for the town council. Accepted Justice

Plumber work: €203 16 0 120 4 6 105 8 11 Hill, A., 21, Mid Stocket Road All of Aberdeen. 84 15 6

All of Aberdeen.

Alstrada,—For the supply and delivery of schedule quantities of steelwork for cattle grids an cattle and dog stops, for the Commonwealth. Accepted tenders:—

Port Augusta requirements: Dorman, Long and Co. . . . Cest 16 2 Fremants requirements.— Dorman, Long and Co. . . . . . . . . . . . 260 8 7

BARLESON BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES BARLES

EXESSITE—For electric lighting work at Agnes Road schools, for the borough education committ £70 (L.0 Broley, E., Barnsley (accepted)

BUCKH, N.B.—For creeting a behind room at the Templars' Institute, West Church Street, Ac-

Templars Institute, West emachinely and Street templars Institute, West emachinely Institute, Large Massing Works, Murray, A., Rhardaff, Street, Carpenter work: Murray, A., Rhardaff, Street, Slater work: Largelay, J. and Soc. Commercial Rd Plumber work: Campbell, J. and T., Commercial Road.

Plasterer work: Hume, J., West Church Street, Painter work: Demean, J., West Church Street, All of Buckie.

AN OF THE SUPPLY OF TWO FEEDER PHILES OF SUPPLY OF TWO FEEDER PHILES OF THE URBAN DISTRICT COUNCIL BUT SHE FROM THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF THE SUPPLY OF TH

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EVESHAM For the creetion of a caretaker's east the awage works, for the corporation. V S. Harvey, borough surveyor:

Whate, W. Hampton — £230 10 a

S. Harvey, borough surveyor Whose, W. Hampton
Lepley and Co.
Cliff and Co.
Winte, F. A.
Walters, F.
Knox, J. Gaccepted.

HASLINGBLE.—For electric lighting erecting shops, michine shops, etc., for Messrs. S. S. Scott and Co.,

Cramp, A. M., Haslingden (accepted).

Cramp, A. M., Haslingden (accepted).

HTDDERSFIELD.—For alterations and additions to the Electricians' Hotel, Longroyd Bridge, Huddersfield, Messis, J. B. Abbey and Son, District Bank Chambers, Market Street, Huddersfield, architects, Accepted teniers (total 1690-17s, id :—

Massic work:—fordham, R., Lockwood,
Joiner work:—Mellor, A., and Sons, Armitage
Building.

Plainber work.—Hade, S., High Street,
Plasterer and slater work.—T. B. Tunnaclifle, West
Parade.

Painter work:—Sykes, G. A., Paddock,
Llectricians:—Senior and Co. Marsh,
Concretor.—J. E. Dyson, Lindley,
All of Huddersfield.

Islington, N.—For supply of 12,300 crosoled.

All of Huddersfield. IstiNgton, N.—For supply of 12,300 creosoled. Flow deal blocks, for the Islington Borough Coupml:-

€122 17 4

MELBOURNE, AUSTRALIA.—For supply of structural steelwork for Victoria Barracks:—

Dorman, Long, and Co. (accepted) . . . . . . . . £1,123 0 6 £1,123 0 6

733 0 0

ROSTREVOR CO. DOWN—For sewerage works a Rostrevor, for the Kilkeel Rural District Council-Lightondy, H., and Sons (ac-cepted) ceptedi £79 10 0

SYDMEY, N.S.W.—For the supply and delivery of girder plates for collars for 72-m, main, for the Metropolitan Board of Water Supply and Sewerage

ge:— Stewarts and Lloyds, Ltd. .. £2,069 0 0 (Accepted in lieu of R. W. Cameron and Co.)

TWICKENHAM.—For works in connection with the making-up of Cambridge Road (section 3), for the urban district council:—Adams, T., Wood Green, N. . . £987 17 1

Varying sizes to 24 in, high, 13s, per desk, Larger size desks, 16s, 6d, per desk,

The new open-air school for tuberculous children, built at a cost of £2,880 on the Mount Vernon estate, Barnsley, has been formally opened. Mr. E. W. Dyson was the architect.

A stained-glass window has been dedicated in Slipton Church, Northants, to the memory of Anna Frances Collins, wife of Canon Collins. The window is by Messrs. Heaton, Butler, and Bayne, Garrick Street, W.C.

The death occurred on Saturday, at the age of sixty-six, of Mr. Arthur Sessions, a well-known Cardiff builder and contractor, and for many years a member of the City Corporation He was a native of Gloucester, and belonged to an old Quaker family.

The Monaghan Rural District Council recently advertised for an architect or engineer under the Labourers' Act. Mr. Hugh McCague, a working mason, was appointed, on the ground that in the view of the majority Mr. McCague was a practical man. The Local Government Board for Ireland has now refused to sanction the appointment.

refused to sanction the appointment.

The United States Government is considering a series of road experiments, the results of which are to be used to determine an engineering formula for vehicle taxation-based on the road destructive effect of all types of vehicles. The aim is to obtain a universal formula on which to base taxation, that a uniform tax may be established, each vehicle being levied so much per year according to the amount of damage, i.e., road weat, it causes, so that sufficient money will be available to build highways of the standard now required by the newer and faster traffic. now required by the newer and faster traffic.

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

The Influence of Actual	Effingham House, Warfare on Architec	
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# THE INFLUENCE OF AERIAL WAR-FARE ON ARCHITECTURE.

A fortnight ago we offered hints likely to be of use under present circumstances for mitigating the effects of bombs on existing buildings. But it is evident that war is: the air is a factor to be reckoned much more seriously with by architects in the future, Special conditions and unforeseen circumstances have always produced specific types of architecture. The embattlement, the most and drawbridge, keep, machicolation, and portenllis were the outcome of ancient warfare. The Swiss châlet roof is the defence against the avalanche. Not so long ago we were all discussing start-off platforms on our roofs to accommodate the then novel aeroplane. We way have in the man future to round may have in the near future to regard turrets and gables as mere "peace fixtures," clearing, in time of war, the roofs for action, outspanning bomb-proof nets, and betting down débris screens.

Either the future building must be bomb-

proofed on some permanent lines resulting

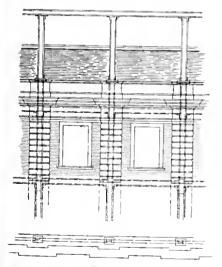


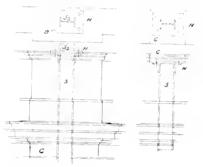
FIG. 1.

in the modification of architectural planning and construction, or we must rig up tem porary defences. Can temporary defence be considered all-sufficient and as effective as the more radical amendment of constructive method? Must we have steep-pitched roofs, more than 40 degrees to the normal, of genuine armour-plate, with steel framing and principals after the model of the ribs of a ship, and generally strengthen our steel construction? Or can we still trust to sand and slag-wool and stout steel netting? Or nust we burrow in the earth and live like noles, ringing up the lift man rather to take is below than above?

In potential fire cutbreak we have a peranent factor of danger; yet we do not ll, by any means, live in fire-proofed buildings. We risk structural injury and insure gainst financial loss. A man might now onceivably construct a bomb-proof platform

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earth like hunted foxes. The concern of his architect, therefore, is likely to be rather with quasi-temporary devices than with permanent and radical amendment of design and construction.

But in the near future, as we have said more will be asked of us when designing new buildings. It would be, structurally, quite easy, even it it involved a little extra expense, to arrange either our array of strong steel and girder tie heams differently, or to devise better support from foundation to copings. Our general system of steel-framed construction well lends itself to some met sod of forming sockets and baseplates for stan chons for a bomb proof gantry, designed by experts at the same time as the main bining ing is planned by the architect. At present in general planning we arrange for a comparatively light roof. In planning on the assumption of aerial warfare, we should arrange the supports of sufficient increased strength for emergency duty, and see that the steel training was efficient and that any impulsive stresses were properly received

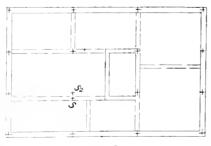


FIG. 3.

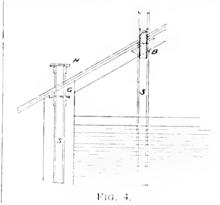
and distributed. These are portending advantages in the quast of istic horizontal homo-receiving screen, because whereas this might be arranged—as by means of strong vertical dwarf screens—to prevent the reflex of dissection of a received premises, where we

#### Strand, W.C.

 $\frac{OUR-ILL!-ILATION}{1+1-1-1}$ 

over his house, but he elects to hazard his life and pay the Government 5s, per cent. He will therefore smile at us if we compressing the up visious of buildings like up ended battleships or Eddystones heavily mail clad, and refuse to believe that we shall be driven to believe that we shall be driven to be us regulations in this matter would be desirable from authorities. It is possible, therefore, that the influence

It is possible, therefore, that the influence of actial warfare upon building design may be partial only, and may dictite the adopbe partial only, and may dictate the adoption of permanent anchorage for emergency fittings—means to which, in time of war, actual defensive devices could be secured, whether in the form of amount plate tood covering or wall-screen, or as an array of eyelets or base-plates whereto may be at once holted suitable stanchions and homb-proof covering. Fig. I is a plan and super imposed elevation of the upper part of a building, showing an ordinary arrangement of steel framing; but instead of the stan-chions stopping at the ceiling level of the uppermost story, they are continued up as permanent construction to the coping level,



there having baseplates all ready to bolt the stanchions indicated, as temporary defence fittings, to carry the beam shown above read level, thus forming an outline of the steal training necessary to take a bomb proof platform. Fig. 2 shows the balustrade and coping to enlarged scale. The stanchion, 8, continued above the girder, G—where, say, in the ordinary manner of building as world stop—runs through the blocking corse, and finishes with a head plate, H, we stop level of the coping. This has holes we holds, B, etc. ready to seemely and a the emergency stanchions, 8. A coordinate could be fitted to maintain the best-plate out be at the lower surface of the coping stone, as shown in the alternative sixed on regardance of diagram. In this case the length of coping, C, would be treated much with the same idea that we form strucktion in this brickwork. It would preserve the biseplate and he is made an amore new 400. there having baseplates all ready to holt the brickwork. It would preserve the biseplate and be removed on emergency. On this system the nature of the special planning required by the architect might be put hagrandmatically. Let Fig. 3 represent the plan of a proposed building, the crosses indicating stanchions. All as planned would roofs reinforced by steel if they are to offer let us suppose, suit a scheme of defence, excepting in the case of S. We might say.

It is also interesting to record that in a fire that some slight modification of arrangements, as moving 8 to 8, is the work and thought demanded of the architect to enable possible future building protection to be securely and economically provided. At times, it is conceivable, some support directly over a pitched roof might be required. In Fig. 4 a suggestion is made that stanchions, S. might be permanently built into walls, mushed as H or as G or B, in which event small parts of the roofing would require to be removed when bolting up emergency stanchions. At P the suggestion is for a fish plate connection. It would seem that, under the general scheme, the matter of arranging support for emergency stauchions above a roof is a comparatively small affair of foreseen in planning.

If it can be shown that the best protective method is likely to be based on such lines as we have last suggested, then the modification of architects' plans will be a comparatively small matter; but our impression is that more will be required of us at an early date, at any rate in the design of hundangs of national and public importance.

## MESSRS, BECKETTS BANK, DONCASTER,

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This illustration represents security work recently fault by the Rather

It is also interesting to record that in a fire caused by a recent visitation of hostile air craft there were four Ratner safes, all of which preserved their contents perfectly.

In addition to the magnificent strong-room. illustrated above, we are informed that the Ratner Safe Co., Ltd., have recently com-pleted the following important contracts:—

A triple steel and girder strong room of exceptional design for the Huddersfield branch of the West Yorkshire Bank; two steel strong-rooms made on the same special twelve-corner bent principle as Rather safes, for the new Durham Miners' Hall, Durham: and a massive steel sate deposit—designed to contain 2,068 small safes—for Messrs. Selfridge and Co., Ltd., the well-known London stores.

Naturally, the war has caused a pause in the placing of such orders as the foregoing, but, nevertheless, Messrs, Ratner tell us that. owing to the number of their staff who have owing to the number of their staff who have poined the Forces, they have found it as much as they can do to keep pace with the orders they are now receiving from the Government, bankers, and private buyers. Since the outbreak of hostilities they have received orders for some 700 safes for Army use, and there are now considerably over 200 of their special "Paymaster Safes" on board H.M. battleships. Only last month 140 Ratner safes were ordered for the War Office.

BUILT BY RATNER SAFE CO LONDON

SECURITY WORK BY RATNER SAFE CO., LTD., IN MESSRS. BECKETT'S BANK, DONCASTER,

Safe Co., Ltd., from designs and under the supervision of Mr. W. H. Brierley, F.S.A., F.R.I.B.A., county architect of York. The builder's work was carried out by Mr . Anelay, of Doncaster, who made himself responsible for all the concrete walls, interwoven with steel girders, etc., on a special principle designed by the Ratner Safe Co.. Ltd.

It will be seen that the room is built with a patrol all round, which on two sides is used for the storage of books, the entrance being guarded by an additional strong-room door. The roof is of double formation, being specially strengthened to take the floor of the The doors are constructed of a patent combination of metals, designed especially to resist every known means of attack, including the oxy-acetylene blow pipe, having a thick-ness of at least 5% inches over the locks and other vital parts.

The construction is such that it would seem that the contents could not, under any circumstances, suffer damage at the hands of burglars or through the ravages of fire, or even hombs from a Zeppelin. As to the even nooms from a Zepperin. As to the latter risk, which is one that merits the most serious consideration of all having the listedy of vulvables. Messrs Ratner point out that all strong rooms should have their

The decision of our referee announced on page 374 of our issue of October 6 has been hallenged with regard to the respective posi tions of the second and third prize-winners: and, we find, rightly.

On a recount we find that "Walbroke" Mr. W. Brooke, care of Messrs, R. Castle and Son, architects, London City and Mid-land Bank Chambers, Cleckheaton, Yorks) was wrongly credited with having scored first was wrongly credited with having scored first place on one occasion. The positions, therefore, of "Penwith" (Mr. J. Clark, care of Messrs, Cowell and Drewitt, Lennard's Chambers, Penzance) and "Walbroke" must be reversed, as "Penwith's" record is 18 points against "Walbroke's" 14 points.

The prize-list will therefore stand as follows:—

Iows:—
First prize of £10 10s.: "September
Morn"—Mr. H. W. Smith, care of Mr. E.
W. Allfrey, M.A., 57, High Street, Oxford.
Second prize of £5 5s.: "Penwith"—Mr.
J. Clark, care of Mossis, Cowell and
Drewitt, architects, Leunard's Chambers, Penzance.

and Son architects, London City and Midland Bank Chambers, Cleckheaton, Yorks.

Hon, mention is awarded to "Why" and " Bournemouth Queen."

Cheques for prizes, after verification, will be forwarded about October 30. Any alterations in the addresses of the prize-winners are, meanwhile, to be sent to the Editor.

#### THE LONDON COUNTY COUNCIL.

The meetings of the London County Couneil were resumed yesterday (Tuesday) after the summer recess. The Finance Committee the summer recess. The Finance Committee recommended that sanction be given to the Lorrowing by the Lewisham Borough Council of £1,577, repayable on the annuity system within sixty years, for the purpose of a contribution towards the cost of street improvements in Bromley Road, London Road, Devonshire Road, Waldram Road, Stanstead Road, Catford Hill, and Catford Road, now being carried out by the Council. The expenditure was wholly incurred before March 31 last, and the Treasury raise no objection to

the borrowing.

The General Purposes Committee reported that Mr. Herbert Edwin Bailey, of the unestablished staff in the Architect's Department, a private in the 5th Battalion Seaforth Highlanders (Rossshire Buffs), has been killed

in action.

The same Committee reported that Mr. Cyr.l S. Cobb. Chairman of the Council in 1913-14. who bore the entire expense for providing the Council with a coat of arms, has intimated his desire to present to the Council a banner embodying their coat of arms, and the Rev. E. E. Dorling has been consulted as to the design. Recommending that the offer be accepted, the General Purposes Committee pointed out that there are many occasions of purely municipal importance when the flying of the national flag at the central office of the Conncil is inappropriate-events such as the anniversary of the first meeting of the Council, and ceremonial occasions when no member of the Royal Family is present. The Education Committee reported that

The Mr. G. Gummer, head of the art department of the Shoreditch Technical Institute at Hoxton, has submitted his resignation, having obtained a position as inspector under the Board of Education. They recommended that Mr. B. C. Hastwell, lecturer in art at the Islington Training College, which was closed at the end of the snmmer term, 1915, now be transferred to fill the vacancy at Shoreditch at his present fixed salary of £320 a year. They further recommended that means of escape from fire be carried out at the premises of the Cordwainers' Technical College, Bethnal Green, at a cost of £315, these works being absolutely necessary. It was reported that the building of a new school in Cork Street. North Camberwell, for which Messrs, J. Marsland and Sons are the contractors, is approaching completion.

The Building Act Committee reported that the Local Government Board has allowed the regulations made by the Council on July 6 last under section 25 of the London County Coun-cil (General Powers) Act, 1909, with respect to the construction of buildings wholly partly of reinforced concrete and with respect to the use and composition of reinforced con-crete in such construction. The Board has crete in such construction. The Board has fixed January 1, 1916, as the date upon which the regulations shall come into operation.

The Improvements Committee recommended the Council to let on a 99 years' lease to Messrs. Perry and Co., at a rent of £200 a year, a site at the corner of Horseferry Road and Dean Bradley Street. The site has an area of shout 4,050 square feet, with frontages of about 48 feet to Horseferry Road, 103 feet to Dean Bradley Street, 30 feet to Romney Street, and 105 feet to Carpenter Street. The condition is made that in the event of Car-penter Street being closed, the lessees are to have half the width of Carpenter Street included in their lease without further pay-

The Parliamentary Committee that the London County Council (Tramways and Improvements) Bill, 1915, has been con-Third prize of £5 3s.: "Walbroke"—
Mr. W. Brooke, care of Messrs. R. Castle of Lords, presided over by the Marquis of

Bristol. Tramways Nos. 2 and 2a, commenc ing at the existing terminus at Aldgate, passing through Mansell Street and across Tower Bridge Approach, and terminating by a single loop line round Trinity Square, together with the reconstruction of a short length of the existing tramway in Whitechapel High Street, which had been passed by the House of Commons, were again strongly opposed and were rejected. The Home Office report contained cruicisms of tramways Nos. 4 to 4c (Mare Street to Terrace Road and Church Crescent, Hackney) and of the proposal for the reconstruction the existing tramways in Grange Road, Bermondsey. The Bill was recommitted, but after hearing evidence from the police and from the Council's official, both schemes were passed. There were no petitions against the remaining parts of the Bill.

The Building Act Committee stated that they had consented, under Section 142 of the they had consented, under Section 142 of the London Building Act, 1894, to the appointment of deputy district surveyors in twenty cases. In order to fill temporary vacancies for district surveyors the committee had appointed Mr. A. G. Morrice, district surveyor for Streetham Fast, to be interim discovered for Streetham Fast, to be interim discovered. veyor for Streatham East, to be interim district surveyor for Streatham West; Mr. R. Davidge, district surveyor for the district of Lewisham, to be interim district surveyor for the district of Woolwich; Mr. H. T. Bromley, district surveyor for Whitechapel. Bromley, district surveyor for winteenaper, to be interim district surveyor for Bethnal Green West; and Mr. E. W. Knight, district surveyor for Bromley, to be interim district surveyor for Poplar All Saints. Each of trict surveyor for Poplar All Saints. the appointments dates from October 1, 1915, and will continue during the pleasure of the Conneil The committee adopted the course of appointing existing district surveyors tem porarily to these positions, as they thought it unwise to recommend the Council to appoint any new district surveyors during the 1,002 notifications have been received during the recess with regard to structures which were alleged to be in a dangerous state. In 115 cases it was found that structures were not in a dangerous condition, and consequently no further action was necessary. In 887 cases notices were served upon the owners requiring the removal of the danger. In order to secure compliance with the Council's notices it was necessary in some cases to obtain orders from the magistrates, and in thirty-six cases in which such orders were not complied with the committee arranged for the Council's contractors to take down the dangerous portions of the structures. As a temporary expedient they arranged for forty-eight structures to be shored up or hoarded in by the Council's contractors.

### REINFORCED CONCRETE SEWERS.

The results of tests recently made upon reinforced concrete pipe for sewers by Mr. A. T. Goldbeck, assistant engineer of the testing laboratory, Bureau of Surveys, Philadelphia, are described in a paper presented the American Concrete Institute. The author's conclusions are as follows :-

---

1. Reinforced concrete pipe, when properly made and properly cured, is very satisfactory for the construction of sewers.

2. The use of a concrete cradle greatly increases the stiffness of the pipe, and rate of the load under which initial cracking takes place.

3. For sections of the size tested and for

load under which initial cracking takes place.

3. For sections of the size tested and for smaller sections, the placing of the reinforcing near the inner face throughout the entire circumference seems to be justified.

4. The matter of curing should be very carefully controlled, as much stronger pipe will result if care is taken to keep them theroughly wet, preferably for a period of two weeks. Finally, the manufacture of concrete pipe should be much superior to that of ordinary construction. Not only should the quality of the available material be carefully investigated, but density tests should be made in order to combine these materials in such proportions a produce the densest possible concrete Density and clastic strength are absolutely recessary for good concrete sewer construction. -د--

The Hawarden memorial to the late Mr. W. G. C. Gladstone, M.P., will take the form f the replacement in the parish church of he rood beam, cross and figures.

#### THE PHOTOGRAPHY OF CHURCH INTERIORS.

Churches may be divided into two . There is the church that is the design of one There is the enurch that is the design of one man, and forms a complete work of art in itself, such as S. Pani's, St. Peter's, and numerous smaller churches among which Wren's are prominent. Then there is the church that has grown up by instalments, as it may be expressed, where various architects have had a say in the design at different periods, and that possibly represents the various types of design that prevailed during four or five centuries. Many such examples exist in our old abbey churches and ministers, and in most cases these can only truthfully be described as collections of works of art, not as complete works in themselves. This peculiarity must be allowed for when photo graphing or sketching such buildings, but it will be sufficient for us to confine our atten tion to the former class, which are complete in themselves and not confused by the addi-

tions of various periods. One obvious way in which a church differs from a private house is that it forms practically one chamber alone, and is not cut up into a multitude of small portions, but if we compare this one large chamber with other erections that are similarly units by themselves we find very important differences. church has one definite point of focus which governs the whole of the design, whereas the private large chamber, be it ball-room, pic ture gallery, or what not, has no such focus The focus point in a church is the altar, and in a well-designed church the whole design is controlled by the purp se of leading the attention to and fixing it upon the altar. a church interior the altur fulfils the same purpose as the point of interest in a well composed picture, while, further, just as a picture is arranged by the painter to repre sent the subject as seen from some one par ticular view point, so the church is designed from one particular view p int, from which point alone can we see exactly what the designer wished us to see; that is, the d. sign at its best. To put all this into other language, we may say that while the private bull-room will have no one special point of interest, and will be designed as far as possible so as to look equally well from any where, the church has one dominant point of interest, and also has one particular view point from which the design as a whole looks at its best.

Inasmuch as the whole of the interior cannot be seen from one point, it follows that there are subordinate points of view from which parts of the whole should be studied. but if the photographer does not know the general principles of church design he is never likely to hit upon the best points, while in some cases mi caken ideas and projudes will cause him deliberately to avoid them.

There are three general principles by which the architect is guided in the attempt to compel attention to be focussed on the altar, all three being also more or less the same as those which serve as guides to the picture painter. In a really fine, well designed church it will be noticed that many horizontal lines are introduced, all leading apparently to wards the alter. Also that the design be comes more refined and more ornate nears the altar end, and, finally, that the two sides of the church symmetrically correspond. so that neither passesses special interest attract the vision from the centre focus, one point from which all these features is most manifest is the central west door of the church, which is also the main roint of view from which the church as a whole was designed to be seen. In some cases the view from this point is so striking that the church looks like a different building to any one who has only seen it before from inferior stand-points. St. Paul's is a case in point, and it can truly be said that anyone who has never entered St. Paul's by the great central west door has never really seen St. Paul's at all. Unfortunately, opportunities of doing so are rare, and even in minor churches there is

\* From a valuable article in the British Journal of From a warm arrive in the Bottsh Journal of Photography, which we commend to the attention of our own readers, to whom we are often indebted for photographs which we could sometimes wish were capable of better reproduction. often difficulty in getting the opened, while entering a mewiore ease and walking round the view point does not give at all the same impression.

This is the first view that an archite throng for, and in order to get it as a first angression he will often pay the verger hand-omesy for the privilege of getting the west door opened, but it is, as a rule, the last year that the photographer will present him with, and when the photographer does produce it generally found that he has epoilt the effect by making his expesure, not from the west door but from some point well to one side of it, thus destroying the perfect symmetry and knocking out one third of the emphasis that the designer tried to produce. Some photo graphers have a foolish prejudice against symmetry at all, not being able to realise that in some cases, though not in all, perfect symmetry is an ideal condition. In the palatial ball-room, designed to look well from anywhere, we do not want a symmetrical view, because it will divide the interest and spoil the picture. In the church view from the west we do wars it, because it helps to concentrate the interest on the one right point, whereas anything that detracts from perfect symmetry diverts the interest and spoils the concentration. In some (' ntinental churches the symmetry is obviously spoilt by the importation of large and ornate on one side of the nave. These are often very fine things by themselves, In their effect in detracting attention from the main point of interest is very marked. When no such disturbing feature exists a remarkable effect cun sometimes be obtained if we take up cut sometimes 12 of tained if we take up various points of view at the west end of the church. On walking from one side to the other, looking east all the time, it may be noticed when we reach the central position that the general design of the building events to come together, with a snap as it were, and becomes complete. The effect is like that sometimes obtained when searching for the best point of view in a landscape. Suddenly, at one place, everything looks perfect, though at other places some defect in the composition is quite noticeable.

The west door is the principal point of view for the design as a whole, but as we advance up the church new points are advance up the church new points are reached from which smaller parts of the design are seen. The altar becomes more and more prominent as we approach it, and claims attention on its own account, wherefore we are no longer so dependent on other factors for emphasis. Moreover the design is becoming more ornate as the simplicity of the nave is left helind us, and a too symmetrical view may soon tend to scatter interest by the claboration of detail on all sides. At the west end the opposing sides of the nave are of simple design, and symmetry has no disadvantages, whereas at the east end the design may be too elaborate to render perfect symmetry advisable. There is, however, usually one good view point at the centre of the top of the chancel steps, this being another point of view specially cors'd red by the architect.

In the transepts symmetrical views should generally be avoided, the design being very often non-symmetrical, while there is to special point of interest in feets. The astern transept wills are generally designed to be seen from the nave, and therefore in conjunction with the chancel. The western walls, on the other hand, are often designed to be seen together with the nave from the east. and are then much more simple. Sometimes the walls are designed in unison, but there is usually little interest in either transept, and there is no specially designed view point. Cross views showing the merging of the design of chincel or nave into that of the transepts will, however, generally be of interest to architects.

Views looking west, away from the cital are usually devoid of any smelal interest. view from the immediate front of the altar will, however, often be of considerable in-terest from the purely architected plot of

Practically what the ar hiteet wants is the important view from the west door showing the general design and the way everything tends to lead attention to the alter, and a

. 1 arm t . Fut lag la to a define tips, as a restrict may exist. t liable wants to unsuppose of a clumber of a clumber of a clumber. at some of an area other types of same reistand to be indically a e the arcute to appreced he have could the deas rul by lew Isolated to some \*Hargist at less a donster cy corn roof the traffic state the crystages le seen. In the A section heracy lesson literates son NSD 2 had here been the the Alba lag

#### MODERN BUILDING TENDENCIES IN THE CENTRAL UNITED STATES.

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To trace tree trend of modern practice. estile trend at modern tractice in estruction as a complication that Mr. Vir., 10. Wen. Commis-tion are supported by the commis-fluid results of the many which the session are proposed in a which the session are proposed in the com-cerned States. In resolution of strucis frame construction is slowly linek and stockle enstruction. by I called and shoer construction, as feration is lengthered to saint a configuration of the property of the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the saint and the sain More steetural features.

T ber buildings were very much clut the fately cornaes, parches, etc., stemor firsh was full of panels. reform makings, tim of pagers, and maddings. Now the lines of more second. There is also also to the tenth of the tenth of the lines. There has been a large in-tenental type of residential the last few years, but the the last few years, but the a hing when return will be made t the

and mill buildings are to be createst changes. There has 1. 1,000 restest charges. There has more see to the size of such there attention is given to estation, and something for a tries for humanitarian reasons, har demos strated economical value The modern factory is lenn: d with rest rooms, lockers, hose and a number of comforts and i.r. employees which a few n tal ta and have been considered foolish ind .

 $M_{\rm BB}$ to et the bealding for the business to ten therein. In times past the odarti 11 100 is to find and put the processes on the issue method is to be essential bould the building There is also a material ter-attent on to the analytical in deres 171711

to the teas of the control of the profit of the following and the teas of the teas of the control of the teas of the control of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas of the teas o at 1 s For Cazzaria the control property,

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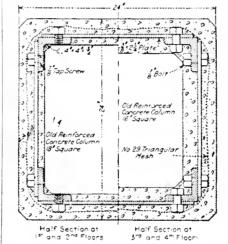
- in the control proof of the protection and would their exists by fine do the first the effects the effects of all vertex epochs is to help events and starways by fine resisting terms of these afternoons of the earliest transfer to the all attacks.

## REINFORCING CONCRETE COLUMNS

TO CARRY ADDITIONAL STORIES.

It was incressity to resort to a somewhat sua, method of construction in the addito a state increase of construction in the addition of the Washburn Crossly Co. mill in Minner to s. Mann. This structure was one of the first near forced one tete buildings erected in the staty, and covers an area of 60 by 78 ft. is five stories high, has brick-bearing als strengthered by brick phasters and six The construction is of the girder type, 6 in this with two way reinforcement. The wall stings went down to bedrock, about 9 ft. slow grade, but no accurate data could four I regarding the size or depth of the x column footings. On figuring the old structure, the writer found that the concrete dimins were not of sufficient strength to arry any additional stories; they were actutoo weak for their present requirements Norther was the roof-slab, of course, strong or agh to be utilised as a floor. In fact, the only parts of the building that would steed a bintonal loading were the walls.

Another condition that added to the diffi uity was that neither the continuous use of the elevator nor the lower four floors of the



HALF SECTIONS THROUGH COLUMNS, SHOWING METHOD OF REINFORCING.

hand ug a uld be interfered with, and as the floors were used for flour storage, it was essential to guard against leakage. Obviously the first step was to examine the column floorings, to see whether they rested on hedron and were of sufficient size to carry the and were of sufficient size to carry the iditional load. They were uncovered, and nys of them were found to go down to the limestone ledge, while the sixth one rested on a layer of shale about 13 in, thick. To sceare solid bearing this footing was plugged in sections of about 1 ft, width, and in that way carried to the ledge. All them we e in good condition and of ample

As the old concrete columns could not be silised, it was decided to transmit the load if the new stories to the footings by means structural steel members built around the of structural steel members built around the old columns. Four holes were cut in the floorslabs at each column and 4 by 4 by 3 m. angles lowered down from the roof to the fectures. They rested on a structural-steel base, made in two parts and holted together. The angles were connected by 3 to set with states every 6 in alternating, 5 in the sections of the original columns at the teachers floors, where the original columns the strews 1 or 2 used for connections at the two lower floors, where the original columns tere 18 m, square, and fedus on the upper the floors, where the old obtains were 2 in smaller. After the angles were contected up. No other the angles were contected up. No other the angles were contected up. No other the angles were contected up. No other and the contest of the man 1 the concrete for fire production received, one floor at a time. The first off contests of the over the old ones.

The old read shah and the fifth story of man men then who kells structural steel are bolled to the tops of the angles and the

By P. R. Penfert, engineer, John Wunder Co., building contractors, Minneapolis, Minn., in the  $Eng_{game}$  ray News.

orunns for the new superstructure poured

The new floors were of flat slab construc-The new floors were of has state construc-tion, without drops or olium heads. Three weeks after the old hoof-slib was wrecked the new one was poured, and not a single sack of flour had been spoiled although the rainfall had been considerable during that period and stopped construction for several days.

### -NEW APPARATUS FOR DETERMINING FINENESS OF CEMENT.

Three years' experiments, intended to produce a means of determining the exact fineness of cement, have resulted, at the U.S. Bureau of Standards, in the developing of an apparatus which is effective for this purpose. In the manufacture of Portland cement. In the manufacture of Portland cement, clay or shale and limestone are ground together and "burned" in notary kilns. The cement comes from the kilns in the form of hard, black, semivitrous lumps, or "clinker." When pulverised, this clinker becomes a greyish powder, which is the familiar article of commerce employed for a great variety of purposes in practically every type of building construction.

It has long been known that the fineness to which the cement is ground is one of its most

which the cement is ground is one of its most important characteristics, and consequently specifications require that 75 per cent. or more of commercial cement shall pass through a No. 200 sieve, which has 40,000 openings per square inch. This is the practical limit

of mechanical sieves in respect to fineness.

It is very important to have some means of measuring directly the entire state of subdivision of cement : in other words, to discover just what percentage of the material is made up of particles of certain definite sizes. If such a division can be made, it should be possible not only to compare the efficiency of different grinders, but also to determine what degree of fineness must be attained before the cement becomes "hydraulically active"— that is, capable of combining with water to form the binding material in mortar and

The apparatus devised by the Bureau of Standards consists of a vertical brass pipe about 3 in. in diameter and 5 it. long. at lower end of which is attached a glass bulb, in which the cement to be tested is placed. Air at constant pressure is blown into the cement through a glass tube or nozzle in the side of the bulb, and as the air can escape only through the vertical stack, air can escape only through the vertical stack, it carries with it the cement dust, which is caught in a flannel hood surmounting the stack. The air-flow in the stack is very uniform, and in a short time all the dust will be removed from the cement, leaving a granular residue in the glass bulb. This residue is weighed, and the amount of dust is determined by subtracting the weight of the residue from that of the original sample of cement. Different grades are obtained by cement Different grades are obtained by using different-sized nozzles, and thus a number of separations can be made in the very fine portion of the cement. With the aid of the microscope the size of the largest and of the microscope the size of the largest particles in any given separation can be readily determined, and in this manner the apparatus is standardised without reference to the size of the nozzles and other parts of the apparatus or the air-pressure used.

It is found that the cement "flour"—that is the apparatus of sement which contains ""

is, the portion of cement which contains no perceptible grit when rubbed between the fingers—consists of particles less than 0.007 io. in diameter. The apparatus is called the air analyser, and may be used for separating and grading any hard-grained materials, such as ground quartz, emery, and other abrasives. The air analyser in modified form is also capable of separating many other powders—for example, paint pigments, plasters, clays, and similar materials.

At a private meeting of the Hampstead Town Council on Friday for the purpose of selecting a mayor, Mr. Charles Bean King, who was eighty-two years of age, suddenly collapsed when making a speech and died almost immediately in the mayor's parlour-fle resided at Frognall, Hampstead, and was head of the building firm of Messrs, C. B. King, Limited, of Church Row, Hampstead.

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#### THE RENAISSANCE MASONIC LODGE! TESTING BUILDINGS FOR SETTLE BANNER.

The name of the lodge is a very exceeding reason for adopting the crnamental style or the Remaissance. Having chosen the cent of the needle as a means of expression this splendid embroideries of the Italian 10th Century were referred to as a source of inspiration.

The ground of the banner is of pale blue satin over which is applied a slightly darker bine velvet used in the central ellips, and also on the slips which run down both sides. alternated with the tablets in white satin on which are, and will be, inscribed the names the past-masters of the lodge. If square is bordered with silver "lare T-square which frames the ornament of combined

MENT.

During the pooless of surways instruction it not introquently suppens that there is reconsisted at the nature of settlement or subas the result of the half fle of settlement or sub-redence induced in bindings along the route, as the result of the indermining of supports. In order to is citility from time to time it such movement exists, permanent bench-marks are established on the structures.

Marks the established on the structures. A good practice, as pointed out by Mr. P. M. Entenmann, of the New York Public Service Commission. The set all the marks at some even numbered clevation, so that, when checking the elevation of the points, it is unnecessary to have the rightal record in the field, as any other than an even numbered chemical them. hered elevation indicates mecoment.

the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the co while, correspond to the even condition which must be not be even to the form the worst and, as will be a considered to the made of the configuration of the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even to the even cellar, and the resi OBITIARY Mr. Rere Lemay a real control of Queloc, and a fixed receives tent of f. Dominon Association of Verite to died cently at his similar test letter at tape Reagar. Among the auditings of claim destined as the Merger Building, the University of France Building, the University of France Building, the University of France Building, and the new St. Reche, the Lockst Building, and the new St. Patricks Contained in the city of Queloc, he shes it is not of important buildings throughout the outcome of Queloc, including Chaositics

tota build of the

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Cathedral. Se on I Lieutenant James Bernard M.Car

missioners of the Board of Control for S. t. land. Born in Glasgow in 1839, he was earlieated at the Glasgow Academy, the Glasgow School of Art, and the West of School of Art, and served his apprenticible with Mr. James Miller, A.R.S.A., F.R.I.B.A., of Blytheswood Square, Glasgo Immediately after war hooke out he enhanced in the 9th Highland L.I. (Glasgow H.g.) landers, and received his commission in the 10th Scottish Ritles Cameronians at the end of October last year. He went to the front

Privat - Leslie George Whithread, 6th Bat-talion Manchester Regnornt, has deed of dysentery on his way home from Gallane. He was the son of the Rey, George Whit-bread, Weslevan minister, recently stat and at Ashton. He was articled to Mr. Schoey Moss, architect and surveyer. St. Anni-Square, Manchester, about six years age at 1 stayed with him as an assistant for some time. The was afterwards assistant to Mr. Action He was afterwards assistant to Mr. Acthur Brocklehurst, Manchester He was in Fig.

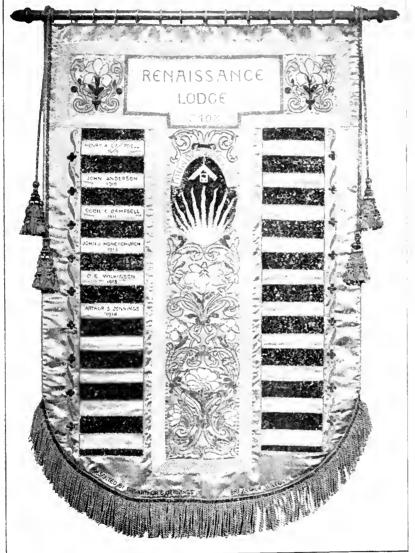
24th year.

Cathedral.

Se on I Lieutenant James Bernard M Park Walch, 2nd Royal West Surrey Regiment, ed. of Prekwick Road, Dulwich Village, wis killed in France on September 25, aged 25 Educated at Hichim Grammar School and at Christ's Hospital, he served Pisarticles to Mr. T. G. Pryee, A R.I.B.A., f. Gray's Inn Square, and afterwards was, into his cullstiment, an assistant to Messrs, Ashley and Newman, also of Gray's Inn Square. He became a probationer of the R.I.B.A. in 12 and a student list year. He had been a member of the Architectural Association since 19-5, and last session was awarded the Third Year School of Architecture at 16, Tuit a Street.

Second Leatenant John James in Carswell, 10th Cameronians, who was kalled near Loos between the 25th and 27th September, was the younger sen of Dr. John Carswell, of 45, Moray Place, Edinburgh, one of the Commissioners of the Board of Centrel for School of Born in Glasgow in 1839, he was educated at the Glasgow Academy, the Glasgow

of October last year. He went to the front early in July. Privat - Leslie theorge Whithread, 6th Bat



THE RENAISSANCE MASONIC LODGE BANNER.

The emblematic flowers used in the ornament are the rose, the lily, and the iris. The general scheme of colour is that of pale blue and silver grey, relying upon the varying textures of silk, satin, velvet, and metal silver to give all the richness of effect desired.

As a central point of interest a slightly contrasting note of colour is given in the rising sun (symbolical of the Renaissance). rising sun (symbolical of the Renaissance), which is in pale gold satin. The lettering is marked in golden brown silk, as also the flower centres. The fringe and well-designed side tassels in silver grey silk give the finishing touches to the design. As stated in our last issue, the banner was designed by Mr. Arthur Wilcock, and presented by Mr. A. S. Jennings.

appliqué and embroidery in shales of silver record of the elevation is kept on 7 m. by II-in, sheets which give the plan of the building and a description of the benchmark. Whenever levels are taken on a building a Whenever levels are taken in a doming a record is made on the sheet, and the differences are noted. There is a general sheet for each building. A sheet of similar form is used for elevated rulway columns.

In addition to fixing the elevation of some that the sheet of similar points.

permanent mark on buildings and elevated railway columns, these structures are plumbed so that the movements due to construction can be detected. An auxiliary base-line is run close to the buildings, and sights are taken with a transit to points on the top and bottom of the structure. In the case of buildings marks are cut on the wall as near the roof and as near the pavement as possible, and sometimes at intermediate points, and a record made of the reading from these points. record made of the reading from these points!

Mr. Frank Brande, RA of 2 About I we Court, Konsington W. Jonner, of the court Westmorfand, part to of the Albert east 10 Mr. White was burchessed in decide the tens of the Chaptirey Bernest and rownings in the Table Gulery, who died on Argust 10 July 16 July of which £5,147 is not not seart.

The death of Mr. W. H. Boon, J.P. of Nuncaton, took place on Further at his loss dence. Tutels Hill, at the 12 of nity-six verses from heart failure. Mr. Boon was a harve of Coventry, and was contacted with a firm of paviors there. For many years he had carried on the Windhall Quarries at Tuttle Hill. Nuncaton, under the title of W. H. Boon and Sons.

## Correspondence.

MISSING JACOBEAN OAK BENCH. STEYNING CHURCH, SUSSEA.

The Edit of of The Building News

Str.-1 hasten to apologise for saving Mr Pridge n was inducted to Steyning in 1879. The Cergy List gives this date as the year the Correct fast gives this unite as the year of his ordination, and also records the fact that three years subsequently he was ap-pointed to the cure of Steyning. The publication in your pages of the sketch of the missing carved bench in question occurred, therefore, ten years prior to his incoming in 1882. I do not happen to know exactly when the ugly deal colleries and lox-like pews were to move from this church, but, if my memory serves me rightly. I saw there a few weeks ago the name of the vicar (when this clear ang out took place) inscribed in clear, con specia as lettering on the wall of the south ussle, and it was this inscription which gave me the impression that it might have been put up as a memorial to a beneficent departed parish priest who had helped to improve the Iniding by disencumbering the beautiful arcade of the Paritan galleries, the removal of which I so approvingly mentioned. Whoever the architect employed may have been—and I have no notion whom he was—he certainly ought to have looked after the preservation of this quaint old seat if it then existed in the church: but Mr. Pridgeon who I now gither church: Eut Mr. Pringeon who I now gamer was vicar at the time doubts if it ever did exist, and he adds that after full inquity he can had no one left in the parish who remembers anything of the kind. This is quite likely, for ordinary folks know so litt such things and perhaps care less. The bench was only a sample of Sussex vernacular work, but art nowadays has receded away from life.

I find you published an article on page of your journal for September 20, 1872, which is descriptive of a visit by the British Association to Stevning on August 17 that year, when the writer says he was met by the vicur, the Rev. T. Maitland. General partichlers as to the styles and dates of the charely are furnished and mention is made of this oak seat as being poked away in the tower. The illustration of it, which I previously alinded to, will be found in your issue

fer February 25, 1872.

In corroboration of the above I see that in the following number (March 1, 1872) a wellknown correspondent of The Building News at that time, Mr. W. F. Potter, wrote confirming what Mr. Maurice B. Adams had directed attention to (when his drawing appeared about the neglected condition of this interesting bench-ended settle. Mr. Potter, however, roundly blamed the Sussex Archaelogical Society for allowing such negligence. Really the purson and churchwardens were primarily at fault, as they are the legal cus todians of all trustee property owned by their parish church. However, Mr. Potter apparently had some experience of archeologists, and he suggests that the use of such hodies "seems to consist in occasionally going antiquities and eating a to look at dinner." In Sussex, so rich in old buildings and works of art, they treated such things and works of art, they treated such amogs with indifference and ne elect for long years, and he names specially Hastings Castle. By way of a similar example of wanton disregard of old church furniones Mr. Potter tells when visiting Guesting Church, in the same county, to see the famous Flamboyant or Flem.sh richly traceried and ornamented oak chest, which is illustrated in Parker's "Glossary," he discovered that it had been "recently destroyed," and be found the only single remaining panel, "like our friend at Stevning, stowed away in the tower," Not even the oldest inhabitant in Guestling, I'll he bound, could now testify, if inquired of by the vicar, that such a chest ever existed by the vicar, that such a chest ever existed it has give for avel. I may refer to one very notable case of this sort, because it concerns the magnificent lectern at Detling, in Kent. perhaps the most beautiful piece of furriture of its kind in England. It is still in a fine state of preservation. During the

when the Gothic chest at Guestling was broken up and the Jacobean settle at Stevnbetting, finding himself in need of funds, carted away this lectern, and it was subsequently found in a dealer's store at Maid-stone. From thence it was fortunately recovered and reinstated in Detling Church. The rector told me about this, and he knows how to estimate such things held in trust for the parish and the Church as a whole.

Steyning Church is illustrated in Britton's "Ancient Architecture in England," and by Mr. F. L. Griggs in "Sussex Higaways and Byeways," "The Brotherhood Hall" in "Churche Street," Steyning, figures in The Building News for September 20, 1872, from the pen of Mr. Maurice B. Adams. The windows shown by his sketch to the first floor have since been removed, vastly to the improvement of the external appearance of the build ing, which is uncommonly picturesque. The now dirty whitewash applied to the old now dirty whitewash applied to Sussex brickwork found about the arched entrance is a sad disfigurement and most objectionable. I do not know who is responsible, but someone with a little enterprise might get this washed off and the Brotherhood Hall brushed up a bit, but not restored or modernised, like "the old post office" at the other end of the town.—I am, etc., October 8, 1915. A Susse

## WAR DAMAGE A NATIONAL RESPONSIBILITY.

A Sussex Man.

-The Government insurance scheme which has made the individual citizen responsible for war damage is so manifestly unjust that we may reasonably hope that it will soon be abandoned.

The Army and Navy are maintained for the defence of the citizens and their property. In so far as they fail to give complete protection the community as a whole should compensate those who suffer damage, whether be freeholders, leaseholders, house

holders, or lodgers.

Prior to the Government insurance scheme. sufferers from air raids and bombardments on the East Coast were, properly, compensated out of national funds, on the same principle that residents of a police district compensated for damages resulting from failure of the authorities to give complete protection in the case of riots

The Riot (Damages) Act, 1886 (49 and 50 Vic., C. 38), provides in Section 2 as fol-

Where a house, shop, or building in any police district has been injured or destroyed. or the property therein has been injured. stolen, or destroyed, by any persons riotously and tumultnously assembled together, such compensation as hereinafter mentioned shall be paid out of the police rate of such district to any person who has sustained loss by such injury, stealing, or destruction; but in fixing the amount of such compensation regard shall be had to the conduct of the said person, whether as respects the precaua party or accessory to such riotous or tumultuons assembly, or as regards any provocation offered to the persons assembled or otherwise.

This question of war damage seriously affects the whole community, and if not dealt with in an equitable manner will add to the necessary evils of the war untold suffering on the fering on the part of those citizens who happen to be hit by the enemy in their attack on the nation. Once recognise that war damage is a national responsibility, and it war becomes clear that all insurance schemes are out of place, and that an Act should be passed for compensating all citizens injured in the person or estate by the enemy.-Yours, MARK H. JUDGE AND SON,

Architects and Surveyors Pall Mall, S.W., October 9, 1915.

[We entirely agree, and said so some months ago. See our remarks on p. 78 of our issue of July 21 last.-En., "B.N."] ---

furriture of its kind in England. It is still in a fine state of preservation. During the in the case of Ernest Schaufelberg, Lombard last century, and quite likely about the time! Street, E.C., architect,

THE ARTISTS' RIFLES.

The following appears in the current issue of the A.A. Journal

I have received a letter from Lieut.-Colonel May, C.B., the Commanding Officer of the May, C.B., the Commanding Officer of the 1st Battalion, Artists' Rifles, in which he says: "You probably know that on arrival in France" (in November last) "the Artists' Rifles were given the task of training and supplying young officers to the British Army, especially Regular units. I send you a roll showing you what the Corps has done in this direction which may interest you, and from which you will see that we have supplied 1,500 young officers (some to every Regular Infantry Regiment in the British Army) besides Machine Gun Instructors and others, so that I think we may feel that the 50 years of pre-paration has been justified. Colonel May says he gets "splendid accounts" from the O.'s of his men, and they all ask for more. The roll is most interesting, as it contains the names and rank, etc., of those members of the Corps who have been appointed officers, and I have had a copy sent to the office of the A.A., where it may be seen by any of our members.

As many of our members are in the Artists' Rifles (a number which will no doubt be largely increased during the war). I think the readers of the Journal will like to know of the good work the Corps is doing in France,

The intensely interesting notes by Lieut. W. H. Ward, published in the last issue of the Journal, and his account of his meeting with a brother "Artist" at "Anti-Krupp Villa" in the trenches, give one a good idea of the spirit of the men in the old Corps.

GERALD C. HORSLEY.
Past President.
P.S.—Copies of the pamphlet 16d. each to cover expenses) can be obtained on personal application at any Orderly Room of the Artists' Battalions or by remitting cost to the O.C. Administrative Centre at the Regimental Headquarters.

Second-Lieutenant F. G. Sainsbury, architect and surveyor, of Friar Street, Reading, has been selected by the War Office for the Royal Engineers, and is now in France supervising defence works.

A brass tablet erected to the memory of Cap-A brass tablet erected to the memory of cap-tain H. R. S. Pulman has been fixed in the vestibule of the Council Chamber at West-minster Cuy Hall, Charing Cross Read, and will be unveiled by the Mayor to-morrow (Thursday) afternoon

At the urban council's office, Northallerton, on Wednesday, Mr. P. M. Crosthwaite, C.E., an inspector under the Local Government Board, held an inquiry into the further application for an additional sum of £10,000 in respect to the expenditure on the new water-weeks at Osmorberlay in the area of the respect to the expenditure on the new water-works at Osmotherley, in the area of the rural council. Mr. E. Sandeman, the water-works engineer, outlined the new works and mentioned details of the expenditure, together with the unexpected difficulties which had arisen which necessitated the further borrow-ing powers.

By ballot the members of the Amalgamated Society of Engineers have decided to secode Society of Engineers have decided to secede from the General Federation of Trade Unions, and the requisite six months' notice has been given by the Executive Committee. The A.S.E. has a membership of 200,000, of whom 20,000 are abroad. The ballot figures were: For secession, 16,075; against, 14,259. Mr. Young, the general secretary of the society, gives as the reason for the secession that "the mumbers no longer wish to belong to a financial mumbers no longer wish to belong to a financial members no longer wish to belong to a financial federation like the General Federation of Trade Unions, but wish to huild up a fund of their

Mr. Hubert Hall, F.S.A., Assistant Keeper of the Public Records, in the course of a lecture on Monday night at the London School of Economies, Clare Market, W.C., on the archives of England and Wales, remarked there was a great opening during the war for the employment of women as archivists. He haved to see at least one woman in every office the employment of women as archivists. He hoped to see at least one woman in every office for the preservation of public records. Sir Laurence Gomme, who presided, said that the local records of this country were as valuable as the national records. In the sixties the records of Weymouth were discovered in an auctioneer's catalogue, but fortunately the cale was stopped. It was distressing that so many public authorities continued to neglect the valuable degenerate in their possession. able documents in their possession.

## Currente Calama.

Great lawyers seem to us strangely unacquainted sometimes with stubborn facts, which are palpable to most of us, whether we are landlords or tenants. Among other suggestions to the Government how to tax us more, Sir Edward Clarke, K.C., says in a letter to the Times of Saturday last :-

the Times of Saturday last:—

There is another matter connected with the incometax to which I should like to refer. It is one in which the State is deprived of payments which it is by law entitled to receive. As the law stands, the tenant who pays an annual rent . . . is entitled, and indeed bound, to deduct incometax. He does, but in the enormous macrity of private transactions he keeps the money himself and never pays it over to the Treasury.

As mere tenants we should really be obliged to Sir Edward Clarke if he will introduce us to a good landlord who will allow us to deduct income-tax from our rent without production of the tax-collector's receipt, and at the same time tell us how we can then "keep the money"!

One may perhaps wish the various Metropolitan borough councils a little common sense in their endeavours, at the very proper suggestion of the Office of Works, to arrange equality of lighting. The differences lately have been ludierous. We live on a boundary road of two boroughs, lit by gas, which, when the trees are in leaf, is always badly lit. One has extinguished half the lamps and coloured the rest dark green. The other sticks to whitewash. The mere man in the street has been asking himself for months whether the end aimed at might not have been achieved by simply turning down the gas, instead of burn ing a full flame and then obscuring it! The whole thing has been ridiculously overdone, and the conclusion of the Office of Works that 75 per cent. of the lamps in side streets should be lit, and that the reduction in main road lighting has been excessive, might with advantage have been arrived at sooner.

The Government and the municipalities seem to have been smitten with the beauty and profit of teaching other people to practise frugality. Some of our mentors, we fancy, must chuckle to themselves as they hum the refrain of the old song :-

By studying economy We like a lord!

Anyhow, the first and indispensable item of their propaganda seems to be to spend other people's money on "Expert advice and assistance." One instance is furnished by the proceedings at a recent meeting of the Devon County Council, when the following resolution was moved by one of the mem bers :-

That with a view to lighten the burdens of the

That with a view to lighten the burdens of the ratepayers, a committee he appointed to consider whether the expenditure of the county council can not be reduced, and to report thereon.

The committee to consist of nme members of the council and three members relected by the nine from outside the council. The three to be appointed by virtue of their experience in public and other business.

virtue of their experience in pussions.

The committee to have power, if they consider such expenditure necessary, to spend a sum not exceeding £100 in obtaining such expert advice and assistance as they may deem of value to them.

The resolution was defeated, and "Devon. glorious Devon" is to be congratulated on its common sense, or was it that the hundred pounds was not enough to share round?

The presidential address of Mr. J. G. Read, at the Auctioneers' and Estate Agents Institute opening meeting of the session on Friday last, should reassure property owners who are wisely declining to swell the ranks of panic-stricken sellers. That this is so is evident from the diminution in sales during the last five months of 1914, which only

totalled £148,426, as against £1.718,205 in the first seven months of that year. Now is the time to buy for all who can afford to wait during the transition period that will follow the end of the war. Then we are certain values will improve, and more than regain their previous level. In the meantime, of course, auctioneers and estate agents are sharing our own had times, though probably to nothing like the same extent, as their activities cover the field of management of property, unlike thole of the architect and builder, which cease with the completion of the building.

The German trade-mark forgers are at their old game again. A slight telegraphic blunder, the change of one letter into another, and, by consequence, of one word into another, has been the indirect means (according to Reuter's Agency) of disclosing a clever scheme initiated with the double purpose of securing trade profit and of disseminating lies in foreign countries. Switzerland and other neutral countries are naturally open doors to the whole world. So these counterfeited goods go to neutrals, who not merely sell to other neutrals in South America and many British Colonies, but are to-day sending over German goods which are being sold in London disguised under counterfeited trade The forgers are, of course, quite marks. secure from legal proceedings owing to the present condition of affairs, and there still seem to be buyers about, even in our own industries, who are none too particular, if the counterfeited article can be had at a cheaper figure. We are watching the matter, and may have more to say about it shortly.

The Executive Committee of the Star and Garter scheme have wisely decided to abandon their original intention to adapt the existing hotel for the proposed Soldiers and Sailors' Home. After the most careful consideration it was, of course, found that by the erection of an entirely new building on the existing site the Home could be made to provide many more heds at a cost per bed not exceeding the sum originally anticipated for the alterations. It was therefore obviously more economical to rebuild than to adapt the old building, and the plans of the new building are now being settled by the Committee of the British Red Cross Society. with the approval of her Majesty the Queen. In the meantime the annexe is being fitted up as a temporary hospital, and when the new building is completed the annexe will be rebuilt, thus forming a complete scheme. the details of which will be published shortly.

The Liverpool Autumn Exhibition was opened on Saturday at the Walker Art Gallery. The expenses connected with it are being met through the generosity of a Liverpool citizen, and the proceeds from admissions are to be given to the Liverpool branch of the Red Cross Society. Other receipts will be available for the purchase of works for the Gallery. Gallery 11. of the exhibition has been given up this year to a collection of modern Belgian pictures and sculpture, and another to pictures of Burmese subjects by Mr. G. F. Kelly. In addition, there are some smaller special exhibits, including those of the Royal Society of Miniature Painters. In the large gallery, Room VII., the chief pictures are Mr. Orpen's "Western Wedding," Mr. Shannon's "Princess Mary, Mr. Maurice Gieffenhagen's "Woman by a Lake," the last-named a loan by the Chantrey Trustees. The principal landscapes are those building of St. Paul's Bridge appear in the

by Messrs, Cameron, David Murray, G. Houston, Oliver Hall, and Talmage. dominant works in the first gallery are Mr. Arnesby Brown's "Cattle in the Fields," and the "Deserted Quarry," by Mr. W.lson Steer. There are good displays of watercolours by Messrs, Frank Reynolds and Cameron, and etchings by Mesers, J. McBev. F. S. Unwin, and others.

Very late in the day, Mr. Thackeray Turner, Chairman of Committee of the Society for the Protection of Ancient Buildings, replies to the letter of Mr. W. H. Wood, F.R.I.B.A., of Newcastle on Tyne, which appeared in our issue of September 8, p. 279, in which Mr. Wood defended his restoration of the churches of Sleaford and Tickhill from the criticisms made in the current report of the society. With regard to Sleaford, Mr. Turner says the society holds to its opinion that the "careful copying of the carving," which Mr. Wood describes as having been done, is the type of restoration to be resisted. The society now, hears with regret from Mr. Wood that the work has been temporarily stopped only from want of funds, and that it is intended to complete it after the war. With regard to Tickhill, the report contained two photographs showing the south porch before and after 'restoration.'" Mr. Wood says that during the period in which he has superintended the reparation of the church, that is during the last year only, the south doorway has not been touched. This may well be, says Mr. Turner: "No particular date was mentioned in the report nor the name of any architect." So that the restoration denounced is apparently a matter of ancient

We are pleased to learn from the October issue of the Journal of the London Society that the efforts made by Mr. Arthur Crow, F.R.I.B.A., the district surveyor for Finsbury, and other members of the council of that society, to preserve Wren's church of St. Vedost, Foster Lane, have been so far successful that, in the event of the suggested road from Newgate Street to Liverpool Street being found necessary and practicable, it will he possible to form the road without materially interfering with either the use or the appearance of the church. The new building about to be creeted on the site of the old Post Office is to be placed farther north than was originally intended, thus leaving a space between it and the buildings in Cheapside. The result of this will be that the view of the church spire from Newgate Street will be preserved, and the need for the destruction of the church avoided, if at any time the new road becomes necessary. The Corporation of the City of London have reconsidered the question of the traffic requirements at this busy corner, and St. Martin's le-Grand is to be widened to 80 ft, in lieu of 70 ft, as originally proposed, and the western end of Cheapside is to be widened to 95 ft. This is mainly done in order to provide for the increased traffic which it is anticipated will result from the construction of the proposed St. Paul's Bridge, should it ever be built. The officials of the City Corporation evidently believe that the bridge is to be an accomplished fact, since leases of properties acquired on the route are being renewed for twelve months only, with henceforth a tenancy determinable quarterly.

Two interesting letters by architects protesting from different viewpoints against the

Mr. D. B.: demands the reconsideration of PB on the ground that there is .. traffe 'two n Blackfrars and ' d\_(s t) is der the new strac to seigh. He points out that the the note exactly of with any proposal - 14 by the Traffic Branch of the and Irid a so not part of a comprehen to south theroughfare, and that . greach road south of Southwark of his men designed as a complement First er, the proposed bridge has obis it in defects. The level at one side of that shaher than the other, each arch approaches the scuth side, is of less trans than its neighbour, and rearly ever, a use would be out of adjustment Fig. by such unestionable expedients, there emans insufficient length to let a proper color to Suthwark Street, consequently the southern vaidnet is made to bend east ands to gain a few feet. On the north again the landge just misses, the Cathodral, al though there seems little reason why it might not here been in alignment. Where a vehicular bridge is really needed is, he says, t Charm\_ Cross. Mr. A. E. Richardson's objections to the scheme are that it would, by its oblique alignment, destroy the amenities of St. Paul's and of the river itself.

Commenting on these latters, the editor of the John remarks: It is an open secret that this bridge was conceived in unseemly caste by the Bridge Hons: Trustees, at a the exhen they had large funds at their disposid with no fixed destination. Fearing that their roost was being watched for spolite tion, they promptly devised this outlet, and locady, we believe from current rumours regret it. The trustess might have made themselves famous for ever, had they taken mage and given up, as they could in their discretion, the fetish that their finids must be spent within the City boundary, and devoted themselves to a new road bridge at Charms Cross instead. Such a bridge was seen to be necessary as long ago as 1846, when Mr. Permethorne advocated it in conbetween with his scheme for central reconstruction; and to-day it is such an obvious and urgent need that we can only suppose to, the existence of the railway bridge has prevented to realisation. That all traffic from the West End should be forced to crosand Westmanster of Waterloo Bridges, both on of line with the general direction of traffic, shows how long-suffering the London public really is

Update onserver were witnessed at a special meeting of the Menaghan Rural Council on Menaghay, says the Trish Berbher and Ergineer, then over torry memors attended, and Mr. Hagh McCagnestee emission. Drumeark, the Menagham, as for the second time within a montal content to the Rural Counce under the Laborate Rural Counce under the Laborate Board, the consequent model of verminest Board, the consequent model of the Laborate Science of the say that the energy qualifications as defined in Although the have as defined in Although the Board The chairman dischance of the Board The chairman dischance of the Board The chairman dischance of the Board The chairman dischance of the Carlo Medical Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Cagnesia Monday's meeting the Ca

o further action of the Local Gov remont B of is awarted with much interest in Monophius and district

S. Radmond P. Roblin, the ex-Premier of Manitoba, and Dr. Montigue, ex-Minister of Works, Mr. Howden, ex-Attorney General, and Mr. Coldwell, another Cabinet Minister, were committed for trial on Friday on the charge of conspiracy to defrand the Province of Manitoba in connection with the erection of the Parliament buildings.

"Wind Stresses in the Steel Frames of Office Buildings" is the subject of the most recently published Bulletin of the University of Illinois. The increase in the price of land on large cities has made it necessary to build ingh buildings in order to get a large rentable floor space on a small parcel of land. The type of building generally used is known as the steel-sketeton building. In this type of bail ling the live and dead loads, including the weight of the walls, are carried by a system of beams and girders to columns and are carried by the columns to the footings, In high buildings the horizontal shear due to the wind load is very large; and, since it is usually impracticable to put diagonal braces between the columns, it is enstomary to make the steel frame rigid enough to resist the horizontal shear by virtue of the stiffness of the columns and girders. The exact determination of the stresses in a steel trame due to a horizontal shear is one of the problems of structural engineering which remains to be solved. While the writers realise that the method of determining these stresses presented in the Bulletin is based upon as sumptions which are not exactly true, they believe that the method is more accurate than the methods ordinarily used. The Bulletin can be had in this country of Messrs. Chapman and Hall, Ltd.

Forty-eight new cottages erected at Harton, near South Shields, for old miners and their wives by the Durham Aged Mine-Worker's Homes Association, were formally opened on Saturday afternoon. The architect is Mr. J. II Morton, F.R.I.P.A., of South Shields

The new wing which has just been added to the U.V.F. Hespital, Botanic Avenue, Belfast, has been opened by the Marquis of Londonderry. The building contract was carried out by Mr. William Dowling, under the supervision of Mr. R. J. Calwell, architect, Scottish Temperance Buildings, Belfast.

Another new picture theatre has been commenced in Upper Sackville Street, Dublin The half will be 100 ft, by 28 ft, and 26 ft, in height. There will be a rea lounge and offices in the front having a depth of 50 ft. The interior of the building will be finished in polished mahogany. Mr. T. F. Macnamara, Great Brunswick Street, Dublin, is the architect, and Messes, H. and J. Martin, Grand Canal Street, are the contractors.

New elementary schools at Shiblon, County Durham, were opened on Saturday afternoon They consist of three departments, providing \$100 boys, \$405 girls, and \$400 infants, and in addition there will be accommodation for cookery, housew fery, laundry, and handicraft. The site cost £1,210, and the cost of the building was \$13,883, making a total of £15,093. The cost per head, excluding cookery, laundry, etc., would be £16 14s 4d. The architect was Mr Rushworth, and the contractors Messrs, Make peace and Vaux, of Trimdon Colliery.

Saturday was the seventy-fourth anniversary of the La. Art. I be a constrained as the consecration of Christ Church, Clifton, which has been described as one of the finest Victorian examples of the Early English style in Bristol. The original cost, including the stressed to port the motion production of the motion production of the motion production of the consecration of Christ Church, Clifton, which has been described as one of the finest Victorian examples of the Early English style in Bristol. The original cost, including the stressed to port the motion product (1212 ft in height) were added, according to the original design, at a cost of £2,400. In 1545 north and south asless were added at a cost of £3,000 after litigation, several in fluential residents being of opinion that the additions, if carried out, would irreparably destroy the beauty of the edifice.

## Our Illustrations.

BLACKSOD BAY RAHWAY TERMINUS STATION IN THE HARBOUR, MAYO, CONNAUGHT, IRELAND.

We give to-day an interior of the station hall or concourse, with an exterior perspective and plan, reduced, on a separate sheet, with the entrance elevation of this station, which has been designed to be built on a reef of rock projecting into Blacksod Bry, and to be a terminus for the Transatlantic traffic. The largest liners are able to berth at the end of this reef, which is the occusion for the The conrailway station being so placed. struction of the building is intended to be carried out in reinforced concrete. The main feature is the concourse, which forms a waiting-place between the platforms and the har-The interior perspective shown by our double-page plate was included in the Royal Academy Exhibition this year. The architects are Messrs, E. B. Hoare and M. Wheeler, F.F.R.I.B.A., of Portman Street, Portman Square, W.

DECORATIONS OF THE SCHOOL CHAPEL, CHRIST'S HOSPITAL, HORSHAM, SUSSEX.

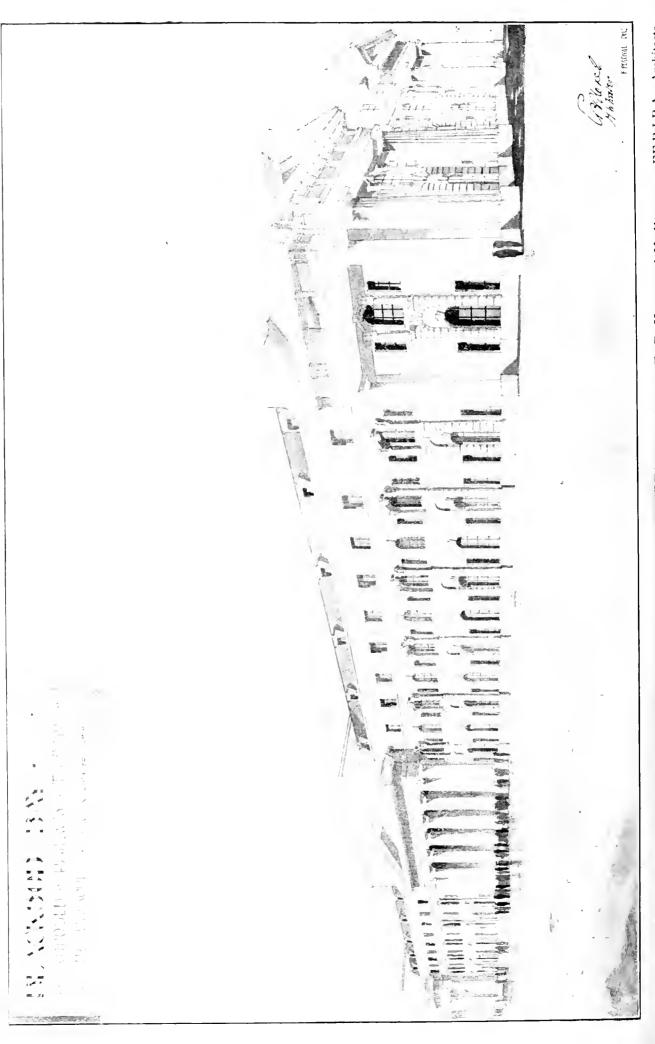
Last week we commenced a series of illustrations of the decorative panels of the Eathers of the Church, which have been painted in tempera as a frieze round the chippel of Christ's Hospital School, near Horsham, by Mr. Frank Brangwyn, A.R.A. Today we give two more of the subjects, viz., St. Pull Shipwrecked, "so it came to pass that all escaped safe to lan l." and the Conversion of St. Augustine at Milan, A.D. 387. "Take read! Take read!" With our previous reproductions a brief description of the scheme was printed and the uniformity of the individual panels, as subordinate to the whole decorative conception, renders no further particulars necessary. We hope at the end of the set of plates to give a view of the chapel showing the decoration in its entirety.

# THE PLYMOUTH CO-OPERATIVE AND INDUSTRIAL SOCIETY'S NEW PREMISES COMPETITION.

SELECTED DESIGN.

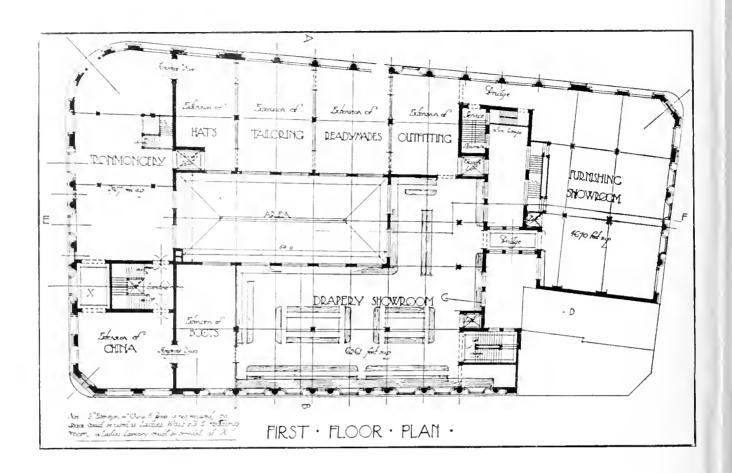
To-day we publish the two main elevations of the chosen design. The upper one shows the chief front to Courtenay Street, and the lower one faces Raleigh Street West. ground and first floor plans now given clearly show the difficulty with which the competitors had to contend in dealing with the rightof-way into the basement of the building to enable vans and motors to descend and circulate, besides providing a rendezvous for the reception and delivery of goods. The other difficulty to be remembered in discussmg the elevational treatment of the premises architecturally was, of course, the requirements of the Co-operative Society, above all other considerations, to allow ample uninterrupted window space for display of goods on the street level. The architects of the chosen design, with this idea, advanced the groundfloor glass fronts by nine inches in projection of the superincumbent masonry, as a counterfoil to the apparent inadequate support to the superstructure; this glazed screen was introduced standing out in advance of the stanchions currying the upper floors. the elevations this difference of face, of course, does not show, but actually in execution the authors think it will well realise their intention. Taking the selected plans as a whole, Messrs, James T. Halliday and Claude Paterson, AARIBA, conjointly with Mr. C. Gustave Agate, LRI,BA, of Claude races....
with Mr. C. Gustave Agate, L.R. (B.A., or
14. John Dilton Street, Munchester, as the
joint architects chosen, have certainly most
satisfactorily solved all the difficulties presented.

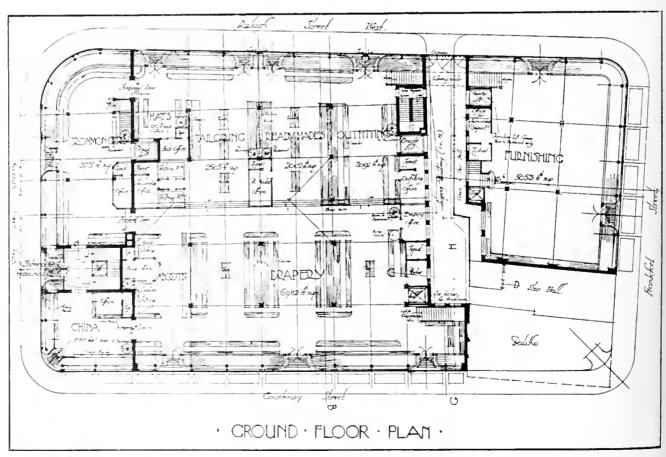
The first meeting of the Birkonhead Corporation since July was held on Wednesday, when it was officially reported that not a single planhad by a submitted for approval to the improvement committee during the last three months. There is practically, it is stated, no building in progress in the borough



BLACKSOD BAY RAILWAY TERMINUS IN THE HARBOUR, MAYO, IRELAND,-Messrs. E. B. Hoare and M. Wherler, FF.R.I.B.A., Architects.



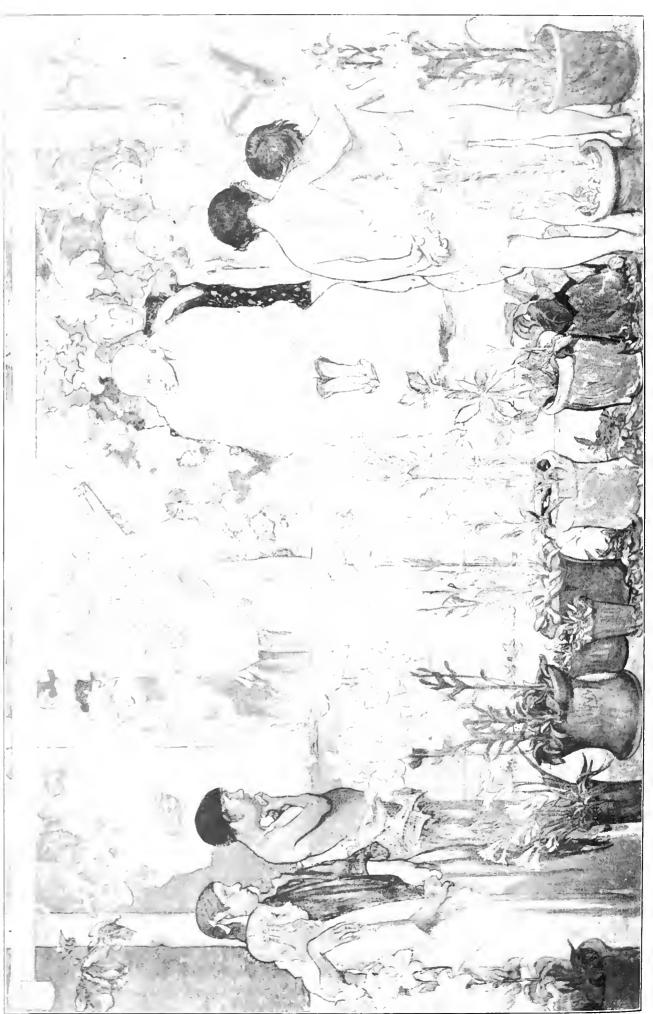




PLYMOUTH MUTUAL CO-OPERATIVE AND INDUSTRIAL SOCIETY'S PREMISES: SELECTED DESIGN.

Messis. Halliday and Paterson and C. Gustave Agate, Architects.

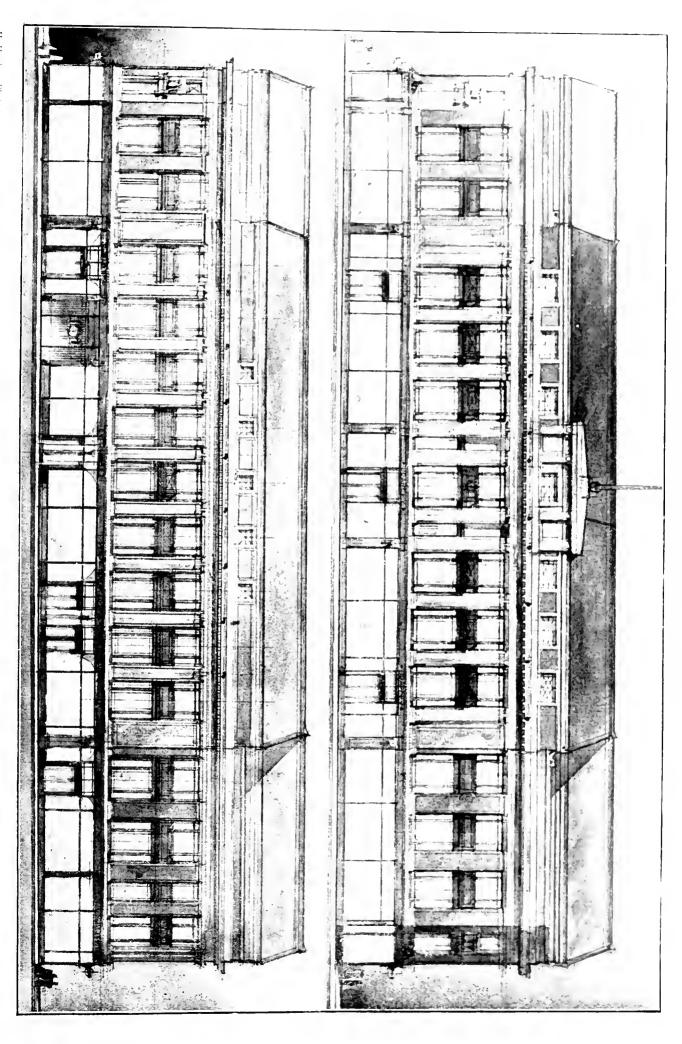




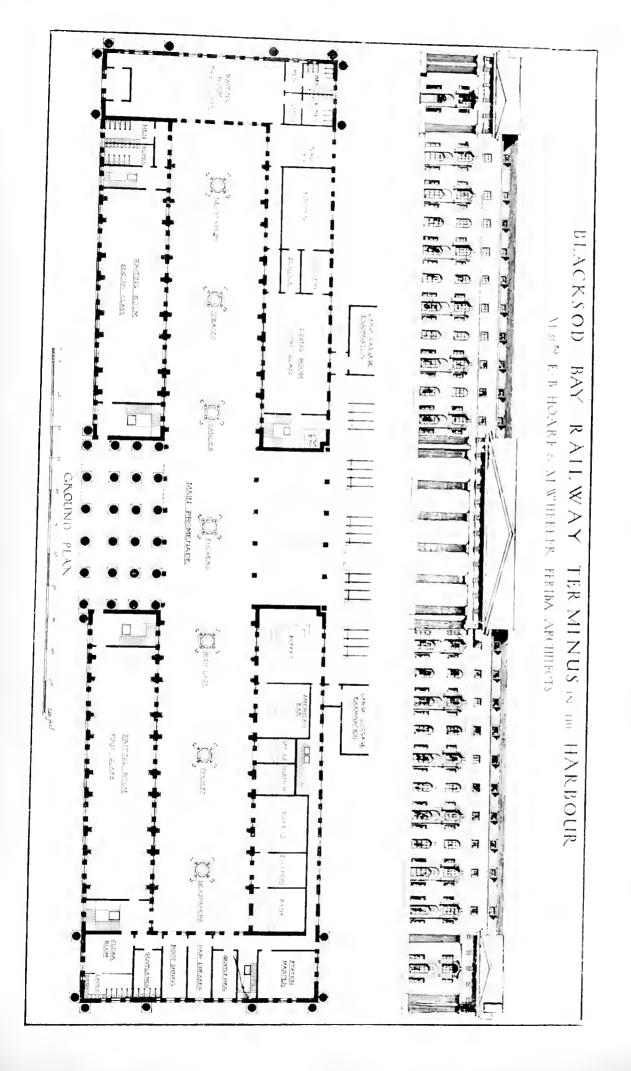
Paul Laib Photo. 1





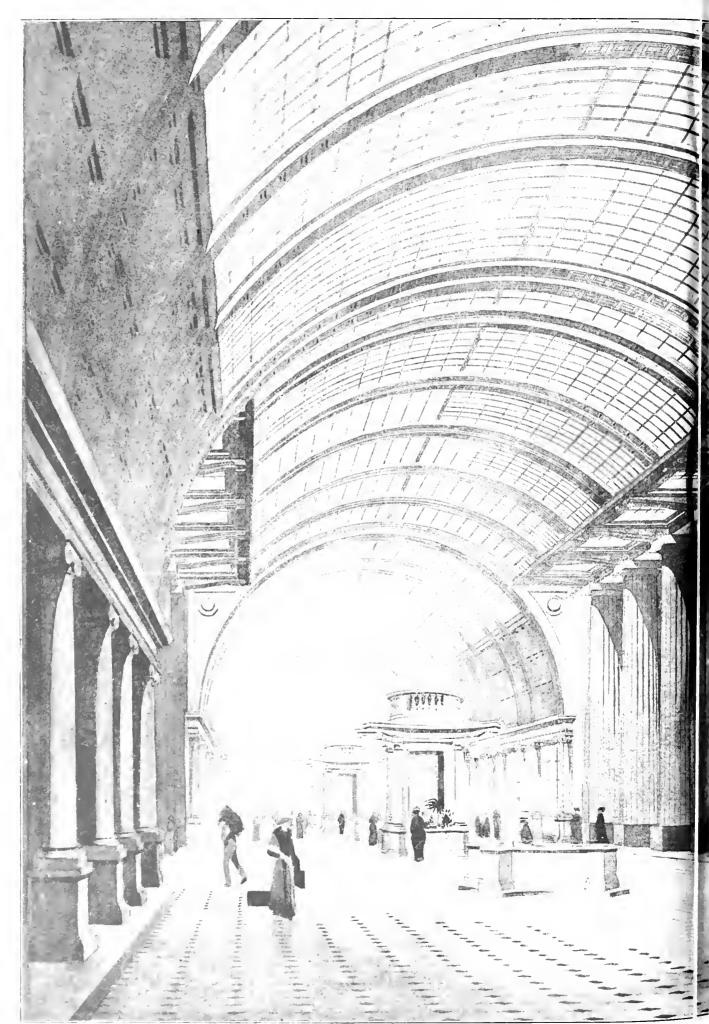




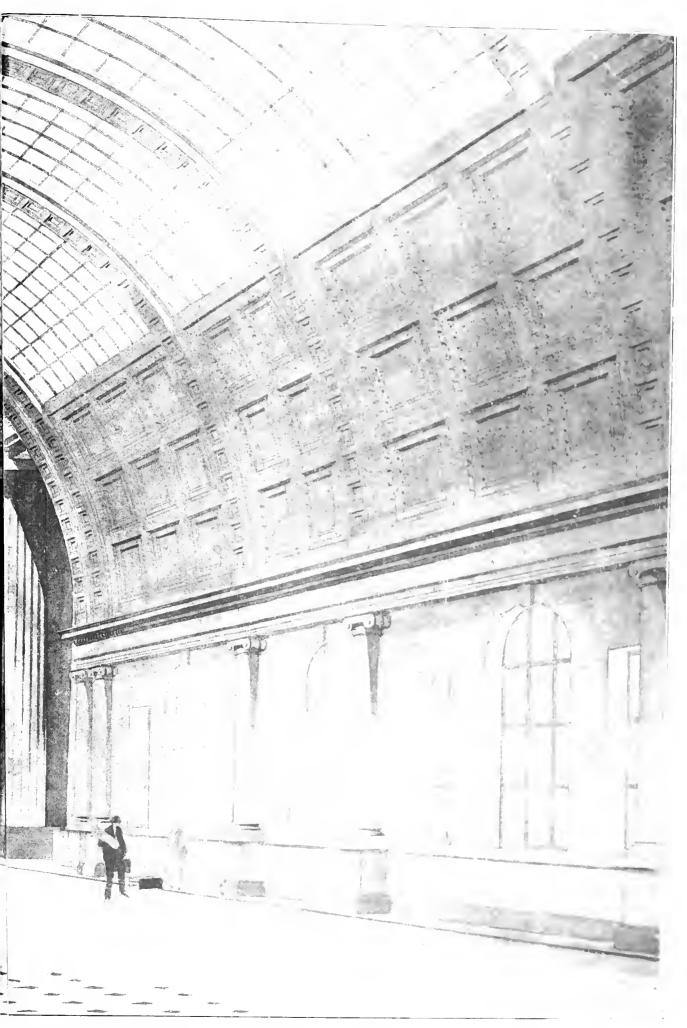








FRACESOD LAY EMILTAY TERMINUS IN THE HARBOUR, INTERIOR OF



STATION HALL.- Messrs. E. B. Hour and M. Whiller, TURABA, Act



### Building Intelligence.

DENTON BURN. A greap of tages, erected for their aged workings to. Mesars, William Benson and Sen. Lunted at Montagu and Fourstones collierae to opened on Saturday at Denton Burn. The ottages are arranged in one row and in collierae to trace and outbuildings. The elevations are trace and outbuildings. The elevations are trace and outbuildings. The elevations are trace and outbuildings. The elevations are trace and outbuildings. The elevations are trace to trace and outbuildings. The elevations are trace to the summary of themselves and the roofs are covered in slates. The critical desired the purpose tractor for the work has been Mr. Richard the purpose factor of Sunderland, and the contages of the purpose the superintendence of Mesars, Joseph Pott and Son, architects, of 12. Eldon Square. Newcastle-on Tyne.

EXETER. At a meeting of the estates can be adjusted.

EXETER. At a meeting of the estates committee of the Exeter City Conneil, last week, it reported that the roofing and external walling of 8t. Nacholas Prory the ancient Bene licture building which has been purchased and is being restored by the Exeter City Corporation, was nearly completed. The roof timbering and plastering of the guests' hall and the prior's room were completed; and the workmen were finishing the roof over the kitchen. The work still recompleted: and the workmen were finishing the roof over the kitchen. The work still remaining to be done was the stone starrouse; the south end wall: flooring of certain rooms; roofing over the south end; and a tew doors and windows. It was anticipated that the restoration would be completed during the coming spring. At the moment the Priory passed into the hands of the Eveter authority it had degenerated into a batch of small tenements. having gone through many the ments. having cone through many changes for the werse since the Dissolution. The restoration is being carried out by Mr Lewis F. Tonar, L.R.I.B.A., Bedford Citcus,

GOLDER'S GREEN. The new Roman Catholic Church of St. Edward will be opened by the Cardinal Archbishop to day. Wednesslay. The building, which has been erected total designs by Mr. Arthur Young, is in ne Perpendicular style. The main feature is the central lantern tower, the square massive proportions of which rise up to a height of nearly 80 ft. with an interest height of of nearly 80 ft. with an interior height of bout 75 ft. The tower rises from the nave n four massive columns. It is 27 ft. 6 in. lear in the square, and forms the centre from lear in the square, and forms the centre from hich branch the sanctuary, the nave, and the tansepts. The width of the transepts is 6 ft., and the total length of the church is 28 ft. The sanctuary is 50 ft. in length nd 27 ft. wide, and rises with two steps to ne Communion rails. The predellar is again tree steps to the altur, thus putting the tar in such a position that all in the church at see the officiating priest. The calling the sanctuary is in oak. Left and right the sanctuary are two side chapels. These is 27 ft. across and is hordered by two occasional aisles 7 ft. 6 in. wide, giving a stall width of 46 ft. 6 in.; the aisles lead the side chapels. The western entrance the building, above the outside of which the Calvary, forms a novel feature. Tenest inside the main door is a stone screening right across the church, thus forming timerely a church porch but an intechapel. and again across the entiren, thus forming a merely a church porch but an intechapel, glit and left of this main porch are the ptistery and the chape, in honour of the yen. Polours,

MANCHESTER. - During the last few norths a scheme for the internal reconstructor of the Athenicum has been under conseration, and it is expected that the work all be completed by the middle of Novem-1. The library has been removed from the fit floor to that part of the basement which we formerly used as a chessroom, and access to it will be through a staircase from the Lasroom. In future the library will be acinged on the open access principle, and a scial room opening off from the newsroom is to be devoted to directories and works of refence. The first floor will be used cuttly for club purposes. A new lounge at smokeroom will take the space formerly ompied by the library, the old magazine

can be adopt to a of a position of a position of Western to the tractor. We same entry T:

amounty

WALLSEND A litting of dwellings of the Message Barrelling as the Market Barrelling as the Market Barrelling as Gorden Square so the force of the second of the second between the force of the second size comparing \$5.577 square winds — Equation of a cotangle have been employed. — Equation of a cotangle have been employed. — Example of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second size of the second

Mi W. J. L. at the tree to the Comment.

Mr. Waters But have the following come University with a contract to Provide Lawrence in the contract group of the following the Mr. Bernard Manus

The Corporation of Middleshough have all tained the sauction of the Local Government Board to borrowing £9,000 for works of flow prevention and sewerage, and £1.29 for a selection of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the

Mr. W. G. C. ss, a list of born is say a Rollmond, Surrey has reserved a consistent as a plane in the 22. Lat. a. B. H. Royal Engineers, and is now on set, a sec. in Frame

The Local Government Berling assessing the box swing so the York Corp. and £1,251 for the layure out of the lark of River Oase between Lenous Proceeds borough ratios, y brough and £2 respect of Gen Graden. The work.

The in an identification of all Richards a unique pointer to see a last who are serving the court of the vevor medical officer of carter a regimeer have all been released for the admitted to a factor of the admitted to a release to the admitted to a remarked acting metal to the area metally acting metal to the admitted to the area metally acting metallicities.

At Thinsday's meeting of the Williams the question was would not be addisonable to so building the rew to so building the rew to so from dosens to Messia Borgand Lacene, of Liverpool I spaisful by the continual Properties that these populations are continued to continue the work accordingly.

WATER SUPPLY AND SANITARY

hagies aparentle W Then Control Model Processes and the volume of the transfer of the volume of the volume of the volume of the volume of the volume of the processes of the processes of the processes of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of the volume of visions obtains policy in V soft The community program A. s., the self-the contribution of Br. have been retrieved upon the possible hard and the self-the self-the self-the retrieved by the self-the self

#### PROFESSIONAL AND TRADE SOCIETIES

INSTITUTE OF HYGIENE. A lecture of The Use and Abuse of Light" was given by Mr. Loon Gaster at the Institute of Hygiene on Thursday. Until recently, the author remarked, the lighting of shops had been futile and wasteful in the extreme. Government Committee had found that mis directed light was a cause of curvature of the some and other diseases in children. On the other hand, bad light caused shortness of sight, and glare was equally harmful. signi, and giare was equally harmful. Nowadays reflections were made with such pregion that it was possible to throw the necessary amount of light just where it was required. To fact the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the required. In factories there should be adequate lighting—a reasonable degree of constancy and uniformity of Alumination over the necessary area of work but an avoidance of direct and horizontals glare; and there must be the utmost care in the placing of lights, so as to obviate the casting of extraneous shadows on the work.

"ROUND THE WORLD IN WAR IME." Mr. W. T. Oldrieve, F.R I.B.A., TIME." who has just arrived home after a four round the world, undertaken on his retirement from the post of principal architect to H.M. Office of Works at Parliament Square, gave a lantern lecture on Wednesday night in Morningside Baptist Chu ch, Edinburgh. Amongst the more important ports visited on the voyage were Cape Town, New Zealand, Australia, and the South Sea Islands. The lecture, which was profusely illustrated by beautiful views chiefly from photographs taken by Mr. Oldrieve himself-was most interesting, a re sult contributed to in no small degree by Mr. Oldrieve's accompanying explanatory remarks A pathetic interest attached to several pic tures which he showed of Samoa, including as they did views of Robert Louis Stevenson's house and grave. In connection with the war, Mr. Obbrieve had something to sav about Brit destroyers, aeroplanes, and British and Japanese cruisers that he saw while on his tour. Speaking of the effects of the war, Mr. Oldrieve said that we here ought to be most grateful for our comforts and the extent that were able to keep on the normal course, as it was not so in some places where he had been recently. One thing that struck him while on his journey was the tremendous enthusiasm for our cause. Our Government had made a great stand for the cause of truth and liberty. In New Zealand especially, it seemed to him, they had grasped the situation even in a more thorough way than we had here at

ROYAL INSTITUTE OF THE ARCHITECTS OF TRELAND - An ordinary meet ing of the council was held at the institute rooms, 31. South Frederick Street, Dublin, on Monday, October 4, at 11 a.m. The President, Mr. R. Caulfeild Orpen, B.A., R.H.A., was in the chair, and there were R.H.A., was in the chair, and there were also present: Messrs, L. O'Callaghan, H. Allberry, F. Hayes, G. P. Sheridan, W. A. Scott, G. L. O'Connor, C. A. Owen, W. Kaye-Pirry, A. E. Murray, R. M. Butler, A. G. C. Millar, and F. G. Hicks (hon, secretary) Refuse proceeding with the hasiness of the meeting the President proposed the following resolution:—"The council of this institute desires to place on record its sense of the great loss the institute and the profession of architecture generally has sustained in the death of Mr. W. H. Lynn, president of the institute in the years 1886-87-88. Mr. Lvnn, during a long life voted to the practice of the profession of his adoption, designed many important public and domestic buildings, which, both in Ireland and England, testify to his masterly qualifi-The minutes of the previous meet vations. ings of the council were read and signed. The result of the ballot for election of members was reported by the scrutineers. and the following gentlemen were elected:—Mr. W. Sedgwick Keating, Mr. William J. Doherty, and Mr. G. Hemingway Yeoman A special meeting of the council was arranged to discuss the question of architects' fees

SCOTTISH NATIONAL BUILDING again fill the sails and waft it to a prosperous TRADES FEDERATION.- The twenty- haven.

first annual meeting of this federation was held on the 4th inst, in the Trades House, Classford Street, Glasgow, Representatives were present from all centres in Scotland, including Edinburgh, Aberdeen, Dundee, Dunfermline, Kirkcaldy, Stirling, Kil-marnock, Ayr, Greenock, Dumbarton, etc. marnock, Ayr, Greenock, Fundament, Mr. George Lyall, Junior (Aberdeen), president occupied the chair. Prior to the business of the meeting the delegates were accorded a welcome by Bailie M'Kechnie. D.L. In its annual report the board states:— The activities of the federation have during the past year been carried on under the most unfavourable conditions. In common with many other industries, the building trade throughout the country has been seriously affected by the war. Notwithstanding national crisis, the organisation of the federation has been strengthened, and much important work has been accomplished. Notable progress has been made in secur-ing regulations of entering into and carrying contracts for building works in Scotland and for a Scottish mode for the measurement of building works. The regulations, it is hoped, will shortly be finally adjusted. Pre-liminary rules for measuring work applicable The regulations, it is to all trades and the mode of measurement for carpenter and joiner work have now been established. Long-standing grievances will have been terminated, and to Sir George Askwith, the Chief Industrial Commissioner, great credit is due. Altogether he has already presided over nine conferences, most of which have lasted from early morning till late at night, and exercising the utmost skill and patience in adjusting differences. Questions lealing with the reinstatement of apprentices serving with the Army after the war and the employment of non-union labour were fully discussed at the meeting. Office-bearers for discussed at the meeting. Office-bearers for the ensuing year were appointed as follows:— President, Mr. Henry H. Spittal, Glasgow; senior vice-president, Mr. Edward Bruce, Edinburgh; junior vice-president, Mr. George Rose, Kilmarnock; and a hoard of eighteen members. Secretary and treasurer, Mr. Thomas Ferguson, solicitor, 123, George Street, Edinburgh.

WAR VALUES OF REAL PROPERTY.-The Auctioneers' and Estate Agents' Institute of the United Kingdom held its first meeting of the session of 1915-16 on Friday night, when Mr. J. George Head delivered his presidential This dealt entirely with war values rent property. After analysing influences affecting the matter, Mr. Head summarised the conclusions arrived at as follows:-That owing to the upheaval of our lives in all these respects (economical, domestic, and financial) property market is depressed, and prices have fallen to such an extent that the ques-tion is no longer "What will the property fetch?" but "Can we find a buyer?" That the revival will come not immediately with the arrival of peace and the improvement in trale, but after an interval, when profits have eased the money market, reduced the demand for capital, and having been saved, are ripe for investment. That values, although much above the prices now obtainable, will be lower at the conclusion of the war than they were before, owing to the demand for capital in other spheres, the abundance and cheapness of gilt-edged securities, and the high rate of interest caused by these conditions. That present values should be calculated not at panie prices, but with relation to the lowered figure likely to prevail during the transition period, by deducting therefrom a sum sufficient to allow for accumulation of interest during the duration of the war, and a further sum for contingencies. That this transition period of depression may be expected to last some years. according to the analogy presented by previous wars. That during the period of transi tion (given a rest from new disturbing influences) prices will gradually rise, and that afterit has passed they will regain and probably surpass their previous altitude. The situation (the speaker thought) is one which calls for grave attention and some anxiety, but not for despondency, and certainly not for panic. We are passing through a serious crisis; but storms have been weathered before by the ship of our island State, and favouring winds will

### Trade Delus.

#### WAGES MOVEMENTS.

BIRMINGHAM.-Builders' labourers in the BIRMINGHAM.—Builders' labourers in the Birmingham district are to receive a war bonus of a halfpenny an hour. This dec s'on has been arrived at as a result of negotiations between the Birmingham Building Trades Employers' Association and the National Union of Builders' Labourers. The bonus will be paid as from October 24, and will continue for three months after peace has been declared. The masters have offered the bonus to all sections of the building trade having an agreement with f the building trade having an agreement with their association, and it has been accepted by the labourers and the navvice. The other sec-tions have the offer under consideration, and in all probability it will be accepted by the

BRADFORD.-The dispute arising out the demand of the Bradford builders' labourers for an advance in wages has been settled. men have been granted one-hallpenny per hour advance, and the question of other conditions has been left to be determined by the Board of Conciliation

#### TRADE NOTES.

A public swimming-bath has recently been erected in Barrow-in-Furness. We understand the borough engineer adopted the powder Pudlo for waterproofing the same.

Boyle's latest patent "Air-Pump" ventilator has been applied to Bawdsey Church, Suffolk.

The members of the London and Middlesex Archaeological Society will pay a visit to Tottenham on Saturday next, and will be shown over the parish church and Bruce Castle by Mr. W. J. Bennett, librarian of the Tottenham Mr. W. J. Beni public libraries.

Mr. T. L. Hustler, borough engineer of Shoreditch, who has been appointed a lieutenant in his Majesty's Forces, has been presented with a service sword and a full eamp kit, as a mark of esteem from the officials at the town hall.

At a meeting of the Newbiggin Urban District Council on Thursday night a block plan was submitted by the agent for the Cresswell estate, showing sites for 323 houses proposed to be built in the Bull Field, Woodhorn Lane, Newbiggin. The council decided to give general approval of the plans subject to certain altera-

Mr. John Gill, city surveyor of Bangor, has submitted a report to his council showing that he had during the twenty-four weeks ending September 9, effected the following savings:—Main roads, £35 2s. 8d.: highways, £57 9s. 9d.: lighting and wages, £60 11s. 9d.; gas, £75: pleasure grounds, £6 6s., in addition to a sum of £63 saved by deferring the making up of Gorad Road, the total saving in the twenty-four weeks being £297 10s. 4d. John Gill, city surveyor of Bangor,

The scaffolding around the magnificent Perpendicular tower of St. Stephen's Church Bristel, has recently been removed, and the work of the restoration is practically comperster, has recently been removed, and the work of the restoration is practically completed. The architects were Messrs, Paul and James, of Bristol, and the contractors Messrs. Cowlin and Sons, of the same city. The outlay has exceeded £3 000. At some future day the south porch will be similarly repaired.

The passion for economy may be carried too at. The Stamford Board of Guardians having the chimney stack at the workhouse was out of repair, discussed with great length at their last meeting the question of accepting or rejecting a tender for its renovation amounting to £3 10s. Eventually it was decided that the isk of injury by lightning was so small that in he interests of the ratepayers the old rod should be taken down and not replaced.

Mr. A. G. Temple, F.S.A., the Director of the Guildhall Art Gallery, has now completed the rearrangement of the pictures in that collection. Nearly 1,000 works are now displayed in the galleries, but there are many others which for want of space cannot be hung, and are now, placed in various committee rocons. which for want of space cannot be hung, and are now placed in various committee-rooms and lobbies in the Guildhall itself. Recent additions now exhibited in the galleries include Frank Holl's "The Lord Hath Given, the Lord Hath Taken Away," a bequest of Mr. F. C. Paul, of Reignte; a portrait of Lord Mayor Cubitt, by Sir W. Boxall, given by Lord Ashton; and a water-colour drawing of Rheims Cathedral as it was just before the war, by Mr. H. C. Brewer

#### LEGAL INTELLIGENCE

ACCESS TO FIRE ESCAPES.-A recent fire in Manchester, in which a man lost his life by jumping through a window, has called attention to the fact that some employers of labour in that city are not keeping clear the entrances leading to the fire escapes. The Marchester Sanitary Department have issued warnings to forty or fifty firms in regard to the matter, and have intimated that noless the means of escape in case of fire are kept in proper condition prosecutions will follow. Two cases against employers were heard at the Manchester City Police Court on Wednesday, and the evidence showed that in one case the and the evidence showed that in one case the doors leading to the escape on two floors were either fastened or obstructed with goods, and that in the other case the door on one floor was barred with pieces of wood. Mr. Pickford, who prosecuted, said Section 14 of the Factorial Western Agency 13 was a constant. and Workshops Act provided that where escapes had been erected it became the duty of the owner to see that the escapes were main it became the duty tained in proper condition and that the meanof access to them were free from obstruction The Stipendiary Magistrate imposed a line of

## Supermary Stagastate imposes a fine of ## 1 mg of ## 23 in the one case and of ## 22 in the other.

### ARBITRATION AS TO SPITALFIELDS MARKET.—Spitalfields Market having been acquired compilsorily by the City Corporation under an agreement, dated December, 1914. acquired compulsorily by the City Corporation under an agreement, dated December, 1914. from Mr. Robert Horner, an arbitration was opened on the 5th inst, at the Surveyors' Institution to decide the purchase price. Mr. C. A. Russell, K.C., was the arbitrator, and the counsel were Mr. Balfour Browne, Mr. Upjohn, and Mr. Landers on behalf of Mr. Horner, and for the Corporation Mr. E. H. Lloyd, Mr. Vesey Snow, and Mr. H. C. Munroe. Mr. Balfour Browne explained that the lease of the market, which had a charter dating from 1632, and certain other properties with the market franchise were acquired for \$2,500 a year by Mr. Horner in 1375, and in his hands the market was greatly improved. In 1882 he got a new lease of eighty-four years at £5,000 a year, one of the conditions being that he should spend at least £55,000 on remodeling the markets. Various Parliamentary Bills were promoted by the London County Council and the City Corporation to acquire the market. In 1901 the City Corporation offered £350,000, but Mr. Horner's minimum was £400,000. In 1904 he offered to sell his rights and property for £600,000, but subscipted the market withdrew the offer. In addition to the rights and property for £600,000, but subsequently withdrew the offer. In addition to the value of the market, which occupied 2½ acres, there was much property. The arbitration is being continued. being continued

DRAUGHTSMAN NOT A "WOR MAN."—Professor Tillyard presided over sitting of Coventry Munitions Tribunal, Friday, with Messrs, T. Hancox and W. Dexter (Rugby) as assessors. The case John A. Northfield, draughtsman, O John A. Worthfield, draughtsman, O Janor Hause, Sillsaurae, who, complain and W. II John A. Northfield, draughtsman, Old Manor House, Silbourne, who complained hat the certificate of leaving was unreasonably withheld by Messrs, Willans and Robin-Timical Rughy, raised, the chairman on, Limited, Rugby, raised, the chairman aid, a new point—whether a draught-man was workman within the meaning of the Muniworkman within the meaning of the Muni-ions Act. Applicant produced a letter from he Ministry of Munitions, in which it was aid:—"I am directed by the Minister of Junitions to reply to your letter of August I respecting the position of draughtsmen and ther salaried employees, as distinct from orkmen, with regard to leaving their em-loyment and obtaining other engagements Isewhere. . . The Minister is advised at the term 'workman' should be construed its ordinary sense as meaning a person who. lat the term 'workman' should be conscious, its ordinary sense as meaning a person who, ibstantially, does his work with his hands, at all events, by physical exertion." There are the further question, whether Northfield as the further question, whether Northfield as engaged on munitions, and Mr. Briggs, as engaged on munitions, and Mr. Briggs, presenting the company, said the engines on to plans of which applicant was working, ere sold almost exclusively to armament firms, hen Northfield had been offered more responsible work elsewhere. The chairman said the cision of the Court was that applicant was it a workman within Section 7 of the Act, and a statement would be made that no certifiate was necessary for him.

d a statement would be made that no certi-tate was necessary for him.

IN RE HARRISON AND GREGORY,
IVERPOOL.—A meeting was held in Liverpol on the 5th inst. of the creditors of Mr.
Illiam Harrison, of Southport, and Mr.
Denezer Little Gregory, of Liverpool, who
aded as Harrison and Gregory, timber mercants, Greenland Street, Liverpool. The
ficial Receiver said the joint liabilities
counted to £12.443 18s. Id., and the net joint
sets to £5,605 10s. 7d. Mr. Louis Nicholatys appointed trustee with a committee of
ispection. inection.

The B shop of S arthwork don atod on West ne day the new in scion charten of St. James's, Nine Elius, Parterson,

A waste warehouse is about to be built at Dumb Mills, Frizinghan, for the corporation of Builford, from plans by their city archi-

The Local Government Board may same a loan to the Urban District Council of Hendon of £1240 for the purchase of a motor fire-

A new manual block for Gallowthat School, A new manual modes for Gallouwhar School, Ratherglen, has been formally opened. The architect was Mr. Walter R. Watson, Bath Street, Glasgow, and the cest was over £12+10.

The remocation of the woodwork and other fittings in the pairsh church of Little Gidding, near Peterberough, has just been completed, having been carried out by Messrs, Hampton, etc. of London

At the meeting of the Council of the situte of Civil Engineers, held on September 29, a silver salver was presented to Mr. Horace Boot, past president, on the occasion recent marriage.

The Curzon bridge over the Basingstoke Canal at Purbright is about to be rebuilt for the Guildord Rural District Council from plans by the engineer, Mr. J. Anstel, of Commercial Road, Guildford. The new bridge will be of steel decking with concret, abutments.

At Wednesday's meeting of Derly Town Council it was reported that, through an indis-Council it was reported that, through an indis-cretion on the part of the then youngest engineer-in-charge, who has now left their service, the new steam turbine at the power station had sustained damage which would cost £ 00 to repair.

At the Royal Academy the lectures to At the Royal Academy the lectures to students on anatomy will be delivered by Professor Arthur Themsen, M.A., F.R.C.S., LL.D., at 4 p.m. on Wednesdays and Fridays, October 13, 15, 20, 22, 27, and 29, and November 10, 12, 17, and 19. The lectures on painting conduction and for the lectures of painting conductions and for the lectures. ing, sculpture, architecture, and chemistry are postponed until further notice.

postponed antil further notice,

Mr. Albert P. Start, of St. Helens, Lanes, has been appointed building and saintary in spector to the Egham Urban District Council in place of the lare Mr. W. J. Simpson. Mr. Sturt was formerly an assistant in the office of Mr. W. Menzus, the Egham surveyor of highways, but for some years past has had the management of two large estates in Lancashire.

The Parsik tunnel, which will be the longest rulway tunnel in India, had been bored through on Septemb r 10 from end to end. The tunnel is for the new altrament of the Great Indian Pennsular Ralway, and is situated between the Than; and Pakis railway tarties, treater was india from the Vice rig stations, twenty two miles from the Victoria terminus. This new line will effect a saving between Bombay and Kalyan Jancrion of three miles. The tunnel is 4,762 feet in length, and will be last with double broad-gauge lines.

At the meeting on Wednesday of the Liverpool City Council the water committee re-commended that steps be taken to obtain a previsional order for the construction of a third pipe line of supply from Lake Vyrnwy. The recommendation was opposed on the ground that it would ultimately commit the city to an expendature of between £7,000,000 and £3,000,001, and the additional water might not be needed for ten years. Eventually the recommendation was withdrawn for further

At the last in eting of the March's or Rivers Committee, the city suveyor, Mr. T. de Courcy Meade, reported that Mr. Gilbert Hart, a member of the committee's main drainage staff and new a temperary second-liestenant in the 173rd (Tunnelling) Company of the Read Footpools had been averaged the of the Royal Engineers, had been awarded the Military Cress for conspicuous gallantry and skill in France. The Rivers Committee passed a resolution congratulating Lientenant Hart on the honour that had been conferred on

A new road streen, designed in the Perpendicular style, has been placed in the parish church of Wellingbourne, The screen is divided into six bays with moulded and carved posts, and tracery heads, having a vaulted cove. ornamented with carved patera at the inter-sections of the a.bs. The read loft over is en-closed with panelled and traceried fronts uson a monided and carved comice from which rises a monned and carve come from water risks the Great Rood, with floriated terminations charged with the emblems of the Four Evan-gelists supported on a rused tribune with the accompanying figures of St. Mary and St. John, all relieved with gold.

Professor He, as the as I known

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Mr. F. Tueley has tendered his resignation as highways surveyor to the Hinck ev Riras District Council in order to take up a smallar position at Uttoxeter in a month's time.

Mr. A. P. Horsox, nor the enginer of Hartlep ol, has been appointed surveyor and architect to the education authority, and has had his salary increased by £5, per annum.

The partnership hitherto subsisting between J. Lawden and J. H. Ho over, architects and estate agents, at Temple Street Birmingham, under the style of Lawden and Heaven, has been disolved

In view of the heavy arrivals expected next In view of the heavy arrivals expected ness season, the Port of London Authority have decided to erect sheds at the Royal Victoria and Albert Docks sufficient to accommodate 50,000 to 60,00 bales of wood.

The Nairnshire County Council have decided to consilt Messrs, Walker and Daneau, engineers, Aberdeen, with regard to the condition of the Cawdor and Fornight, bridges, damaged by the recent flooding.

Mr. William Mitchell Aitken, of Hope Terrace, Elimburgh, late of Messes, Mackintosh, Burn, and Co., architects, builders, and contractors, Calcutta, who died on May 12, has left £62,430, exclusive of real estate.

The John Dawson Memorial Strater um at Lincoln has just been opened. It was planned by Mr. F. Taylor, of the city engineer's de-partment, and accommodates thirty-five patients, Mr. F. W. Horton, of Lincoln, was he builder.

Mrs. John Crosfield, of Bryn Eithin, Colwyn Bay, has unveiled a marble lust of her late husband, Mr. John Crosfield, in the Town Hall Warrington. The bust, which is the work of Mr. Henry Pegram, A.R.A., is the gift of the Crosfield family to the town.

Plans for the erection of a new school on the Orchard House s to Lave been submitted by the Tottenham Education Committee to the Board of Education for approving Mr. G. E. Laurence, A.R. I.B.A., Buckingham, Street, Adelphi, W.C., is the architect. Good progress has been made on the erection

of the First Church of Christ Scientist on River Street, Winnipeg, and the exterior work is nearing completion. The exchitects are Meses, nordin and Over, of Winnipeg, and the general contractors the Fert Garry Con-

the general contractors the Fort Garry Construct on Company.
Captain N. H. L. Matear, 2nd Battalien Royal Warwickshire Regiment, the only sen of Mr. Huon A. Matear, F.R.I.B.A. North John Street, Liverpool, has been killed in Flanders. Captain Matear was originally gazetred to the Royal Engineers, but was transferred to the Royal Warwicks. He was vey severely wounded last winter, but returned to duty in May duty in May.

duty in May.

The corporation of Northampton recently applied to the Local Government Board for permission to raise a loan of £5,75° for works of sowage disposal at Kingsthorpe, and the draining of 405 herrs outside the borough boundary. At the inquiry held last work the inspector pointed out the futurity of such applications at present. As an afternative nesuggested proposals for temperary expedients costing from £301 to £400.

The Dalmuir West of Scotland Estate Com-

The Dalmuir West of Scotland Estate Company, Limited, have received permission at Clydebank Bean of Guild Court to error eighteen tenements, consisting of 120 workments at Dalmuir. The est is estimated at £30000. This firm has at present mated at £30 (00. This tirm has at present 230 houses in course of construction, the entire number being part of a scheme for the housing of the employees of Messis, William Bear Imore and Co., Limited, Dalmur.

General approval was expressed at the last meeting of the Nottingham City Conteil of the meeting of the Nottingham City Conteil of the plan proposed to attract fresh industries to the city. The establishment of a small department of the council, to be run at a maximum cost of £500 a year, to make a properly expanse I and systematic effort to scene new works may very probably prove one of the trust profitable undertakings on which the council has ever entered. A special efficial is to be appointed for two years at a salary of £25° a year to devote his whole time to watching the formation of new companies and the development of industries, so that the promoters velopment of industries, so that the promoters may be premptly and adequately informed of the advantages which Nottingham can offer.

### Our Office Cable.

Stepson, FRIBA. Walta at University College . Custanting e. and the start rople and Brisa, "at I usday. October 2. Addrive will be by to ket, which I at its from the Sovietiv of ege on application, on osing

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ist session of the Dean of Guild Duntermlare Messrs. Balph W Puntermline Messes, Ralph W. 2 i C., Seatish Central Rubbe, reserted plans for an extension of horse in Elgin Street. The fown land that the proposed buildings or etad on ground which, under a guiposes. The Town Plant tee Lowever, were quite willing as should be passed, subject to be the Local Government Board E., at Elgin, who was the superior of Mr. Currie Micheth, solitation of the burgh in the future of the street of the scheme were adopted in that which was dedicated for see purposes could be utilised for s purp ses could be utilised for the trace of workshops, and the trace of workshops, and the tas doducated to works are as and for that purpose, no matter the additions might after. Subect to the marrial of the Local Govern-ert Band cod the Earl of Elgin, the plans error of Dear of Guild Invine observing that is any event, he thought the ground error of the left upon was unsuitable for that

portion means of the City Compensation held on Wednesday, the reported the report of the portion of the portion of the portion of the report of the compensation of the result of the compensation of the compensation of the portion of the portion of the portion of the compensation of the portion of the compensation of the portion of the compensation .. the experimental had used the tree of difference of heads of the experimental tree proposed that they could only the experimental tree values of the tree conditions and the experimental tree values of that undue influence had a considered that undue influence had a considered that undue influence had a considered that undue influence had a considered that undue influence had a considered that undue influence the existing that the had single to induce the existing that the examined the use of local many that the two controls the experimental trees and the experimental trees of the committee of the committee of the parameters of the suggestion of a committee of the American Chemical Society, the United Stars American Chemical Society, the United Stars Bacteria of Stardards has made an experimental standards has sector to between model at well-ed corps sed that under a fluence had been consider was Mr. I do Harrison. It was so if the had sught to induce the

A similar adegation was suggested in Mr. Harrison's relation to the city surveyor's committee, in the first case, bound that Mc Harrison 's was indiscreet and a result. Harrson was indiscreet and committed an error of judgment. They did not, however, consider he was actuated by any corinpt mostly. In the second case they thought he "showed indiscretion but no corrupt motive." Mr. Harrison assured the corrupt motive." Mr. Harrison assured the council that he had no corrupt motive in anything he had said or done. In the development of the brick industry of Manchester thousands of pounds had been spent; it now stood second to none in the country and he had tried to do the best he could tor the trade. The report was adopted, and the matter ended.

During the months of July, August, and September, 1915, the Road Board indicated additional advances to highway authorities additional advances to highway authorities amounting in the aggregate to £38,687, of which £33,715 was by way of grant, and £4,974 by way of lean. The advances made and indicated from the constitution of the board up to September 30, 1915, less indications cancelled, amount to £6,170,966. Of this total £4,719,466 is by way of grant, and £1,451,500 by way of lean. The formal grants completed, with the approval of the Treasury, during the last quarter, amounting to £94,013 during the last quarter, amounting to £94.015, were applied as follows:—Road crust improvements, £88.781; road diversions, £705; bridges reconstruction and improvement of £1.800; new roads and bridges, £2.727.

A writer in the Commonwealth Engineer describes the reinforced-concrete sleepers that have been laid in Adelaide, 8.A., to carry train rails. The sleepers used are reinforced train tails. The sleepers used are reinforced in compinction with a metal sloe, on which the rail tests. The shoes are connected with reinforcing rods, and these are strengthened by intervening braces. The whole forms a truss bridge, which in itself is very strong, and is further strengthened by the allition of the present of the sheeper is concrete. The ironwork of the sleeper is placed in a mould, into which the concrete is conred, and the necessary tamping is done to ensure that every crevice is filled. The bottom of the sleeper has a concave surface, which is considered an improvement on the usual flat bottom, as it gives a better grip of the road hel. When the sleepers are laid the rails do not come in contact with the conrete, and all vibration is taken on the shoe, The initial cost per sleeper is considerably higher than in the case of wood or steel, but the Imability is said to be immensely

The discovery of walnut on the Pacific constrof Mexico is generally regarded as very important, since many have believed that walnut was a stranger to the woodlands of western and southern Mexico. Botanists have named it Jughans mexicana. A number of prospectors have reported three varieties of this walunt—white, red, and black—in great abundance. O, these the black is said to be the most valuable, as it is curly in gran, and as fine as the Circassan walunt from Asia Minor. It is susceptible of the nnest polish, and seems metallic in its com-pactness. The region where this walnut grows is exceed ugly rugged and wild. The forests are very dense and must have stood for centuries undisturbed by fire and axfor centuries undistributed by the and axis. It is not unusual to find walnut trees from which ents 80 ft in length and 4 or 5 ft, is launcted may be obtained. It is believed that after the walnut in Arkansas and surto neling territory tecomes more nearly ex hand I, the Mexican walnut will find a rendy sale, both in the Unitel States and in Europe

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### TO ARMS!

#### 4th Battalion ("Architects") Central London Regiment Volunteers.

Re units are urgently needed for the Regulars, Territorials, and Voluntiers but inding recruits should apply to Battalien Headquarters, where they will be advised as to the branch of the service for which they are best suited.

ORDERS FOR THE WEEK BY LIEUTENAXT-COLONEL A. W. WARDEN. GENERAL PARADE.

GENERAL FARADE.
Saturday, Joth inst., at new Drift Headquarters, Chester Heads, Exclest in Place, S.W., at 3 p.m., Uniform parad.

#### LATREXCHING.

Members who have volunteered for this will receive written instructions regarding hour of parade, etc.

DRILLS AND PARADES.

"A" Company —Tuesdays, Muniature Range, Gas
Light and Color to is promises, Monck Street, Westminster, 5 to 8,30 p.m.

Wednesdays—Company Parades, 5,15 to 7,15 and
6 Ty to 215 at the ofter House.

Thursday—Signalling of Chester House. See
orders from Acting Battalion Signalling Sergeam
Chesille

"B" Company.—Miniature Ringe and Company
Parades as for "A" Company. See orders local
heighparters.

"U" Company.—see orders books

"Y Company.—see orders books

"Y Company.—see orders books

"Y Company.—see orders

headquarters,
"T" Company.—see orders local headquarters,
Paydon A V. Athlette Ground, Borcham Wood,
"D" Company.—Prateon and Section Drill at
Chester House, The sdays and Thursdays, 6.45 p.m.
Company Parades, Wednesdays as for "A" Com-

SCHOOL OF ARMS.

Drill Headquarters, Chester House. Instruction in bayonet fighting, gymnastics, physical drill, boxing, and singlesticks on Tuesdays from 6 to 8 p.m.

#### RECRUIT DRILLS.

RECRUIT DRILLS.

"A" Company.—Chester House, 5.15 and 6.15, Wedn, sdays and Fridays.

"B" Company.—Dulwich College, Mondays, 8 to 10 p.m., and Thursdays, 6 to 8 p.m.

"C" Company.—Boreham Wood and Elstree Distinct Headquarters, A.A. Athletic Ground, Borelam Wood.—For rull particulars apply to Alan Potter, 6(ray 6 thdes, Borcham Wood, Herts.

"D" Company.—Chester House, Tueslays and Thursdays, 6.45 p.m.

#### CORRESTONDENCE.

CORRESTONDENCE.

Special attention on members is drawn to the fact that correspondence should be answered by return. If this is not attended to the office work of the Corps is man usely increased. Eurodient forms of new members and all correspondence not referring to recruiting for the Army or co-haracial matters must be addressed to the adjutant, 10, Condustative, W., and regarding recruiting for the Army to the Recruiting Officer at Battalion Headquarters, and regarding accounts and subscriptions to the Psymieter, W. R. Haghes, 14c, Dashwood House, E.C. By Order,

L. R. GUTHRIE, Adjutant, BATTALION HEADQUARTERS,

18. FUFTON STREET, WESTMINSTER, S.W.

#### MEETINGS FOR THE ENSUING WEEK.

WEPAS-DAY (To-day)—Royal Academy, Introductory lecture on Auatomy, By Professor Arthur Thomson, M.A., F.R.C.S., Li. D 4 p.m.

Association of Engineers-in-Charge, Presidential Address by Frank Banley, St. Bride's Institute, E.C. 8 p.m.

The shay.—National Housing and Town-Planning Conneil, Annual Meeting. 41, Rus-sell Square, W.C. 5 p.m. British Museum Lectures, "Archi-tecture of Ancient Egypt," by Banis-

firtish Misseum Lectures, "Architecture of Ancient Egypt," by Banister F. Fletcher, F.R.I.B.A. 4.30 pm. Society of Architects, Special Meeting to receive Report of Scrubners on Ballot for Officers and Council. 28, Bedford Square, W.C. 6.30 p.m.

FRIDAY.—Town Planning Institute. "The Planning Design, and Arrangement of Railsay Ferninals," by James Crossland, Lic.R.I.B.A., 92, Victoria Street, S.W. 8 p.m.

Sheds and other additions are about to be built at Highfield Mills, Ossett, from plans by Messas Holton and Fox, of Corporation Street, Dewsbury.

St. Nicholas' Church, Ardtole, Ardglass, Co. Down, has recently been conserved by H.M. Board of Works, and its history and details noted by Mr. F. J. Bigger, M.R.I.A. Its full size and architectural details are now for the first time exhibited to the visitor. The remarkable feature of the building is the size of the cast window. This has now been explained by the discovery of large fragments of stained glass with which the window was filled beform it was ruined and destroyed. No old church in Ireland has provided such a store of early painted glass as has St. Nicholas of Ardtole. The doors and other features of the building are also well worthy of examination. St. Nicholas' Church, Ardtole, Ardglass,

### LATEST PRICES.

N.B.—All prices must be regarded a merely approximate for the present, as ou usual sources of information are in many cases failing us.

#### TIMBER.

Owing to stoppage of supplies all price have advanced considerably. IRON.

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B.B. Drawn Telegraph Wire, Galvanised— 0 to 8 9 10 11 12 B.W.G.
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4 in. to 5 in
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Water-Tubes         57½           Steam-Tubes         55½           Galvanised Gas-Tubes         50           Galvanised Water-Tubes         47½           Galvanised Steam-Tubes         40
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\* For 5 cwt. lots and upwards.

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Ditto, brown	26 15		27 5	(
Cottonseed, refined	29 (		33 0	- (
Olive, Spanish	39 10	0,,		(
Seul, pale	21 (	0.,	21 10	0
Coconnut, Cochin	46 (		46 10	(
Ditto, Ceylon	42 10	0 ,,	43 0	C
Ditto, Mauritius ,,	42.10			(
Palm, Lagos	32 5		33 5	C
Ditto, Nut Kernel ,,	35 (		35 10	C
Oleine	17 5		19 5	0
Sperm	30 (		31 0	0
Lubricating, U.S per gal.	0 7		0 8	0
Petroleum, reflued	0 0			6
Tar, Stockholmper barrel			1 10	0
Ditto, Archangel	0 13		1 0	0
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English Sheet G1:	B.~S:	15 ea.	21 oa.	26 oz. 32 oz.
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GLASS (IN CRATES).

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i	Omnilae Copal Oak			l O	0
ı	Superfine Pa'e Elastic Oak			2	0
Į	Fine Extra Hard Church Oak		0 1	0	0
ı	Superfine Hard-drying Oak, for seats	10			
ı	churches		0 1		6
J	Fine Elastic Carriage		0 1		Ü
I	Superfine Pale Elastic Carriage		0.1		+
ı	Fine Pale Maple			0	0
i	Finest Pale Durable Copal		0.1		6
ı	Extra Fine French Oil		1		9
ļ	Eggshell Flatting Varnish		0.1		0
	White Copal Chamel		1		0
	Extra Pale Paper		0.1		Э
ł	Best Japan Gold Size		0 1		٦
l	Best Black Japan		0.1		9
l	Oak and Maliogany Stain		0 :	9	3
l	Brunswick Black		0	8	
۱	Berlin Black		0.1		0
ì	Knotting		0.1		0
l	French and Brush Polish		0.10	J	Q
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The Kirkea'dy I nited Free Presbyte via voluceded to build a new him seef 5 satisfies on the main road at Derbeat, in every proximity to the collecty.

The funeral took place at Berkeley on I need day in last week of Mr. Edward Grezery, whose death occurred on the previous Fridae, at the age of many years. The deceased had for many years carried in the business of builder and timber merchant in Berkeley. For some years he had lived in retirement.

#### TO CORRESPONDENTS.

We do not hold ourselves responsible for the opinions of our correspondents. All communications should be drawn up as briefly as possible, as there are many claimants upon the space allotted to carrest indents

corresp indents. It is particularly requested that all drawings and all communications respecting illustrations or literary matter, books for review, etc., should be addressed to the Editor of the Building News, Effingham House, I, Arundel Street, Strand, W.C., and not to members of the staff by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributors' tisks, and the Editor will not undertake to pay for, or be hable unsought contributions.

f.r. unsought contributions.

\*\*\*Drawings of selected competition designs, important public and private buildings, details of old and new work, and good sketches are always welcome, and for such no charge is made for insertion of nurse commonplace subjects, small churches, chapels, houses, etc.—we have usually far more sent than we can insert, but are glad to do so when space permits, on mutually advantageous terms, which may be ascertained on application

When favouring us with drawings or photographs, architects are asked kindly to state how long the building has been erected. It does neither them not us much good to illustrate buildings which have been some time executed, except under special circumstance.

Telephone: Gerrard 1291. Telegrams: "Timeserver, Estrand, London."

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The charge for Auctions, Land Sales, and Mis-cellaneous and Trade Advertisements (except Situa-tion Advertisements) is 6d, per line of Eight Words (the first line counting as two), the minimum charge being 4s 6d, for 50 words. Special terms for series of sx insertions or more can be ascertained on appli-cation to the Publisher.

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#### SITUATIONS WANTED.

Advertisements not exceeding Thirty Words inclusive of name and address, are inserted under the heading "Situations Wanted," free of charge. inserted under

Rates for Trade Advertis-ments on front page and special and other positions can be obtained on application to the Publisher.

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Replies to advertisements can be received at the Office, Effincham House, I. Arundel Street, Strand, W.C., free of charge. If to be forwarded under cover to advertiser, an extra charge of Supence is made. (See Notice at head of "Situations.")

made. (see Notice at near of Stuatons.)

Advertisements for the current week must reach
the office not later than 3 p.m. on Tuesday. Frontpage advertisements and alterations or stop orders
for serial advertisements must reach the office by
first post on Monday to secure attention.

Refliver — R. A. S. and Co.—D. M.—C. W. H. W. H. and Son—L. L. Co.—L. E. F., Lod.—C. Co.—L. E. F., Lod.—C.

J M S -No.

F. G. H = Kindly send.

B. S. Wery speculative, we to rest

Where was the paper restricted West avenue refer-

The structural detels might interest is, no space to space for the rest.

Tivily REMINIE — Architect bolders, and others are reminded that the Pullitio News is now published on Wednesdays instead of Frinces, it? a million to the should be obtained to trity in the day anywhere. If delay court in the peted direct from the office on to exit of quarter's subscription, or single copies can be in any sent to readers in camp or moving that the country.

OGILVIE & CO. Many years counserted with the late from of W.H. LASCIELLES & CO., of Bundal Royal

Mildmay Avenue, ISLINGTON, N. EXPERTS in HIGH-CLASS JOINERY.

ALTERATIONS & DECORATIONS.

Olivers'

### Seasoned

Hardwoods.

WM. OLIVER & SONS, Itd., 120, Bunhill Row, London, E.C.

#### TENDERS.

. Correspondents would in all cases oblige by giving the addresses of the parties tendering—at any rate, of the accepted tender: it adds to the value of the accepted tender:

BLACKWALL TUNNEL.—For the repair of the carriage-way paying of Blackwall Tunnel, for the London County Council:—

cepted) ... 987 [Chief engineer's estimate, £1,000.]

IDLINGTON.—For erection of a stable and cart on land in Bempton Short Lane, for the town oil:—

ouncil:— Abel, 1. and G. (accepted) ... €55 0 0

CENTRUL FINSETRY.—For installing heating apparatus in a ninet on with the rehalding of Winchester street school, Central Finsbury, for the Lendon County Council:—

Heane, E., and Beal, Ltd., 3, Monument Street, London Bridge lay, J. and F., 33, Whetstone Park £745 0 0 Unsigned Brightsde Foundry and Engi-nering Co., Ltd., 2s. Victoria Palowkar and Sons, 90-91, Queen Street raiowar and Sons, 96-91, Queen Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the Street ross of the S

CHORLEY.—For supply of various materials, for the town connect. Accepted tenders:—

Paving setts and kerbs:—

Catterall, T. C., Anglezarke,

Limestone and chippings:—

Horrocksford Lime Co., Ltd., Chtheroe.

Natural flags:—Brooks, J., and Sons, Hipperholme. Concrete flags:—Shap Granite Co., Ltd.

Broken granite:-Penmienmawr Granite Co., Ltd Earthenware pipes:—
J. Crank-haw Co., Ltd., Horwich.

CLUBAN JUNCTHAN —For the reconstruction of the bridge carrying St. John's Hill over the London. Brighton and South Ceast and South-Western Railways, for the Lendon County Council :—

Physfair and Teols, Southampton 3,384 0 0
Charles Ward, Ltd., Chebea 3,347 0 0
Gerrett, Jehn, and Son, Balham 3,393 0 0
Holloway Brothers (Lendon, Ltd., Lamboth (accepted) 3,017 0 0
[Chief engineer's estimate, £2,000]

Croynox.—For repairs at the slaughter-houses, for he town council;— Monell, R., Grant Read, Croy

414-11 (Recommended for acceptance.)

DENMARK HUIL S.E.—For the supply of locks re-ninged at the Mande-ley Hospital, for the London quired at the Council

Hobbs, Hirt, and Co., Ltd. (accepted) €411 0 0

DERBY.—For repairs to a steam turbine, for the lectric lighting committee: $\rightarrow$ Parsons and Co., Ltd. (accepted) £800 0 0

DERRY.—For the supply of wood blocks, for the aniways committee:—
Millar's Trading Co. (accepted) 4136 0 0

DERRY.—For the supply of copper wire, for the transways committee:—

British Insulated and Helsby
Caldes, Ltd. (accepted) ... 45% 0 0

Dhiffield.—For building a reinforced concrete retaining well for the road bank of the Mickley Dyke, near the Grange, for the Driffield Rural District Course!—

Witty W., North Fordingham (accepted),

DINDEE.—For the reinforced concrete superstruc-ture of the new city half, for the town council:— Yorkshire Henn, bique Contract-ing Co. (accepted) . . . . £25,355 0 0

Enimmergh.—For supply of plant for new power atton at Portobello, for the Edinburgh Town

Fraser and Chalmers, Erith (turbines and alternators, £23,251, and condensing plant, £7,611, accepted).

GLASGOW.—For the electric wiring of the new ten ments at Calton, for the corporation: cennet and Rutherford (ac-Bennet

HARDERN.—For the erection of garage, etc., at HARDER Well Works, Mesors, Chus, F. L. Horsfall and Son, Lord Street Chambers, Halifax, architects. Accepted tenders:—

Accepted tenders:

Mason work:—Pickles, T., Luddenfoot,
Joher work:—Wadsworth, S., and Sons, Halifax,
Plumber, heating, and glazing work:

Botton Bros., Halifax,
Plasterer and slater work:

Baneroft, J., and Son, Halifax,
Con tructional engineer work:

Haywood, W. H., and Co., Huddersfield,
(Total amount of accepted tenders, 2000) (Total amount of accepted tenders, £950.)

HABITAX —For the supply of plant, for the transveys and electricity committee. Accepted tenders:

Hampton Wick.—For the supply of 5,000 wood backs, for the urban district council;—
Bennett, W., and Co. (accepted), £10 4s. 6d.
per 1,000.

HUNTINGDON.—For effection of 40 artisans' dwelling-houses on Stoney Clove, adjacent to the late militia harracks, for the town council. Mr. O. W. Gillson, brough surveyor:—

Pattine'n and Son, Lendon .£12.640 0 0

Benfield and Loxley, Oxford ... 11.125 0 0

Pryer A. E. Bedlord ... 10,080 0 0

Kidman and Son, Cambridge ... 10,000 0 0

Pears'n and Wright, Hunting don ... 9,660 0 0 Thompson, J., and Co., Peterhorough
Batemin, A. J., Ramsey
Furniss, T., Peterborough
Clark and Sons, Cambridge
Gatterldge and Sons, Peter-Gatter.dge and Sons, Feter-brough
Bull, H. F., St. Neots
Shanks, R., Chatteris
Drev.r. O. P., Kettering
Thackray and Co., Ltd., Hunt-×.6×0 0 0 5,411 Men and son, Brampton (accepted) 5.276 0 0

J.B.(NESBERG.—For supply of eight 100-kw, single-phase transformers, for the municipal council:— Gould, R. H., and Co. (accepted) £808 0 0

Lower Birling.—For extending the sewer at Lower Birling, for the Malling Rural District Council:— £119 0 0 105 0 0 Perce and Son .. .. Wilford, J., and Sons (accepted)

LITON.—For the supply of 2-in, broken granite, or the tewn council. Accepted tenders:—
Enderby and Stoney stanten Granite Co., Ltd. (12s. 4d. per ton).
Mount-ortel Granite Co., Ltd. (12s. 6d. per

Croft Granite Co., Ltd. (124, per ton).

PORTLAND.—For effecting repairs to the sewer out-ill at Chess.l, for the urban district council:— Jesty and Baker, Weymouth (accepted)

# THE BUILDING NEWS

## AND ENGINEERING JOURNAL.

	Effin	ghan	ı Ho	use.	
A Ferro-Concrete Factory				,	1111
the Royal Society of Brit	ish Ari	dutec	f s		435
The International Society	of Sep.	Indane.	13	tels.	
and Gravers		* *			4355
Engineering for Architec	t				135
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Legal Intelligence					1.35
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Our Illustrations					
Professional and Trade Soc Building Intelligence	cieties				

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OCR ILLUSTRATIONS.

The Council Chamber, Instants of Chartered Accountacts, Woorgate Place, 1 (Painted Decorations by Mr. George Muriay, The late John Belcher, R.A., Architect.

Strand, W.C.

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Drawn by Mr. Frod Richard

Units had six Galeria, Plymouth Richard booking

East, sketch of Gover and rapid Mr. W. D.

Catoo, M.A., I.S.A. I. R.I. R.A. A. A. Error.

Historic Buildings in Belgium de ray, Ch., Ch.

Germans, A. La ber House, C. Application by Mr. Robert, C. Keimard

Sound, Modellion, and Tray, R., Stalent had Sketches in Italy, Tion's Had Water sponform Grigant, Society Details, Conf. C. M.

A. K. Horsnell,

#### A FERRO-CONURETE FACTORY.

The new London County Council regulations, when they are finally approved by the Local Government Board, should do much to stimulate reinforced concrete construction. It will be useful to consider generally the application of these rules to practical design, and in order to provide a means of illustrating our remarks, we have prepared the accompanying sketch plan and section of a building suited for actory or many other purposes, such as a warehouse or motor works. The overall area is 100 ft. by 60 ft., from centres of vail piers, and from these points, for the ake of round numbers, we shall consider he sketch design. The plan is divided ransversely into three bays, and longiudinally into five, so that the spans are 0 ft. from centres of piers. There are hus, on each floor, four main beams runing transversely, and eight subordinate eams longitudinally. There are sixteen rall-piers on each floor and sixteen wall-eams. F.P.S. is a fire-proof, or "in-ombustible" staircase; F.R.S. a fire-re-testing stairs, and F.E.S a fire-escape aircase. Offices are suggested at O, and large goods lift could be arranged at L. sanitary annex would be required, duly at off by a ventilated lobby.

The whole of the weight of floors and operimposed loads is assumed to be car-ed by the columns and wall-piers. Thin ell-panelling is shown between these tter, and walling sufficiently thick and itably reinforced to enciose the tireoof and fire-resisting stairs In making deulations for a design such as own, we should need to decide upon the cessary "superimposed" load as reduled, under various conditions, in rt II. of the L.C.C. regulations.\* For a "workshop" the allowance is 112 lo. of ft. super., and for a full warehousethe building 224 lb., and on this class a structure no reduction is permitted in n'ny-storied construction, as is the case f other types of building

There is one feature about reinforced elecrete design that greatly assists the digner-the homogeneity of constructhe material; and we will take the weight othis, i.e., of the complete concrete and the steel at 150 lb, per cubic ft. Whereas it ordinary building construction we need ir calculating loads to take out brickwk, steel, timber, stone, etc., each with thir specific weights, in reinforced conof the building parts in feet and divide by 150 for weight in lbs. We have Aroximately estimated this design as 1.3 tons. The "cube" of the building is approximately 100 ft. - 60 ft. - 40 ft. or 240,000 cubic to ; so that, if we price plain ferro-concrete shell at 4d. per enlinft., the cost of the design shown would be  $\mathfrak{L}4,000$ . The price of the complete material in sith would, therefore, appear to be  $\mathfrak{L}4,000 \div 1.598$ , rather less than £3 per ton of the complete reinforce l material, labour and "forms." Taking the steel as 5 per cent. of the whole, it would weigh 5:100 × 1,3981 say, 70 tons, costing, probably, in normal times, about £500 for ordinary steel merchant bar. If we take Portland cement concrete in trenches at 15s, per yard of 4 000 lbs., the difference between 15s, and £3 per ton must be deemed to represent the extra cest of high-grade concrete, reinforcement forms, laying, and careful "tamping," With steel at a premium and engineers' labour scarce, reinforced concrets con-struction seems highly suited to the present times. It may be noted that new L.C.C. regulations permit of calculations for loads and stresses of concrete, reinforced, at as low as 144 lbs., but we a pressure of 30 lb, per square uich musi have taken the usual figure of 150 lbs, be resisted as from both sides. have taken the usual figure of 150 Hes.

The whole of the interior beims, as sketched, are Theams, and are "con-tinuous," with "fixed ends," as defined in Ruly 32, and come generally under regulation in Part II, and as to detail of construction, must be in accord with the instructions laid down in Part III. T beams, taking compressive-s') as assistance from floor-slabs, are dealt with in Rule 82; and L-beams, to which class we should consider the wall beams above windows relate are considered in Rule 84. The main beams in the sketch come within the scope of rule 91 "become sup-porting other beams," and the "longitudinal bars of the supported beam must be continued across to the further side of the supporting beam," the ends of the bars being hooked; and it is to be noted that the regulations require, in the case of subordinate beams, such as are shown on the sketch, that the positive bending moments should be "calculated on the assumption of the ends being freely supported

The design of columns, such as shown in our sketch, is a matter dealt with in Part IV, of the regulations. The L.C.C. rules do not, strictly speaking, deal with foundation design specifically; but Part IV, refers to such, and gives the allow able pressures on soils as 1, 2, and 4 tons per square foot for soft and wet sand and elay, for natural clay beds, and for compact gravel, etc., respectively; and states, further, that the pressure on plain concrete, in foundations, shall not

exceed 12 tons per square foct. Then slabs generally, as so oit in in part pergante elements of T-beams, a + a 2001 deal considered in the regulations in connection with beams. The method of calculating bending-moments on slabs is given in rule 37; "effective slab depth" is defined in rule 72; and an important practical detail in rule 86, wherein it is set out that T-beam slass shall have transverse reinforcement across the full breadth of slab taken as beam-flange. It may be pointed out that the suggested well for goods lift in our sketch jdan is an example of a true LJ cam, as specifically dealt with in rule 84

The sketch shows berroson rate walling of ween onter wall piers and round stairs Wall design is regulated in Part V., wherein is laid down a general instruction that, so long as designed in accordance with the general regulations to meet suitably the several stresses, such walls may be of any thickness not be sthan four inches. Rule 130 deals with wall panels, such as shown in the sketch, staring that

Affecting our sketch proposals, Rule 131 lays down that in a wall of any story above the ground story the aggregate area of window openings shall not exceed two thirds the whole area of such wall; and that the aggregate widths of such openings shall not exical three-fourths of the whole length of the wall. These regulations are duly observed in our such that also affecting our proposals, the superimposed load on stars and lumings (Rule II) shall be equal to 120 Fee per scharafoot, each step further the expense of thirds the whole area of such wall; and 11) shall be equal to 120 for a grade of foot, each step further to a quick of supporting a concentrated lead at every point of not less than 300 lb be a roofs the flat shown must bear a super norseal load of 55 lb per square foot; at under the regulations the light starr all boads indicated on our sketch section in the discovered line may be included in the disregarded i.e., may be included in the general superimp sed load.

For calculations for leads to the lesson of beams and slabs, and to a contribute to the weight on such and the leaders students, and so, furdly, at the possesses transmitted to the foundations we took of the outset, to assert an the energy of the outset, to ascertain the energy of nacut on beams, and with this R 25 22 to 40 deal in detail. It is no essay to the L C.C. regulations are to entropy a tone concrete design, to analyse energi's the eigenmustances of loading and the mature of the beam, and so unity of order moments in accordance with beams active in the rules. In our learn we can enter the contract of the search of the load of the search of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of given in the rules. In our lesign we con-templated in exempolistributel loading: and so far as such a thing is practically possible, the ends of our beams are "fixed." We have noted above that the

NE, July 14, 21, 28, and August 4 of present year.

regulations stipulate that beams supported by other beams must be regarded as having "free" ends. Ferroconcrete structure, however, has little or nothing to do with true free ended beams or true restringular beams; if it has, then it misses the beauty and economy of the given in Part III applied to the design system. All the main and subordinate of beams having the necessary moments beams in our sketch are, technically, of resistance, fixed," and are "continuous," designed. The econom

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to be moulded in bloc-i.e., as though the tion largely results from the application of imposed load of 56 lbs. per foot super.

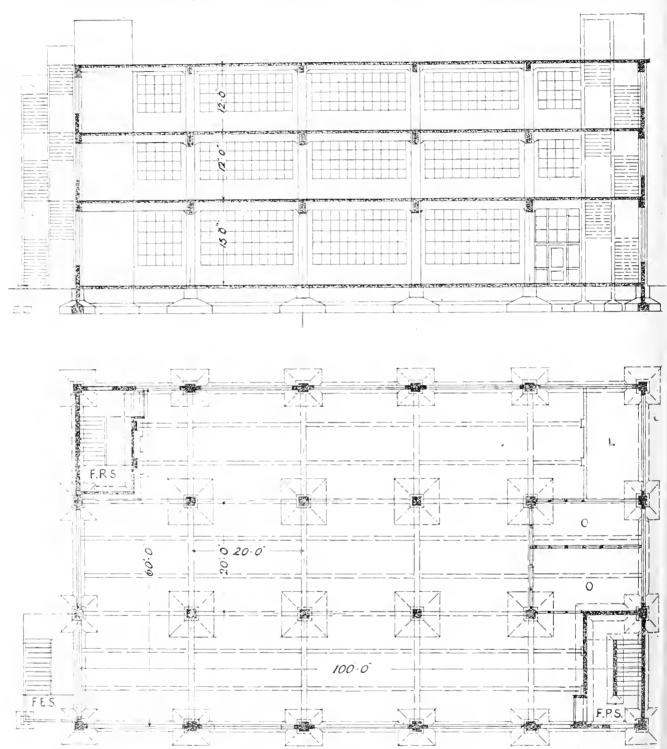
which deals with the divergence in effect of loading at end and intermediate spans. Having had careful regard to these general rules and modifying circum-

The economy of ferro-concrete construc-

in the rule following. No doubt the scree walling below the window-sill, if effe tively connected and homogeneous, wi beam, assists this latter; but in calcul tions this would be ignored, and the bea designed as an L-beam carrying its sha of flooring and the screen walling.

Ост. 20, 1915.

In making calculations for a buildi such as our sketch shows, we should beg from the roof, which has to bear a supi



SUGAL-SIED DESIGN FOR A FERRO-CONCRETE FACTORY: GROUND PLAN AND SECTION.

east in a solidifying fluid -11- that in theory, or violety on general consideration. that end this are no systemic as intermediate. given even spins and similar cross section to greders. Of these points the regulations take note; so that, in addition to recovering to the scheduled formula of bending moments for various elementary the amount of floor slab allowable as contended to the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less than the less t

[th - T-beam principle, which views a large] and cross area of floor slab as available for taking up compressive stress; and this, which applies throughout our sketch proposals, excepting where L-beams are e-rised, is a matter regulated by Rule 82.

The wall beams carrying the margins of floors and screen-walls are L-beams, and

the case of six columns, the load the mitted to the foundations is roof, send and first floors with their superim ed loads, as included within a square of ! ft. centred about the axis of the column to gether with the included parts of in and secondary beams, and the total w ht of the columns. Since the econor of affected by the cost of "forms," should be simplified as

or, more correctly, the design should be prepared bearing this important point in mind. Although calculations may show that an organic part-beam or column. etc.-should be of a different total breadth and depth of reinforced material, it is not absolutely necessary always to proceed on this plan, and in many cases real economy may result from putting a little extra concrete and reducing the steel. Thus, in ordinary practice, the columns shown in our sketch would diminish in cross area in upper floors. As a suggestion we have shown them of similar area as illustrating the principle of maintain ing sizes to simplify "form" work. The steel reinforcement would be, of course, reduced, and more than in the proportion if the columns were designed of reduced area at higher positions.

A design must be suitable for ferro-concrete construction. The more simple and plainly rectangular the better for the form work; the more that part repeats in exactly similar form as to height, length and breadth, the less costly will be the timber framings and boxings, etc. think that our sketch typifies the kind of structure most suitable. The plain rect angular construction is modified some what by the staircases and lift well, but apart from this the scheme seems highly suited. If more floors were added, the ame superimposed loads being carried. and the same pitch of 12 ft. floor to cerlng being maintained, the total economy f reinforced concrete construction should e still better shown; and these consideraions point to the reason why one would of deem one-story buildings as well nited. Again, although a consistent mixure as 1, 2, and 4 may seem a hest ractice, economy may result from a oorer concrete in suitable parts—as, for xample, in the upper columns of the cetch, which, being maintained of similar coss area, this becomes unnecessarily eat on the topmost story. Where great ad is concentrated, as, say, 76 tons pproximately, on the ground floor lumns of our sketch, we may well emloy the richest mixture-2. 2 and 4ider rule 42, allowing a compressive ress of 750 lbs. per square inch.

#### ---HE ROYAL SOCIETY OF BRITISH ARTISTS.

The autumn exhibition at Suffolk reet, though noticeably less rich in lding works, and numerically than in Imer years, is fairly representative.

Hr. J. H. Amschewitz shows one of the t portraits, "Elspeth's Portrait" (23), a "Portrait Study" (146), and a s iewhat rollicking Bacchanalian orgy, come Fill the Cup, and in the Fire of Sing, the Winter garment of Repentate of Hing?" (199). Mr. A. J. Bryce has a ortrait of "Miss Walpole" (123), and a ther of "Senor Don Jose Garcia (11). with two other pictures, "Demolishir the Zandstraat, Rotterdam" (186), ar a "Spanish Gypsy" (207). Mr. II. (186).D is Richter's two flower-pieces are good. 'oses'' (155), and "Peony" (180). He ah shows two other works, "In Hyde Pik'' (124), and "Scocia" (145). Mr. Jon Muirhead's "Meadow Lane, In Hyde Lane, Highton" (126), is his best exhibit: "A Hyvest Field, Houghton" (28). "The Fa Gate Pit, Houghton" (201), and "he Two Windmills, Port St. Croix, Brges" (106), are all worth notice. Of there shown by Mr. E. A. Cox, the best is An Artist and His Daughter ' (127). MrRobert Morley is best represented by his' Autumn " (130), with its russet tints exclently rendered. Mr. Leonard Richmol has an impressive subject, "Rays of sight" (131), excellently conceived.

Mr. Leonard Richmol has an impressive subject, "Rays bean better with less sky. Mr. Pond, M.A. Instructor of Architectural Engineering at Columbia University (London: Oxford University Press, 85, 64).

Mr. Francis Blacks COn the Conway (132) is the best of his three, but The Lesser Orme, Llambelto (181), and Croesan, N. Wales (202), will gratify (181), and all lovers of Welsh scenery.

Mr. Frank Brangwyn, A.R.A., R.P.E., the president, contributes five suspects, "Avignon" (24) we like best, but "On the Terrace" (25), Milan (20), The Breaking I p of the Duncan (255). and "The Old Mill, Dixmude" (234) are all worthy of him.

all worthy of him.

Mr. F. E. Hodge has three good portraits, "The Tate Brigadier General Julian Hasler, killed in action April 27, 1915" (153), a "Lady in Fancy Dress" (151), and "Danstan, Son of the Late A. C. Curtis, Esq. (215) Mr. A. Currithers' two fandscopes, in Homer Woods Somerset" (157), and "The Woods, Somerset (157), and The Green, Burberry (212), are among the best, and he shows two more, at Brendon" (1) and "The Vale of Ayles bury from Whitehurch" (18). Mr. W. E. Biley only sends one of his always wel come seascapes this year, "The Tireless Tide" (88); his other subject is "The Chalk Road, Box Hill" (103). Two excellent seascapes are shown by Mr. Chris topher Williams, "A Lonely Shore (141) and "By the Sea" (135). Two very satisfactory portraits by Mr. Thos. F. M. Sheard are "Paula, Daughter of Stan-Sheard are Faina, Danghter of Stan-hope Spring, Esq. (145), and "The Rev. Hope Gill, M.A." (149). "In the Days of Cicero" (222), by Mr. Walcot, is good, and his "Estrance to the Doge's Palace, Venue" (224), is the best thing of its kind in the exhibition.

#### THE INTERNATIONAL SOCIETY OF SCULPTORS, PAINTERS AND GRAVERS.

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The autumn exhibition of the International Society of Sculptors, Painters and the Grosvenor Gallery is Gravers at reasonably well up to the average, and there are not a few pictures of more than passing interest, and several of very real inerit.

Mr. W. Nicholson sends two excellent Indian military portraits, "Duffadai Rar Singh" (1) and "The Viceroy's Orderly" (33), both fine specimens of the gallant men who are so nobly doing their share in the defence of the Empire, and adequately well rendered. His "The Bull" (75) is a fine study of its subject, and "Tiger Skulls" (80) is a noteworthy piece of artistic osteology. Of Mr. Louis Sargent's three contributions we like "Carthew Beach" (73) best. We do not care thew Beach "(73) best. We do not care much for "The Sea" (78), a decorative cartoon. The undes are doing nothing suggestive of their habitat, and they hardly are of sufficient interest in themselves to

more polise the picture.

Mr. Walter Sickert's only exhibit.

"The Prussians in Belgium" (17), is somewhat of a mishomer. The man and woman might be of any decadent race, but scarcely less repulsive. Mr. John Lavery shows three portraits, Mrs. F. A. Konig (13), The Right Hon, Winston Churchill (22), and "Miss Jean Crombie" (51). Mr. Charles Shannon's "Autumn" (24) is a decoration well embodying its title, but hardly up to his average. Mr. William Strang. A.R.A., has three interesting works Cafe Bar" (4), "The Gipsy Girl" (26), and "In the Country" (38). One of the best works shown is Mr. William Rothenstein's only contribution, "A Little Boy Lost" (39). It tells its story well, and the structural adjuncts are excellently done.

Charles Ricketts M. nt. znm.c. Sacratic ing to the Sun (47) is good and as his Acis and Galabar (79). Mr. Damel Veresmith so its well with a lathres of hiworks, "The Spanish Stielen" (70), "The Cherus Girl (71), and Dinner Hour at the Angel (115) Miss Freda Macdonald has a really nice exhibit. Garden (54). Mr Charles H royd is entirely successful with his Saint entirely successful with his Saint Francis Preaching Poverty, thas ity and Obsolit nee (133) His etching of A Stormy Landscope (283) is a second Probably the general public would be more interested in Mr. Edmand Dalac's

clever carreatures, as exquisitely fining as they are models of good draughtsmanship Mr. Winston Churchill Loking for More Trouble (183) is hit in So the hife as he timidly offers the first four's of has newly discovered artistic familty to the somewhat supercitions booking director of the gillery. Mr. Elmund Dillac has well carne I a copyright of the many farure chances his versatile subject is likely to afford him; like Lord John Russell of old. Mr. Churchid having commanded the fleet to his own satisfaction, is as ready for anything ere the days come when he too will prefer to " rest and be thankful Scarcely less happy are the conceptions of "Inspector James Prode" (181), contemplating the ladders and flags in his land scape, or "Ivan Mestrovie" (184), work the away at the toe of a statue many sizes larger than himself

Among the water colours we liked "The Dining Room at 1. Dorset Street (141), by Mr. W. B. Ranken; "Hen<sup>4</sup>ey Re-gatta" (146), by Mr. William Monk? by Mr. W. B. Ranken; Henry Regatta (146), by Mr. William Monke Lamshouse (150), by Mr. W Lamshouse (150), by Mr. W LaBruckman; "Poppy" (206), by Miss Lily Blatherwick, and "Edgware" (211), by Mr. H. M. Livens,

There is not much sculpture of interest. Rodin's marble "Countess of Warwick (41c) is lent by its owner, as are heads of Ludy Cunard by Ivan Mestrovic, one in bronze and the other in

#### ENGINEERING FOR ARCHITECTS:

This is a very useful book, on right lines, worth the study of British architects in the regrettable absence of such a text book this side based on our own trade hardbooks. We have often insisted that there is no real need for an architect to puto. specialists to design constructive details, or to decide on the size of beams, guiders, column sections.

He ought to be able to do this himself:

and when he is, the results are consilerable saying to his elient, and much less lisk of failure of the structure. There is, or ought to be, no mystery about the matter, for co-knowledge of mathematics beyon's single algebra is necessary.

With that and such a look as this the solving of simple engineering too blons easy, and the design of structural members facilitate I to such an extent the diago. I many readers will gratefully realise i probably to the

The Arts and Craft-Exploition Scale as chotsel as its tree depth of the plan of the late Mr. Walter Crin.s. Mr. Her. Whom, who has for many verus added to its work as an architect the practics of according to associated with architecture, a radial scale tures and metal work, at his horter known of the exploition of British Handwork in Press of Scale secretary of British Handwork in Press of Scale secretary is act of milk from the rew treesdent the Science of the following its act of with regard to the following treesden of British Artistic Industries, and their reorganisation to met the new coordinals which must arise after the war. must arise after the war

VDOX COLVID COLVEIL A . . . t the Lord not suf-Lesday after n matter ten it at the 5% decards to anyon of the mag strate of the costs assard by the distinct Mossis, W. An to Persy Halland Ra

#### -PROPOSED RESCISSION OF A RETIR-NG ALLOWAN E

the result be still has been at  $M_1 - W - H$ if M I H Yabbrom as orthon made betermented.

to the mater table. So stary of that there was a debasely the reason and so orders, we take Me Yakke me was englished this case of the table so next the last of the last trees in the sound the last trees in the sound the last trees in the sound to the sound the last trees and the sound to the sound the last trees and the sound the sound the sound trees to the manufacture of the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees to the sound trees the sound trees to the sound trees to the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound trees the sound will rathe Sentary the fairly and surrely of the rests to further further end innert. The same an eptod, but the surrely the interests of In the tostion of con-til satisfier and also Tree do del to ff? were and after that ELO in the relative offer and the differential to the When has appointed the value of the Denne offer Cep.

ial a right to demand compensation from the committee. Since January, 1912, 122 mprovements had been carried out, and the and the committee for compensation which might have been enforced by arbitration proceedings were £55,387. By careful and persistent negotiation the amount had been reduced to £52,180 18s., a saving of £12.56. It must have required considerable is owiedge and skill to carry out that reduc in In addition, many proposals, under a dynamic of their engineer, had been

Mr. Francoube said the effect of the resultion was "Transfer to Mr. McKenzichte work now done by Mr. Yabbicom." But M. Kanzie would expect to be paid for it.

Eventually Mr. Ayles's resolution was rejected by 48 to 17 vetes

#### HOUSING PROGRESS IN LIVERPOOL

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The with and policy of the Housing Committee of the Laverpool Corporation were received by Abdoman Hartord, the actings format. During the past year, he remarked, the reimber of back-to-back insanimarked, the number of back-to-back insani-tary masses had been reduced from 2.645 to 2.540. The committee could not deal more onekly with the remainder because of the nearth of empty houses and the practical of pouze in the effection by private enter-poise of houses for the power classes. The number of empty houses at a rental of over 5s of 1 index december which had dropped since 1919 it in 1.643 to 558, and a considerable number of these were of insanitary type. As number of these were of its and ry type. A-to the shortage of newly ere ted houses during the past five years out of 678 houses erected under a restal of £18 per amount, 384 renements erected by the corporation.

With regard to rebuilding work, there were three blocks of dwellings in course of erection, viz. in Gore Street, 18 three-roomed Avellings and 6 two-roomed; in Jordan Street 7 four-roomed and 24 three-roomed and in Sparling Street 16 five-roomed dwellings making 71 dwellings in all. This work had proceeded rather slowly, as the builders have been handicapped considerably by the shortage of labour, especially of the labour ing type. In response to the appeal of the try Conn. I to limit capital expenditure, the connuttee had only expended £16,000, though their estimates for the year amounted to £ 3,000. Steps, however, had been taken to represent to the Treasury the desirability of the committee below allowed to proceed recount of the advanced state of the buildings generally, and also for the urgent need of houses of this class in Liverpool at the buescut time. The number of dwellings under the control of the committee was 2,792. under the control of the committee was 2,792, and there were only ten vacant, though the direct robal robes than 400 applications. With regard to the other six schemes which the committee had in hand, viz. Prince Eiwin Street, Rathbone Street, Mason Street, Saltney Street, Blenheim Street, and Pearhyn Street, the greater portion of the properties comprised in these areas were purbased error to the commencement of the based prior to the commen ement of the tir, and as the remainder would have to be settled by an arbitrator, who would be arrownt d by the Loral Covernment Board, it is more than likely that further properlies would be indefinitely postponed by cat department.

The birth rate in the corporation dwellings

The birth rate in the corporation dwellings a visitivity as a strict rate of the exceptional figure of 56.9. The rufant mortility, however, was higher than it ought to be, but the downward trend continued. The general death-rate for all the highlings was 28.3, a figure which, although still too high, was very fay arable when continued and the bright with the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the strict of the stric st. It o might was very tax arrable when con-trasted with the rates of mortality which ised: obtain amongst the same people in their assentary surroundings. Turning to finance, Alderman Harford syel that the present net charge for the whole

fith, work was approximately equivalent to the way was approximately equivalent to 2.4 in the £ on the rates, or for rehousing the 1 to 1 to 1 approximately equivalent to 2.4 in the £ on the rates, or for rehousing the 1 to 1 approximately equivalent to 2.4 in the £ on the rates, or for rehousing the 1 to 1 approximately equivalent to 2.4 in the £ on the rates of for rehousing the 1 to 1 approximately equivalent to 2.4 in the £ on the contractor may have apply the 1 to 1 approximately equivalent to 2.4 in the £ on the same which the contractor may have apply the 1 to 1 approximately equivalent to 2.4 in the £ on the £ on the same which the contractor may have apply the 1 to 1 approximately equivalent to 2.4 in the £ on the same which the contractor may have apply the 1 to 1 approximately equivalent to 2.4 in the £ on the same which the contractor may have apply the 1 to 1 approximately equivalent to 2.4 in the £ on the same which the contractor may have apply the 1 to 1 approximately equivalent to 2.4 in the £ on the same which the contractor may have apply the 1 to 1 approximately equivalent to 2.4 in the £ on the same which the contractor may have apply the 1 approximately equivalent to 2.4 in the £ on the same which the contractor may have apply the 1 approximately equivalent to 2.4 in the £ on the same which the contractor may have apply the 1 approximately equivalent to 2.4 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the £ on the 2 in the 2 in the 2 in the £ on the 2 in the £ on the 2 in the 2 in the 2 in the 2 in the 2 in the 2 in the £ on the 2 in the 2 in the 2 in the 2 in the 2 in the 2 in

1885 and 1891 respectively, will have been repaid. The corporation would then enjoy the unencumbered possession of the property which yielded a net revenue of about £2,000 per annum. This income would, in process of time, repay to the corporation its outlay in the cost and maintenance of these dwell ings, a point of overwhelming interest to the housing reformer.

Negotiations were pending, he added, with the Sutton trustees with the view of securing a grant for housing purposes in Liver-

### DEDUCTIONS FROM AND ADDITIONS TO PRICED BILLS OF QUANTITIES.

At their meeting, held on Friday last, the Metropolitan Water B and received a report from the Works and Stores Committee ing attention to the fact that paragraph 2 of No. 6 of the "Instructions to Tenderers" contained in the Board's Model Form of Contract includes the following:- The Board will not accept any tender wherein the tenderer shall have deducted or added any percentage or lump sum from or to any or all of the tems in any or all of the bills of quantities as priced by him." In connection with the construction of the pumping station buildings at Shortlands, the committee in-formed the Board in February last that the I west tender did not comply with the abovementioned instruction: that the prohibited practice obtained generally in the building made, and that the instruction should be waived in that instance, so that it might not present the acceptance of a lowest tender submitted by a firm whom inquiries had satisfied the committee were of substantial character and first-class repute. The committee have since had under consideration the question of retaining the instruction in its present form. In this connection they have obtained informatton from the London County Council, the Metrop dit in Asylums Board, the Royal Institute of British Architects, and the Insti-tute of Builders as to the practice adopted by them and have had the advantage of the opinions and experience of their mem bers who are conversant with the subject. appears from the information received from the Land on County Council, the Metropolitan Asylums Board and the Royal Institute of British Architects that the practice of adding or deducting a percentage or lump sum is by or deflucting a percentage or tump sum is by body state that while the existing Institute form if contract does not deal with the matter, yet one of its committees have drafted a clause to meet it, which may become public in due time. The committee are solvised that the present instruction is quite expensional in contracts, and is creative of exceptional in contracts, and is creative of difficulties for tenderers, as well as bringing about a disinclination on the part of tractors of good repute and standing to tender for the Bourd's works. After giving the matter careful consideration they had arrived at the conclusion that the practice prohibited by the clause in question should mitted, and therefore recommended

a That paragraph 2 of No. 6 of the Instructions to Tenderers included in the Board's Model Form of Contract be deterni.

the That the following paragraph be inserted in the "Instructions to Tenderers in the Board's Model Form of Contract:-

In tenders for (a) engineering works or h) contracts combining engineer engineering ing and building works or (c) works of building construction, a percentage but not a lump sum) may at the discrebut not a lump sum) may at the discretion of the tenderer be deducted from or added to all or any of the items in all or any of the priced bills of quantities, and in ascertaining and certifying the payments to be made to the contractor, such deduction or addition will be applied to all work which, in the judgment of the engineer, has been executed under the item, series of items, bill or bills of engineer, has been executed under the item, series of items, bill or bills of quantities or the whole contract as to which the contractor may have applied such deductions or addition."

Mr. O. Loughlin has been appointed engineer

### SANITARY FITTINGS IN WORKING-CLASS HOUSES.\*

By Joseph Weekes, Burgh Surveyor, Irvine Take the average tenement house erected in our cities within the past few years. It is quite a common thing to find in the two or four roomed house (i) a bathroom apartment with water-closet and wash hand basin. and (2) a small scullery, sometimes provided with a wash-tub and boiler. In other houses the scullery is omitted, and the sink is to be found in the kitchen window. In others, again, there is no bathroom, but a welllighted and ventilated water-closet apart-ment. Take, again, the housing accommodation of our poorer localities. We find the common water-closet and common washinghouse still in evidence, and the number of sanitary appliances reduced to an absurd minimum. I cannot understand why the common water-closet should be tolerated at all in new properties.

Of course, we all know the plea that the water-closet outside the house is better for the health of the dweller and his tamily: but is it? It so, why go on perpetuating the inside closet in our dwellings at ad? What is the result of the outside closet? the "night-mail the "night-oai," in many cases. Can anyone blame the us, of such when perhaps a long passageway has to be negotiated, or a journey has to be made down the stain and across the court with the temperature below zero. as often as not to find the apartment occuas often as not to find the apartment occu-pied, or that it has been used previously as "a smoking parlour," with all its expec-torations on the floor, or in such a filthy condition through the habits of one or another of its past users as to be unusable?

. . . But what of this condition of things during times of illness in the household?
There is no disputing the fact that many of the loathsome orders of disease and affliction found among our poorer classes can be traced

to the common water-closet. The modern cottage and small flatted house do not, or, rather, ought not, to present the same difficulty with regard to the planning of their sanitary apartments compared with the tenement. There is generally plenty of ground, but can it be said that we are improving the planning of our cottages in one respect? Since the English type of cottage has invaded our Northern clime it would seem as if a backward tendency had crept into the planning of our small dwellings. The chief aim is evidently to gather the triviage and fittings closely together. The idea is all right in one respect-that of concentration-but it can be carried too far, the detriment of the comfort of the dweller. Take the average cuttings elected under garden city anspices. "Every modern conmeans in most cases the sculleryvenience washing-house-larder-bathroom washing-house-larder-bathroom and water-closet apartment—a most peculiar combina-

Before entering into the merits and de-merits of the scullery with its combination of fittings, let us consider the kitchen and scullery apartments generally, as we find them being erected around us to-day. In the tenement house the scullery-wash-house is a great acquisition, some will say; but it is not every worker who can pay for this necessity. Others may call it a luxury. Of course, in the cottage home the scullery and washing-house apartment is nearly always to be found : we expect it. But in the tenement dwelling the sink and wash-tub are oftenest placed in the kitchen window. Now, we all know of the presence in working-class houses of a hed or beds in the kitchen. Workers who sleep in their kitchens, containing sinks with rotten and decaying woodwork (for it 's still common to have sinks and tubs woodlined), and perhaps a dirty siphon trap, or grease-choked overflow only a few feet from the bed, or who have to inhale while asleep the effluvia from the contents of a tub of clothes put to steep, or the vitiated air folbwing on a day's washing in the kitchen, are not getting a fair chance. Even should Even should there be a common washing-house, is it possible for the mother of a young family o leave her children alone in the house while

\* From a paper read at the Annual Congress of the Incorporated Sanitary Association of Scotland,

she does we would be to be as in the kit here. On the question of the combined rates constant buttered in the autocurset and buttered, apartment some autocurses go the language of raying that mader no conditions stand the water coset and buttered. Formy general, this is no sweeping to attempt to a do in the water general to attempt to a do in the water last and the water closed would be builded in the same apartments for the butte and the water closed would be builded in the time.

noise separate apariments for the battle and the water closel would be bordering on the extravagant and rightallois.

In the scuttery of the cottage of today you will often find a battle starting for a corner of the one of graph attack from whom a factor be found near to the reduce, from whom a parameter is a supercontrast of the form of the search from whom a parameter is a supercontrast of the form of the search from whom a parameter is a supercontrast of the search from which is supercontrast or the search form who are the search form when the search is supercontrast or the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form when the search form w to be found near to the roote. Itom who is a draws its supply of hot water. A langed cover presents a good take top view the bath is not in use, which, in its turn, often hades a wasning of daity clothes and various other articles. In other cases the nath secondaried in a employed and made to have contained in a employed and repaired to according these expedients. We require privacy while bathing, and how can this be obtained without a property partitioned if Vary whose battning, and how can this to obtained without a property partitioned it apartment? The ejen bath may answer its purpose quite well in the heavened est out a family, or three the conditionate going; but the observing of camin in deemy trues be the first aim in the family life. We know that in many industrial behinds a both is a necessity after a day's to,", and I wan leave to your imagnation to confine up the feel mass of a father or so wan loss to long of 10.25 of a father or son who has to take a daily bath under such conditions. Even it. for economic reasons of hot water supply from washing boder, the bath is put in the sculery, I cannot understand why it should nor be partitioned off.

The sentery wards has besides a fact, water caset is a so very object woulde. The sendery is the hule of the whole house, for in it is done both preparing of tool and culmary work. Do our planners of cotages ever consider the repugnance of the idea of a meal being prepared in baking being done a meat being prepared in baking using maxim an apartment comprising water closed accommodation? In this style of house the kitchen really as the principal holdey, and as a sleeping apartment its privacy is reas a sleeping apartment its privacy duced to a faire.

The water-desir apartment is, again, often found placed outside the honse, either 1 at the link door, entering off a small porch formed by the scallery door, or 2 at the side of the back door, entering direct from the outside, or 3 on an outhouse, away trom the main brieding entirely. It may be said in tay or of No. I be the closet can be entered and but by the way of the buck door; but this is not always convenient. especially little durk, and here, again, the kitchen as a passageway enters into the urginion. As for the other two arrange regiment. As for the other two arrangements, the only taxourable point is that one closet is provided for each it is, but the main objection is that the pion encourages the use of the commode. Generally, these three latter arrangements present definite examples of bad planning, the underlying idea evidently being that, so long as suntary accommodation to the ayded, it matters not where; but it must be cheaply dure.

I am sorry to say that there are types of houses being erected, especially a our ministed centres, which are of the impossibleinstead centres, which are of the impossible-to-alter order, so tar as the situation of their sacitary amortments are concerned; but I cannot deal eath them within the limits of this paper. My endeavour is to show how certain types of plans could have been altered, and, to my mind, improved, at very lists, and increase in little cost, involving lattle or no increase in rent to the tenint. They are il houses of the kind for whole there is a demand at present, and for whole good rents are to be

In the meantime indications point to our local anthorities having to tackle the housing problem themselves, as private enterprise is not keeping up with public needs. Let it dispositi . d

#### OBIT(AB)

Mr. Jacob Moderals Hope and of the oral numbers of the architectural late to a Liverpoon, proof a vive at his property ed avry at h He er on Intlenar von Licipan, poold to con Lad Wester Li The december and the reason was minety second by the reason was minety second by the reason was a war manner of the farm of Morra. We have not been part to be a constant to both him be architecture in the North land. Mr. James W. Hay, was a consequent of the farm to the farm to the farm the responsition of which the farm to the decided Americkies was a lower to the work, even to the farm to the work.

exponent of the Gothe Program of the control which the firm the real of of the transition of the Parsh Charel, Welley and the Parsh Charel, Welley and I are completed to the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the

funeral took place on Saturday at B bargtor Cometery.

The death to be place on Tancolar, at the age of 65, from heart tailine, rollowing a serious operation, of Mr. Edizar Radio I. Hewitt, 3. Brent Villes, Header A.P.I.B.A., distinct surveyor for Seathward and North Lambeth, with affects at 1.2. Blackfrians Road, S.E., since 1.2. II a solvings as surveyor and viction to the code request. He had been a Associate of the request. The had been a Associate of the Royal Institute of British Associate strong Both Institute of British Associate strong Both Institute of British Associate at the first Bee, the give his professional societies of the satisfact and surveyor of the new years. Bee, he give his professional services glates as architect and surveyor of the new corresponding to the dule moved to Michary. He was one of the last known members of the National Liberal Clab. A reconstruction was held on Saturkay at room to the Hendon Congregational Character the lateral following in Hendon Characteristics.

A persh elibinate by the control of this what he was been Brown I considered the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the

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A few years ago in or of the step notes of American carals were considered in the research for the construction of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of the step of not keeping up with public needs. Let it be our first consideration, therefore, to see that even the poorest classes are provided with thoroughly healthy houses. I think this can be done without materially increasing the cost of building, if thought and care and common sense are brought to hear in the renewed easily.

#### LEGAL INTELLIGENCE.

BUILDERS CLAIM AGAINST EXECU-ORS OF LORD BURTON—M. Edward TORS OF LORD BURTON—M. Edward Polisik, ore of the High Court official referees, commenced, on Tuesday, in Court No. 2 at the Reyal Courts of Justice, an action in which Messis. Henry Whiles k and Co., church thanks to Day 12 to Street. Wolverhampton, so Little recover the balance of £5,500 for the July 2. Chad's Church at \*Horninglow, Burton in Trent, for the late Lord Burton, the defendents in the action were Hagnet Georgina. Downger Lady Burton, Rangemore, Burton on Trent, Mr. John Arthur James, Grafton Street. c tract error for which was £19.559. The defends term the action were Harriet Georgina. Downger Lady Burton, Rangemore, Burton on Irent: Mr John Arthur James, Grafton Street, Lend, in M. John Gretton, M.P., Emissioner Gardenes, London; and Mr. John Lambuck, Statter Road, Burton on Trent, joint executors under the will of the late Lord Burton. Mr. A. A. Hudson, K.C., with Mr. Disturnal, K.C. and Mr. Leshe Scott, K.C., with Mr. Giblions and Mr. Leshe Scott, K.C., with Mr. Giblions and Mr. Bethune, was for the defendants—the action involved an enominous mass of details, the idealness occupying four bound volumes of from 100 to 270 pages each.—Mr. Hudson, K.C., in his opening, sail the claim was upon two certificates given by the architect under a bailding contribet. In 1904 Lord Burton desided to find a cauch at his own expense, and the designs were made by the late Mr. Gosenze Frederick Bodley, R.A. The designs having been approved of, it became necessary to form a contract. Then it appeared that a Mr. Conclinian who approved of, it became necessary to form a contract. Then it appeared that a Mr. Conclinian who approved of giving linimover to successed to have his name inserted in the specification for the nurpose of giving linimover to successed. Mr. Grover was the quantity sirvey r who prepared the quantities for the purpose of the tee does. Various modifications in the glaintiffs tender had to be made to bring the purpose down to the figure which Lord Burton was prepared to pay, Lord Burton had, in the meantine, prepared the foundation for the church by his own men independently of the planntiffs, and this some what delayed the work. The contract was entered into in November, 1916, and the contracts were only able to start work in May, 1907. Directly after work was started difficulties arese with Mr. Conclinian, who was engence to Messey, Bass and Co., as to the entered into in November, 1915, and the contractors were only able to start work in May, 1907. Directly after work was started difficulties arose with Mr. Couchman, who was engineer to Messrs, Bass and Co., as to the quality of the stone, and that on two or three or assents stepped the work. Mr. Cecil G. Hare, Mr. Bedley's partner, had the immediate charge of the work, and he disagreed with Mr. Couchman in his condemnation of the stone. These distorts resulted in difficults and delays These distincts resulted in difficults and delays, as a fresh quarry had to be opened to procure the stone required. Not only did Mr. Cone iman assume great powers in reference to the stone, but he also made consideral le alterations in the place. The church was entirely of stone, for distinctions and the consideral control of the distinctions of the characteristics. stone, but he also mane considerate anergamens in the plans. The church was entirely of stone, faced inside and out, and he gave extraordinary instructions as to how the work was to be carried out. He was an engineer, and the result was that it was an engineering instead of a church job. Matters were, however, smoothed over to an extent. Ford Burton died in February, 1993, and Mr. Palley in Ortoher, 1993, After Lord Burton's death Mr. Conchman again raised difficulties but ultimately the work was completed in Mry, 1999. It should have been fixed a claim to the trastors for the interference so for as the condemnation of the case the Court would not be troubled. Mr. stone was a corned, but with that next of the case the Court would not be troubled. Mr. Grover, the quantity suverence to do up the work of valuation for the first so of the extras, and they are ented to £1.72. Mr. Combanin had been invited by Mr. Grover to at and the valuation, but he did not arranged to take done anything. Directly the voluntees to take done anything. Directly the voluntees was made, however, Mr. Combanin before two takes to take definition again, and in the result of Aral 1911, the blunteff obtained a cert fixet for £3.560 and upon that confidence to a rise was brought. the drive of clined a cert hate for £5,500 and upon that cornifects the etion was brought. It was not known from the con espandence that Mr. Can amage had taken agon bimself the duties of quantity surveyor, but if ex knew row that dishe tes were occurring between Mr. duties of quantity surveyor, but if ev knew row that dish to swere occurring between Mr. Grover and Mr. Concinnational between Mr. Gretton and Mr. Hare. It appeared that in the end Mr. Grover was induced to revise his valuation, and he reduced it from £7,790,198, 9d. to £6,618,7d. The second valuation was made without any reference to Mr. Willcock. In the meantime, plaint if and from pressing for navment of the £3,519 contined by the architect but not a penny of it had they been able to 20%—Mr. Hudson, K.C., continued his eventral speech on Wednesday.

nearly the whole of the day being occu pied in reading correspondence between Mr. Conchinan and Mr. Cecil G. Hare, the architect, and Mr. Conchinan and Mr. Concuman and Mr. Conchinan and the architect, and Mr. Conchinan and Mr. Glover, the quantity surveyor. He remarked that Mr. Conchinan appeared to have been tempted to interfere with the work Mr. Leslie Scott, K.C., for of construction. Mr. Leslie Scott, K.C., for the detendants, objected to Mr. Hudson mak-ing slapdash observations, but said he would ing slapdash observations, but said he would have something to say on that matter later on. In regard to the correspondence with Mr. Hare, Mr. Scott said he supposed that gentleman would be called by Mr. Hudson, Mr. Hudson said he was not going to call min, as he was defendants' witness. Mr. Scott said he would not call him. During the course of the action on Friday the learned Refores said it snowed to him that the past. Referes said it seemed to him that the position of the case was that defendants were entitled to show, if they could, that what were called "extras" really represented were called "extras" really represented work done within the contract. Mr. Hudson K.C., said he did not dispute that. The Referee said the defendants, on the plead represented Ir. Hudson, ings, were not entitled to say that the work claimed to have been done was not done, claimed to have been done was not done and they could not say that those things claimed as extras were not authorised. Mr Hudson said that those were his points Gibbons said he agreed. except with recard to the second point. The Referee said in his opinion the question whether the work the discontained and the work of the pleadings, the only paragraph which could have raised it having been struck out. Mr. have raised it having been struck out. Mr. Couchinan, who was apparently there during the whole of the time, did not in his affidavit say that the work was not done. Mr. Gibbons, K.C., applied to be allowed to amend the pleadings. Mr. Hudson, K.C., objected, as the amendment would result in a further delay of the long-tending trial. The Referee said he felt bound to allow the amendment to be made upon conditions. After an adjournment, Mr. Gibbons said that having been unable to get into communication with either of the executors he was in the position of not being able to say whether or not he would be prepared to ask whether or not he would be prepared to ask for the amendment. The case accordingly stood adjourned until Monday in next week, the 25th inst., upon the understanding the the defendants paid the costs of the day.

the defendants paid the costs of the day. WOOD FLOORING CO v. TRAVELLER.—Mr. Verey, one of the High Courts Official Referees, concluded on Friday the hearing of the action brought by Mr. William Barry Greger, trading is the Zete Wood Flooring (Stratford) Company, against Mr. A. S. Hesford, a commercial traveller, of Victoria Road, Stechford, to recover £1974s., balance of account for work done and materials supplied. The claim was admitted, but defendant counter-claimed damages for alleged breach of agreement, for less of commission, and for the expense of several visits to London made by the direction of plaintiffs. The admission of the debt threw the ones of proof don made by the direction of plaintiffs. The admission of the debt threw the onus of proof muon defendant, who alleged against plaintiff that he had failed to afford the necessary information to enable defendant to ascertain the amount of work done by him and the commission due. The Referee found there had been a settlement in September, 1913, and there had been no refusal to allow defendant to have access to the books. The defendant had failed to prove his case, and there would be judgment for plaintiff on the claim and counter-claim with costs.

-Messes Carrero and Hastings, Boston, Messes, have compileted plans for the chemical laboratory of the Johns Hopkins University at Homewood, Baltimore

Mr. W. Ingham, formerly water engineer at Terquay, now chief engineer to the Rand Water Board, has been elected as president of South African Institution of Engineers.

Witer Board, has been elected as president of 1.8 suth African Institution of Engineers.

The Postmister General has presented to the Cur. Cornoration for the Guildhall Maseum a number of the Roman antiquities including turner curs of Samian ware and fragments of Samian porters and painted plaster—recently found at the site of the old General Post Office. St. Martan's leGrand.

On Samelay week the Bishop of Winderster increased week the Bishop of Winderster increased the consecration ceremony of St. Cuthhert's Church, Copnor, the fifth of the six new churches provided for out of the Bishop's £50,000 Portsmouth Six Churches Find. The church cost £11,000 of which Medican Harrison, of Petersfield, gave £96.6, in addition to the organ and some entique panelling for the sanctuary. Mr. E. Starley Hall, M.A. A.R.I.B.A., of Bedford Square, W.C., was the architect.

### Currente Calamo.

Probably the capriciousness of the effects of the bombs discharged over the "five areas" in last Wednesday's Zeppelin raid will have surprised most of us who have had the opportunities of examining the scenes of destruction more closely than the general public. It is difficult to say more without specifically pointing to instances of what we mean; but it is obvious that in any future attempts to modify construction with the view to rendering buildings bomb proof this will have to be taken into account seriously; and, moreover, that it will be as necessary to study the dangers to our roads, and the gas and electric mains, and other services beneath them, as well as those to our structures. As regards the latter the latest developments of German barbarism have suggested ideas which we shall endeavour to explain next week, which may be suggestively useful, and which we should he glad to see criticised by others. The matter is a pressing one, and might well engage the attention of architects and engineers and those who are responsible for invitations to them to communicate then ideas to the various professional institutions, the paper-lists of which, so far as we have glanced at them, scheduling not a few other things that can very well stand over till more tranquil times.

In a letter to manufacturers, Mr. Lloyd George says he is encouraging a scheme for giving a short course of training in technical schools to applicants who undertake to work whole time in munition factories on the completion of their course. He says:—"No attempt will be made to produce skilled engineers, and the training given will differ materially from the ordinary educational training given in technical schools in normal times. The whole object of the Minister is to have a certain number of people who would otherwise be entirely unskilled taught the use of tools, and to have them trained, as far as the equipment of the technical school permits, in performing a specific mechanical operation. Such men and women would still be at most semi-skilled workers, but they should be far more useful recruits in a munitions factory than workers who have never used a tool. Every effort will be made to select for training men of intelligence, and only those who are likely to make satisfactory munition workers will receive a certificate at the end of the course." The idea is rather vaguely stated, and as only men ineligible for military training are to be selected it would appear that they must be handicapped, either by age or physical disqualifications; but we must wait and see what the proposed " short course " is before saving more.

Several members of the House of Commons are determined to ventilate the grievance which has been caused by the recent decision of the Treasury to dismiss the whole of the temporary staff of land valuers. It is recognised that very little has reached the Exchequer as a consequence of Mr. Lloyd George's excursion into land-taxing in his Budget of 1909, while it has cost very much more than any resulting revenue has been worth. That, however, is not the fault of the temporary staff, all of them skilled men in the work and engaged under the implied understanding that the tax had "come to stay," and some quitting other positions in which they were established so as to secure what so many desire, a position under Government. As it is alleged that, in cases of which details can be furnished, unmarried men eligible for the

<sup>&#</sup>x27;An interior perspective of a chanel in St. Chad's, Hornenglew, appeared in the Britishs. News for June 2, 1305.

Army are being retained in this particular ser vice, while married men ineligible for the Army have received notice of dismissal, the Financial Secretary to the Treasury is to be questioned on the whole matter.

Under the scheme for assisting architects and surveyors whose practice has been brought temporarily to a standstill owing to the war. to which we have previously referred, four applications for survey work have been granted in the Manchester district and one in Laver pool. The main objects of the Laucashne sur vey are-(1) To promote the health of the community, (2) to improve the commercial fac, lities of the county; these boons being pri marily sought by means of more open spaces and better means of transport. The hon director for Lancashire (Mr. L. P. Abercrone bie) is being valuably assisted by Mr. Isaac Taylor (Manchester). The idea is a practical and timely one, and we heartily commend it to other authorities.

The trouble caused by landleads raising the rents in munitions areas, first heard of in Glas gow, has extended to London. Vigorous pro tests are being organised, and tenants' profeetion societies are being formed in many dis tricts. Mr. Lloyd George's promise of an immediate inquiry and his statement that the Government will, if necessary, take powers to deal with the situation are not much believed in! Mr. James Rowlands, who taised the matter in the House, and has forwarded some details of increases to the Prime Minister, states that rents are being raised all round in the London munitions area—in some cases by as much as eighteennence a week. The owners of a large estate in Canning Town hase sent their tenants a demand for an extra sixpence a week, accompanied by a formal notice to quit. Tenants who make difficulties are being forced to leave to make way for more accommodating persons. At Dartford, where the housing problem is specially serious, Judge Parry has intervened on the side of the tenants by refusing to grant ejectment orders. He has laid it down that if landlords want to turn out tenants who are munition workers they must appear themselves and give their reasons. The plea of agents and owners in most cases is that they are compelled to raise the rents in order to meet the new Budget burdens. Others allege that mortgagors are raising the interest on mortgages, and then there is also the extra cost of aircraft insurance. At the bottom of the whole matter, of course, is the present dearth of houses all over the country.

An interesting and sensible proposal for honouring the fallen was made by Mr. George Kirby (the York Museum curator) in the course of a lecture last Wednesday. Mr Kirby said the ordinary statue and tablet memorial should be superseded by designs conceived from a lofty patriotic impulse, and which would at the same time serve some useful purpose. He suggestel noble buildings, suitable for advancing arts, sciences, chemistry, crafts, manufactures, machinery and various other industries, as well as leeture and concert halls. They should be majestic in design and artistic in embellishment, selected from competitive designs suitable for local requirements. They should represent scenes and subjects of hero'sm and battlefield bravery, chiefly (for York) gallant deeds done by sailors and soldlers of York battalions and individuals. To advocate the battalions and individuals. To advocate the provision of several small and useless memorials would be to throw away money. To drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures are drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as the imminent danger drastic measures as

loyalty and sacrifice of present day e tizens and meritorious memorials of the brave defenders who suffered for the honour of England, frome, and Empire, Wivery heartify endorse the riba - Far better than frittering away tonals on the stock memoreals of the mason's yard, and other poerdithes, would be the co-operation of all the actin the erection of really useful and creditable memorials of the appreciation by their fellow countrymen of the heroism and self-scriffice of the Emperc's heroes

In yesterdiy's Donly Telegraph, in timely and interesting article on " Venue Proserved." Sir Clinte Phillips describes the precautions that have been taken to protect St. Mark's and the other treasures of the city and trenehantly contrasts them with the apparentindifferences from own authorities to the possible fate of some of our own great monaments. Wirit, he asks, have the guardrins of Westmarster Albey done? In the centre of Henry VII 's Chapel the great tomb of Henry VII and his Consert, by Torriginio, still remains utterly exposed, and it is, more over, encircled with a venitable forest of most inflammable woodwork, in the shape of carved and tretted stalls, with all their accessories and the decaying barmers which project from them. What the explosion of an incendency bomb here would men a we leave to the inergunation of our realers. It would very possibly entail the destruction not only of the whole chaps, but of the whole Aldsey. And then there are in the choir of the main church tombs even more precions to England; a group of Royal sepulchres which are without parallel at present in Europe. Are we to attend absolutely nothing to protect the Sheine of Edward the Confess of the tombs, so precions artistically as well as historically, of Henry III., of Eleanor of Castile, of Edward I., of Philippa of Hainardt, of Edward III., of Richard II., of Henry V. of William de Valence and Aylmer de Valence? Are we to look on impassive and inert, leaving it to Fate to decide whether a most precious heritage of the Auglo-Saxon race shall be utterly ruined and obliterated? Are we here again to be told to "wait and see" await, it may be, some hideous catastrophe, some awful enveloping destruction by licking tongues of fire of all that we hold most precious, most vital as a record of our country's greatness?

He appeals forcibly to all interested, to all concerned, to make themselves heard, " Let them speak, even if there be no comfort in their words; let them speak, even if it be to confound us. Have the universities no word to say on such a subject as this; or the Royal Academy; or the corporate bodies of architects; or the British Academy; or the time bonoured societies for the promotion of art and seterce? Why do the Society of Antiquiries the National Art-Why do the Collections Fund, the Burlington Fine Arts Club remain mute and officially unrespon sive". How fittle will their activities appear in the future of now, at this moment of supreme anxiety, held back by trivial considerations of routine and etiquette, they are content to look on as mere spectators while risks are run which may result in irreparable disaster. The men in authority who, through irresolution, through lack of courage to take the initiative and throw down merely

and in the e-teem of the fellow country men, will be held to have betrayed a most sacred trust, and their great refusal will be recorded against them, and for ever remain bered in fatterness, by their boother."

### Our Illustrations.

AINTED DECORATION IN THE COUNCIL CHAMBER OF THE INSTETUTE OF CHARTERED ACCOUNT ANTS, MOORGATE PLACE, E.C. PAINTED

AMAS, MORIGIATE TRANSPORTS, 18, by the pair of large have a partial view canvas hedded on alls. The motif of the morphists the door "Science Bringing Objects Commerce"; walls. is "Science Bringing Octor to Commovee"; of the one over the doce. "The Tramph of Law." The architectural background is more or less a repet too or the architecture of the Council or the architecture. more or less a repet ton of the architecture of the Council Channeer. Figures about life-size. The rest of the decoration is painted directly on the wall. There exer at top is filled by the signs of the Zelhac. The four pendentines are in guisalle—dustice. Prudence, Wislam, and Truth. Over the bust of the Queen is a treatment of the Royal Change field. Charter of the Institute. The accompanying plate has been reproduced from the beautiful water colour shown at the Royal Academy Exhibition this year by the artist, Mr. George Murray, of 10, Girdlers Road, W.

XHIBITION HALL, AUSTRALIA HOUSE, ALDWYCH AND STRAND, EXHIBITION

The Exhibition Hall occupies the central portion of the ground floor. It is intended for the display of the produce from various States in the Commonwalth. The hall is in itself one of the exhibits, as its walls and floor are of Australian marble. Throughout Throughout the building Australian marble and woods are being employed in the interior finishings, general plan of this important stone building. now advancing on all four siles, was given in The Bullding News on July 4, 1913, imme-Jiately prior to the laying of the foundation-stone by the King. We also then gave a general perspective extensor view from the Strand, looking north west, where the Gladstrand, nooking north west, where the Gladstone statue stands, on an island west of St. Clements Dane's Curreb. The architects are Messrs. A. Marshall Mackenzie, LLD., A.R.S.A., F.R.L.B.A., and A. G. R. Mackenzie, F.R.L.B.A. The builders are Messrs. Dove Brothers. The section below the accompanying view of the Calcium Language. accompanying view of the Exhibition Hall is secondarying view of the Exhibition than is very interesting, as it shows the columned lantern rising through the floor above, with gallery round, giving light, and adding a flav architectural effect to this mornimental interior, with its vaultings carried by de-tached columns and piers below a very massive entablature, in one consistent order throughout.

### ST. PETER'S, ROME, FROM THE STRADA DELLA MURA

This charming pencil drawing by Mr. Fred Richards was hung on the line in the "Black and White Room" of the Royal Academy this year. It forms part of the set of illustrations of "Rome" in Messrs. Adam and Charles Black's "Artists' Sketch Book Series," and the high standard of these little handy and artistic volumes may be gauged by the merit of this example which we have reproduced from the original pic we have reproduced from the original pic-ture placed at our disposal by the owners of the copyright and the artst. The book devoted to "Rome" comprises twenty four similar studies, all of which possess the quality of heal atmosphere, and their access quality of feed atmosphere, and their accessories are fittingly sub-reduced. The sub-released, without being over-upd acts of, have the charm of freshness of view of the unassumingly handled and delineated with precision without pandering to the popular parade of the ordinary guide-book. Each drawing is valuable as a portrait, and all are considerably more interesting than photographic reproductions. Notwithstanding their great reduction as compared with the

tary's reen ir colonnaded frontispiece which asks the tagade as built in 1500 from the Program of S. Pretro. The dome was elected during his lifetime, but the landern survivous tine great cupola remained to a limithed after his death, and this was likely est in accordance with Michael Angelie's pains. The choir end of the list edral appears still very much as he ies gived it, and a reference to a former classification given by Till Bullious Kilws of this front may be useful as showing the front may be useful as showing the psidal treatment perhaps more clearly psidal treatment perhaps more clearly than the present study. We refer to the freely fravin pencil sketch lent us by Mr. Walter Keesey, A R C.A. when he was Fravelling Student of the Royal College of Art. It appeared in our issue for August 25, 1911. The point of view he adopted was rather remnon, being chosen to illustrate the capora and chapels as seen from the hell to the rear of the Pontial Busilian, and for that reason the pleture possesses pot are possesses a special interest. The capital little pocket book on "Rome." to which we are directing attention to day, teludes a sketch of St. Maria di Loreto trom the Piazza Venezia. It will be remenabased that there are two churches on the north side of this open space. That on the fight, shown as "Del Nome di Maria." 112) t. shown as "Del None di Maria," was begun in 1507 by Antonio da Sangallo was begun in 1507 by Antonio da Sangallo, jour. Trajan's Column, of course, comes it's the picture though another plate is very fuely devoted to its individual illustration, and necessarily shows the same charch beyond. A very scholarly drawing a given of the Partheon, the only ancient state of preservation. Its lustary is familiar, and readers will recall the enument fact of its consecration as a Christian church by Pone onsecration as a Christian church by Pope structure as a thristian curren by cope B andace V in 609, after which time the structure was known by the ecclesiastical arise of "8". Maria Rotonda," The Castle of St. Augelo, one of the most tamiliar obwets in the city with its well known bridge approach reeds no more than a passing men tion by way of alluding to another of Mr. Fred Richards' sletches, and as showing Bermin's statues of angels standing on the baston piers. Though these figures in themselves are somewhat indifferent as examples of the plastic art, they really do look extense, the plastic art, they really do look extense, the in sharp perspective leading open Hadrian's Tomb, in contrast to which they turnish a beatting foil and serve which they timish a behtting foil and serve to show the value of heroic sculpture. Plate 7 gives a tiver view of St. Peter's, and in the maille of the pattice or us the spandrel to the leafter and a girder bridge over the Tile. The address these first heat can be girder bridge over the cities of the service of traff, by the touch of The Procedure recognity is moderated with at the southern recognity is moderated with at the southern for the art stock table pencil. No 9 is a charman record delegatifully to decay the solumn Procedure of The Universe Temple "I near the record of we also admire very much has shot best fittens, and we also admire very much has shot best at the record of the Temple of clost read Principles of the Temple of a decay and to be 2 the object to one of the most beautiful at a week for procedure of the most beautiful at the Temple of the Temple of the force of the draughtsman. In If the tare as torse of the draightsman. In a line it may be set down that the indicationary was dedicated to the memory of the by Digitary ADD 34 and we have the serial the stall of the set of the serial the stall of the set of the serial terms and which the stall of the set of the serial terms and substitute that and shadow. The stall terms of the left terms of the Temple of Wesseless has a Serial terms of the Addiction of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms of the serial terms the fair or tores of the draughtsman. 15 BU are, or either their discussion of the third that the third in the control of the North Control of the North Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of could be those the control of an energy grand. No descript a subscied, do the best for the confit of an energy for of an energy for the best for the subscieda for the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the first form the firs do do consider that an advantage

All the same it is very convenient to have ready to hand a tew dates for reference on the spot, and these might quite well have been added to the index of plates without increasing the bulk of the volume, and so avoid the necessity of carrying about an ordinary "guide" in the pocket in addition to this sketch book.

#### ST. GARRIEL'S CHURCH, PLYMOUTH,

The nave and aisles of this church have a cently been finished. The drawing shows the complete effect after the erection of the The site is a sloping and irregular one, which has permitted the erection of a large parish hall, as well as vestries beneath the main fabric. The staircases and ap-proaches to the upper floor will form an item of interest in the whole scheme. tect is Mr. W. D. Caroe, M.A., F.S.A., F.R.I.B.A. The drawing now reproduced was in the Royal Academy this summer.

#### HISTORIC BUILDINGS DEMOLISHED BY THE GERMANS IN BELGIUM: AN OLD GABLED TIMBER HOUSE IN YPRES.

In our journal for October 6 last we gave two sketches made in Ypres and lent us the artist, Mr. Robert C. Kennard, as illustrating examples of the characteristic architecture and old domestic buildings of that tamous and beautiful, but now ruined, Belgian town. During the past year the place has been reduced almost to a veritable heap of ashes. Now only a few runs are still standing here and there to emphasise the vandalism shown by the relentless bombard-ments of the cruel German invaders. Their wanton disregard for historic architecture and their murders of civilians, young and old alike, are abundantly manifest wherever their armies have gone. It is not necessary to say more on that self-evident page in the history of this war. In all previous wars in which the Germans have taken part they invariably, as in 1870, displayed a similar barbarity, though never before on so large a scale. We printed a few particulars about the subjects of Mr. Kennard's artistic and excellent studies before published as above mentioned. There is not much to add about this typical timber-framed old house, with its picturesque timoer-framed old noise, with its jucturesque gable and oversailing stories. In all likelihood the building has entirely perished, and most probably it burned to the ground very quickly. The steps in front lead down to the entrance borway, placed at a considerably lower level than the side walk. The artist says he knows nothing of the history of this house. The sketch depends entirely on at architectural character, which gives it much interest, though the effect of the building was by no means improved by the adjacout modern business premises, part of which necessarily comes in the picture.

#### LION'S HEAD WATER SPOUT FROM GIRGENTI, SICILY.

to the National Museum at Palermo there is a special gallery, known as the Sala delle Metope, and in this room are housed most of Metope, and it this ream are nearest most of the prime treasures of that exquisite and valu-able collection. These chet d'ouvres comprise the far raised Metopes from three of the Dorre temples of Selmanto, All these examples belong to the earliest period of Dorie sculp-ture, and the oldest of them must have been carved soon after the foundation of Schius, n.c. 623. They are strongly conventional and stiff in treatment, but their chief interest conists, popularly speaking, in the fact of their ists, popularly speaking, in the fact of their hords since of the most ameant attempts extant in composition, as well as striving after are expression of 15c and movement. In this since gallery are preserved several noble fragments of lions' heads and the 1 kc from Humon. We give to day a fine fold detail daving, executed on the spot in red chalk, horing a splendfid water spout lion's head It was sketched from the original ost index of the council that it is a smooth from Gazenti, where once stood to general Greek city of Acragas, founded by don't from Gazenti, where once stood to general structures there to day may still be found the remains of a series of temples, and I kewise the Tomb of Theron.

The foods head thus illustrated came from Government Beard for sanction, which was refused or greeness (it comes to be covernment Beard for sanction, which was refused or greeness (it comes to be covernment Beard for sanction, which was refused or greeness (it is not be found to the found the remains of a series of temples, and I kewise the Tomb of Theron.

one of these temples, and we are indebted to Mr. Alick G. Horsnell for this sketch, The same collection contains two celebrated Etruscan rams' heads in bronze from Syracuse. One and all of these things are powerful conceptions, bold in form, big in their sense of scale, and admirably suggestive for modern monumental buildings. They belong to the mythological family, "well worthy to carry Phryxus and Helle." This lion's head carry Phryxus and Helle." This lion's head detail, on its merits as a design, will be much appreciated by our readers, because it is a beautiful specimen of fine conventional conception, based upon exactitude of treatment, at once recognised as being in direct contradistinction to the feeble naturalesque tions prevailing pretty generally till lately among modern sculptors and designers of architectural metal work, both at home and disoud

The Madras Government have secured the services of Mr. H. V. Lanchester, vice-president R.I.B.A. for town planning. Mr. Lanchester is due in India this month, and has been engaged till March, 1916.

The Government have acquired the freestone quirries of Corschill, Annan-the largest free-stone quarries in the South of Scotland-which have been in the occupation of Messis, Murray and Sons for fully forty years.

The seventeenth list of Members, Licentiates, and Students of the Royal Institute of British Architects who have enlisted in the Army or Navy for the period of the War gives a total to date of 45 Fellows, 339 Associates, 174 Licentiates, and 216 Students.

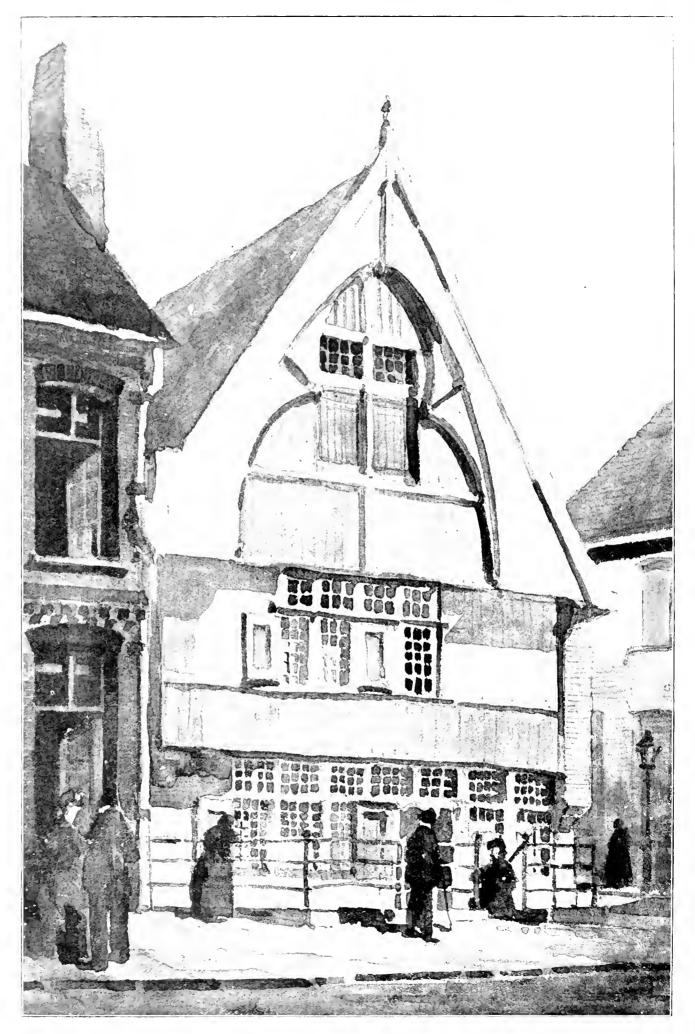
A report has been submitted to the Manchester Corporation Finance Committee on a scheme for the provision of cooling water at the new electricity generating station at Barton. Sanction has been received to the borrowing of £10,750 and £4,730 in connection with the new station.

The new buildings of Cheshunt College, Cambridge, were occupied last October, but on account of the war there was no formal open-ing ceremony. The Governors, however, have ing ceremony. The Governors, however, have now arranged for an opening commemoration on Tuesday in next week, the 26th inst. The debt on the buildings now stands at about £4,500.

In connection with the opening of the Edinburgh College of Art for the winter session, it is announced that 202 members of the staff and students are serving with the colours, fortyone of whom hold commissions. A fair pro-portion have already seen service at the front, and of these twelve have been killed and seven-teen wounded. One student who held a travelling scholarship is still interned in Germany.

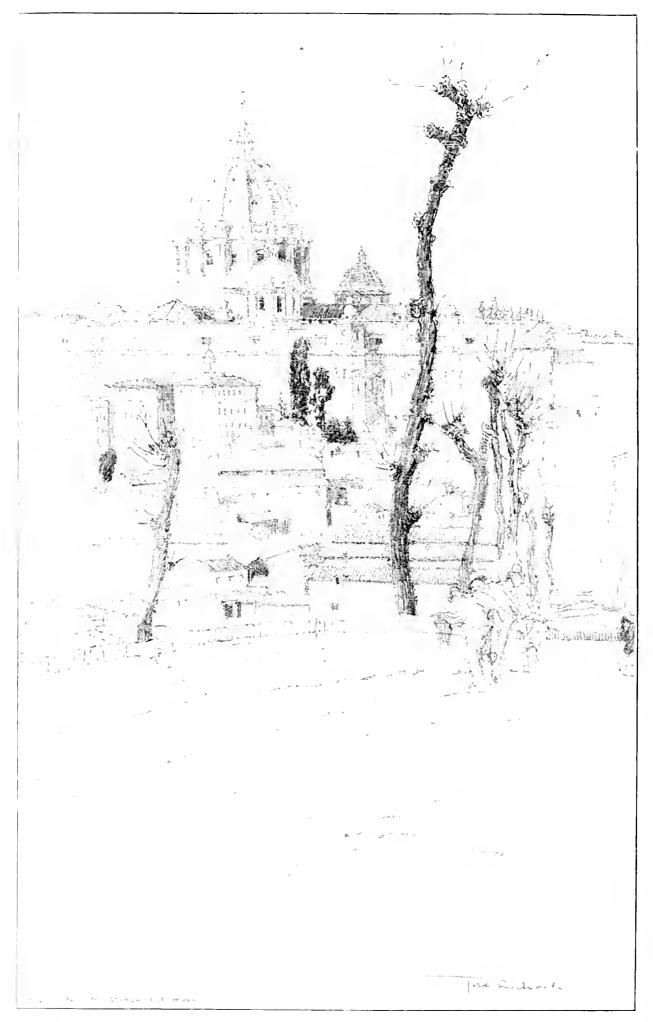
The railway in Aleska which the United States Government is building runs from the States Coverament is building runs from the deep-water point of Seward in Resurrection Bay to Fairbanks, a distance of 471 miles. The first seventy-one miles were built by the Alaskan Northern Railway Company, now defunct, and the Government bought that section for £3.200. the Government monght that Section 120,220 a mile. The line is now being reconstructed, and it is hoped to open the first thirty-four miles this year. The dock that belonged to the Alaskan Northern Company will have to be largely rebuilt.

It was reported to the Metropolitan Water Board at the meeting on Friday that the work of laying an independent main from the Forris Green reservoirs to the three engines at the new pumping station at Fortis Green, together with a sump pit and pipe chambers, and the new pumping station at Fortis Green, together with a sump pit and pipe chambers, and the laying of two 2f in delivery mains to connect to the mains laid under the G ear Northern Railway for future use on completion of the Fortis Green pumping station, has been completed at a total cost of £5.635 about £936 above the original estimates.



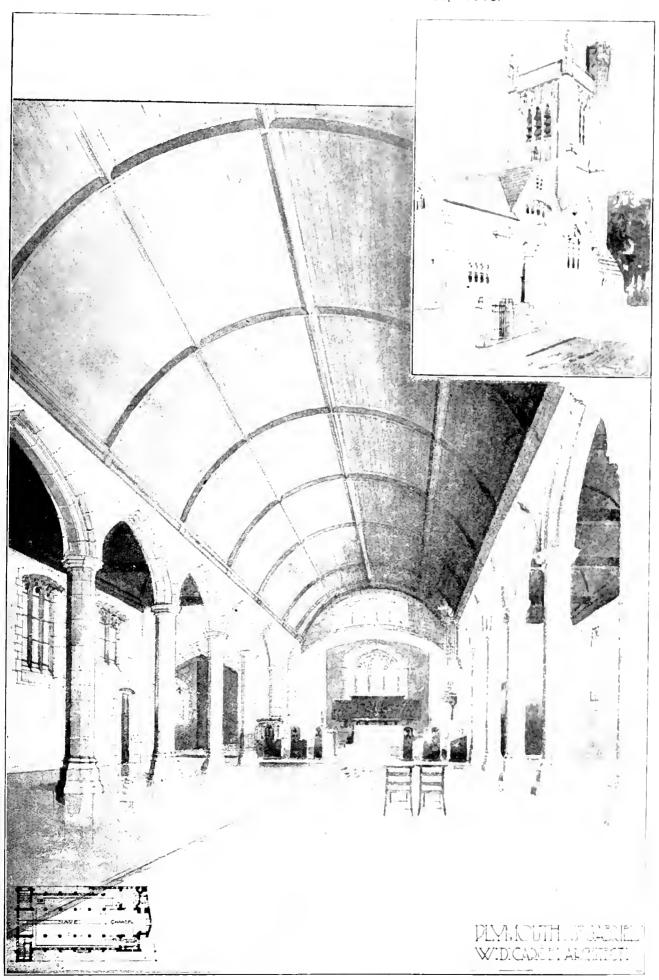
HISTORIC BUILDINGS IN BELGIUM, DESTROYED BY THE GE MANS: A TIMBER HOUSE IN YPRES, Sketched by Mr. Robert C. Kennard.





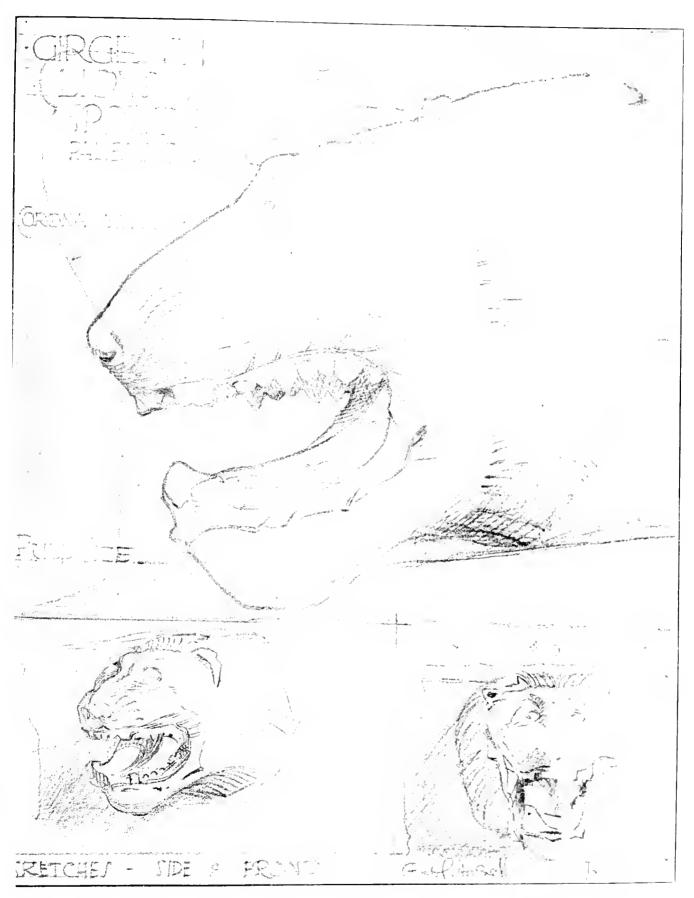
ST. PETER'S, ROME: FROM THE STRADA DELLA MURA.—Drawn by Mr. Fred Richards.

From "Rom - Artists Sketc. book Series. By permission of Messers. A. and C. Black.)



CHURCH OF ST. GABRIEL, PLYMOUTH: INTERIOR LOOKING EAST. Mr. W. D. Carde, M.A., F.S.A., F.R.I.B.A., Architect.

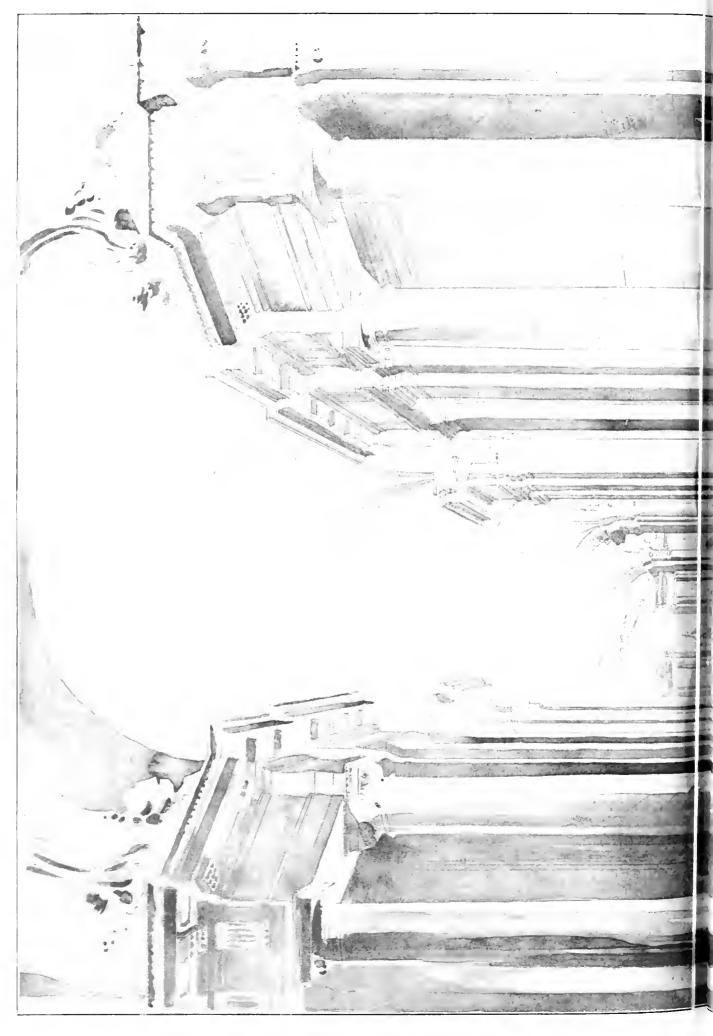


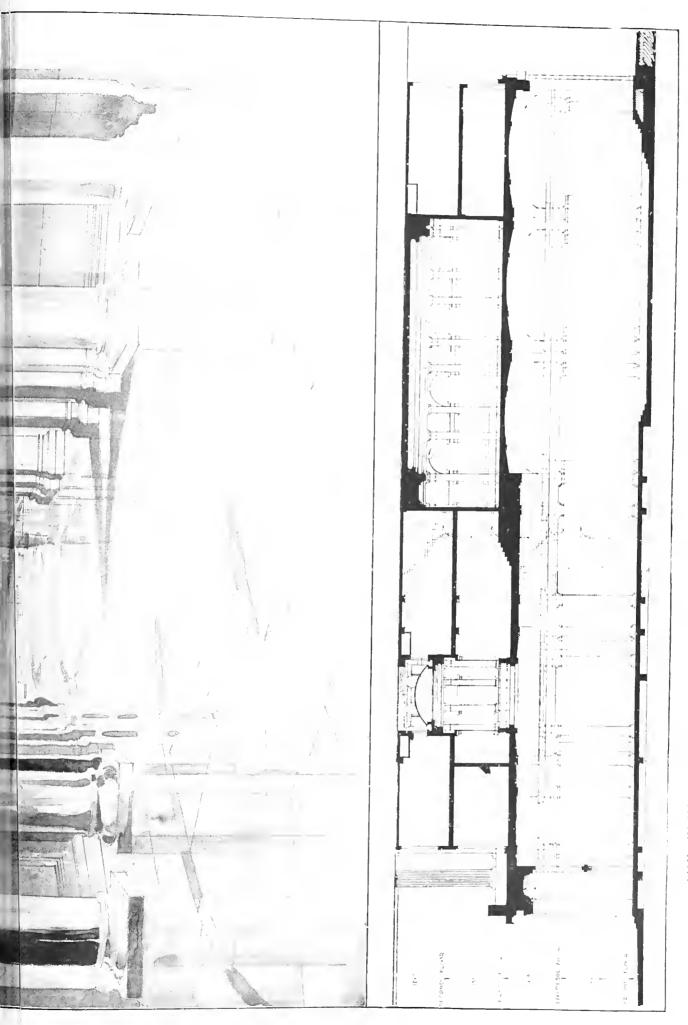


LION'S HEAD WATER SPOUT, FROM GIRGENTI, SICILY: SOANE MIDALLION AND TRAVELLING STUDENTSHIP SKETCHES IN ITALY, By Mr. Apr. G. H. Sa. J.







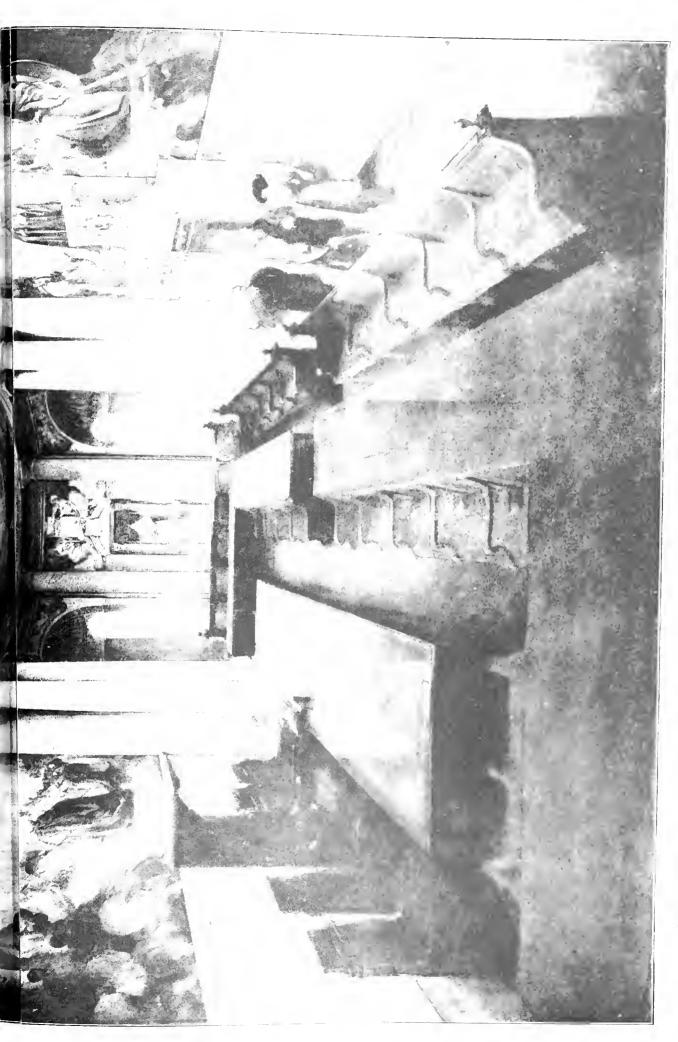


THE EVIIDATION HALL, AUSTRALIA HOUSE, STRAND, LONDON, W.C.: ALEM AND SECTION NOTES AS MERCHANISTICAL ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, ALEGA, 18. A. Mershari, Machashi, LLab, A.R.S.A., F.R.L.B.A., and A. G. R. Machashi, F.R.L.B.A., Architects,

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THE BUILDING NEWS, OCTOBER 20, 1915.



#### PROFESSIONAL AND TRADE SOCIETIES

BRISTOL SOCIETY OF ARCHITECTS The opening meeting of the session 1915 1916 took place on October 11, when the president, Mr. Graham C. Awdry, F.R.L.B.A., held a conversazione at the Restaurant, 6. Royal Promenade, Clifton. In the mahogany room a collection of drawings submitted by members of the society in various architec tural competitions was exhibited, and retrish ments were served. An interesting and in-structive address was delivered by the presi dent, after which a programme was rendered in which the following took part :- Mr. C. G. Skinner, piano solos; Mr. Charles Bernard piano solos; Mr. J. Foster Wood, F.R.I.B.A. Charles Bernard piano solos; Mr. J. Foster Wood, F.R.I.B.A., readings; Mr. T. S. Davis, recipitions; Mr. John Bevan, Lic.R.I.B.A., violin solos; Mr. H. J. Cavell, songs. A hearty vote of thanks to the president, proposed by Mr. W. S. Skimmer, F.R.I.B.A., and seconded by Mr. T. H. Weston, F.R.I.B.A. was carried with acclamation. A most enjoy able evening was spent, and the proceedings terminated shortly after 9 p.m.

EARLY EARTHWORKS AT CHARL TON.—An examination of the scant; remains of a once extensive earthwork at Charlton has been made by the British Archeological Association, by the countesy of Sir Spencer Maryon-Wilson, Bart., the free holder, and Mr. E. Gilbert, the lessee. paper on the subject was read to the members on Thursday by Mr. F. C. Elliston Erwood, the director of the excavations, who pointed out that the remains constituted the only fragment of early earthwork in the County of London, and they were being gradually destroyed in order to obtain sand for casting and glass manufacture. earthworks, which probably covered an area of  $17\frac{1}{2}$  acres, had now dwindled to about three acres, and had been reduced by at least one-half since Professor Flinders Petrie surveyed them in 1870. The remains indicated a quadrilateral enclosure sur rounded by a double bank and ditch, crowning an eminence overlooking the Thames. The excavations revealed the existence of a settlement of Romano-British culture, period of habitation ranging from the middle of the first to the middle of the second cen-The objects found indicated a community dwelling in wattle and daub huts, engaged in agriculture, weaving, and perhaps metal-work. No evidence of military occupation was seen. Among the various finds were two coins of Claudius, two fibulæ -one of second century type being enamelled in white and blue-loom weights, quern frag ments, a supposed fire-bar, similar to but larger than those discovered in the Essex hills, and a large quantity of pottery fragments of the first two centuries. objects were on view, and also two complete vessels found on the site in the course of quarrying in 1906.

GLASGOW INSTITUTE OF ARCHI-TECTS.—The quarterly meeting of the Glasgow Institute of Architects was held on Wednesday last, Mr John Watson, F.R.I.B.A., presided. The president ex-plained the proceedings which had taken place in regard to regulations for contracts for building works in Scot'and and stated that the proposed regulations issued by Sir G. R. Askwith would be considered at conference to be held in Edinburgh to day (Wednesday).

INTERESTING DISCOVERIES AT URI CONIUM.—At the annual meeting of the Shropshire Archæological Society at Shrews bury, last Wednesday, an interesting report was given by Mr. Bushe-Fox, director of the excavation at the Roman city of Uriconium, Vroxeter, near Shrewsbury. Mr. Bushe Fox Wroxeter, near Shrewsbury. Mr. Bushe For said they had uncovered about two acres There were the remains of many houses super imposed one upon another, the cather ones of wattle and daub being similar to the half timbered houses common in Shropshire in the present day. They dated back to between 75 and 120 A.D. One large dwelling-house and rooms heated with hot air, fine mosaic navements in different colours, and hot, tepid, and cold bathrooms. One of the most striking points about this building was the

dramage system. From a range watermain running down the street side channels passed through the different houses, having mouths taised 7 m. or 3 m. above the level of the main. There were sluce gates at intervals, so that when the stater was mised in the main their field. it flushed out the drains in the houses and carried everything away to the R vir S verii. The excavations already made proved almost conclusively that the town was abandoned about the year 325. They had not found any evidence that the end of the town was a massacre, nor that the town was buint, as was generally supposed. Some of the objects found dated as car y as 50 v.b. Among many interesting objects found were conducted of breoches, some beautifully made; a very fine clasp knife, carved hone; and two exumsite cameos.

MANCHESTER SOCIETY OF ARCHI FECTS—The Caendar of this incorporated society has just been published. It contains the annual report of the Council for the the annual report of the vouncer for convear 1914/15, which shows an aggregate membership of 271, v.z., 113 Fellows, 111 Associates, and 42 Students, a decrease of one on the previous year. The sylladius is given of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture in control of the School of Architecture nection with the Victoria University of Man-chester, which has as its director Professor chester, which has as its director Professor A. C. Dickie, M.A., F.S.A., A.R.I.B.A.; on the Advisory Committee the society is represented by Mr. Pani Ogden, F.R.I.B.A. and Mr. F. B. Dunkerley, F.R.I.B.A. The opening meeting of the session of the society was held at Canada Chambers, 36, Spring Gardens, Manchester, on Wednesday even mg. A collection of working drawings, lent by Messrs, J. Gibbons and Son, were ex-libited, discussion being invited. The usual presidential address will not be delivered this year, the syllabus for the session being as follows: November 10, Mr. J. B. Gass. Gus year, as follows: November 10, Mr. J. B. Guss, F.R.I.B.A.; paper, "Athens and Some of the Isles of Greece" December 8, Mr. C. E. Elcock, F.R.I.B.A.; paper, "The Necessian Converge 12, Mr. James E. Elcock, F.R.L.B.A.; paper, "The Necessity for Proportion." January 12, Mr. James Brown; paper, "The Builders' Point of View," February 9, Mr. I. Budden, M.A., A.R.L.B.A.; paper, "Originality in Architecture," March 3, Mr. J. A. M. Hunter, Lic.R.L.B.A. The scheme of prize competitions for the session is left over for future consideration.

R.E.B.A. EXAMINATIONS: DISCOY TINUANCE OF THE PRELIMINARY. The Council of the Royal Institute give not.a that the Preliminary Examination of cands dates for Registration as Probationers will be held probably for the last time next month. The Regulations which will come into force after its discontinuance will be published as soon as possible.

R.I.B.A. Phoblems IN DESIGN,-The galleries of the R.I.B.A. not being available for exhibition in consequence of their being devoted to the work of the civic survey of Greater London, the Council of the Architectural Association has kindly offered accommodation for the bi-monthly exhibitions of the problems in design. The exhibitions will be held on the following dates at 18, Tuftor Street, Westminster - November 5 to 15, 1915; January 10 to 15, 1916; March 6 to 11, 1916; May 8 to 15, 1916; Jaly 10

SANITARY INSPECTORS: MEETING IX NOTTINGHAM A meet of of the Derbyshire, Lerestershire and Nottinghamshire branch of the Sactary Inspectors As sociation has been he'd in the Guildhall, Not tingham. At the business meeting the war, both in relation to enlistment and sanitation, both in relation to enlistment and sanitation, came in for careful consideration. The chairman, Mr. J. Fondinson, Long Exton. reported that 25 per cent, of the members of the Widland centre had poined the colours. The necessity for a continued in crease to his Majesty's forces, especially in regard to similarly services, was fully appreciated, and although the members did not wish to appear in patriotic, the feeling was evident that it would be economically and morally wrong to deplete the stiffs of the local authorities to such an extent as to leave them unable to effectively carry out their Mediael Angelo, and Reminandt to "Instrate duties. For the purpose of obtaining a bis thesis that behind mere representation clearer understanding as to the position of there lay the idea inher at in the pairter, different contents of the pairter, different contents of the pairter of the pairter.

the samiters in perfectors, it are is seed that the samility inspectors, it was respect that the Ceneral Cours to discuss a sure most at make an appear to the local Concernment Board for a statement on the matter. After the meeting Cours floor A. B. Cate in clear man of the Nithelliam Corporation Homing Committee gives a lanters with the second control of the same and others, the property of the same chart and staters, the property of the same chart and staters the property of the same chart and staters. visited in the tareneous.

SCOTIASH ACCLASIOLOGICAL SOCIETY On Saturday attended the Saturday attended the Saturday strength of the proceeding of the year by visiting two churches in the neighbourhead of Leighbourh Co. Markett by the strength of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the saturday of the chinches in the neighbourhood of radiance 2. At Mills rull the party was received by the Rev. John Mills Beth. B.D., min. ter. it Newton, and conducted through the fields to the Old Kirk of Newton. Mr. Ma Beth. 2 (vo. ton, and confined through a super-Old Kirk of Newton. Mr. Ma Bett, give an interesting account of this beach, 2, of which only the tower new remains. It was founded in the twelfth century is sept. founded in the twelfth certains (i) spit where it should be out of sight of siman highlation. After the Retornal (i) it right to be a poinsh of in swar dispose from in 1563.4 it was authoritatively declared to so. By 1593 it was in a rank is so dispose and though afterwards reported it closed to be otherwards as and though afterwards reported it closed to be otherwards.

and though atterwards reported at cased to be the place of worsh pefor the ratio 1742, when a new church was in.

The old churchyard has been errored upon, but a number of tember ares of more the graves. A cordial vote of the rest of Mr. MacBith was accorded, on the motion of Europe of Couthrie. By permission of the Dane of Burclench, the searty enpoted a walk through the grounds of Dalyesta Protection of the trees were in tall autumn because of the Caledonen Forest were made of the Caledonen Forest were made at the me views of the Esk and of the remains of the Caledonian Forest were greatly allomired. The party was then met by the Rev. W. A. Dunnett, B.D., musister of Dulgetti, and conducted to the church, inspected the ruined chancel, and listened to be slipt versions. and historical account by Mr. Thomas Ross, LL.D. On the motion of Sr.Junes B. Your P.ud, M.V.O., Dr. Ross was that yell for his

PAULS ECCLESIOLOGICAL SOUTETY. The following meetings of the society will be field during the autumn at the Chapter House, St. Profs, E.C., at the Chapter House, St. a control on Wednesdays at 8 p.m.; October Monasticism in the Greek and sian Churches," by the Rev. November of 13. Salar Greek and sian Churches," by the rees and Robinson, S.S.J.E.; November 1 19 Oxford Movement and Its Effects Churches, "by Cletton Kelly ext. F.R.H.s.'s November 17, "Ameliorite Cl.S. by Vet. D. Sharp; Dozember 1, S. nov. rees, North West Kent," by F. Reg. T. and Dozember 15, Care S. by t. R. 6 1 Arres December 15. Care's," get We alward, MA

THE NATURE OF THE ART OF PAINT ING A lecture under this tet has been finday exercing by Mr. A. C. 2000 B. before a large and encount of Mo-Art Gellery, Mr. Lamerce Hart of The lecturer did not discuss the M. pointing, but took points a the visual arts, and went his work, and to the behalfor. M showel that, whole the behalf his conit was not great only by reason it was not 2r at only by to set that it reproduced to set the set in call of our nemoty of board for it work at the good and set was this can describe that the board for it is such as the board of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of the set of t thing more years, we to accept the closely connected in character and what the artist remisents has a contracted anything which we had a use the so, in looking at patiens of a clear our mirel of pions sees a what of Constable, for restarce, I ing a landscape to end as unit condition of it what he had been defined their action. The lecturer cited examples, as in a tend in

1 45 1 1 a personality, reflective of him t heressarily attractive to others,

THE SOCIETY OF ARCHITECTS special continuency of the Society of Architects was held at 28. Bedford Square, on Thursday evening list. The Prisident Mr. E. C. P. M. (son. F.R.I.B.A., F.S.I., occupied E. C. P. M. (Son. F.R.I.B.A., F.S.I., eccupied): (1996). The solutiments' report on the election of the its and council for the session 1915-16 was passed by the president. E. C. P. Monson, F.R.I.B.A., F.S.I., London; An Presidents, 'Elicial Sadgrave, F.R.I.B.A., London, and A. Albay, H. Seutt, M.R. San Inst., Louis, P.St. Piesidents, 'Albert E. Pridmore, F.S.I., London, and 'P. rey. P. Thibs, F.R.I.B.A., London, and 'P. rey. P. Thibs, F.R.I.B.A., London, and 'P. rey. P. Thibs, F.R.I.B.A., London, Hon. Treason, "J. H. Gibert A. Harrison, London; Hon. Treason, "Gilbert A. Harrison, Oxford; Memores," (Gilbert A. Harrison, Oxford; Memores, Connedlerg teen scats, (wenty-one L'array, 'Gilbert A. Harriso Mercors (Coungal eig tegriscats, Mercie's (Council et al. Martison, Oxford);
Mercie's (Council et al. Mercie's (Menty) Adams, Milist C.E.,
F.S.L. L. adam, George Bames, F.R. I.B.A.,
L. et al. P. M. Beaumont, A.M. Inst. C.E.,
M. J. J. A. Bowden, London; B. D. Can
et al. Wachester; Edward Crothney, Newestic at Tyn.; George E. Dickens Lewis,
Abevstwith: 'Illabort O. Ellis, London; G.
Blan Imme, London; T. Stewart Inglis, London;
G. Blan Imme, London; T. Stewart Inglis, London;
G. Blan Imme, London; 'Charles E. Sal
men. Regate; 'Ned D. Sheffield, London;
'Chirol J. Taylor, Bath; 'B. R. Tucker,
M.R. Sar List., London; and 'Thomas Walles, London, An asterisk (\* signifies reselection datger (\* change of office). No obseret al. Edward (\* signifies reselections level; freed on the report, it was resolic to et al. the adapted and entered on the
min stes. Vet soft thanks whe bassed to the
estimal mariers of the Conneil and to the twenty-one Something in mices of the Council and to the Somethin and staff for their services. Five mit it are to membership were announced.

THE SURVEYORS INSTITUTION.—
Orang to the effect of the war upon the number and standard of excellence of the competitors, the Council have doubted not to offer the Institution Scholarships during the oming year, and the usual examination Jambary will, therefore not be held. tollowing papers will, provisionally, be read of the ordinary general meetings held at the lest them on Mondays, at 8 p.m., during the first part of the session :-

the first part of the session:

N. v. 24, 1215.
Case Law under the Finance Acts, by
E. M. Konstam Barrister-at-Law.
English Timber Indistries and the
War, b. M. C. Duchesne, Fellow.
Tan. 24, 1216.
And C. Breiter and State of Town Planning, b. Mr. C. P. Slater, Fellow.
Accepted Principles of Town Planning, b. Mr. W. R. Davidge, Fel ow.

The Local Government Board has, with the consent of the Treasury, sanctioned the borrowing by the Hull Corporation of £47,252 for war-rworks purposes.

On account of the difficulty in obtaining money from the Public Works Loan Board, Civdebank Town Council have decided to relinquish their municipal scheme of workmen's dwella,2 houses

The new phthis is pavilion at the Hford Isoarde, Hesteral Chridwell Heath, has been the research of the place were prepared at Mr. H. S. aw, the silveter to the Urban District Control of Liferd. The cost is estimated at £1250.

To Code Navigation Trustees have agreed one of the man for the extension of the common form of the extension of the common time of the adjoining farm hand on the of the adjoining farm Land on the of Renfrew Road, and Laving off the same estimated as the

rectionts have been made for the cre-Let us seen church on a site in Darke Lat by Rischen church on a site in Darke the with St. J. hr.s. Chinch. The Bank strikes we first works in the venity of the bars works in the venity of the strikes of the premises were sold as the strikes to \$1.2 C. Plans have here we first the election of a building so that the twin serve as a temperaty with when the permanent church is the converted into a parish from the converted into a parish from the converted into a parish from

### Buildina Intelligence.

BRISTOL. - The reconstructed market was opened on Thursday by the Lord Mayor of Bristol (Alderman Swaish). The reconstruction has been rendered necessary by the purchase by the Great Western Rail way Company of two fifths of the site of the market for the purpose of extending their accommodation at Temple Meads Station. The work has been carried out from plans prepared in the City Valuer's office, and an icr the superintendence of Mr. Peter Addie and the mambers of his stalf. The area purchased by the railway company is being The area walled off, and the remainder has been laid ort arresh, with the result that there is morsovered assummodation than formerly now tavern and bruking premises have been built, and also a covered sale ring and overed pennage for cattle. At the sale ring crescent shape I gallery provides accommo lation for buyers or spectators, while in the troot part of the building suites of offices for anchoneers have been arranged. A new overed pennage for sheep is being built just mside the boundary wall of the railway com The floors of the market are of cen crete with roughened surface. The whole of the new buildings are of Cattybrook brick the new buillings are of Cattybrook brick with Broseaey tiles, and the contractors are Messrs, Walkerdine, Limited, of Bristol and Fierby. The covered cattle penning is the work of Messrs, Garliner, Sons, and Co., Limited, of Nelson Street, Bristol; and Messrs, Stock and Collings, of the Albert Iron Works, St. Philip's, supplied and erected the cattle pens, sale ring, ornamental entrance and stable fittings. gates, and stable fittings.

> -COMPETITIONS.

SACRAMENTO, CALIFORNIA — The competitive pluns for the Carnegie Public Lorary, to be built in Sacramento, Cal., were on Monday in last week, the 11th unst. The City Commissioners appointed as the assessor their inspector of buildings, Mr. W. B. Rohl.

Mr. Albert D. Jenkins, the city land steward and surveyor, of Liverpool, has returned to duty after a prolonged illness.

The new Wesleyan day schools in Ribbleton Avenue, Preston, Lunes, built at a cost of over £4000, have been formally opened. Mr. F. Howarth was the architect.

The names of Mr. William Davidson, architect of Ellon, and of Mr. James Burnett, beilber, of Drimonk, have been added to the Commission of the Peace for Aberdeenshire.

In connection with the northern relief sewer for Acton, W., an amended scheme, prepared by Mr. Binnie, has been referred to the Sewerage and Drainage Committee of the Urban District Connell for their consideration. The cost is estimated at £40,000.

The foundation-stone of the new Church of the Blessed Sacrament, Copenhagen Street, Caledonian Road, N., will be faid by Cardinal Bourne on Saturday, October 30, at 3 p.m. A parish hall is in course of erection, and will be under the church. The cauch is to be ready for opening in the early part of next year.

Mr. W. J. Corker, clerk to the Omagh Town Council, has been granted a clessing order in respect of houses in Castle Lane, which the on it spect of a fixes in Castle Lane, which the unchical officer of health, Mr. J. J. Todd, stated were damp, were without windows, and the sewage ran in open pipes at the doors, whilst the area all round the houses was a mass of

The Cambridge University Press are issuing rise v imbridge University Press are issuing, is a compinion work to his recent "Roman-sque and Byzantine Architecture," Sir Thomas Lackson's "Gothne Architecture in France, England, and Italy." Many buildings that have suffered during the wur, such as the Cathedral of Rhams, fall to be described and III a region of his swa volume. Harried whis two volum -

Mr. A. W. Brightmore has held a Local Government Board inquiry at Pembroke Dock with respect to an application of the town contact for authority to borrow £1.742 for water-supply purposes, including the construc-tion of new works in the parish of Carew. Par-ticulars of the proposed works were given by the town clerk and the borough surveyor.

### Trade Aelus.

WAGES MOVEMENTS.

BIRMINGHAM -Negotiations that have been proceeding between the master builders of Birmingham and the Amalgamated Society of Carpencers and Joiners have resulted in the employers agreeing to pay one halfpenny perhour as a war bonas to the operatives in Birmingham and distinct the operatives in Birmingham and distinct the operatives. hour as a war bonus to the operatives in Birmingham and district who are not receiving such a bonus or its equivalent. This will mean a weekly advance in wages of from 2s. to 2s. 6d., and by the concession, which comes into operation on October 24, from 7,000 to 8,000 men (bricklay es. carpent es., plasterers, masons, labourers, and navvies) will be allected. The arrangement will remain in force until three months after the war. Councillor Saunders, the secretary of the society, suggests that the workers should still press for the payment of a bonus of a penny per hour, and for the deletion of the claus? "To terminate three months after the war." As we announce I in our last issue, the employers have granted a similar bonus of 2d, per hour to the builders' labourers in the city. in the city.

in the city.

CONTINUED DECREASE OF UNEMPLOYMENT.—In the trades compulsorily insured against unemployment—viz., building, works of construction, engineering, shipbuilding, vehicle-making, etc.—the percentage of unemployment at October 1 was 0.91, as compared with 5.11 a year ago and 3.45 two years ago. These figures relate to the whole of the United Kingdom, and include all unemployed workmen in the insured trades.

WICES IN WAR TIME—The Roard of

WAGES IN WAR TIME.—The Board of Trade Labour Gazette publishes an article on the advance in wages during the war. This states that the advance which began in 1910 and reached its culminating point in the first half of 1913 was followed by a decline in wages in the metal and mining industries and by a slackening in the advances in other industries. In the first seven months of 1914 the net effect of all the changes recorded was a decrease in of all the changes recorded was a decrease in wages of nearly £13,000 a week. After the outbreak of the war, however, owing to enlistments and an active demand for war require ments, employment became very good, and before the end of the year a considerable amount of overtime was being worked, and in amount of overtime was being worked, and in several trades complaint was being made of a shortage of labour. Concurrently the prices of food and many other necessaries rose. In these circumstraces a movement began at the beginning of 1915 to raise wages. This movement, which in most cases took the form of houses, or of increases in rates of wages limited to the dration of the war, first became evident in the trades most directly concerned with the output of munitions and the transport of troops and supplies. From March onwards, however, it spread to nearly all the principal industries, and its effects have been far greater than those of any other upward movement is wages previously recorded. It is estimated that during the whole period under review about four and a half million workpeople have about four and a-half million workpeople have had their rates of wages increased by over £750,000 per week. In the organised trades in which the numbers affected are ascertained by the department from the parties concerned in arranging the changes there have been is crosses reported amounting to £494,000 per week in the rates of wages of over 2 800,000 workpeople, an average of about 3s. 6d. per head.

#### TRADE NOTES.

Boyle's latest patent "Air-pump" ventila-tors have been applied to Allerton Weselyan Chapel, Bradford, Yorks.

The Wholesale Co-operative Society's architect (Newcastle) reports that the water tower connected with the new West Hartlepool Co-operative buildings has been made waterlight by using Pudlocal coment.

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The Trefreca College, Talgarth, which has been restored at a cost of £2,000, has been formally opened. Mr. Griffiths was the archi-

In consequence of the war and of the need for economy in every direction, the construc-tion of the new offices of the India Govern-ment in Karachi has been indefinitely post-

A new Chirch of the Covenant is to be built at the corner of Brondway and East 27th Street, Paterson, New York, at an estimated ontlay of \$125,000. The architects are Messas Lee and Hewitt, of 1,123, Broadway, New York.

### Our Office Table.

The Committee for La Maison de Dieu, 45. Salisbury Square, E.C., of which Mr. Douglas Pepler is one of the hon, secretaries, has started a fund to present wooden churches to Cardinal Mercier to take the place of the churches which have been destroyed in Belgium, and which cannot be rebuilt for a long time to come. It is proposed that these struc tures should be made by the Belgian refugees, and started either in Holland or France. They would be made in sections, bolted together and used by the refugees in their temporary homes until the time came for them to return to their own country, when they could be re-erected on a concrete platform, and would last as long as they were wanted. Donations may be sent to Monseigneur de Donations may be sent to Monseigneur de Wachter, Bishop's House, St. George's Road, Southwark, S.E.

Facilities for the study of designing in steelwork and remorced concrete are provided on Thursday evenings at the L.C.C. School of Building. The advances made in structural engineering and the L.C.C. new regulations for reinforced concrete have created a growing demand for young engineers and architects with practical training in the theory and design of structures. The class is conducted by Mr. R. Graham Keevill, A.M.I.M.E., M.C.I., and affords opportunities to those desirous of instruction on practical lines.

According to the annual report of William Williams, Commissioner of the Department of Vater Supply, Gas, and Electricity of the City of New York, for 1914, the Street Lighting Bill for 1915 will be \$400,000 less than for 914. A goodly portion of the saving is said o have been effected by the use of pitrogenilled tungsten lamps in place of the arc lamps. The former are being rapidly introduced ver the city In 1set, before the end of the ear it is expected that 15,000 gas lamps will e replaced by the electric incandescent lamps. in interesting comparison between the relaive cost of operating nitrogen-filled tungsten imps and are lamps is presented in the folowing figures: 300-watt nitrogen-filled tungten lamps cost \$70.00 each a year to operate. hile the 400-watt lamps cost \$77 00. ost of operating are lamps was \$85.00 each; reduction of \$5.00 having been effected in ne course of the current year.

The City Council of Coventry met speci-ly on Thursday to deal with the scheme, orked out by the Housing Committee, the linistry of Munitions, and the Local finistry of overnment Board, for the erection of 600 overnment Board, for the crection of 600 puses for munition workers on land near toke Heath, just outside the borough mits. The site of fifty acres will be rehased at £200 an acre. The cost is timated at from £150.000 to £200.000. It the Ministry of Munitions will pay e corporation about 20 per cent. on what ch a scheme would have cost at pre-war ices. Mr. Poole, chairman of the Council ousing Committee, said it might have ousing Committee, said it might have en thought that the fact of so many n having gone for h as soldiers would ve reduced the need for more houses, but tat had not proved the case, and the unble was greater now than at any other riod. The houses to be erected were to l, in the first instance, for munition orkers, and held by the corporation in the usual way; but the committee recognized that there must be quicker methods to the corporation must have financial aistance from the Government. He would that the scheme was to by any means the last word in borning has been provided at once. The committee rected an alternative of temporary account addition, on the ground of ultimate waste all their confidence that Coventry was gang to be, in the future, a much more inortant armament centre that it had been hereto. Mr. Grant said he thought the Gernment allowance should be on the bis of 33½ per cent. on pre-war prices, as alDudley. Alderman Batchelor contended the provision should be made also for the 2,00 or 3,000 women about to come to cerection than ordinarily prevailed, and to the corporation must have financial asistance from the Government. He

Coventry for amministing way council adopted the committee recommen dation. It is expected that the centration will be at work in the corner of a fort might.

The Town Country of Dudley extring in committee have formulated a report of an important scheme for providing arosans dwellings at a total estimated expenditure of \$2100,000. The report states from the amount had considered a alrestic. that the council had considered correspondence from the Local Government Board inviting the council to build at once 366 houses in the borough, subject to a grant in-aid from an important Government Department representing a material part of the additional cost of building at the presentime. They sent a deputation to concet with officials of the Board on the subject. with the result that a final offer of a free grant of 25 per cent, of the cost of the buildings and 10 per cent of the rost of the made to the rouncil. The committee and accepted this ofter, subject to the coance approval. The committee recommended that a housing cheme be prepared forthwith, with the assistance of the officials of the with the assistance of the officials of the Local Government Board; that application be made to the Local Government Board for east for the Loriow the proportion of the cost of the scheme, ucluding the land, to be borne by the council, and that application be made to the Public Works Loan Commissioners for a loan of the propor tion of the cost of the scheme, including the land, to be home by the council. It is proposed that the whole council in committee act as a Housing Committee for the purposes of the proposed scheme.

The Borough Engineer of Kensington has. says a writer in the Engineer, prepared a Much scheme to repair roads economically road improvement is necessary, but munic. palities will not be able now to secure loans for costly repaying schemes. The borough en to secure loans gineer some time ago experimented with a concrete carpet over the macadamised roads. and was delighted to find that it served its purpose admirably. The carpet not only purpose admirably. The carpet not only spread the weight of the Leavy modern motor vehicle fairly evenly over the foundation of the road, but also did much to absorb shock. Now this process is to be adapted to certain wooden roads which are in leid condition. He proposes to deal with an experimental length of roadway by removing the wood and converting the foundations into a concrete road. The existing foundation will remain. but will be reinforced by a layer of bitu minous concrete, over which a wearing sur-face carnet of concrete will be placed. It is face carpet of concrete will be placed computed that such a reinforced total will last as long as a completely may road, but the cost will be only one-third of a new

It is announced in a supplement to the London Gazette that the King has been giacionsly pleased to confer the Military Cross en Lieut, William Harold Hillyer to student of the Royal Institute of British Architects the Royal Institute of British Architects and a member since 1901 of the Architectural Association), 3rd London Field Cov., R.E., T.F. (attd. 171st Mining Co.), "For conspicuous gallantry and devotion to duty in mining operations at 'Hill 60' near Ypres, between 2nd and 17th April, 1915. The tisk of completing and charging on of our mines was one of ment difficulty and strain. Licent. Hiller of great difficulty and strain. Lieut, Hillver worked and watched lone hours at the end of a gallery 165 ft, long and 3 ft, by 2 ft, 3 in, in

to advise these to the potential of and to bring them to tour, with a tide craftsmen. The A station is fitted as strong a science to expend a play d with our Albacky guithern one both and tournet work by British excitation at the presentation to cookera tournet at thorities in the su mod of trief. Supply vited which may take the formest of class towards the general fund, or prochessly from annual subscription of 5. Among the section annual subscription of 5. Among the section annual subscription of 5. Among the section annual subscription of the respect to support are Sn. Edwird. Planter. P.R.A. K.C.A.O., Sir Aston W. Ind. K.C.A.O., C. B. R.A.; Sir Wim. Gescombo dohn. R.A. France, G. N. Plunkett, Preference W. R. Lettado, Halsey Ricardo, Lord Herry Cavendrish B. tinck, M.P., Assount Coblinia. Sn. Gry. B. tink, M.P., Assount Coblinia. Sn. Gry. B. tink, M.P., Assount Coblinia. Sn. Gry. B. tink, M.P., Assount Coblinia. Sn. Gry. B. tink, M.P., Assount Coblinia. Sn. Gry. Smittleworth, 28, Prince's Gordets, S.W., and dequies should be made payable to the H. Treasurer of the Civic Arts Association.

"Arithmetic for Carpenters and Barders. thorities in the runed do trot

"Arithmetic for Carpenters and Bu der-by Profe sor R. Burdett Date Lond in Cha-man and Hall, Limited, 5s, 6d, net , is peatheal; and those benefited will find they be learnt a good deal more than ar things wil-they have assimilated it, probably with knowing it.

"Practical Shop Mechanics and Mitter matics," by Projessor James F. Johns (London, Chapmar and Hall, Limited, 4s. 64) matics. net), are evident'y lased on actual shop pase tree, compled with experience in technoid at 4 trade school teaching.

It is announced that no further consideration as to the site for the London University is to be given during the war.

By the demolition of old property w Carli-in the neighbourhood of the Castle, some 22 to of the old city wall has been uncovered.

Professor Sidney Barwise has been elected President of the Association of Managers et Sewage Disposal Works for the year 1915.

New police buildings in Priscot St. or, Liverpool, were formally opened in Monda: The building was designed by the manaci darchitects, and the contract was carried out by Messis, Rimmer Brothers, build is, of Liv.

After spending £15,000 on their sewercze scheme, the urban distric Consoil of Ysto 1 girllars have decided to stop the work in after the war. This step has been taken on the recommendation of the Local Governors.

The rural district council of Aideyl x have appointed Mr. M. Kelly as engineer for the carrying out of the eleventh scheme under the Irish Labourers. Acts for the erection of cottages in the towns of Ballmakill, Durrow and Rathdowney.

Mr. J. Brierley, davis and surv you and; Ar. J. Brierley, days and says and the Shelfield city surveyor, who temp early beft the corporation service in data less y join the Army, has just been to emoted to 6 rank of lieutemant in the engineering unat the Royal Naval Division.

At Gott Buy, on the island of Tire At Gott Bay, on the island of Tire, in a Hebrides, a ferro-concrete breakwater for use of steamers has just been completed is solid for 571 ft, in length, and sheltered is a parapet wall, and beyond this an eten yeldare 250 ft, in length and 12 ft, in wife extends into the sea. Mr G Woulfe Borrier was the engineer, and Messes Kentee. Modifie and Co., of Gliszow, which is tractors.

#### CHIPS.

Rung, District Connect bave M. John Hawken, of St. Merryn,

L. O ver, survivor to the Conway Users District Council of Llan

It is so, out of to the Ledbury Rural Dis-son of the at the last meeting that the sewer-tess to not so the village of Colwall had been injured of the relationship £2,020.

with visit in the avers that while members of Line Variation Department staff have the moreone of dismissal the War Office to achieve engaging outsiders for valua

of a new church at a Sheffeld, has been formally east will be £3,547. Mr. J. D. et Westbaurne Road, Sheffeld, is

stor, and P stwick parish church two boon formally opened. The colour, statistical and carried out sine viscon of Mr. A. Stevenson,

Mr. Charles Murrell, of Albion to the creek cuttinger for West-ek waste and Lamberh, who died on the \$13.510 with new personalty

C Temple, recently district en-Maz (flatpur, has been definitely as samilarly engineer to the cof Biha; and Orr-sa, in place of who has resigned his appoint-

M. A. P. S. at, of St. Helens, as samilary in-strate length inspector of buildings. Mr. Sunt vas in the effice of the surveyor to the Egham line. Mr. W. Menzies) some years ago as threather assistant.

A discourt station and concrete slipway are out to be built in the North Harbour. Frascolar 2h, N B, for the National Lifeboat Listitution, from plans by the engineers to the institution Messis Douglass, Lowis, and Douglass, of Victoria Street, S W.

The sex Workster Connect school in Stanley and was recently opened by the Mayoress of ext. The school has three departments, 202 the accommodation of the city up to 555. It was oath from the designs and under the meadance of Mr. G. Parker, the

A Society so, dos good by the famous French and a Dami, has been presented by the with Marchy of Fine Arisoto Mr. Frank (2005) ARA. The galowis made with a contribute of the presentation to the performance of the presentation of the driver and the complete follows to driver a constant and the following sections.

N. 1. har Geographic Society of Wash-Note the Geographic Society of Washibit in making a survey of com-bet in making a survey of com-less replayed States, is including and other lepting in ortho-building trade in his The Builders' Exchanges of the the bare been asked for information a our z industry in their localities

The epitrof the Deputy-Keeper of the Prior R. Sin Ir land published on Mon-lin and the English of Communication of Conference of the Conference of Lord Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Communication of the Com

A second and the second and the second and the second and the second and the second and the second and the second are second as the second as the second as found at Addition again mean Bertial integer and from a church within a second as the two remains have been proved to be that of the one or good shift of a fine Vizitation of the late Mr. A. S. Laws in, and I be set up at Rocalife, near Boroughing. On the east side are two subjects, one what is David playing before King Saulance, the other Samson carrying away the gates of General The other panels are filled with strainfolding, where seeds with animals and the strainfolding the seeds as to in the uppermest that The ways of shows conventional foliage of the action the uppermest panel. The strainfolding the seeds are in the uppermest that The seather in the uppermest panel. The strainfolding the seather in the uppermest panel. The

Messes, Ramsden and Co, are about to rebuild Warth Mills, Diggle, Saddleworth, from plans by Mr. F. Thorpe, of Oldham,

The Madras Government have sanctioned £35,067 for constructing a pier at Tellicherry and also a wall for preventing the crosson of the beach by the sea.

The constitution of Chescerfield have rec the sametion of the Local Government Board and the Treasury to a loan of £5,000 for providing electricity plant.

The coral district conneil of Shrewshin's have resolved to prepare a town planning scheme for the district of Old Heath, abutting on the borough of Shrewsbury.

Operations on the new sewerage scheme for Lymington have been completed. Messis, Brierley, Holt, and Co, were the engineers, and Mr. H. Preston was the contractor.

The highways and sewers committee of the urban district council of Goole recommend that application be made to the Local Government board for a further loan of £4,000 for works of

The new home of St. Hugh's, Oxford, which was to have been occupied at the opening of Term, is not ready. The students will lodge awhile in Wychife Hall, which has for some time stood empty.

Ar. Joseph Ash, of Leanington and Burning Jenn, zine and galvamsed from online and galvamsed from online and tank manufacturer, director of the Burningham Wagon Co., Smethwick, who con August 1, left estate valued at £165,503.

Lieutenant Richard Newman Somerville, R.E., who was killed in France on the 9th art, was the eldest son of Mr. R. M. Somerville of Osborne Park, Belfast, for many years at the Royal School, Cavan, He was educated at the Royal School, Cavan, and graduated in acts, and engineering at Trinity College. Dublin.

A conference of the urban district councils of Walton, Esher and the Dittons, and East Molesey has decided adversely to the suggestion of the Surrey County Council for the formation of a board of control over the river Mole.  $\Delta n$ on a poard or control over the river Mole. An alternative scheme for improving the course of the river and minimising flooding has been drawn up by the surveyors to the three councils, the estimated cost being about £3,000.

The Glasgow Corporation considered Thursday the position relating to the increased house rents in the city. Proposals were mach to petition Parliament and to hold a local m quiry, but by an absolute majority the Cor-position agreed to forward to the Commisporation agreed to forward to the Commis-sioner appointed by Mr. Lloyd George the whole representations and resolutions received by the corporation for his information.

Mr. Edward Leonard has held an inquiry on hehalf of the Local Government Board into the application of the Carlisle City Council to learnew £9.582 for the purchase of land and the creation of workmen's dwellings. The town clerk, Mr. Collingwood, stated that there were no empty centages in the distinct, and that were no empty cettages in the district, and that a log influx of workers was anticipated in the mear future. Dr. Beard, medical officer of heddth, and Mr. Marks, city surveyor, also gave evidence as to overcrowding, the latter stating that the projected houses would probably be erected by direct labour.

The members of the Church Committee of Holbrook, East Suffolk, are contemplating making certain necessary improvements and making certain necessary improvements and alterations in the fabric of—the church, and arve requested Mr. E. Fearnley Beshopp, architect, of Ipswich, to report upon the matter. He acknowledges that Holbrook Climich at one time must have been really beautiful, but through long years of neglect it has gone down, and some of the modern work is very poor. A large sum must be spent upon the roof, which is in a bad condition. Mr. Bishopp's report was considered, and eventually it was agreed to take up the matter again at the mext monthly vestry meeting.

next monthly vestry meeting.

Colonel Porter, chairman of the Liverpool water committee, briefly reviewed at the last meeting the work of the past twelve months. During the year the total quantity supplied from all sources was 14, 164,575,000 gallons, an increase on the previous year of 343,961,000 gallons. The average rate of consumption per day was 39,733,000 gallons. In accordance with suggestions received from the President of the Board of Agriculture arrangements had been made to reduce as far as nossible the area of land to be planted on the Vyrnwy area during the season 1915-16. The reduced area to be dealt with would be sufficient only for the idunting out of young trees which could not be kept longer in the nurseries.

#### TO ARMS!

#### 4th Battalion ("Architects") Central London Regiment Volunteers.

London Regiment Volunteers.

Recruits are irrectly needed for the Regulars, Territorials, and Volunteers. Intending recriits should apply to Battahon Headquarters, where they will be advised as to the branch of the Service for which they are best suited.

ORDERS FOR THE WEEK, by LHLUT-COL.

A. W. WARDEN.

GENERAL PARADE.

Saturday, 23rd inst., at new Drill Headquarters, Chester House, Leeleston Place, S.W., at 3 p.m. Uniform parade. A full attendance is particularly requested.

requested.

ENTRENCHING.

Wembers who have volunteered for this will receive written instructions regarding hour of parade, etc. The Corps has been asked to carry on this work. Names of members prepared to assist are now required for week commencing Monday, 25th inst., and should be sent to the Adjutant's office, by first post Firday. The arrangements for billeting have proved very successful, and the work is of historiate importance and very interesting.

DRILLS AND PARADES.

"A" Company.—Tuesdays, miniature range, Gas Light and Coke Co.'s premises, Monck Street, Westminster, 5 to 8,30 p.m.

Wednesdays.—Company Parades, 5,15 to 7,15 and 6,15 to 8,15, at Chester House, Eccleston Place, 8,W.

Thursdays.—Some Co.

W. Thursdays.—Signalling at Chester House, See edges from Acting Battalion Signalling Sergeant

Chearlie.

"B Company.—Miniature range and Company Parades as for "A" Company. See orders at local headquarters.

"C" Company.

"C "Company.—See orders at local headquarters, "C "Company.—See orders at local headquarters, Paydron, A.A. Athletic Ground, Borcham Wood, "D "Company.—Platoon and Section Drill at Chester House, Thresdays and Thursdays, 6.45 p.m. Company Parades, Wednesdays, as for "A" Com-

pany.

SCHOOL OF ARMS.

Drill Headquarters, Chester House, Eccleston Place,—Instruction in bayonet fighting, gymnastics, physical drill, boxing, and single-sticks on Tnesdays, from 6 to 8 p.m.

RECRUIT DRILLS.

RECRUIT BRILLS.

RECRITT DRILLS.

"A" Company.—Chester House, 5.15 and 6.15,
Wednesdays and Fridays.
"B" Company.—Dulwich College, Mondays, 8.10
p.m., and Thursdays, 6 to 8 p.m.
"C" Company.—Borelann Wood and Elstree
District, Headquarters, A.A. Athletic Ground, Borelann Wood. For full particulars apply to Alan
Potter, Grey Gables, Borelann Wood, Herts,
"D" Company.—Chester House, Thesdays and
Thursdays, 6.45 p.m.

COLEESPONDERGE

CORRESPONDENCE.

Special attention of members is drawn to the fact that correspondence should be answered by return. If this is not attended to the office work of the corps is immensely increased. Enrolment forms of new members and all correspondence not referring to recruiting for the Army or to financial matters must be addressed to the Adjutant, 10, Conduit Street, W.; and regarding recruiting for the Army, to the Recruiting Officer at Rattalion Headquarters; and regarding accounts and subscriptions, to the Paymaster, W. R. Hughes, 146, Dashwood Honse, E.C. By Order.

By Order, L. R. GUTHRIE, Adjutant, BATTALION HEADQUARTERS, IS, TUFTON STREET, WESTMINSTER, S.W.

#### >000 MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY (To-day).—St. Panl's Ecclesiological Society. "Monasticism in the Greek and Russian Churches," by the Rey.

Society, "Monasticism in the Greek
and Russian Churches," by the Rev.
N. F. Robinson, S.S.J.E., St. Paul's
Chapter House, E.C. 8 p.m.
Frinty —Junior Institute of Engineers, "Safety
Precantions for Transmission
Machinery," by W. V. H. Capps, 39,
Victoria Street, S.W. 8 p.m. Victoria Street, S.W. 8 p.m. Glasgow Architectural Craftsmen's Society, "The Bocks of Scotland" (illustrated), by David Chalmers, 8 p.m.

S p.m.
Syn edyy.—Institution of Municipal and County Engineers. North-Eastern District Meeting at Brighouse. "The Juties of a Municipal Engineer in the Present War," by S. Haywood. 2.30 p.m.

The Local Government Board have sanctioned a loan of £3.327 for a refuse destructor to the corporation of Newport, Mon.

Mr. H. Stringer Jardine, A.R.I.B.A., Turney Road, Dulwich, late of the 1st Battalion London Scottish, has been gazetted 2nd Lieut., 3rd 1st London Field Company, R.E.

Lieutenant E. Stanley Thornton, of the 6th Worcester Regiment, is reported to have been wounded in Gallipoli, and moved to hospital at Alexandria. He is well-known as a surveyor in Birmingham.

Members of the Architectural Association's School of Architecture will be gratified to learn that the late Master, Mr. H. P. G. Maule, F.R.I.B.A., formerly Company Sergeant-Major of the Hon, Artillery Company, has been given a commission and the post of Camp Commandant.

### LATEST PRICES.

N.B.—All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

### TIMBER.

Owing to steppage of supplies all prices have advanced considerably.

IRON. Per ton. Per ton.
Rolled Steel Joists, English
Boiler Dietes Iven
South Staffs
Builders' Hoop Iron, for bonding, £13 5s. to £13 15s. Ditto galvanised, £20 to £20 10s. per ton.
Valvanised Corrugated Sheet from-
gauge
Cast-Iron Columns       £7 7 6 to £9 0 0         Cast-Iron Stanchions       7 7 6 9 0         Rolled-Iron Fencing Wire       8 15 0 9 5 0         Rolled-Steel Fencing Wire       7 15 0 8 0         Cast-Iron Sash Weights       6 5 0 6 15 0         Cast-Iron Sash Weights       6 5 0 6 15 0
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3 io, diameter       £7 5 0 to £7 12 6         4 in, to 6 in       7 0 0 , 7 2 6         7 in, to 24 in, (all sizes)       7 7 6 , 7 12 6         [Coated with composition, 5s. 0d. per ton extra.]         Turned and bored joints, 5s. per ton extra.         Trope       Per ton extra.
Cold Blast, Lillieshall 137s, 6d, to 142s, 6d, Hot Blast, ditto 100s, 0d, 177s, 0d.  Wrought-Iron Tubes and Fittings—Discount off
Standard Lists f.o.b. (plus 2½ per cent.)     Gas-Tuhes
OTHER MFTALS.  Per ton. Per ton.
Lead Water Pine Town fr31 10 0 to
Lead Barrel Pipe, Town
Lead Pipe, tinned inside, Town *33 10 0 , — Country *34 10 0 , —
Lead Pipe, timed inside and outside
Lead Soil-pipe (up to 4½in.) Town *34 10 0 ,, —  Country *35 10 0 ,, —
Gver4in, £1 per ton extra.   17 17 6 , £18 12 6   Lead, Common Brands   17 17 6 , £18 12 6   Lead Shot, in 28th bags   24 15 0   —   Copper sheets, sheathing & rods 100 0 0   101 0 0 0   Gopper, British Cake and Ingot 86 10 0   87 0 0 0   Tin, English Ingots   150 0 0   151 0 0 0   Do., Bars   150 15 0   150 15 0 0   151 5 0 0   151 Lead, in lewt. Pigs, Town   23 12 6   24 12 6   Sheet Lead, Town   31 0 0   —
Genuine White Lead

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# ARTHUR P. COLLINS, Snow Hill, BIRMINGHAM.

Phone: Central 1029. Telegrams: Metalism Birmingham. Bankers: The National Provincial Bank of England, Ltd., Bennett's Hill, Birmingham.

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Plinth and Hollow Bricks, Stretchers and Headers—
5d, each 4d, each 6d, each 6d each 5d, each
Double Bullnose, Round Ends, Bullnose Stops—
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Red Mansfield, in blocks per foot cube	£0	2	4
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Closeburn Red Freestone, ditto	0	2	11
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# GLASS (IN CRATES)

English Sheet	Gla-s:	15 07.	21 oz.	26 oz.	5701.
Fourths		44.1	51d,	53d	7.1.
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VARNISHES, Etc.	Per	gallo	n.
Fine Pale Oak Varmsh	£	0 8	5
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Finest Pale Durable Copal		0.18	6
Extra Fine French Oil		1 1	3
Eggshell Flatting Varnish		0 18	0
White Copal Enamel		1 1	0
Extra Pale Paper		0 12	0
Best Japan Gold Size		0 10	0
Best Black Japan		0 16	9
Oak and Mahogany Stain		0 9	9
Brunswick Black		0 8	0
Berlin Black		0 16	0
Knotting		0 10	0
French and Brush Polish		0 10	0

M) Stephen MacDonagh, B.A. B.E., late professor at St. Joseph's College, Ballingslee, has been appoint d by the Lettim County Council as assistint county surveyor.

At the Manchester Consistory Court a faculty has been grant of to the vicar and wardens of St. Thomas's Church, Pendleton, for lengthening the church by a single bay, laying the new marble fleors in chancel and sanctuary, providing oak reredos screen and panelling, and providing new vestry and porch.

### TO CORRESPONDENTS.

Ve do not hold ourselves responsible for the opinions of our correspondents. An communications should be drawn up as briefly as possible, as there are many camanis up in the space allotted to correspondents.

forresp ndents. It's particularly represent that all drawings and a communications respecting illustrations or laterary rater, by so for review, etc., should be addressed if a last of the Bringwa News, Ethiophan lase, I. Arundel Street, Strand, W.C., and not to subject of the stail by name. Delay is not introduced by otherwise caused. All drawings and other runs ancestons are sent at contributors rasks, and I'd for will in a undertake to pay for, or be hable for unsertal contributors.

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and now work, and good sketches are always welcommonliate subjects, small chirches

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Bound opes of Vd. (VHII are now ready, and should be ordered early quice 12s each, by post 12s 9d y, as only a limited number are done up A few bound volumes of Vods, XXXIX., XIJ., XIXI, XIXI, XIXI, XIXI, XIXI, XIXI, XIXI, XIXI, XXII, XXII, XXII, XXII, XXII, XXII, XXII, XXII, XXII, XXII, XXII, XXII, XXXII, XXII, XXIII, XXII, XXII, XXII, XXIII, XXIII, XXIII, XXII, XXII, XXII, XXII, XX

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# LEPHIES TO ADVERTISEMENTS

Replies and advertisements can be received at the Other I ffingham House, I. Arindel Street. Strand, W.C., free of charge. If to be forwarded under cover to advertise, an extra charge of Sagence is made. (See Notice at head of "Situations.")

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while the system is not one we should use. We VP if the system is not one we should use. We consist that a configuration are cases at the different time of the consist time at which we can work up for the configurations, and there are conclusive.

who gave usivate lessons some of whom advertise in these columns

A Hotshholder. We do not think the conneil can be compelled to lay the sewer deep enough to drain the cellars, but in ignorance of their powers we cannot say more. The best course is for owners interested to combine and take advice can be consistent in importance of their powers of cannot say more. The best course is for whors interested to combine and take advice consisting completent for all sanitary organier, and he is of opinion there is a good case, to appead of the Loval Government Board to order an

TIMITY REMINDER. Architects, builders, and others are reminded that the BUILDING NEWS to now published on Wednesdays instead of Fridays, at 2 a.m., and that it should be obtainable early in the day anywhere. If delay occurrent can be peefed direct from the office on receipt of a charter's subscription, or single contess can be similarly seat to readers in camp or moving about the country.

M: Wilham Morris, M Inst C.E., V.D., late buffered on Thursday last at Buxton in his 80th

We regret to hear that Major Basil Edgar Baily F.R.I.B.A., of the 7th Battahon Sher-Bally F R I B.A., of the 4th Battanon Sucrawood Foresars, and in practice at 44, Parliment Street, Nottingham, has lest his right hand as the result of being wounded in action it F after. He is now progressing favourably in a London hospital.

The old oak lectern which was displaced in The old oak never which was uspaceed in 1845, when an eagle betern was given by "certain College Prefects," has been restored to the chapel of Winchester College. It dates from 1950, and was made by one Howsman, who is decrebed in the College accounts for 1632-85 and Maysman falca lignaria." Howsman fabro lignario.

Mr. J. W. Gilmour Wilson, chief assistant to his father, Mr. W. Gilmour Wilson, of Blooms-bury Man. C., Hart Street, W.C., F.R.L.B.A., who has been for six years a member of the London Scottish, has just received a commission as 2nd Lieutenant in the Mechanical Transport Division of the Army Service Corps.

by twenty-four votes to eight the corporation of Wolverhampton have approved of the payment of an honorarium of 350 guineas to Mr. E. A. V. Woodward, the borough water en gameer, in recognition of his services in assist-ing in the passing of the Wolverhampton Cor-poration Water Act, in spite of stremous ep nosition.

It was reported to list week's meeting of the Manchester Rivers Committee that Mr. Gil-ler Hart, a member of the committee's main draininge staff and now a temporary second henterant in the 173rd (Tunnelling) Company of the Reyal Engineers, had been awarded the Military Cross for conspicuous gallantry and skill in France.

In the new hall of Spurgeon's Orpharages Aspliam Road, Stockwell, a three-light Chaplain Road, Stockwell, a three-light will dow in the transpot, erected as a memor al to the Rev. Vernon J. Charlesworth, for many to its the he burster, will be unveiled rosmoriew (Timrsday) afterneon by the Rev. Themas Spirgeon. The subject is the Go of Shepherd, and the artists are Messrs. Morris and Sons, of Kennington.

The opening meeting of the session 1915-16 of the R aval Institute of British Architects will be field on Monday week, November 1, when the subscript on portrait of Mr. Reginald Blombidt, RA past irrisident, painted by Mr. J. J. Stannon, R.A., will be formally in a vided and present d to the Institute, and the opening address if the section will be delivered at Mr. Ernest Newton, A.R.A., the President.

The death at Stockton Bridge of Mr. Thomas Allen at the age of eighty four removes a well-nown ceramic artist from North Staffordshire He received his artistic education at the National Art Training School at Marlborough House, and after yards at the South Kensington Schools on the contdetion of his training he joined Mests Muitors, and subsequently became art his contact views. Josiah Wedgwood and Sons'. Etrona - He had hyed in retirement at Stock-ton Brook for some years

At the last meeting of the urban district une Lei Macket Harborough if was reported with the soveyor. Mr. Herbert G. Coales, had that the surveyor, Mr. Herbert G. Coales, party prepared a plan in connection with a tewns claiming scheme. The clerk, Mr. H. Lindley, said the general idea of the scheme was that, if the lard was scheduled for townsplanning, one coincil much could say where roads could go and which part of the town could be used for building factories and which could be used for residential converses, and they could limit the name der tial purposes and they could limit the number of houses to the acre. The matter was adfoured to give the members an opportunity of looking into the plan.

# Olivers' Seasoned

Hardwoods.

APPLY TO-

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## TENDERS.

"." Correspondents would in all cases oblige by giving the addresses of the parties tendering—at any rate, of the accepted tender: it adds to the value of the information.

(Accepted.)

BAITERSLA'S For machine-made canvas fire-brigade how for the Metropolitan Water Board:— Angus, Geo., and Co., Ltd. . . £100 0 0 (Accepted.)

Batteesea. For supplying pulleys and wall brackets at the Central Buildings, Battersea, for the Mecropolitan Water Board — smith and Grace (accepted) . . . £178 10 0

Battersea.-For the supply of gunmetal stop-cock, and ferrules, for the Metropolitan Water Board --

Woodhouse and Co., Ltd. .. £412 10 0 (Accepted.)

BATTERSFA.—For the supply of 110 yds, of taped and brand decals, but megodim grads, for the Metro-politan Water Board:— Callender's Cable and Con-struction Co., Ltd. (accepted) 4116 0 3

Bradiord. For supplies, for the trainways department. Accepted tenders:—

nent. Accepted tenders:—
Oxygen (three months):—
British Oxygen Co., Ltd., £1 5s. per 1,000 feet.
Gearwheels and pimon for motor-cars:—
Scholey and Co., Ltd., 200 teol-steel gears a
£7 9s. each, and 200 tool-steel pinions at £1 5s

Philodontii - For repairs and improvements to the starway approach to the council chamber, for the corporation:— Lay, T. E. (accepted) . . . . £115 0 0

(accepted) about ... £1,500 0 0 CHESHUNT. -For the supply of 2-m. broken Guernsey grantle, for the urban district council: — Griffiths, W., and Co. (accepted), at from 148, 3d. to 14s. Ild. per ton, according to place of delivery.

Derry — For the provi ion of cloakroom fittings at the new secondary school for girls, for the educa-on committee:— Ratcliffe, J., and Co., Derby . . . £172 0 0 (Provisionally accepted.) tion

Diss.—For repairing Walcot Road, for the urban district council:— Edwards and Co., Norwich . . . £565 0 0 (Accepted.)

Ensirourne.—For alterations to Durley, The Agence, for the Rey, Sir Peile Thompson, Bart. Ir. S. C. Scalis, architect:—
Bambridge, G., and Son, Eastbourne (accepted).

HAMMERSMITH.—For repairs to boiler at Hammer-muth station, for the Metropolitan Water Board:— Beeley, Thos., and Son . . £85 0 0 (Accepted.)

KINNIGH. For erection of proposed medical residence at Kinneigh, for the Cabireiveen Board of Guardians:

ordians:-Jennings, W., Kilgarvan (Provisionally accepted.) £1.300 0 0

LAMBETH, S.W. - For redrainage, repairs, and decorations to manager's house. Providence Wharf, for the borough council: Collars, S. J., and Sons, 7, Clifton

Collins, S. J., and Sons, c. Chilon Street, Clapham
Pierpoint, R. H., 106, Albert Road, Peckham.
Daley, W., and Co., 58, Birch Grove, Acton
Peddle, E., 156, Hamilton Road, West Norwood (205 5 0 225 2 6 215 0 0 West Norwood Fineh and Co. 48, Budley Road, Ifficed Line, H., 81, Peckham Ryc, 8 E. Line, A. H., 36, Camonale Street, E.C. 179 0 0 167 15 0 E.C. Truscott, R. J., 291, Romford Road, Forest Gate Shaw, S., 18, Grange Park Road, Leyton Jackson, H., 22a, Afred Street, 167 0 0 164 1 2 159 5 0

Boss 

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

# Effingham House

A Bomb-Proof Builde The Engineer a Pract-	lead	denlis	at .			
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# A BOMB-PROOF BUILDING.

Since we last dealt with this matter a fortnight ago, the results of the last Zeppelin raid in the "five areas" have sufficiently demonstrated the urgency of the necessity for modifying our future construction. We know, at any rate, what aerial bombs will do!

An aerial bomb, falling at K, Fig. 1, is endowed with destructive force of impact related to its mass and velocity. On ex

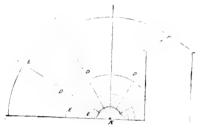


FIG. 1.

plosion it wrecks material and structure in contact. Presumably this force may vary inversely as the cube of the distance from the centre of explosion, as diagrammatically indicated at E, etc. The explosion scatters shell-contents and debris, as shown at D, etc., in rectilinear, radiant lines, obviously under ordinary projectile law. In addition, there is either chance fire, or such by design, as from specific incendiary bombs. Further, from solid objects, such as walls, there must be secondary, reflex air-concussive wave systems, no doubt capable, at times, of blowing in the glass of windows.

Assume an explosive bomb of, say, 50 lb, weight, falling from a height of some 4,000 ft. Under the constant acceleration of gravity, such a hostile missile will arrive at the earth's surface at a velocity of about 500 ft. per second. The limits energy, the investe or invariables kinetic energy—the impact or impulsive force, available for destruction—acquired force, available for destruction—acquired through the fall, taking g 's the force of gravity = 32, and using the old formula  $K = \frac{1}{2} m v^2$ , will be  $\frac{50}{2} \times \frac{500}{32}$ , or

about 195.000 foot-lb., for our purpose-in round numbers, 87 foot-tons. To oppose the mere impact of such a falling mass, we need more than a few slight sheets of wire

We have heard that some of these postile bombs weigh 2½ cwt. It is conceivable that such may be dropped from, ay, a height of 10,000 ft., so the reader an estimate the force of impact. In Fig. 2 we give a diagram, from memory. of something we have seen in one of the five areas." so officially described. A omb impacted on the concrete roof  $C_r$ .

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New Central Offices, Rochety Avenue, E.C., for the Metropolitan Water Bourd, Mr. H. Austen Ha, F.R. F.R. V., Architect.

broke through this and the concrete floor C2, and appears to have impinged directly over a steel joist, J. This joist, we understand, was about 10 m. by 6 in., of \$\frac{1}{6}\$-in, metal. About 1 ft, 6 in. to 2 ft. of that P.S.I. \( \). that R.S.J. has vanished, as indicated at Ks appears to have been wiped out of existence. The joist formed a lintel to an area window, and the explosion has disrupted the brickwork of the area walls a great deal more violently than approximately indicated in our sketch, besides greatly damaging adjoining buildings; and although our sketch may not exactly represent the premises where this bomb fell, the quite undisturbed brickwork here, and its complete disruption there, is in true accord with the peculiar, partial character of high explosive. In all the areas officially described, examples of the destructive forces to be met are numerous. In one a foct of concrete was perforated, and four or five feet of earth thrown out, roofs were blown off, holes made in solid granite in which one may put two fists,  $1_2^i$  to 2-in, iron railings cut clean through, cubic feet of solid masonry | dislodged, to say nothing of other evidences of immense explosive energy that it is the duty of the architect to consider.

When new problems of this sort are suddealy presented, only the empiric will instantly profess to suggest certain solu-tions; but we will endeavour to put forward some farther suggestions. Before

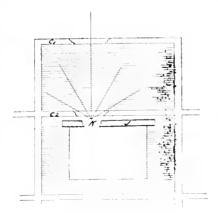


FIG. 2.

our examination of the latest results of great impact and high explosive forces, we might have hesitated to submit our sketch, Fig. 3, for discussion. We present the design now, however, for what it is worth. While ordinary stanchions, supporting netting, slag-wool, or sandbags may be the best possible expedients in regard to existing methods of construction, our sketch essays something entirely re-

# Strand, W.C.

Strand, W.C.

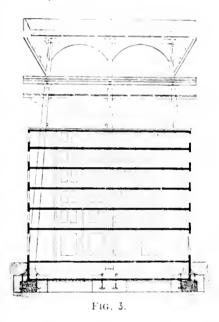
Decoration of the Since, the quantum of the Chore in his Church at Milan, via 385, and 885 Augustine at Lithe best. Lurn, to Lord, Ingwish from this people. By Mr. Frank Brang wyn, V.R. V. Sir Asten Weldi, R.A., Architect king Lidward Memorial Last Sussey Hoppist, Haward Lawred Memorial Last Sussey Hoppist, Haward Snell and Stanley M. Speor, Architect Some Medadion and Frayelling Sudenthing Sketches, by Mr. Ack G. Horindl. Forch at Vernon, Eury, France.

Obl. English Turniture from Pritwell Manor, Banhry, Oxon, and elsewhere. Deawn by Mr. W. L. Wills.

Catholic Church and Pre-bytery, Santhwoold, Suffole.

English Culture of the Month of the William of the Willis, holic Clarich and Prochytery, Southwold, Suffold Plan and view March Schedulet 1888, Ale Beart Free, Alebert 1988.

modelled, assured and complete. Our sug gestions are mainly aspared by consideration of certain natural phenomera. The earth is protected from national "unbard-



ment la its atmosphere. The high velocits of these celestial projectiles causes their destruction. Our proposal here is to so k to ensure a definite explosion of a bomb as high above the building as possible. In doing this we must guard against diverting destructive forces to neighbouring premises. But for this consideration, we might rely more on steep-pitched armour plate roofs. These would possibly shelve a lomb, but the missile would be discharged over adjoining roofs or into the street. The bomb must be caught directly, and the explosive forces rendered as harmless as possible. Reviewing these circumstances, we turn to Figs. 4 and 5. We have suggested already that the explosive energy must lessen, from its source of origin in a cer-tain geometrical order. Therefore, a re-bitively slight removal from immediate control with the explosion greatly reduces the destructive energy; the further that we can remove the point of literation the less will be the destruction to the building Fig. 4 shows a special detonating plat-form, P. The explosion should occur as form, I — The explesion should occur as far above a second it y platform, B as may be practically possible, which should be of such a nature that it will resist the results of the explosion as the forces of such are diminished by the distance between the two stages. This we think a correct principle, when we consider the holes in thickly-concreted roads, which

appear to be the result of explosive force against solid resistance. It would seem that it is the institute contact that renders high explosives so destructive. Fig. 2 we should incline to consider the actual det nation and explosion to have taken place immediately above K, and regard the holes in the concrete, C, and Us, as resulting from impacting force. A bemb proof platform, then, must resist both the force of impact and the explosign if it is at a low level; but, if raised sufficiently high, its office might be to cause detonation and explosion, the secondary results of explosion being recerved by a lower staging. Assume that the platform, P. Fig. 4, is raised 500 ft. alove B, then, once the explosion has been caused, we do not mind what wreckage occurs at this level, so long as the explosion wave (500 ft. below) is so reduced that we have only to deal with this lessened force plus the projectile emanations from the explosion. We must, how ever, have regard to neighbouring premises In Fig. 4, say the explosion occurs at impact K. Debris and shell contents are showered down at D. etc.. upon the bomb proof platform, B; but at D miss this screen and are directed on to adjoining toofs. If now, in Fig. 5, side walls are erected round the detonating platform, debris from the explosion at K cannot be projected over adjoining premises at a lower angle than D. D<sub>3</sub>. That something immensely strong needed for this screen wall is evident to all who have seen the results of a boml falling in a passage-way and bodily shift ing a heavy stone plinth below massive iron railings. Figs. 4 and 5 we sketched some little time back; it was after witnessing various recent wreckage that we made sketch. Fig. 3. It may be thought extreme, we thought so ourselves until we considered the forces involved in Fig. 2 If indeed extreme, it may perhaps be reduced by calculation and design, so that the right mean may be discovered between obviously ineffectual efforts and that which attempts, possibly, superfluors strength and excess if precaution

The z wind idea of Figs 4 and 5 was a let not az platform a bombproof plat

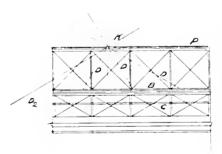
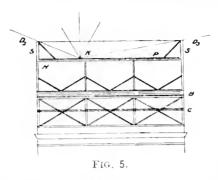


FIG. 4.

. - rissentehing net The search, Fig. 3, proceeds on much the same lines, and assumes aerial warfar to have become a resignised factor in fluen ing building construction, and carries such a weight of protective defence that separate stell plate riveted columns carry this lead direct to foundations. We neg lect, for the moment, destructive effect from homes fulling outside the building. Assuming the fuilding 100 r. square, five fest of sand would be a lond, alone, of over 2 000 tons. As seetched, the steel columns necessarily trespass on the build ing spine, being butter I for stability. If way above a building. The general idea creeted plumb they could be enclosed in seems rather to suggest a fullular girder, turned the projections, and the construct terming in min1 that, in addition to sup-

con could be such that the steel-riveted ocumns could be isolated, or insulated, rom the actual building. The sketch, Fig. 5, was made before we had studied the deet of the bomb as shown in Fig. 2. therein, the missile has penetrated a conrete roof and floor, and wrought some avoc upon a steel joist, the nature of thich is not quite clear. If it sheered the tiel, as appears possible, it exerted a force purvalent to a dead load of, say, 270 tons. n the face of this, and the clean holes in ouf and floor, we must not trust to con-



crete or steel to resist either impact or explosion; and we are driven back to the quasi-elastic means of receiving a falling weight, and to sand-packing; and hence for the top platform in our sketch. Fig. 3 we would suggest steel netting, a layer of slag-wool over, and a very considerable lepth of sand, the whole so designed that the bomb would have no chance of dropping on to any solul material whatever. The side screen walls would restrain any -cattering of débris over adjoining pre-

mises below a certain angle.

The sketch, being a development of the plea in Figs. 4 and 5, shows a lower platform to catch any debris from, and pene trating, the upper platform, and an additional steel netting below this. It seems plain that the amount of protection afforded would relate to the amount of brakmy resistance that would be brought upon the falling projectile; this is lest accomthe failing projective, that plished with saud, which picks under the influence of a projectile. We would place influence of a projectile. We would place the said upon one foot of slag-wood, supported by strong lattice-steel netting, and would give the whole as much elasticity as possible. We inclined the steel columns for stability, but it seems possible that the outsetting of these supports to or near the exterior wall lines would leave a clear run for netting. Necessarily these are points open to much debate. That which a theoretical consideration would seem to demand is a strong hoop, free of supports over the building area, and so lesigned that the lateral stress from sudden depression of the elastic structure would be suitably resisted by the hoop. The instant when the tennis-ball strikes the racquet must witness the conversion of the energy of impact into stresses tending to crush in the hoop; so that our main principle would seem to be a maximum of lasticity for the platform, and to prepare he hop to adequately withstand the concerted stress equivalent to a side thrust upon the girders supporting the margins of the notting. It would seem, then, that toss gir lers should be a'sent. In practice t would, no doubt, be difficult to realise this ideal, and where this is so, we must car big. 2 in mind, and protect as much as tossible all stadwork. Short of greatly inclined armour-plate, it would seem hepe less to stop a bomb by means of solid material of any such molerate weight and thickness that it could be placed in sorre

porting a load, we have to be prepared for cross strain; and as we cannot expect a bomb to fall in the centre of our elastic structure, we may see certain advantages in a design of platform that yields equally all over. The more science is brought to bear on this problem the less cumbrous and weighty, probably, need be the whole scheme of defence.

Fig. 3 shows the great mass of defensive material on the uppermost staging. In Fig. 6 this is provided at B, while P, so long as it causes detonation and explosion, may be as light as consistent with the provision of sufficient obstruction to cause such explosion. K is the point of impact and explosion. Circles 1, 2, 3, 4, and 5 suggest the decreasing effect of the explosion wave, which, if impact is at R, the distance K-E is the measure of the reduced forces acting at the level of the platform B. This, then, need but resist débris and shell contents. The impact, say, has partially destroyed P, but the explosion has obliterated the impulsive, destructive force. We have got rid both of this and the necessity for providing resistance to high explosive in immediate contact. The debris-resisting platform B shelters the building, as shown, within the lines D,

It must be remembered that the impact of 2½ cwt. falling say 10,000 feet is over 1,200 feet-tons. If we are to deal with this and with an immediately contacting high explosive, we require an upper staging after the lines of Fig. 3, with as great a depth of sand as possible, all needing immense strength in the supporting structure, while if we make the staging P, Fig. 6, act on the bomb as the concrete roof and floor in Fig. 2 presumably acted, we need something comparatively light. Before considering detail design we need to arrive at

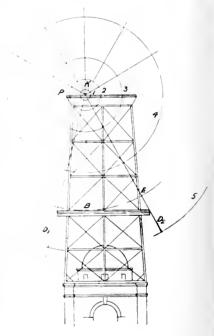


FIG. 6.

general principle of arrangement, based upon sound theory.

We may learn much from Fig. 2. Obviously the bomb broke through the concrete by impact. In the space of, say, 1-80th second, it exploded, probably close to the steel joist. The evidences are the to the steel joist. level, angle, and direction in which shell contents and débris have been scattered on to adjoining premises, and they bear eloquent testimony to the fact that while endeavouring to protect our own buildings we must have due regard to those of our neighbours.

# THE ENGINEER A PRACTICAL IDEALIST.

Let us turn in detail to various branches of our profession, and see if the practice of them is likely to be destructive of idealism The Mosaic code of laws shows that the health of the Jewish population was a matter of such supreme interest that special legislation on that subject seemed warranted. The Greeks, and particularly the Romans, recog nised fully the moral value of personal cleanliness, but it has been left to our country to show clearly, and on the basis of scientific study, the interdependence between samitation and disease, sewerage and crime. Mun-sterberg has said, "Hygiene can prevent more crime than any law". Speaking before rime than any law. Speaking before the Massachusetts Conference of Health Officials, Dr. Charles W. Eliot, President Emeritus of Harvard, addressed them, in part as follows: "The progress of knowledge of preventive medicine made during the past hifty years, and in applications of that knowledge in social practice, has been the most cheerful phenomenon in the recent history of civilisation. The new applications of physical forces—heat, light, and electricity, which forces—heat, light, and electricity, which mankind has learned to use in its conflict with nature—have proved to be highly beneficent in the field of preventive medicine. Civilised communities have been chabled to make their water supplies, food supplies, and systems safe, and to contend with unex-ampled success against formidable pestilences. the common communicable diseases, and the bodily ills which attend urban life and the factory system,

# SANITARY ENGINEERING ACHIEVEMENT.

In this work of preventive medicine the sanitary engineer has borne his full share, As we read these inspiring words of Dr. Eliot our thoughts turn at once to that means mental work in sanitation carried out on the Panama Canal under the direction of General Gorgas, and with the hearty co-operation of the engineering staff. Under disheatering difficulties, and with sacrifice of personal comfort—yes, at the risk of their lives—the men laboured who made the Isthmus a place fit for the white man to live, and thereby made the construction of the canal, which neans so much to mankind, possible. Honour, leserved honour, has come to him who lirected this splendid piece of sanitary engiseering; but I desire to put on record here he appreciation of this society for the men who stood by. Is it reasonable to suppose that he engineers who did this work, who made hese sacrifices, were not the highest type of nen-practical idealists? We are called iconoclast engineers, utili-

arians, non-respecters of tradition, antiquity, nd picturesqueness. Iconoclasts Yes: reormers usually are. Utilitarians? That, too. s an accusation we cannot deny, but is an ct less noble for being useful. Nonspecters of tradition and antiquity? Again plead guilty, if tradition stands for error. and antiquity for decay. Destroyers of the icturesque? A general denial cannot be stered against this charge either, and in me cases, I am free to confess too little istification can be shown for the disregard the picturesque. This is a point I shall uch upon more fully later, but with special plication to the cases cited above and milar ones, what is picturesqueness but the seased condition of structures and their roundings? What is this vaunted love of picturesque, in many cases, but a selfish d thoughtless appreciation of surface pearances? Selfish and thoughtless, I say, cause the few are willing to sacrifice the alth and happiness of a whole community. rhaps, in order that they may feast their oes on narrow winding streets, on quaintables, far-reaching eaves, small, uriously laded panes of glass. They are taken in I the surface appearance of things. But lile heed give they to the squalor and dirt, tomisery and sick ess existing in these pictesque quarters. Who, then, is the idealist he man probing into the sore which has so ble surface indication, finding its deep reted seat, and skilfully using the knife.

Extracts from the presidential address of Charles IMarx, delivered at the Forty-seventh Annual Convition of the American Society of Civil Engineers in S Francisco on September 16.

or the man who missed he these attre and ts. applies a surface dressing and arlows the set to eat into the body. To the thinking man the answer is simple. Perhaps you was grant now that it least one branch of engigrain how that it gast one firther of engi-neering, saintry engineering, and idealism are not only not meompat,ble, but that they are almost inseparable. And what I have shown somewhat fully to the branch of the profession can be shown as well for the many ther branches.

# TRRIGATION OPENS NEW TERRITORY

Take irrigation engineering, for instance the possibilities of which are only beginning to be realised in this country. Is it likely that the men carrying out these works see in them but the piling of one stone upon another, the digging of so many feet of pipe? These black cast or wrought from cylinders stand for more than this to the true engineer. He realises that with every water or drain pipe well laid he s bringing time engineer. The council of water or drain pipe well laid he is bringing prosperity and happiness, health and vigour, where before existed poverty and misery, sekiness, and langiour. Perhaps the most wonderful instance on record in modern times of the far reaching effects of irrigation engineering is found in Egypt. In an acticlion the regeneration of Egypt by the former librarian at Stanford, Mr. Woodruff now professor of law at Conseil, he midiesthatingly and justly, I think, attributes a large share of the credit for time "new bath" to the work at the English engineers. Mr. Woodruft says, "The history of the English in the administration of Egypt for the past nine years s the record of the return to health, strength, and prosperity of a country that has been bled and starved almost beyond resuscitation. And yet there has been little romance in this restoration. It is closely a story of common sense, hon sty, and strught

forward hard work.

But we need not turn to foreign countries to find work of the aragation engineer worthy of commendation. Our own Replanation 8 i vice has made a record of which we may wel feel proud. Here, too, the men, with loyalty and stendfastness, have given a service the value of which is not yet fully recognised. a record of which we may well They are the men of whom Chief Engineer Davis said: "Their chief tie to the service is not the matter of salary, but interest in their work and loyalty to a and the belief that they are appreciated. Again I ask, is such work destructive of dealism are such men-lacking in (deals)

# RAILBOADS USITE MANKIND.

In raifrond engineering, think you that the men who through vergin forests and sandy deserts, through miasmatic swamps and rocky canyons across rivers and over mountains, carried the steel bands that now the manking so closely together, think you that these mer were engage I in an occupation Plety to kill their ideals? When the final balance is struck, I warrant that the debrt will not on the side of this grand army of peace of the present, as compared with the arm is of was of the past and present, for deals of ideal heroism, self-scribes, and devotion to duty. It seems like carrying coals to Newe, stle to speak in an audience like this of what the railroads have done for all countries for our railroads have done for all countries for our own country especially, and more particularly for the Pacific slope. It was not so long ago since I read of the leginning of construction of the Trans-Sberiau Railway, which now unites the Veloute and the Pocitic on the other continent. The Capetto-Cairo-Railway, too, has passed through the stages of its preliminary saw as and careful stages of its preliminary sarylys and partial construction. What centuries of fighting could not accomplish these two roads will in time accomplish. The light of civilisation will be spread on the Dark Continent, and its strong rays we borst the fetters and open the prison loops of suffering men and open the prison loses of suffering men and wom in Russla. Who, then is destructive of idealism the main whose works are a means, if but a humble one, of bringing his fellow beings into a larger contact with the wonders of creation, or he who, enveloped in the maintle of exclusiveness, bemoans this de

What is ig no ling's ton, that master is Lean to. Br ig Bo. be A Burney that master by the variation promote party of the variation of amost posts, could be a considered amost posts, and the work. It was a long, long review and the covered sterm, sudden treshers dearn in corry mather and shape, violent and refer rige against field type half frenzying a mind that amosts it should be bosy on other things, drought, sandation, finance, both, welding hural, and root in the viviage efficiently with a rate of the blank despart that a mange's collect upon, thanking that his rifle is all in process in the gun case. Behind everything rose the black frame of the Kashi bridge plate by plate, girler by girner, span by span, and each piece of it recalled Hatcheck, the all round man, who had stood by his enert with round man, who had stood by his ener with out falling him from the very first to

last."
If I desire to saw that in still another branch of engineering—the one of theory and harbour improvement there is nothing destructive of idealism. I word not go har for an illustricus example. What dames R. Eads has done for the people away in the Mississippi Valley in opening up to monitor of the Father of Witters stamps him as one of the beneficators of markind. For years he betterfactors of markind, For years for distances, overcame mound or impact, and obstacas, overcame prejudice, mance, and ignorance. Mr. Corbell, the stanich friend and principal assistant of Captain Eads on the this momentous work, quotes i m as saying, "I therefore undertike the work with a faith based upon the ever constant ordinances of G.d. Himse'f; and so certainly as He will spare my life and figuit is for two years more. I will give to the Mississippi, thi aigh H's Grace and by the application of His a deep, open, sale, and permanent outlet to the seas

## ART AND THE ENGINEER.

I think enough has been brought before you now to show clearly that engineering is not destructive of idealism. That much refuted, there still remains the charge that engineering is destructive of, or at least or engineering is destructive of, or at least in part responsible for, the decay of art. I propose to show that this statement also is false. Artist and romantic st appear as accusers. Again they point backward and say: "See what the past has created; what have we that can be placed by its side!" Their eyes are blinded to the changed condition of the changed condition. tion of things. They lack the syn pathetic understanding of the complex problems of the life of to day, and the material's 1's lation of these problems does not uppeal to their dea of the benefite'. For the intelligent enjoy ment and, more particularly, for the or tleism of any crowton, there is neded at least a fair knowledge of the underlying principles of construction, be that work a symphony, a poem, or a bridge. It is true that a symphony phony or peem appeals much note reachly to a large andience than does a lendle or a complicated piece of machinery; yet both the latter may be as much works of art as the former, a higher degree of development of the intellect being needed, however, to see feel their beauty. Every engineering states ture is the materialised idea of its function The ideas underlying engineering works are often ideal ones, and the works themselves therefore can be idealised. When these shows the engineering structure becomes a vark of

art.

In all ages that which most trull rily and characteristically embedfed in the Web was resentation of the life and the deast those times was deemed a wark of art. He is the artist who expresses most facilities what we think and feel. If such reconstruct a law in them had in our centrely a soler for lark of rew deas and materials to sold by sience pure and applied, but for the ack of adequate assumfacing power on the reast of the would be apostles of the State Pages of the Ture Artistic as the State Pages of the

# THE ARTISTIC IN THE STATE IS OF THE PARMY CANAL.

the mantle of exclusiveness, bemoans this defiling contact?

ROMANCE OF BRIDGE BRIDGE,
What bridge engineer has not been touched by the romance of his profession? Frederick Law Olmsted, to report on the

ets the Istuman structures and the structures of the structures of the structures of the structures of the structures of the structures of the structures of the structures of the structures of the structures of the structure. There is at entire absence of the structure of the structure is been considered except the few cases as a contary considered except the few cases as a contary considered except the few cases as a contary considered except the few cases as a contary considered except the few cases as a contary considered except the few cases are of the structure. The canal, like the there is little to find that, with from the rust's point of view. The canal, like the Pyrannis or some imposing diject in ratural energy is impressive from its scale and some many and one merely for the purpose of beautifully toward the distribution of the difference. The little hards between the many sections of the many sections of the many sections of the many sections. This spike the true artists

# IS IT PROFITABLE TO BEAUTIFY ENGINEERING Works

Is it promtable to beautify engineering structures. Here we stand before a momen-tons question. If the answer be given by the cons question. If the answer be given by the ingineer, or by one who holds that the status of a people is determined not merely by the a cancilated wealth of the nation, the quantity of goods produced, and of articles material tured, then it will be in the positive, ten times over. But if the man of , we ideals and measuring in times gives gives answer, it is locally to be an emphasic "No." This answer has been given too from in our own country, and the blame for the deep scars in the face of a cone time, in which and man of cents. for a new theorety dams and ragged cuts, case of the hild on the shallers of the engineer. Wayre broad might liberality and green. Where bend minded liberality and farsening policy govern the construction of greening works, as is the case in countries deritain our over, these works stand as orthwart products of the splint of the times symbol, also the best and highest in the life

So we also do to applied if the very incoming, to first. Have note in our destinative of causin, for his to words of academy? When period of a start was a face others. When period of a start was a face others. When it is remaind to completeness, all the greated in stage of his can been destined as to immediate of a to be members and a result and when of actions as the call of a legislative of action beauty. As Emerson says, Beauty will a tome at the call of a legislative of action beauty of a legislative. It is a factor of a line of the call of a legislative of actions at the call of a legislative of actions at the call of a legislative of actions at the call of a legislative of the first of actions. It is in America, its his appropriate for the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call of the call o and its applied form, angineering, that one into how adestructive of of a form to be words of a other in When The metric case and mechanics of the effect to the metric consideration of the metric case of a consideration of the Matthewst Reparts as search of the Affact to the effect of the Affact to the effect of the Matthewst Collard New England and arriving this ports with the particulty of a plant, was seen of mer little carminate with that reflects both as Sc. Petershold with the safety of the best at Sc. Petershold of the the magnetism collection of the magnetism collection of the magnetism collection of the collection of the striplements as the extractions of the metershold of the constraints.

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New Remar Care and the seconds in Din-bert ripe for the Communication of the seconds in Din-ban Read Backho Countries. The new pre-cises which have note £5.1 and vide are one condition for \$2° children. The work has been arried out by Mr. Robe G. Pachen, of Black in I found the designs of M. F. A. Coyle, a char-ter of consett.

# et the Istumian structures MAINTENANCE, MATERIALS, AND Sorts for such improve METHODS OF ROAD WORK.

# By A. W. DEAS !

The date of the completion of the construction of a roadway surface marks the date when maintenance must commence. The materials and methods to be used are governed by the type of the constructed sur face; the urgency for prompt attention to maintenance is governed by the type of surface and by the quantity and quality of vehicular traffic: the cost of maintenance is governed primarily by the judgment used in selecting the types of surface for the roadway when constructing it. Too often necessity requires the construction of an inferior sur fale where a paved surface should be laid thus permitting a temporary economy in construction that is soon balanced by an excess sive charge for maintenance and renewal.

Maintenance is brought to its lowest terms when the roadway surface has been properly designed and constructed. A properly built roadway is that which has been properly designed to withstand existing and anticipated traffic and other conditions and built with good quality of material and workmanship. If all roadways were so built the mainten ance problem would cease to be a problem and there would be little occasion for conventions and discussions by roadmakers. condition will never be reached however, and for generations to come we shall have the

for generations to come we shall have the untiless problems of maintenance to solve. The terms "maintenance" and "repair," while not entirely synonymous, will, however, be considered as such herein, in order to permit as broad a treatment of the subject as possible in the fewest words.

# EARTH ROAD MAINTENANCE

The prevailing distacle to proper main The prevailing obstacle to proper in the tenin e of earth roads is lack of surface and sub-drainage. Surface drainage should be provided for by constructing and maintaining the roadway with proper and sufficient rown and by providing proper side-drains or gatters and culverts. When built on a long steep grade on a side hill, culverts should be placed frequently to carry the major roses and unler the road rather than water across and under the road rather than water across and under the road rather than tas is quite common) constructing so-called water bars to carry the water across and above the surface of the road. A grader or road machine should be used on earth roadways not more than twice a year, and preferably not more than twice a year. It should be used with care. If so is an I improper material have accumulated as the edges of the roadway, and are nulled on the edges of the roadway, and are pulled over to the surface of the road by the grader. over to the surface of the road by the gradient by should immediately be carted away from the surface. A road drag is almost in isoensable in the maint nance of a pusper stace on an earth roadway. The drag sould be used frequently and when the certh is moist. It is of no value when the earth is very dry, and it is of luttle value when wet. The drag will not fill large drag at the certh is controlled to the controlled of a controlled or the controlled of the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the controlled or the he faited away can newer. The drag will not in large the rossions, such as occur at each cod of a bridge, but it will keep the roadway in larly good condition for travel at all tim's a properly used. Where large depressions or in a roadway it is not good practice or in a roadway it is not good practice place broken stone or course gravel into the depressions, as such practice has a of high vectors a land section with a hold cach and.

# Sand Cray Rouse

Reads construct d with a mixture il cay sand cay may be considered as oth reads in an advanced stage. The educity orth reads in an advanced stage. The endurry conjector once of sand clay roadways is less fitted in the same meen r as earth road rys. Where self mod holes occur in sand cy roadways, it is obvisable to fill such some self sand, as it general such holes are mod by an excess of clay at the mixture. Out it said in plants are not constructed with the road argument one at sund and clay in the road argument one at sund and clay ith the right propertions of sand and elay of the original mixture, and maintenance of depend upon the conditions due to the xc -s of one material or the other. If the

\*Presented before the Pan American Road Congress at San Francisco, September 15, 1915 Chief engineer, Massachusetts Highway Commis-con, Boston, Mass.

entire surface is quite soft, and ruts badl; during wet weather, it is evidence that there is an excess of clay; therefore, in the maintenance of the roadway under such conditions, a thin layer of sand should be spread over the surface, and if the conditions are sufficiently bad to warrant it, the sand should be harrowed into the surface. On the other hand, if the surface does not be the other hand, it the surface does not be come compact, but rather shows indications of being sandy, a small quantity of clay should be spread upon the surface. As in the case of the ord-nary roadway, proper surface and sub-dramage should be provided to take care of the excess of surface and ground water.

# GRAVEL SURFACES

Gravel surfaces are frequently maintained to a certain extent by the use of the drag. A road machine should not be used on gravel surtaces except when it is desired to widen the travelled way or to smooth the surface lightly. Whenever a road machine is used on a gravel roadway for widening the travelled section, great care should be taken to remove from the surface any material other than gravel that. may be brought on by the use of the machine. Ruts or depressions occurring in a gravel road way should be repaired by filling lightly with gravel as near the same quality as that originally used in the surface as is obtainable. Maintenance of a gravel roadway is greatly assisted by applying uniformly at the rate of about or e-half gallon to the square yard once each year an asphaltic oil of about the maximum consistency that can properly be spread at air temperature with a common distributor. Such application not only furnishes a small amount of binder for the upper surface, but prevents the dispersion of the surface in the form of dust. The gravel surface herein referred to consists of material in which the mixture of roand stones and particles is quite uniformly ariable in size from minute particles to stones we or three inches in diameter. This definition is given on account of the fact that there are so many different ideas conveyed when the term gravel surface is mentioned.

# THE WATER-BOUND MACADAM TYPE.

Maintenance of a broken stone macadam water-bound macadam roadway) whenever constructed by the usual method is a more or less difficult problem, depending upon the traine that it has to withstand. If the traffic consists largely of steel-tyred vehicles, with very few rapidly-driven motor vehicles, a macadam roadway may be maintained by keeping its surface covered with a light layer of sand other suitable fine material, the object of this covering being to keep sufficient binder on the surface to prevent the stones in the surface from picking up. If, however, the traffic is sufficient to wear out the surface rapidly, as is the case when there are many motor-driven vehicles, the sand surface cannot be maintained, and it becomes necessary to use some other means of maintenance. use of a bituminous binder in the construction and maintenance of macadam roadways now become quite universal, and the problem if maintenance of bituminous-bound or sur faced roadways has now become simple.

Applying about one-half gallon to the square

yard of an asphaltic oil or refined tar at proper intervals permits of maintenance of macadam noadways under ordinary traffic for a long period, provided the subsequent applications are made at proper intervals. The interval between applications cannot be definitely stated; it can only be determined by the appoarance of the surface of the roadway. In Massachusetts it has been the practice for several years to maintain water bound macadam roadways by surface applications of so-called "cold oil," the oil used being what is termed by the manufacturers as "50 per cent oil. It has been found that one application a year is sufficient on most of the roadways where maintenance is effected in this manner The method of applying the oil is as follows: First, the road is swept lightly to remove all snaplus material from the surface. The oil is then applied by means of a pressure distributor, thus ensuring a complete and uniform covering. Immediately thereafter coarse sand is spread in sufficient quantity to entirely cover the oil. The amount of oil used in the first ambiention is approximately a half-gallon to the square yard, and on sub-sequent applications the amount varies from one-fifth to one-third of a gallon to the square yard. The asphalt contained in this oil forms a thin carpet on the macadam surface and not only prevents wear, but prevents distribution of dust. It has been found that the use of heavy oils, such as are known to the trade as "90 per cent. oils," assists in a satisfactory maintenance for only one or two years, after which the bituminous material has a tendency to crawl and become waxy. The lighter oils, having less body, do not have this objection. Refined tar is often used in the same manner as described above in the maintenance of macadam road-ways, and often gives quite satisfactory results.

# REPAIRS ON A BITUMINOUS BLANKET.

Repairs on a bituminous blanket or thin surface coat may be made by covering the section to be repaired with a thin coat of asphaltic oil or tar, as the case may be, and immediately covering with pea stone, fine gravel or coarse sand. This is assuming that repairs consist of renewing comparatively small sections of the coating that for reason may have disappeared. general fixed method can be described for making repairs due to imperfect workmanship, the use of too much bituminous material, or the irregular distribution of material, each case having to be treated in such a manner as experience may show to be best. Ordinarily, renewals of bituminous carpets may be made by a repetition of the usual process of constructing such carpets, except that it is advisable always to use less bituminous material per square yard for re-newal than was used in the original carpet.

So-called sand and oil-mixed road surfaces are either repaired or renewed by the addition of mixed material of the same quality and density as that used in the original surface.

Bituminous grouted or mixed macadam surfaces should not require early or frequent repairs or renewals if designed and constructed properly in the first instance. Should the necessity for repairs arise, however, they are or linarily made by the removal of all disintegrated or imperfect portions of the surface, and substituting a mixture of bitumen and small broken stone, the mixture being made either by mixing previous to application or by spreading stone and filling the voids by pouring. In renewing bituminous macadam surfaces it is not generally necessary to break up or remove any of the existing surface; the new surface may be added by spreading directly over the old surface. If, however, the old surface in addition to having become worn thin is worn very irregularly, it is advisable to loosen up, scarify, re-shape and roll the old surface before adding the new surface material.

# CEMENT-CONCRETE SURFACES.

The repair of cement-concrete surfaces is a comparatively new problem, as such surfaces have not been in use for many years, and such repairs as have been required have been due to imperfect workmanship or material. If the defects to be repaired consist of badlydisintegrated sections, they cannot be per manently repaired except by the removal of material in the sections to the full depth of the surface, replacing with new and proper concrete. If the defects to be repaired are minor, however, and consist merely of small depressions, they may be repaired by filling the depressions with a bituminous mixture. When a cement-concrete surface becomes worn sufficiently to appear to require renewal, it is impossible to renew it by adding a new thin coat of cement-concrete mixture; therefore, it may be said that a cement-con crete surface cannot be renewed with the same type of surface, but must be entirely and a new section constructed removed This would be expensive however, and it appears that the proper method of bringing up an old concrete surface is to cover it with a bituminous-bound surface in place of a

ement-concrete surface.

Block pavements of all kinds can be repaired or renewed only by the entire removal and replacement of the sections.

DACRE CHURCH, NEAR I LLSWATER.

There are many old villages and hamnets in the environs of the Laky District which are rather out of the beaten track of tourists, and are, therefore, not much visited; but they are well worth inspection, for all of them have then are intectural remains, not to speak of their old customs and legends, the latter being given material support by quantisteness and signs of every concervable form, and share

and signs of every conceivable form and shape. One of these villages is Dacic, a quaint old world retreat, a few miles from Calswater. The Castle, church, and houses still retain the vigour or their youth, so well are these northern structures able to withstand the ravages of time.

The Castle usually receives most attention from visiters, although there is nothing partendarly noteworthy about it, except its antiquity.

The church, however, is extremely interesting, for although it has been extensively restored and repaired from time to time, it has lost nothing of its architectural value. It was originally a Norman structure, the chancel being now the only remaining portion of this lite. The walls are constructed with a red sandstone in uncoursed rubble, the rest of the church being built with a white sandstone.

There is a small doorway in the south side of the chancel which appears to have been inserted at a later date, being transitional in character, as shown by the flat keystone, and the columns worked on the separate stones of the door jambs.

The latter was a step to making the column a separate feature, distinct from the jamb. The interior of the church is very interesting, much of its chaim, however, being lost by the insertion of new varnished woodwork and dull drab red floor tiles.

There are many beautiful wall monuments; some within the sanctuary should command special attention as a specimen of the crafts manship of the period 1769. They include a stone effigy of a knight, presumably Lord Diere, from whom the name of the village is derived, and two other pieces of stonework with crude surface cirving. The alter rail is of extreme age, and the baluster is a well-

wrought piece of wors.

Four peculiar stones in the churchyard very much weathered are said to be carvings of bears which were formerly on the Castle tower; and then there is underground masonry in the lower portion of the church yard, which is pointed out as being the head of a vaulted tunnel leading to the Castle. Il such quaint features of these old villages can only safely be presumed to have the significance attached to them by the local xiseacres, who are only too glad to talk to mybody seemingly interested in them. The writer was imitated into the key series of the symbols of Daere Church by the village imbereper, who was superintending the digging of new graves at the time. Possibly he was calling of Boniface.

Another village in the vicinity is Askham, perhaps the prettiest of all Lakeland villages, and well worth more than one visit to the architectural student.

Dare lies about five miles to the north of Pooley Bridge, at the northern head of Ulls water, and Askham about five miles to the south

Bubart Frastr, Student S A

Mr. C. H. Wollaston has been appointed Chief Engineer of Burma, in place of Mr D. W. Aikman, transferred in a similar capacity to the Punjab.

capacity to the Punjab.

Mr. D. J. Pludips has been accidentally killed whilst serving in the Naval Division at the Dardamelles. Prior to the outbreak of war he was engaged as a divisional surveyor under the West Suffolk County Council, and resided in Bury St. Edminds. He was about twenty-seven years of age.

The first meeting of the session of the Birmingham and Midland centre of the Institute of Sanitary Engineers was held at the Exchange Restaurant, Birmingham, on the 18th inst., when the president, Mr. E. J. Harber, delivered an address on "The organising and work of the sanitary engineering prefession."

\* From the Journal of the Society of Architects. C

THE LONDON COLNTY COUNCIL.

At the more age of the London County Council yesterday (lucsday art meson, the Education Committee repeated that the Professional Classes War Rehe's Council that with a view to inding work for artists in distress through the war, the wards of certain Council scheols, to be selected by the Council, may be decorated with finezes and panels, the decorations to remain the property of the Council. It is proposed that the subjects and designs shall be apervised by an expert committee of artists, and subantist of napproval to the Council before being carried out. In order that the work of the schools may not be interfered with the finezes and panels will be executed away from the school buildings, and fixed during the school vications. The Council will not be put to any expense in the matter. The committee recommended that the offer be accepted with thanks.

The Council was recommended by the Improvements Committee to consent to the postponement for another year—to Christmas, 1916—of the demolition of the properties at Nos. 197, 198, and 1.9, St. and, part of the site which has been acquired by the Duchy of Lancaster for the widening of the Stratd

The Treasury having refused sanction to the capital expenditure involved in the reconstruction of the horse tramways between the West India Docks via Burdett Road and Grove Road to Victoria Park and those in trange Road, Southwark Park Road, and Rotherhithe New Road, Deptiond, it was reported that it will be necessary to effect extensive repairs to the tracks in ord r to make the highway safe for vehicular traffic at an estimated cost of £6,250.

Some of the own is of property in the Tabard Street slum area, which is being cleared by the Council, refused to accept the compensation offered, and the disputed claims have been a teed by arbitration. In one case, where £2,002 was claimed, the council offered £200. The arbitrator now awards the lundlord £31 16s. In another case, where £625 was claimed and the Council offered £20, the arbitrator awards £5, this being for four houses.

# THE DISMISSAL OF THE LAND VALUATION STAFF.

Mr. McKenna, the Chancellor of the Exchequer, received on Friday afternoon a deputation of the "retrenchell" professional staff of the Land Valuation Department. The deputation, which was introduced by Mr. C. E. Price, M.P., the Liberal member for Central Edinburgh, consisted of delegates representing England, Scotland, and Wales.

Mr. Price, before introducing the speakers gave a resume of the case of the temporary professional staff, and arged that the dismissals would result in schools less of become; and, mither, that in view of in mements and promises held out it was the duty of the Government to find these me; employment in other departments where their services would be of value to the State.

Mr. Laimutt, Manchester, dealt with the broad aspect of the case, and especially drew

Mr. Lamutt, Manchester, dealt with the broad aspect of the case, and especially drew the attention of the Chancel or to the loss of revenue which would assume in colate duty alone, and also to the fact that the sales on which increment value duty has revealed could not be investigated, and that consequently a loss of revenue would use it, as the depleted staff was inadquate for deding with the work.

ing with the work.

Mr. Crampton pointed out the hardship resulting to men in the department which had considerably relied upon promises made by responsible officials as to the country of their position, and urged upon the three dier to show every consideration to these men in eligible for minimize weaver. He referred to the disparity of teatment in the cases of men who, at the outbreak of war, were given permission to enlist, with the benefit of their civil pay tless 7s, per weeks and a premise of reinstatement, and those who were refused such permission, and who were now dismissed without any consideration.

Mr. Agate, Manchester, declared that eligible military men were now at a disadvantage in consequence of the War Office

z non cutside the department to and have been suitably fixed in the department.

Mr. M.K. ma gave the delegates a patient heat, 2, discussed with them the various poults ased, and promised to make further inquires.

# TEMPERATURE EXPERIMENTS AT LAHORE.

Under this title, Mr. W. S. Derman, M Inst CE, executive engineer in the Panjab R sais and Buildings branch of the Panla Worss Department, furnished a paper to the Panjab Congress of 1915. He men toned that in the design for the new Government Press stress was laid on the necessity for keeping down the temperature of the magnitude room as far as possible, and it was, therefore, decided to carry out exparaments

with vir. as rooms; materials. The experiments, as there was a row of rooms, each 12 fr. by 8 ft. for the mental staff englighed at the Press. These rooms were reased with red eternition batters with an eternitical below: grey eternition batters in the test as leaves or rugated sheets on batters at 122 B.W.G. corrugated sheets on batters at 122 B.W.G. corrugated from sheets on jair or earlie, with a 25 m. fibro coment coding on an hearist without the eading on 2 to batters over 3 m. beards, on batters with the sheets to intend with two coars of white corrugal paint, and on batters with the sheets unpaint 1. The observations were evidently made with great care by Mr. Dorman, at 1 he arrived at the following results: or In any tail by period the maximum tem-The lemain's concerned was very suitable man, at I be arrived at the following results: or In any tin lay period the maximum temperature seldem varied by more than 5 degrees. If The colour of the eternit tiles, grey or red, made no difference in the temperature. If The addition of an eternit ceiling is, we the rafters was of no advantage in reducing temperature. Id The substitution of bear is for batters below the eternit added Rs. 12-13-3 per hundred sq. ft. to the expense and reduced the maximum temperaexpense and reduced the maximum tempera expense and reduced the maximum temperatur iv 2 legres. (c) Asbestos corrugated whors was double the cost of the asbistone roofing, and only 1 degree coder. (f) Corrugated in a con-batters was 1 or 2 degrees hotter than the asbestos corrugated sheets, and one-third the price. (g) Painting the corrugated from white hid in effect in reducing temperature. (b) The use of boards instead of batters under the corrugated from reducing the maximum temperature, and kent stead of battens under the corrugated from reduced the maximum temperature, and kepther on from heating up so soon. (i) The addit media filter comesticeling added largely to the cost, and was not worth the expense. (i) There was no alwantage in having batters between the boarding and the control of the cost.

A second set of experiments were made A second set of experiments were made with three-ply metas of on a boards, with three-ply mathoid on felt and 3-in, boards, with red pollife tiles on batters and a felm pine cellul, with Remain tiles on batters, and with sugle Allahabad tiles on batters. These experiments confirm the test set, and These experiments confirm 1 the first set, and showed that as for as the temperature was concerned, there was very little difference in the materials tiked. A port toof being obligatory, corrugated in a on heards was as good as any for all practical numbers, and it was decided to not this form of roof for the

corrugated from sheets.

Press.
In the discuss to R. Bahadar Ganga Ramsand that in his obtained the coolest and most satisfactory made were of additionables with a celling, not follow for the model of the coolest and cover the ry rost western followed by the following research of the following and highly arrowed of the bound of the following with

# THE MEDIEVAL ARCHITECTURE OF THE WEY VALLEY.

In the course of an interesting paper read recently by Mr. E. Chapman before the Lendon Natural History Society, the author

The valley was so strongly held, and was so largely royal demesne, that the long struggle between Crown and Nobles lett little mark upon it, but with the rise and decline of monasticism, and with the struggle between the church and state its history is closely linked. The documentary history of Surrey begins with a charter, probably a forgery, but a very early one, of Chertsey Abbey. The great monastic revival of the eleventh and twelfth centuries saw the reform of the Benedictine rule, and the foundation under an Englishman, Stephen Harding, of the Cistercian order. In 1128 the Bishop of Winchester brought over from France twelve monks of the new order, and gave them lands at Waverley by Farnham, where, under the renewed encouragement of successive bishops. they established a great abbey. The story this abbey forms in itself a synopsis of the story of monasticism in England. We see the monks busy with their buildings, industhe monks with their country side, raising great flocks of sheep on the neighbouring hills, entertaining great nobles and kings, for here in 1208 came John to spend four days of Holy Week, bringing with him two tuns of wine, no doubt to mitigate the severity of of wine, no doubt to mitizate the severity of the Lenten fast, and here, in 1225, came the young Henry III., and was admitted to the confraternity in the chapter house. At this date the monks were in the midst of rebuilding: they were replacing their first Norman Abbey with a beautiful Early English structure. The new clurch was completed in 1230, and now the monks seemed at the beight of their presents. In 1240 a young height of their prosperity. In 1240 a young shoemaker charged with homicide took sanctuary with them, but after some months was seized by the king's orders and carried off to prison. The Abbot, after a vain appeal to to prison. The Abbot, after a vain appeal to the Papal Legate, turned to the king him self, producing the charters and privileges of his order, convincing him "that the precincts of abbeys and their estates were by apostolical authority exempted from the encroachments of all wicked and profane per-sons, and inviolable as the altars of churches. The shoemaker was restored to the monks, the officers who arrested him were condemned to ask pardon at the convent gates, and afterwards to be publicly whipped, "which sentence having been fully executed upon them by the Dean of the House and the Vicar of Farnham, they were absolved in form, and, having a sufficient penance enjoined them, were dismissed.

Nor was this the only incident in the great struzzle which the valley witnessed. Already in July, 1174. Henry II. had passed through struggle which the valley witnessed. Guildford on his swift penitential journey to Canterbury, after the murder of Becket, and in 1199 Ruald de Calva had founded, in Thomas, the Austin proc.
Thomas, The beautiful little honour of St Newark at Ripley. hurch of East Clandon also dates from about this time and bears the same dedication.

Of the rise and development of media-val architecture, the valley presents many in-teresting, but no very rich or famous illus-trations. The district was not wealthy, and harding materials were not of the best what a rural population could do with flint and bulk and Bargate stone, with tiles and Horsbam slabs, and with here and there a shoft of sussex marble, was done. Of the

main stru ture of St. Mary's, Guildford, whose walls were enriched in the thirteenth century by paintings which remain, the royal keep of Guildford, and the tiny village church of Pyrford. Of Early English work the most notable remains are those of Waverey Abbey, the beautiful western doorway of Shere, and the great E. window of seven lights at Ockham. The architectural needs of the district do not seem to have undergone any great expansion in the fourteenth cen-Here and there a fine new window was opened, as at Shere, but I do not recall any building wholly in Decorated work, and similarly the examples of Perpendicular work are mostly to be found in enlargements and modifications of older buildings. Then at the very close of our period, we see the needs of a new time finding satisfaction in two buildings, both instinct with the old Gothic beauty, the great manor house of Sutton, and the Grammar School at Guild-

# ---NEW INDUSTRY FOR HUDDERS FIELD.

The directors of British dyes have, after long deliberation, decided definitely to set up great works in Huddersfield, in close proximity to those of Messrs, Read, Holliday and Sons, Limited, which they took over some months ago. Huddersfield will thus become the chief colour-making centre of the country, and its population and rateable value will be largely increased, as the company is expected to have 10,000 workers in its service. The Mayor and Corporation will undertake to make the trade effluent satisfactory to the river authority, as they already do. The directors considered the relative advantages of Manchester (Trafford Patk. Selby, Leeds, Goole, Widnes, and Huddersfield, and eventually the choice lay between the last two named. The scale protween the last two named. The scale bably turned in favour of Huddersfield. doubt owing to the proximity of Messrs. Read, Holliday and Sons works, but also because the town can offer a large supply of good soft water, and is well situated for supplying all the Lancashire and Yorkshire textile dis-The company has acquired about 250 acres of land for buildings and yards, extending from the river Colne in Leeds Road up the Dalton Valley, and has let contracts amounting to some £250,000.

The housing problem which will be created at Huddersfield by the establishment of these works was discussed at a meeting of the Town Council on Wednesday. Alderman Smith, chairman of the Housing and Town Planning Committee, said that already the applications for houses exceeded the number of houses that the council had decided to build. Councillor H. Dawson said if only 5,000 men were employed at the British Dye Company's works it would mean an increased population of 25,000, with all that was necessary for them. would mean an increased population He suggested that a special meeting of the General Purposes Committee should be called to consider the question. Councillor Jagger urged that in addition to corporation enter-prise private builders should be encouraged to erect cottage property. Alderman Smith promised that the question should come before the General Purposes Committee.

The Council of the Surveyors Institution have nominated Mr. Howard Martin, past-president, 27. Chancery Lane, W.C., as the representative of the institution on the Tribunal of Appeal under Sec. 176 of the London Building Act. 1894, to fill the vacancy caused by the death of the late Mr. Herbert T. Steward.

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General Colors of the first stage in the calculation of the first stage in the completion of the first stage in the comple At Breadeall on the 18th inst. the Bishop of

# RAILWAY TERMINALS.

At the Surveyors' Institution on October 15, Mr. James Crossland gave a lecture, illustrated by lantern slides, on "The Plac ing, Design, and Arrangement of Rankay Terminals." The common view, he said, was that a big railway station should be placed in the very heart of a town, but he thought that wrong, because it would generally be found that slums accumulated in the vicinity of large stations. If, therefore, a station was some distance from the centre, it led to decent development of the town from the station to the centre. A railway running through a town necessarily created a kind of barrier, and therefore it might just as well be a barrier between the residential and the factory areas.

He discussed the methods of bringing a railway into a town, on the ordinary ground level, above, or below, and expressed the opinion that if a railway could be brought in below the surface it was obviously the best. The advantages of having through stations instead of terminals were referred to, and the lecturer urged that architects, in designing a railway station, should strive to express railway station, and not an hotel or a bank.

In conclusion, he dwelt on the design of small country stations, and by slides showed how, by simple design and an arrangement of foliage, these could be made to look very pleasing. Incidentally, he expressed the opinion that in large towns the right way to deal with traffic was to entirely separate the suburban from the main line traffic.

The discussion was opened by Mr. T. H. Mawson, who said that, as city planners they must have some idea of the areas required for the probable traffic of a station they were planning which would provide for the growth of the town for twenty, thirty, or fifty years. This was necessary in order to avoid the constant alterations of stations and the expenditure of money which did not bring in any return, not to mention the up-setting of the plan of a town.

Mr. Davidge expressed the opinion that within the next twenty years the whole of the large railways running into London would have to reorganise their systems of arrangement of suburban traffic

After having been closed for about six years the old Formby Cement Works, Frindsbury, have been re-opened by the Medway Standard Portland Cement Company, Ltd., and are now employing upwards of lifty men. Mr. John Clarke, for twenty-two years manager of the Artillery and Albion Works, Greenhithe and Shoreham, is in charge of the works.

At the last meeting of the Stafford Rural District Council a letter was read from the Road Board expressing their appreciation of the valuable services which Mr. Idiens, the council's surveyor, had rendered in connection with the construction and improvement of roads, and asking the consent of the council to make him some monetary payment council consented.

The funeral of Mr. William Francis Hile, of The funeral of Mr. William Francis Hile, of Little Bayham, Lamberhurst (clerk of works on the Bayham Estate), who died suddenly at the age of sixty-four, took place at Frant, on Monday, the Rev. E. S. Jose, chaplain to the Marquis Camden, conducting the service. The coffin was borne to the grave by members of the staff. There were numerous beautiful floral tokens, amongst the senders being the Marquis and Marchioness Camden.

Marquis and Marchioness Camden.

Private Edgar James Edgar, younger son of Mr. James Edgar, of Cronkbourne Road, Douglas, Isle of Man, has been killed in action in the Gallipoli Peninsula. Private Edgar was just twenty-nine years of age. On finishing his education at the Douglas secondary school, he was articled as a pupil to Mr. A. E. Prescott, then borough surveyor of Douglas, and now of Eastbourne. After completing his articles. Private Edgar held several appointments in Canada, and later in the city surveyor's office at Sydney. At the outbreak of war he was an assistant engineer to the Public Works Department, New South Wales. He was appointed Second-Lieutenant in the Submarine Defence Force of Sydney Harbour. When the menace of an attack on the harbour was removed, he joined a signalling company as a private, and proceeded to the Dardanelles, where he met his death.

# THE STREET SYSTEM IN CITY PLANNING.

By NELSON P. LEWIS, †

There have been a few cases where important cities have been planned as a unit; where the administrative centre, the commercial, industrial, and residential districts the lines of transportation and their ter minals, have been laid out after careful study to meet conditions which could be confidently expected or to a large degree controlled. Washington is one of the most notable instances of such city planning. The city planner usually finds, however, that the beginning has already been made, a begin ning which may prove a serious handicap or may, though less frequently, be an admir able nucleus for the larger plan. Most old cities have simply grown with very little planning. Comprehensive plans, where such have been prepared, are of comparatively recent date, and have had to adapt themselves as well as might be to the older portions of the towns as they were, and make designs for sections not yet developed conform with the haphazard growth which had already taken place. Plans of such cities, therefore, commonly consist of a number of separate designs more or less unrelated to each other, abutting upon the confused and uneconomic system of streets in the old town, which in most cases has persisted as the actual centre.

# STREETS IN UNDEVELOPED SECTIONS.

In every city, however, there are large areas not yet developed and not even planned, where opportunities are presented to design a street system, the different parts of which will be properly located with respect to each other and to such modification of the system of the existing town as may ultimately be carried into effect. Too often these undeveloped sections are planned as if they were so many different urban areas unrelated to each other or to the original city, and too often the obvious blunders of the older sections are repeated in the new additions.

In nearly all cases where a street plan is to be devised, whether it be for a large area which can be treated almost as an entire city in itself, or for a smaller tract contiguous to the built-up portion of an important city, the first essential is an accurate plan of the exist ing roads showing their widths and the build ings fronting upon them. The old highways which serve to connect villages or centres of population have a good excuse for existence and serve a useful purpose; they lead where people want to go and are likely to be fairly Their alignment may be somewhat direct. faulty, their grade excessive in some places, and their widths inadequate in view of the fact that they will naturally become the main lines of traffic for the urban district which will include them. With such straightening and widening as may be straightening and widening deemed necessary and such changes in line as will reduce excessive grades, these old roads will be the logical basis of the street plan which is to be prepared. When they have been plotted, it will be obvious that additional roads will be needed, some to establish cross connections, others to give greater directness to the roads traversing the entire territory, others as bypasses around groups of buildings so located as to render the widening of some portions of the old roads unduly expensive, and still others to furnish lines of main drainage along the valleys through which the lateral sewers and subsidiary trunks must ultimately find their

While no one can predict with any certainty the precise manner in which any city will grow, the purpose of the preliminary design is to establish lines of least resistance which future development is quite likely to follow The streets laid down in the plan will pro bably become the main arteries of traffic.

· Abstract of a paper presented last month before he International Engineering Congress at San Francisco.

+ Chie' engineer, Board of Estimates and Apportionment, New York City.

They will divide the territory into a series of pregular hences having three, four, or more sides, which sides may be a quarter or half a mile or more in length. The c areas must be subdivided by secondary tools in the location of which regard should be paid wherever possible to property subdivision, to the possibility them developing into main traffic roads, and to the avoidance of awkward junc-tions with the main roads aiready laid down, which would is sult in confusion of traffic. It is difficult to say how wide the primary and secondary roads should be made. The Royal Commission on London Traffic in its report, made some years ago after an exhaustive study, suggested the following widths: Main avenues 140 ft., first class arterial streets 100 ft., second class arterial streets 80 ft., third class streets 60 ft., fourth class streets 40 to 69 ft. This scale of widths may be somewhat over generous and might involve unnecessarily great cost

Lastly will come the minor streets, which will serve almost entirely for access to dwellings. Their alignment and grades are of little importance. The chief concern is that they should be so laid out as to furnish ample light and air and discourage, if net prevent, a too intensive development with rear build ings in case the city ordnances do not prohibit this menace to health and decent living. To plan far in advance the precise location of these minor streets is not necessary, if it be not unwise. There is no reason why a street which is to be devoted to private residences should be long and straight. Among the most attractive features of a city are small residen tial areas treated in a distinctive way, each with a character of its own, which the visitor stumbles upon with agreeable surprise. If these minor subdivisions are planned at d.fferent times or by different persons, this variety in treatment is more likely to be realised. The important thing is that the skeleton should be created first.

While directness is desirable in the main and even the secondary streets, it does not follow that such streets should be perfectly straight; in fact, straight streets are seldon interesting. Neither need circumferential or curved streets be laid out with perfect symme-try. In studying a plan the slightest depar ture from symmetry is noticeable, but on ground it cannot be detected. One can ride or walk along a boulevard following a sweeping curve and be unconscious of the fact that its radius is frequently changing.

Mr. George Elton Sedding, Lance Corporal, Signalling Section, 7th Norfolk Regiment, elder son of the late John D. Sedding, F.R.I.B.A., and grandson of the late Rev. E. D. Tinling, tranon of Gloncester, died in a London hespital on Satarday last from wounds received in action in Flanders, aged thirty three.

The Sutton Trustees have purchased Brom-The Sutton Trustees have purchased Bromwell House Estate in Wick Road, Brislington, Bristol, where they propose to build 240 workmen's dwellings, at a cost of £70,000. As the trustees have been prohibited by the courts from spending any of their funds upon buildings until the close of the war, they will not be able to proceed with their scheme at ones.

At the last meeting of Stirling Town Coun-At the last meeting of Stirling Town Council it was reported that certain donors had intimated their willingness to supply a stained-glass window for the principal staircase leading to the council chamber in the new Municipal Chambers. A design, executed by Mr. Gillespie, architect of the buildings, has been accepted. The design represents King Alexander II preparation of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council of the Principal Council timespie, arcintect of the buildings, has been accepted. The design represents King Alexander II, presenting to the Process of Stirling the Royal Charter of August 13, 1226, by which he granted the burgesses of Stirling a weekly market, a guild, and other privaleges

market, a guild, and other privibges. The death has escurred after a short illness, at his residence, Menai Bridge, at the age of sixty-four, of Mr. Evan Parry, builder and contractor. Mr. Parry was a native of Menai Bridge, and succeeded nearly forty years ago to the extensive business carried on by his uncle, the late Mr. Richard Parry, and carried out many important building contracts, including soveral schools and chanels in the county, the National Provincial Bank. Metai Bridge, Ceris, the residence of Mr. J. R. Davies, D.L., and the Marquis of Anglesey's estate office. He excented extensive structural alterations some years ago to Gadlys, the residence of the late Colonel McCorquodale. Mr. Parry leaves a widow.

# Our Illustrations.

NEW CENTRAL OFFICES, ROSEBERY AVENUE, E.C., FOR THE METRO POLITAN WATER BOARD. ROSEBERY

These buildings have been in course of creet. in for some months. The competition drawings submitted by the six invited architests were all idustrated in the Building News for June 5, 1914, and the perspective here with reproduced, showing Mr. H. Austen Hall's front part of the premises now in hand, was exhibited at the Royal Academy this sea sen. It shows several alterations upon the original elevation, and by further study the dites have been much improved, although the lay cut of the plans seems to have been substantially adhered to. The chimneys seen in the picture were absent in the sketch sub-mitted in the competition. We published a block plan of the site and the two chief floors buildings, giving a fairly full descripto n of this scheme, and pointing out the main essentials of the five other plans. Their architects were Messrs, Brown and Barrow, Messrs, H. T. Hare and H. S. East, Mr. Edwir Cooper, Messis, Herbert O. Ellis and Clarke and Messis, E. T. Hall and Son.

DECORATION OF THE SCHOOL CHAPEL, CHRIST'S HOSPITAL, HORSHAM.

We commenced this series of tempera paintings, executed by Mr. Frank Brangwyn, R.A., illustrative of the Fathers of the Church, on Wednesday, October 6, and conthatch, in wednesday, teleber 6, and continued their illustration in the following number. To day we give two more of the panels, which are, like the remainder, based upon a scheme of blues, warm grey, and old gold in the figure work, with a blue sky serving as a band round the chapel to bind the discretions together as a first all of the descriptions together as a first all of the discretions as a first all of the discretions are discretions. the decetations together as a frieze above the top of the cak stalls, the bays being divided the wall shafts carrying the roof. by the wall shatts carrying the root. The subjects now given are St. Augustine at Ebbs-fleet. "Turn, O Lord, Thy wrath from this people," and St. Ambrose Training the Choir in his Chinch at Milan, v.D. 385. Other subects will follow.

KING EDWARD VII. MEMORIAL EAST

SUSSEX HOSPITAL HASTINGS.
This hospital is being built on a site to the north of the existing hospital on the high ground. The present building is opposite to the pier, bandstand, and promenade, and, therefore, does not enjoy the quiet necessary to an institution of this kind. It is seen that the hospital is designed on the ordinary pavilion system; it has to adapt itself to a very difficult site, which has a fall of nearly 60 tt. difficult site, which has a tall of nearly 60 ft. from west to east. The buildings will be entirely of brick, with a few stone dressings, the tools to be evered with Westmoreland green slate. The design is by Messrs, John Saxon Snell and Stanley M. Spoor, architects, of Great James Street, Bedford Row, W.C. The draw.i.2 shown was at this year's Royal Academy exhibition.

PORCH AT VERNON, EURE, FRANCE.

SOANE MEDITLION AND TRAVELLING STUDENT-SHIP SKEICHES BY MR ALICK C. HORSNELL. This excellent water colour sketch is handled in a particularly transparent way, and, archi-tecturally, it makes a very suggestive drawing of a broad and rich piece of work. The study thus directly done is executed with knowledge and minimum effort. It is by Mr. Aliek G. Horsnell, Some Medallist and Tite Prizeman Horsnell, Some Medallist and Tite Prizeman of the R.I.B.A. The subject is the portal of the interesting church at Vernon, on the Seine. The building has a choir of the 12th Century, a nave of the 14th Century, with chapels added in the 15th Century. The work of this very mixed in style and of distinct teriods which differ in detail. In the second of angelong the left stands the temb of Marie Magarard wife it Sein Imbert d'Harcqueney, in the radit a sle is a Resurrection group by Magnard wife of Slem Imbert d'Harege nev. In the right a she is a Resurrection group by Arribale Cara et al. The care half a doz fine tanestries of 17th Certiny differ in the limit of the limit of the limit of the limit of the limit of the limit of the limit of the major the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the limit of the li

Chateau de Bizy. This mansion was destroyed during the Revolution. It was the property of the Duc de Penthievre. The original drawing was recently exhibited in the large gallery at Conduit Street with the rest of Mr. Horsnell's studentship sketches.

AND PRESBYTERY. SOLTHWOLD CATHOLIC

This church is designed in the Late 15th Century style, of the same period as that of the ancient parish church of St. Edmund at Southwold. When it came to erecting this comparatively small church, it was necessary to consider in what way it should be treated in order not to compare unfavourably with the magnificent Mediceval church near by The architects determined to make the whole of the sanctuary form the lower walls of the massive tower. The treatment is ex tremely simple, and a noticeable feature is that no buttresses are used. The walls inter nally are plastered and are to be panelled to a height of 7 ft. The contract for the whole building of the church was £3,000 The architects are Messrs, Benedict and Beart-Foss, of Great Marlhorough Street, W The drawing reproduced to-day was shown at the Royal Academy Exhibition this year. The plan, with the view, shows the arrangement of the presbytery with the church at the chancel

OLD ENGLISH FURNITURE.

The pair of 17th Century oak chests on legs drawn in the upper half of the accomparying sheet of sketches came from Fritwell Manor, Banbury, Oxon. Both pieces, singularly harmonise, though so different in size. The lower chest, from another private collection, differs in style, which is more akin to the dacidean manner, with its pretty, simple pat-Cremwellian chair is true to date and detail, and so is the Yorkshire chair from an eld yeoman's house in the Wolds. ---

OBITUARY,

The death occurred at his residence, Caris The death occurred at his residence, Carishtooke House. Southey Street, Nottingham, on Monday in last week, of Mr. Richard Charles Sutton, principal of the firm of Messrs. Sutton and Sons, architects, of Bromley House, in that city. Mr. Sutton, who has died at the age of 81, was a pupil of the late Mr. S. S. Teulon, and afterwards established a large practice in his native city, where he built many churches schools wage. where he built many churches, schools, ware-houses, shops, and domestic buildings. For fourteen years, 1837-1901, he was a member of the Nottingham Corporation.

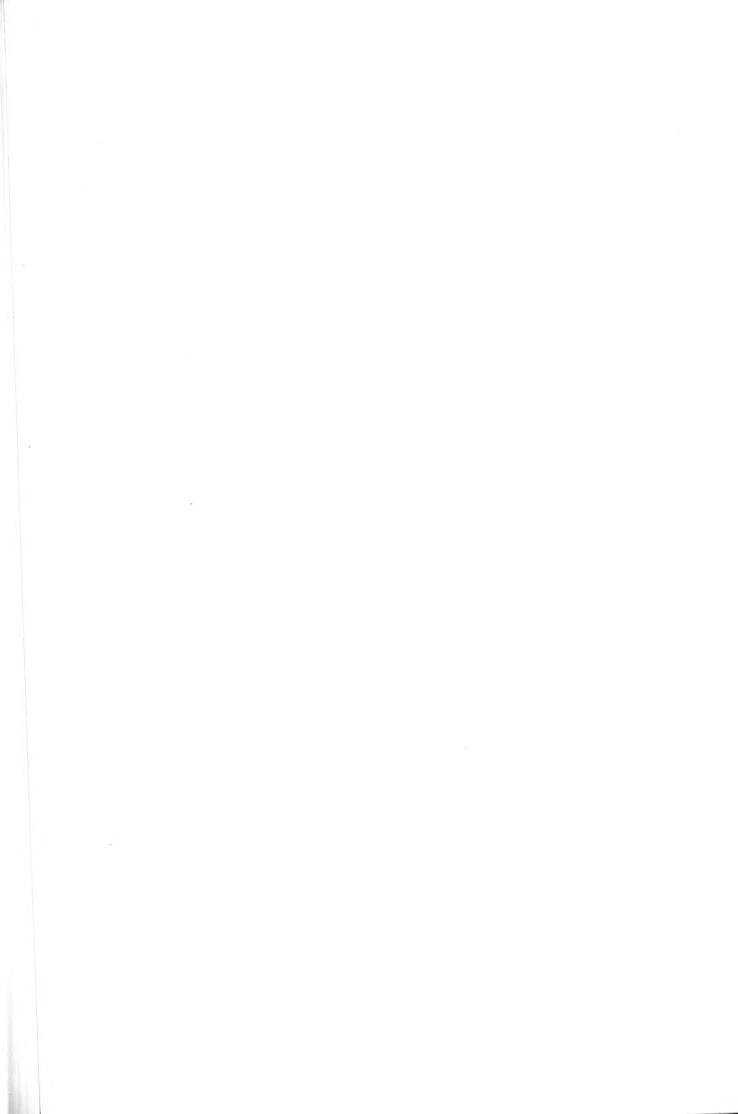
We regret to announce the death, which occurred on the 19th inst., at his residence in Tewit Well Avenue, Harrogate, of Mr. George Bertram Bulmer, F.R. I.B.A., of the Leeds firm of Messrs. Henry Perkin and G. B. Bulmer, architects, City Chambers, Infirmary Street. Mr. Bulmer, who was sixty-four years of age, was a past-president of the Leeds and West Yorkshire the Leeds and West Yorkshire Society of Architects, and had been a Fellow of the Royal Institute of British Architects since Among the Leeds buildings in the creetion of which he was concerned are the head office of the Yorkshire Penny Bank, the National Provincial Bank, the United Coun National Provincial Bank, the Union and National ties Bank, the Scottish Union and National Insurance Buildings, the Union of London and Smith's Bank, Atlas Chambers, City Chambers, Cabinet Chambers, and West Bank Chambers The funeral service was held in Peter's Church, Harrogate, on Friday.

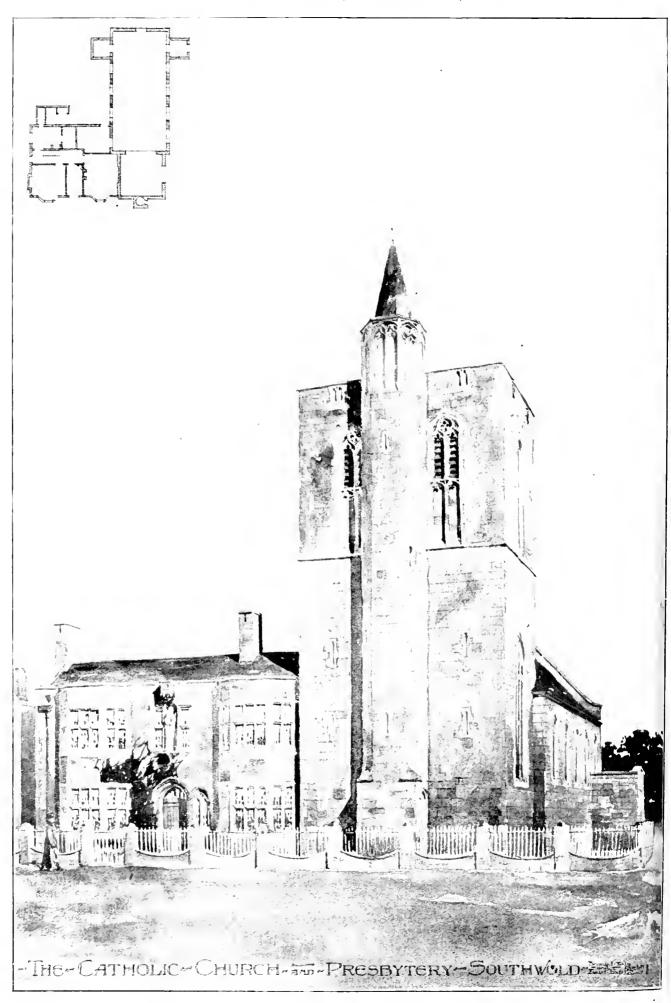
Mr. Gordon Sanderson, a clever young architectural draughtsman and architect, has been killed in France, at the age of twenty After serving some time in London architect's office be went out to Egypt, and was engaged in Government surk there. He went to Scotland, marrying on Edinburgh lady, and was over a year balf in the office of Mr. J. B. Dunn, F.R.I.B.A. of Frederick Street, Edinburgh. Out of over a hundred and fifty applicants be was selected to fill an important post on the Archaelogical Survey of India, having charge of the buildings of arel vological value sart fith ancient for tilled ensight formal in the United Provinces and the Punjab. Edward I of England creeked the wastle of Werner test in the right bank of the Seine. The stables along are now left intact of the dian visit. Of commarding appearance and physique, being over six feet four inches in height, he had a charming personality, and was a very fine pen and ink and pencil draughtsmanship. One of his earlier works was a charmingly-illustrated book on the Yeoman Farmhouses of Yorkshire. could illustrate the Indian temples with their filagree work in a remarkable manner. Although offered an A.D.C. appointment, he preferred to see some fighting, being in charge of the Machine-gun Section of the 2nd Gurkhas. Lieutenant-Colonel Boilean writes of him to Mrs. Sanderson:—"It is with the greatest sorrow that I have to write to you about your gallant husband. was talking to him only about half an hour be-tore he was wounded. He was as usual full of energy and keenness, and then unfortunately was wounded and removed from our midst about an hour afterwards. I do not think I ever knew a man who was so universally respected and beloved, and his cheery, brave spirit was a great asset to us. He took up machine-guns with that keenness that charan absolute expert. I am thankful to say he did not suffer at all, for he was nnconscious when I saw him, and must have been so at once. May I offer you my deepest sympathy, for if we as a regiment deplore his loss, I know what sorrow it must be to you. Mr. J. B. Dunn, in sending particulars to us of Mr. Sanderson, says:— "It is sad to think such a very clever fellow should have been killed so young. . . He was a fine young fellow, and a highly-skilled draughts-He was buried in the British Ceme-

man. He was buried in the british conse-tery at Gorre, not far from Bethune. Professor Vivian Byam Lewes, Professor of Chemistry at the Royal Naval College, Greenwich, and Chief Superintending Gas Examiner to the City of London, died on Saturday from an attack of double pneumonn. He arrived at Moli, Flintshire, on Tuesday in last week, and delivered a lecture under the auspices of the Educational Trust on "The Explosives used in the Great War." He was afterwards in a state of collapse, and was removed to Hafad, near Mold, the residence of Mr. William Buckley, Chairman of the North Wales Munitions Board, whose guest he was to be during his visit, and succumbed four days later. Professor Lewes was born in 1852, and was educated at University College, London, Among his published works are "Service Chemistry," "Acetylene," and "Liquid and Gaseous Acctylene, Fuel." He was a contributor of many papers to the Society of Arts, the Chemical Society, the Chemical Institute, and the Royal Society, and had lectured before the Royal Institute of British Architects and many other societies on the relative values of illuminants,

and kindred subjects.

Mr. George Macfarlane, J.P., the oldest master builder in Manchester, and an ex-president of the Master Builders' Associa-tion of Great Britain and Ireland, died on Friday at his residence, Oxford Road, Manhester, in his seventy-seventh year. Macfarlane, who was a native of Perthshire, where he was born in 1839, went to Manchester in 1854, after spending a little time at Bolton. He began business a few years later as a builder. In 1876 he became a member of the Manchester Builders' Association. and, in due time, its president. In that capacity he took a leading part in the settlement of several labour disputes affecting the building trade. It was, however, in the work of the administration of the Poor-law that M. Macfarlane, outside his business activi-ties, took the widest interest. He was elected a member of the Chorlton Board of Guardians now the South Manchester Board-in 1901, and afterwards became chairman of the board, and arterwards became charman or dis-board, a position which he relinquished a few years ago. Mr. Macfarlane was an ardent advocate of the sheme for the amalgama-tin of the Manchester, Chorlton, and Prest-wich Boards, and one of the principal witnesses who supported, at the Local Government inquiry, the proposal which has now come into operation. For many years Mr. Macfarlane was also a Governor of Henshaw's Blind Asylum. He had held high office in Freemasonry,

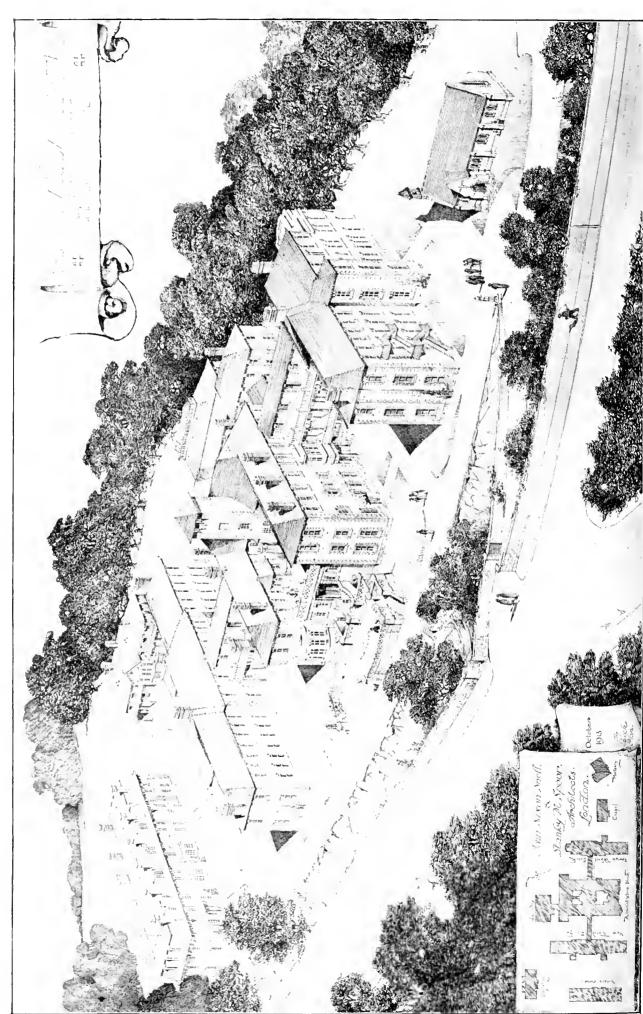




CATHOLIC CHURCH AND PRESBYTERY, SOUTHWOLD, SUFFOLK, Mesers, Beight et al. C.S.S.S., and Beagt-Foss, Architects.



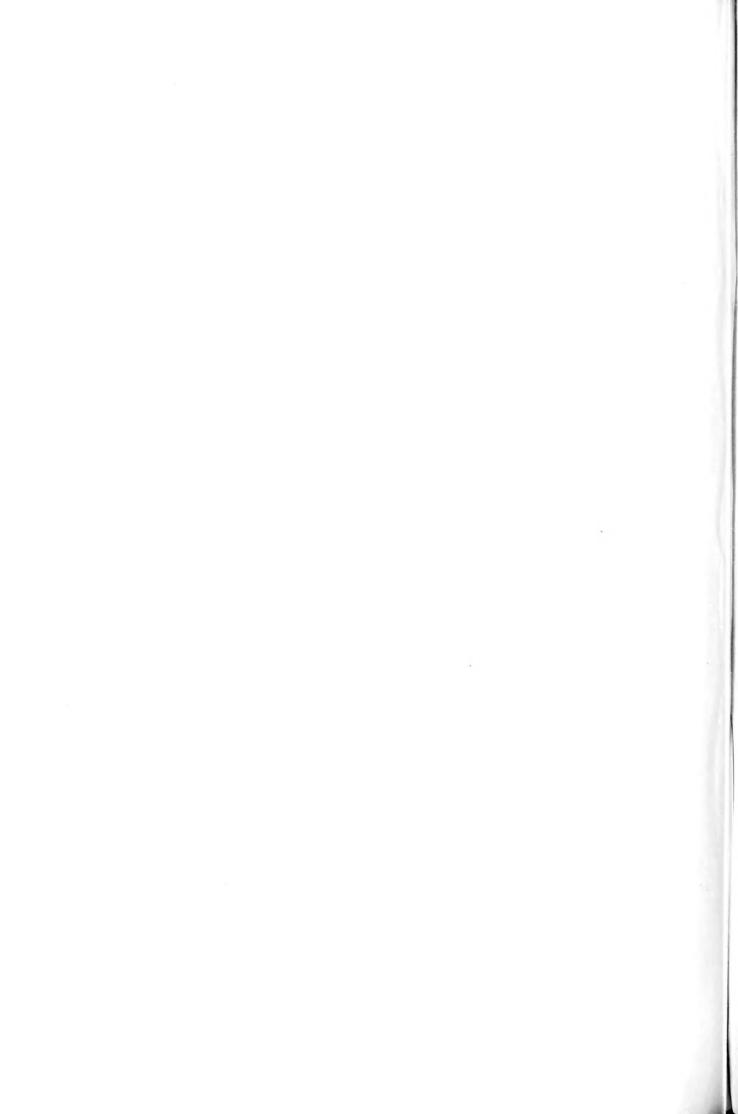
KING EDWARD VII. MEMORIAL EAST SUSSEX HOSPITAL, HASTINGS.—Messes. John Saxon Snell and Stanley M. Spoor, Architects.

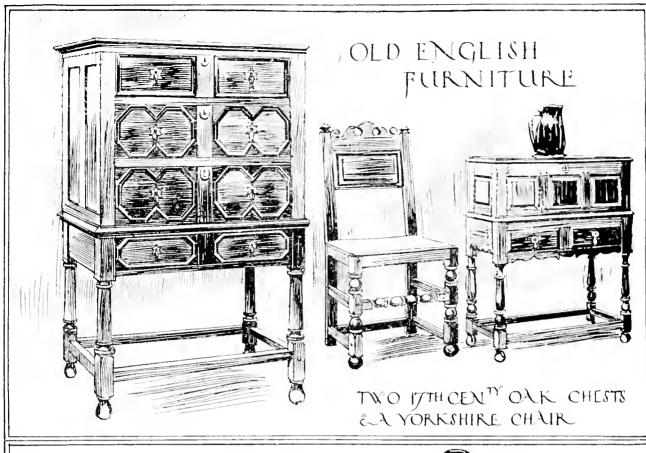


27, 1915. THE BUILDING NEWS, OCTOBER



PORCH AT VERNON, EURE, FRANCE: SOANE MEDALLION AND TRAVELLING STUDENTSHIP SKETCHES.—By Mr. ALICK G. HORSNELL.





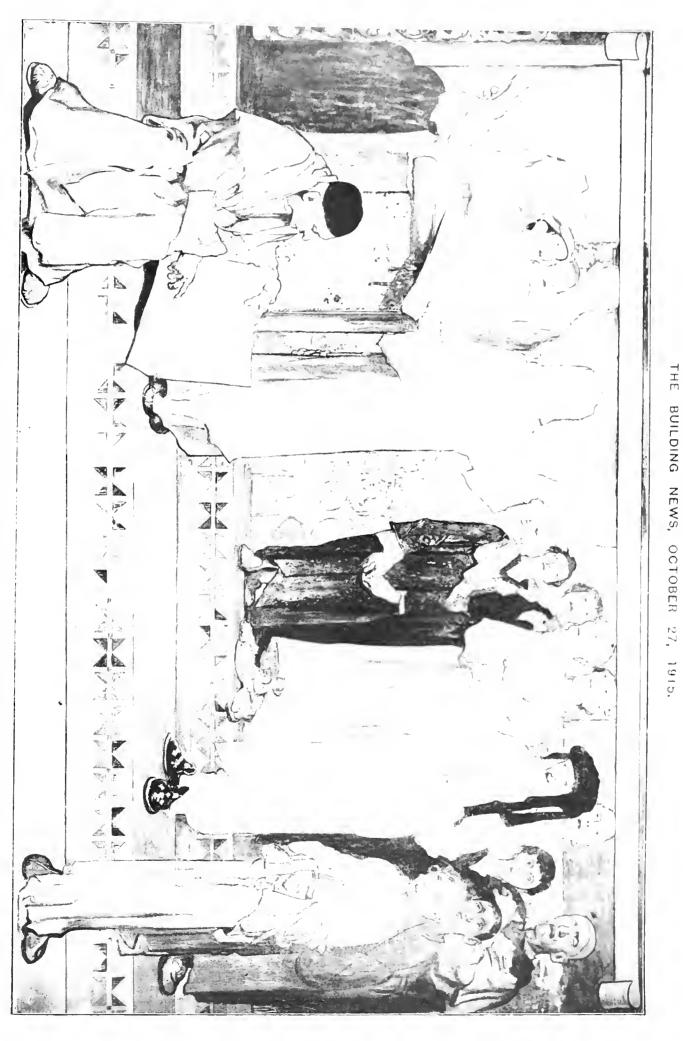


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DECORATIONS OF THE SCHOOL CHAPEL, CHRIST'S HOSPITAL, HORSHAM.

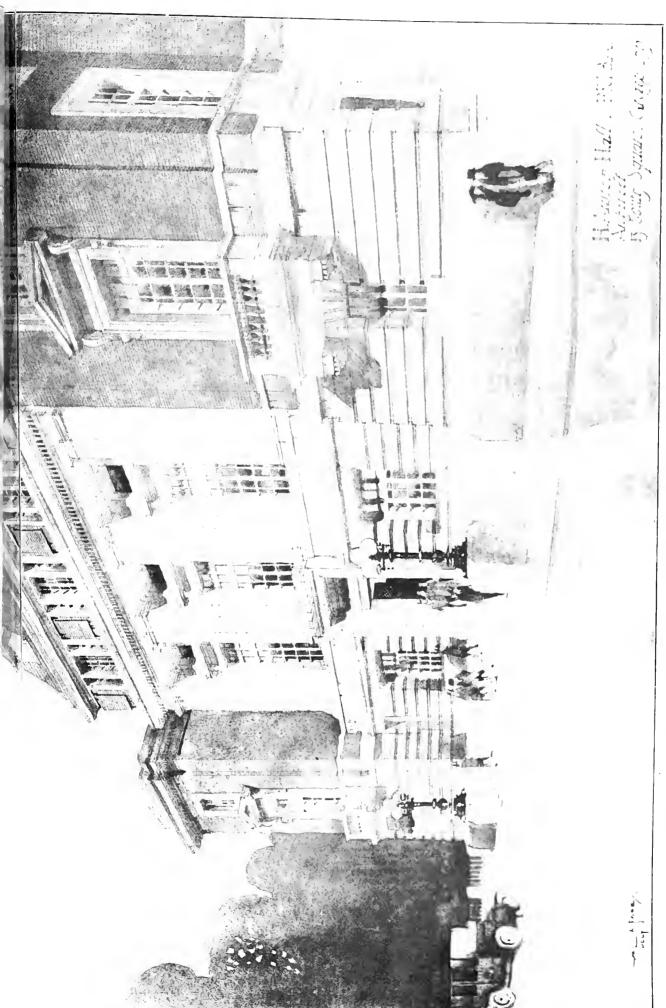
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Merignaston Water Board Now Copins Office Received Argue Lagaign F.C.





NEW CUNTRAL OFFICES, ROSEBERY AVENTE, E.C., FOR THE MILIROPOLITAN WATER LOAMD

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# Currente Calamo.

We have little doubt that the Shilling Fund the Daily Telegraph has started to provide a fitting memorial statue of Ninse Cavell in London at a cost of £2,000 will be fully subscribed ere this is read, and that the genius of Sir George Frampton, who is to design it. will ensure a fitting tribute to the heroic woman whose name will go down to posterity as the most shining example of British self sacrifice of her age. We should like to know by this time next week that the initiative of the Daily Telegraph has been so many times more than needfully responded to that those responsible will feel justified in promot ing the erection of some building consecrated to the objects to which Miss Cavell devoted her life and energies, and that many more British women will in the future be thus enabled to emulate the devotion and comage of the lady who has, in its highest degree, embodied the attributes which are the gory of the sex, but which the "Nana Sahib of Belgium," as the New York Herold calls her murderer, was naturally incapable of appre-

It is stated that "at an early date" the Government will lay before Parliament a Bill to prohibit the raising of rents through out the country during war. The statement is a vague one, but it is impossible to resist the conviction, bearing in mind some of the legislation of this Covernment, that more harm than good may result from a hard and fast general prohibition. For the glaring cases alleged of the increase of rentals of the houses of workers, where the demand has been due to the sudden large in rease of workmen in certain districts, owing to the starting or enlarging of factories for the production of munitions and the like, there can be no excuse. But surely the ordinary property owner, who is likely to pay more than his share of increased taxation, is not to be the scapegoat, while traders are making a harvest in many cases out of the large in crease in the prices of commodities! For the present scarcity of houses the Govern ment itself is mainly responsible. It has handicapped the builder for years past by exceptional taxation, and its present neces sities are the fruit of that and other doubt less benevolent but ill-conceived impulses of Mr. Lloyd George. We are told that the matter has been "referred to other depart nents of State." We trust they are comsetent and well-informed, or we shall have mother muddle added to the many already nade.

Public-house property is just now in a oad way, and it does not seem likely to get unch better during this war time. These censed houses are usually held on lease from he owner, who is often a distiller or a rewer, and the ordinary form of such a ase contains a set of rigid covenants which ) not give the lessee much of a fighting ance of his life nowadays. But if the laintiff in the recent case of "Wootton varifield Brewery Co." had succeeded, the t of every similar lessee would have been orse than ever. The deed was dated in 1909. te term was seven years, and one covenant covided that the lessees should insure the cause itself in the sum of £650 against loss forfeiture, such sum in that event to to the lessor, the plaintiff. The lessees. e defendants, had insured against loss rough any act of theirs, but not against to well-known risk of what is called "re potential, sell-

dundants of the attract Act the house under the Act 1904 or a rate very too many, as a none of the local the house was conditioned in the local the house was conditioned in the local the Act, and compendition of £200 or awarded, out of this has plaintful to £20 or he share. He may chould \$600 or is for the breach of coverant in the local coat heast the difference. Notice, the local coat heast the Courtest Appear could be the below nor the Courtest Appear could be the logal just occur the lamb and courter to logal just occur the sharm and courter to be and the law still as specified or the and we suppose that someone is diely of that there was a cool part of taxonic success.

The trouble in the half paper trade aboute and onewhat complicated. There is three sections interested, when doubt have the randoms for the action taken and so far, apparently, a module of the section difficult to acrive at. The module of section difficult to acrive at. The module of section the Wall Paper Merchants' Associative at I the National Association of Douard in our the three bodies conserved. The development of contact in order to merchants to refer editional to the decrease of the merchants to refer editionals in module prices from 35 per cent to 25 per cent. The decrease of the decrease is the propositive of the interest of the propositive of the interest of the propositive of the random cipal organist from the says that some members of the National openly advocate that decorators who have been buying paint of wormshes, and other similar supplies from wall paper merchants shall of the threat to be duce the discount is not withdrawn, at off their supplies of such materials from the source altogether, and that which that the recreasing disposition to me washable potential of the exclusion of wallpaper, if massets, modulants, and measure the latter field to har mouse their differences.

The Edinburgh Revew has a very a treet ing article by Mr. Edminal Gesse, CB ch "The Desceration of French Monuments in which he describes at length the cuttages at Rheims, Arras, Sendis, and Soiscons, and some of the lesser known victims of German bar barism. It is impossible to read the exilence Mr. Gosse bring forward without be no convinced that the outraces have been no necessity ruthless necessities of warfare or the work of ignorant savages. They have been perpertrated needlessly is far as in litary veress. ties went, with the old blooded determina tion to insult the rational sentment of the French people and to humiliate France, care nesses to the unrivalled gen'us of her aidli teets of the past with which every exilis d nation has regarded them, and of which she has been the taithful mind at. Things have been had enough in Bellium, but used the difference, as Mr. Gosse says

difference, as Mr. Gosse says.

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# LEGAL INTELLIGENCE.

LEGAL INTELLIGENCE.

A BIRMINGHAM ARCHITECT FOUND DROWNED. In Brainingham Covicorement M. Isaac Braziley he dean impost at the Viscori Cores in Wednesday into the circumstates of the death of Frederic John Gillarest 54, an architect and surveyor, of 79, Vicarac Read, Smethwick, who was round cook in the canal, near Garrison Lane on the provious in imag. Miss Florence Ellen Gillate de eased's sister, with whom he lived, said his was in very good health. He had never to each do his his. He left home on the previous inversality to go to the office, and she is directly away from home for some days at a time, so that at first she was not specially analysis. He periodically gave way to drink, but had been a testotaler for seven or eight months. Sometimes when he met a few friends he had a little too much to drink. The decased's cerk, George Randle, said Mr. Gill came to the office on Thursday morning. He left about 11.3 to keep, witness believed, an appointment. He did not return. The body was discovered in the canal at 7.15 in the morning by two men who were walking along the towing-path about sixty yards from the Garrison Lane bridge. George Dallow said morranz by two men who were walking along the towing-path about sixty yards from the Garrison Lane bridge. George Dallow said on Friday evening, about 9.15, he noticed a man walking up the lane in the direction of the canal. He seemed very much the worse for drink. The towing path there was often used by people as a short cut to get to Watery Lane. He believed the person he saw was the deceased. His dress appeared the same, as well as his general appearance. In reply to Mr. Sidney Vernon, who represented the relatives, a police witness said the path was a dangerous place for a man "who was not quite steady." a pence with mass and the pain was a dargeton place for a man, "who was not quite steady," especially as Friday night was very fee ey. A doct a who examined the bed: said it had been in the water several days. Death was due to drowning. The pury returned a verdict of "Found drowned."

AN ALLEGED DEFECTIVE GANGWAY, HEAVY DAMAGES -ELLIOTT v. C. P. ROBERTS AND CO. LIMITED -Mr. Justice Lish and a common jury heard on Thursday in the King's Bench Division, an action is strictly Subrey Elliott, but water engineer, Cirley Street, Snepney, against C. P. Roberts, J. C. Ley Street, Snepney, against C. P. Roberts, J. C. Ley Street, Snepney, against C. P. Roberts, J. C. Ley Street, Snepney, against C. P. Roberts, J. C. Ley Street, Snepney, against C. P. Roberts, J. C. Ley Street, Snepney, against C. P. Roberts, J. C. Ley Street, Snepney, against C. P. Roberts, J. C. Ley Street, Snepney, against C. P. Roberts, J. C. Ley Street, Snepney, J. Ley Street, Snepney, J. Ley Street, Snepney, J. Ley Street, J. Ley Street, J. Ley Street, J. C. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley Street, J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. Ley J. tiff adezs i that the defendants were 2011y of a zinzence in not proveding a safe and suitable zinzwic. The defendants denied nerligence are local time act zway was perfectly safe and the right. The arey found for the plaintiff and awarded him £2 — damages. Judgment was not entered pending arguments as to the legal L. Sility of the defendants.

AN ARBITRATION AT BOULTHAM. At the last meeting of the Branston Rural District Council a committee reported the result of the arbitration as to the charges under the contract for the sewerage of Boultham made by the contract for the sewerage of Boultham made by the contract for the sewerage of Boultham made by the contract for Mr. Smith. It was reported that a bill of £21 for extras was sent in by Mr. Swith, and obsertions were made by the committee. Mr. Smith withdrew the account rad sent in another for £115. Eventually the only the order of the matter to an arbitration. M. Joseph C. Joseph Shenford, who awarded £115- that and object of Mr. Smith to pay the set £2.

BUNGALOWS AND BUILDING BY-LAWS Same Sheem of Stour Street Kirk dale and of Scalark From Moreton, was a not one of defere the Birkenhead county pasters on Threshy for setting up a tempor dale and district the Birkenhead county provides on There in Birkenhead county provides on There is for setting up a temporal to readdly at Moneton contrary to the wistors of the Public Health Acts Amend with Act. Mr. W. Greaves Lord, for the William Radal District Council said this was reself the well-known being alow cases, and the where a barefreed attempt had been read to get round not mency by laws, but the Lytis of P. Sament On March 20 there are Moneton statem a bingulow in the Lytis of P. Sament On March 20 there are Moneton statem a bingulow in the feet of the county of the foregalew to the feet there are very the form a wag zon. Mr. Short there are very the the Council, what to the feet of the was allowing another being alow to the feet of the was allowing another being alow.

name of the owner. Replies were given denying the electron of the bangalow, but it was found out later that the owner was the defendant. Notice was then given to Sheen that he had recently ejected a building contrary he had recently ejected a building contrary to the Public Health Act. A reply was then received, not from Sheen, but from the solicitors to Mr. Kerr, the owner, stating that the building had been ejected on Scabank Farm, but saying that the caravan there could be inspected by the Council in Birkenhead if the Council were prepared to pay the cost of the necessary horses. The building (continued the necessary horses. The building (continued coansel) had a span roof, sponting, and gutters, a stove which was built out over the end of a stove which was built out over the end of the waggon with a chimney, and at the other end there was a down spout which seemed to be much more suited to a permanent dwelling. The building had a garden in which were be much more suited to a permanent dwelling. The building had a garden in which were growing vegetables, and, in fact, there were all the amenities of a country dwelling. Mr. Shanen, surveyor to the Council, gave evidence as to the character of the structure, which, he said, was intended to be used as a bungalow and not as a caravan. For the defence, Mr. Dean argued first on the legal point that this structure was not a temporary building. They had had three summonses issued against them, one of which was for creeting a temporary building, and another for erecting a new building. It would be quite clear that if this structure was a new building it was not (under a legal decision) a temporary building. He objected to these alternative summonses. Briefly his point was that this structure was neither a new building nor a temporary one. It was purely and solely a caravan. He also raised the point that the Council had not given the necessary notice structure was neither a new building nor a temporary one. It was purely and solely a caravan. He also raised the point that the Conneil had not given the necessary notice to the owner as to their intention to take proceedings, and therefore the case could not succeed against him. The Wirral Rural Courcil had tried to get at the bungaiow owners on the ground of public health, and had failed. They had lost two cases in the High Court, and now came before the magistrates in order to secure a more favourable decision. The caravan in question complied with the law. It was a caravan and not a permanent building. Mrs. Sheen, wife of the defendant, said she always regarded the structure as a caravan, and not as a bungallow. Her husband had made an application to effect a bungalow, but permission was refused. Mr. A Keir, owner of the land at Moreton, said the caravan had been moved from one place to another to prove that it was mainle. The magistrates decided to convict. The structure was a temporary building within the meaning of the Act. They in flict d a fine of 20s and defendant must also pay five guineas costs. The bonch expressed the hope that some arrungement would be arrived at the avoid further highien concerning the bungalows.

THE BUILDERS CLAIM AGAINST EXECUTORS OF LORD BURTON—In the official Receiver's Court, on Monday, after an adjournment from the 15th inst., Mr. Edward Pollock again had before him the action of Messrs, Willcock and Co., builders, Wolverhampton, to recover from the executors under the will of the late Lord Burton the sum of £3.785, balance of the cost of building St. Chad's Church at Horninglow, Burton-on-Trent, for the late Lord Burton, the contract price being £19.559, to which a certain amount was added for extras in the claim by the plainprice being £19,559, to which a certain amount was added for extras in the claim by the plaintiffs. The defendants in the action were Harriet Georgina, Downger Lady Burton, Rangemore, Burton-on-Trent; Mr. John Arthur James, Grafton Street, London; Mr. John Gretton, M.P. Emismore Gardens, London, and Mr. John Lambuck, Stanton Road, Burton-on-Trent, joint executors under the will of the lane Lord Burton Mr. A. A. Hudson K.C., with Mr. Disturnal, K.C., and Mr. Drysdale, appeared for the idaintiffs, and Mr. Leslies of the K.C. with Mr. Gibbous and Mr. Beth me, was for the defendants. We reported the earlier hearings of the action in our last Both me, was for the defendants. We reported the earlier hearings of the action in our last issue, p. 45%. The adjournment took place on the question of the defendants being allowed to amend their pleadings in regard to an allogation that work said to have been done as extrashed not been done. The Referee decided te allow the amendment to be made on certain conditions as to pryment of costs, and defendants' counsel being unable to accept the condition with a consultation with the executors the case stead adjourned. On the reassent bling of the court, a consultation took place between the leading counsel in the case, and dimately they acceeded in arriving at a between the leading counsel in the case, and drin ately they succeeded in arriving at re-ordement of the action. The terms were con-semicated to the Official Referee in his privat-tion, but no announcement was made in

# PROFESSIONAL AND TRADE SOCIETIES

ARCHITECTURAL ASSOCIATION RED CROSS VOLUNTARY AID DETACH MENT. A second series of lectures on first aid is being arranged in connection with the above detachment. The course will consist of six lectures, and will be held at the Architectural Association on Monday evenings, commencing on November 1, at 6 p.m. The detachment is now supplying orderlies The detachment is now supporting for various London hospitals, and further property needed. The work is recruits are nrgently needed. purely voluntary and part time only. Full particulars can be obtained from the Quartermaster, at 18, Tufton Street, Westminster,

BIRMINGHAM ARCHÆOLOGICAL SOCIETY.—Mr. J. A. Cossins presided on Wednesday night at the Midland Institute at the annual meeting of the Birmingham Archaeological Society. The report, which was approved, stated that the excavations The report, which at Uriconium had been discontinued for the present. The officers of the society were re-elected as follows:—President, Mr. J. A. Cossins; hon. secretary, Mr. Howard S. Pearson; hon. librarian, Mr. Francis B. Andrews, A.R.I.B.A.,; hon, excursion secretaries, Messrs, Phillip B. Chatwin, F.R.I.B.A., and John Humphreys, Dr. Christopher Martin was elected on the committee in the place of Mr. W. Hobart Bird.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.—At a meeting of the council of the Royal Institute of British Architects held on Monday, the 18th inst., it was decided, owing to the war and the exigencies of the lighting regulations, to cancel the programme of papers and to sus pend altogether the evening meetings which had been arranged for next session. The president, however, will deliver the opening address on November 1 as already an-nounced, but the meeting will be held at three o'clock in the afternoon instead of eight in the evening. General meetings will also be held during the session for the election of members and the transaction of the usual business of the Institute, the meetings to take place at three in the afternoon. At the meeting of November 1, the portrait of Mr. Reginald Blomfield, R.A., Past President, painted by Mr. J. J. Shannon, R.A., will be formally presented to the insulute. It has also been decided that the hours during which the Institute Library will be open shall until further notice, he from 10 a.m. till 6 p.m. instead of from 10 till 8 as hitherto.

TOWN BUILDINGS IN ENGLAND AND SCOTLAND."—The Archdeacon of Elv. Dr. William Cunningham, lectured to the members of the Royal Philosophical Society, Glasgow, on Wednesday night, on "Town Buildings in England and Scotland." He said that when he compared institutions of Scotland with those of England he came to the conclusion that, though there were many superficial resemblances, there were real differences between them. The main result were that sult was that, whereas in England there had been a great deal of influence from the Mediterranean lands in the town buildings both in Mediaval times and the Renaissance, in Scotland the influence was largely derived from Flanlers. The two different types both in England and Scotland were the monastic and the castle, which types represented the different reasons for a considersented the uniferent reasons for a considerable population gathering together. Aided by hintern slid's, Archdeacon Cunningham explained the contrast between the towns and the effect which the affairs of primitive times had upon their organisation.

The Bristol and District branch of the Auctioneers and Estate Agents' Institute of the United Kingdom held its fifth annual meeting at Bridgwater on Friday last. The president for the year is Mr. H. Mundy, Mr. John E. Pritchard being the honorary treasurer, and Mr. E. A. Young the honorary secretary. The meeting considered the question of offering Institute prizes for the 1916 examinations. A special meeting followed the general meeting to make further arrangements for the conduct of sales for raising funds for the purchase of the "Star and Garter."

# Correspondence.

AFTER FORTY YEARS: A RETROSPECT

Sir,-Forty years have passed since I first contributed to these pages, and the anniver-sary, with its many nappy recollections, suggests a contrast between the conditions or today and October, 1875, in the architectural

and building world.

At that period the Gothic revival had nearly spent itself, most of our cathedrals and churches had been restored, and rising architeets were following the lead set by Norman Shaw, J. J. Stevenson, and other students of Dutch art of the beginning of the eighteenth century, and were endeavouring to revive the style of Queen Anne and the use of cut and moulded red brackwork. It was a time of commercial prosperity, and, therefore, of much building activity. Many towns were providing themselves with larger and more ambitious municipal offices, and numerous poard schools were in course of erection, both n rural and urban areas. Two important neasures aiming at the advance of sanitation and the solution of the housing problem—the 'ublic Health Act and the Artisans' Dwelling Act—had just been passed, and had a marked affuence on public opinion. Under the timulus of the obvious growing prosperity of he middle classes, mirest showed itself among he working-class and labouring population the demanded their rightful share in the ad-ancing scale of domestic comfort. Many imortant buildings were in progress. George idmund Street's Law Courts were beginning show themselves above the ground level of he vast area cleared of sluns, the most rward portion being the red-lirick block using Bell Yard and the base of the clock over at right angles to old Temple Bar. hich still obstructed the Strand. The ational Gallery was being enlarged in an rofessor E. M. Barry's plans. Sir Gilbert out was putting the finishing touches to the lbert Memorial, hard by Captain Fowke was monstrating how needless it was to commison an architect when a concert room of the mensions of the Albert Hall was contemated, and the Brompton boilers were being panded. Alfred Waterhouse was showing e capabilities of red-brick and terracotta the Natural History Museum, just being arted, and was bringing to completion the win Hall and Owens College at Manchester. ınl and Bickerdike were building for New-un Hall Christ Church, Westminster Bridge lad, Lockwood and Mawson had in hand for Joseph Parker the City Temple, and rring and Son the Memorial Hall in Far rigdor Street. Buildings of another class ver John Bedforough's Westminster Aqua m, Horace Jones's Markets at Smithfield at Billingsgate, and the reconstruction of the Alexandra Palace after its destruction fire, all then in progress. Architects were having a busy time, and

ts was beginning to reflect itself in their o ces and in the professional societies. gat influx of the ambitious sons of builders al tradesmen into offices, where their pents hoped that they would have easy h rs and an early competency, was beginh rs and an early competency, was beginn g to awaken concern among the elder membe of the profession, who, while gladly acceting premiums, gave less personal attentic to pupils, and inquired with an appearare of anxiety where all these building archi-

tes would find bread-and-butter.

he membership of the Royal Institute of B ish Architects was then comparatively sull, and, as many leading members of the pression preferred to remain outside, its influe was not great. In October, 1875, the ro-consisted of 298 Fellows, 290 Associates, 12Honorary Fellows, and 9 "contributing mabers," in all 609, whereas at the date of st June's report the membership showed anaggregate of 4.641, of whom 857 were Ferws, 1,713 Associates, 54 Honorary Assoanaggregate of 4.641, of whom 857 were Fews, 1.713 Associates, 54 Honorary Associates, and 2.017 Licentiates. At the date refer to Sir Gilbert Scott was serving for a thil year as President, with Messrs, Henry Cuey, George Vulliamy, and John Wishcorl (afterwards president) as vice predents, and F. P. Cockerell was the honsectary. C. L. Eastlake, the secretary aftewards pitchforked by Lord Beaconsheld

destinguing hims in type endeavours at amper the Press The publication of the amumic report was probabled, and attemptioned that address efforts prompt, appared to presidential address efforts prompt.

At the Vislout

At the Architectural Association, which a met at 9, Conduit Street, the voluntary system of classes was being carried on with greaenergy and success, the membership ver rapidly accessing, and proposals that the vizotous younger rody should be absorbed ! the Institute were rejected with spirit. Mi I Salmon Quilter, an architect with a good City practice, had succeeded G. H. Birch, tre City practice, had succeeded G. H. Buch, the order-lessologist, as president, with H. Cowe Boyes (a son of Anak in stature and proper tromately well built) and H. L. Florence, a vice presidents, and E. G. Hayes, as bon secretary, all three afterwards in turn occupied the chair, and of them all only Mr. Florence survives. ence survives. An energetic ex others member of committee, qualified for office as the teacher of a class, was one Aston Webin, whence year undertock the duties of hone seem tary, in succession was called to the offices of vice president and president, and then serve in turn the like positions at the Institute and as the most eminent architect of the day received high honours from three Sovere.21 of England. It is interesting to note that two of the young mon elected as members or the opening night of that session of the asso ciation were after aids elected president.
G. H. Fellowes Prynne and Leonard A. 8
Stokes and that the latter immediately followed Sir Aston Webb in the Institute chair At that time the total membership of the

At that time the total membership of the Association was little over 600, against a total at the date of the last annual report of 1,485. The Britisha News then, as always throughout its long career, was served by at able band of contributors. Many of these have passed away, and many more have rein forced the ranks. For the moment you, Sir. have passed away, and many more have from forced the ranks. For the moment you, Sir, whose service of fifty-two years dates back farthest of all of us, must miss some of the help so treely rendered, which, as you have neep so receiv reintered, which, as you have often said, has made the PULDING NEW what it is. When the struggle in which is many of us are manually bearing their par-is finished, may it be yours and ours to rejoice together in the hour of victory, and may those that come after be able to say, "another indicate the finance of the first peaks," throughout them our art flourished, and the BUIDIN NEWS and all its friends and helpers with it Fistri MOR. - Lam, etc..

WATER SUPPLY AND SANITARY MATTERS.

WATER SUPPLY AND SANITARY MATTERS.

ABERDEEN WATER BILL. The Parlia mentary Commission appointed to deal with Provisional Orders in Scotland opened an in quiry at Aberdeen on Friday into the application by the conjugation for power to take an additional 3,000,000 gallons of water per day from the River Dee to meet the growing demands of the city, and to make provision for the erection of works for liming and storage of the water, in order to ensure the proper preservation of its purity. The cost of the scheme is estimated at £450,000. The apposition to the Bill is at the instance of the Dee District Fishery Board. Sir Thomas Burnett, Bart, of Leys, Sir Victor Mackenzie, Bart, of Glenmuck, and other proprietors of salmon fishing on the river, the principal objection being the the proposed abstraction of 3,000,000 gallonadditional per day would seriously and injuriously affect the salmon tishings, and they ask the tribunal to make provision in the Order for compensation water being sopplied. The inquiry is proceeding -

# TRADE NOTES.

Boyle's latest patent "Air-Pump" ventillators are bose, applied to Wraxnall Purish Charela, Brist I

In consequence of the expansion of their

# Our Office Cable.

An atenot is proposal from the Propositional Classes Witt Relief Court Force docussed by the London Education Commute. on Wednesday. The Council asset that, with a view to finding work for artists in distress through the war, the walls of vertain Council schools, to be substed by the Council. might be decorated with trozes and paners, the decorations to remain the property of the Conneil. It was proposed that the subjects and designs should be supercooled by an expert committee of artists, and submitted for approval to the Council before heard carried out. In order that the work of the schools might not be interfered with the feature and many, want he exceed a way. might be decorated with traces and papers, schools might not be interfered with the friezes and panels would be executed away from the school buildings, and fined during the school vacations. The Commonweal not be put to any expense in the matter. Mr. O. E. Warbing proposed that the offer should be accepted. Mr. Gantrey right in a the decorations should not be closs in build modern. For example, one of the closs in build modern. For example, one of the closs of being printed for his old school. Mr. Warbing and that he thought Mr. Gantrey's order to worthy of cateful consideration, and remove modern of cateful consideration, and the undertook to bring it before the German Purposes Sub Committee. The metion was mark monely approved. monsly approved

A Yorkshire correspondent of the March A Torkshire correspondent of the Marcine to Foundation writes: Sphegnum moss women used as a builder's smalley to give an agay name to a beautiful thing. All along the border of the West Ridling the old houses are toofed with grey stone slates. Mess was collected and forced into the joints of the slates. As the rain ran down the root the most absorbed the moisture, and the swollan most made a water tight joint. Besides serving this purpose, the rich green, velvety lines of most bejewel the grey slates and make a pleasing picture worthy of being run troduced by the walking of the control of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich transfer of the rich tra architect of our garden caties. The old loulders architect of our garden cities. The old builders took especial pade in their roofs, "continues the correspondent," and added another too he of decoration that is worth following. Their finstone chimneys and ridge stones were well pointed, and over each course of line a bread band of whitewash or even white paint was added, so that the pointing of the channeys and the ridge is plainly visible from a distance It is called scam pointing, and the black and white effect is most charming. The house-proud farmer has the white seams renoved every spring. I am told that the custom is

Sand is mixed with nearly all aggregates. remarks a writer in the Contract Re ad et Toronto, for the purpose of filling the vo. 1s. Toronto, for the purpose of high the volus, If enough sand is added to fill up the volus between the particles of aggregate added to fill the interstices between the seek, a much smaller quantity of coment is recief than if the sand be emitted, while at the same time a stronger, heavier, and more inversions concerts is identical. Since of me pervious concrete is obtained. Sand of un-form size tends to weaken the concrete, as also very fine sand. Unaformity in size more s a greater proportion of voids, and either a larger quantity of cement has to be used to fill up the interstices or some remain annily I to weaken the strength of the concrete.

The old church of St. Paul's, Herfax, N.S., is a standing testamony to the duradiaty of timber. This ancient pile, which dates from 1750, is constructed of pine and cake with was brought from Boston, M.S., which it these early days was part of the British almplie. It is the mother chard of the Charlington England in America, and the front time I The West custs. Allow of Canada, "The svery rich offs treed issue a tions. It was bind on the Parabour 1750 at the expense of the Crown, by a respective ment. The interior of the charle built of ment. The interior of the charle built of great great wealth of noural table ts of great gristerical interest than can probably The old church of St. Paul's, Halfax, N.S. of great whistorical interest than an probably be found in any other church on that side the Atlantic.

s at trac intervals were made on y 'st., aeroplines, which threw rls on the town, some of them in y. One bomb struck the roof of the of the Scalzi, bringing down the cell of the Scalzi, bringing down the cell of nothing day precious painting by contained a precious painting by it. Another incendary bomb fell in the letter See Marce, without doing any wage. It is course of a third attack, in adden afterwards, three bombs were throot, the it was two of which did no damage, and there we do dropped in the courty rid of a limboures, set fire to a pile of we of Monday morning there was a fresh attack, too. Vistr an incombanes dropping soy rall Mendaly merring there was a riest, attack, the Austrian acroplanes dropping several ends at refer a re. Three people were slightly at h. The insterial damage done was very ght. It is regarded as a real miracle that bomb should have fallen in the Plazza San with ut doing any harm.

# CHIPS.

The around district council of Helbench have appointed Mr. Firby to the position of surveys in place of the late Mr. W. R. Bailey.

It will cost S. Paneras Borough Council £35; took to whiten the 560 corners of Streets. The rk will have to be done three times a week, d in dirty we other more often.

A new Reman Cathelic Church at Batley larr, built at a cost of £1.732 from the plans i Mr. Elwen Sempson, architect, Mauning am, Bradford, has been opened. Carr. b

The f undation stone for the extension of a parish shurch of Lechts lly has been form by last. The architect is Mr. P. Macaregor almers, F.S.A.Sect., of Bath Street, Glas

The death is anneaned of Mr. Thomas Avield, arbitrer blandly. He was a mem-e of the Institute of Civil Engineers the Mading Engineers and a Fellow of the Sur-

The Kirnenkey Coperator have completed, the of £17200, the layure of the new cut, sewers on the bach at Patalond and taken to These outers discharge for below

w wing added to the U.V.F. Hespital Avenus Belfest, has been formally Mr. R. J. Calwell, of Belfast was been and Mr. W. Downing of the title output for

A construction potential of the late Principal Refert Range has been executed by M. Per Wisson, a coming Belgian somptor and edge of the firm Russes. It has been placed in the Range Hill of New College, Edinburgh.

The new Dock mission large Edition (22), studied in studied in New Park R and also have half-rafford Read extent to the collect Manchester, was exampled in Manchester, was exampled in Manchester, but have as week. The foreign with more large designed by Messas, Arthur Brocklehurs and Co. of Manchester, explaced with an open cut ock over Ordsall Park.

At the annual meeting on Welfies lay of the At the annual meeting on Westers may of the observe record the Gassew Revold To income follower record to act 175c members of the 2 very majority of committees, so the reduction of present surfaces and providing the corresponding to a time of the corresponding to the corresponding of the manual following the corresponding to the corresponding of the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding

A chain a palace is being built in York South Politest from plans by Mr. Themes it as the of Wellyn Phace in that city. If a New Greek in chain the and will be told persons in the country Borness, Ltd., Rivenin Road Befort the tracking Road section the build to contract at \$3,500.

Mr. F. H. P rthad, a coll known are beset Region and a partner in the time of emistic and Partner, has enlisted in the tike of the 45th Canadar Overseas Battalor, It. Perhalls firm admitted the successful can their mappetites for the new Cry Hall Winapez, for which they received the promium of 5 the bears

A zi den sibuib is ab ur to be created at cry. Gamin an estate of 105 aero-maying his prime for the purpose. It is proposed rived rively ten or twelve houses to the cr. Provision is made for the building of the for a civic centre, around which an intuit, church, and shoot may be grouped. I for constructing a marine lake on the low zi and at the fosc of Cold Knap.

The sudden death is reported of Mr. J. H. Jevons, borough surveyor of Hertford

The corporation of Darlington have received the sanction of the Local Government Board to a can of £7,200 for purifiers and a station meter at the gasworks.

In paniphlet form Mr. Henry Lovegrove, VRIBA FS.I., a past president, has issued "Some Account of the District Surveyors' Association of Lendon," a body founded in the

Lieutenant Wilfred Hoskins, of the 6th East Yorkshire Regiment, and district surveyor to the West Sussex County Council, has been action during the operations in the Dardanelles.

The general purposes committee of the cor-poration of Darlington resolved on Wednesday to proceed at once with the reconstruction of the Bank Top Mart and pay for the cost out of revenue, in order that the cattle markets may be centralised,

The new premises of Messrs, Mappin and Webb, Ltd., on the east side of Regent Screet, have just been opened. The frontage is Italian Renaissance in character, and the centises have been built from plans by Mr. J. Johns, FRIBA.

Mr. W. H. Leete, Assoc.M.Inst.C.E., county surveyor of Bedford, died on Monday in last week at the age of sixty-eight. He had held the office of county surveyor for over twenty-tive years, and had previously been borough tive years and had previously been borough surveyor of Luton for sixteen years.

The committee who have been charged with The committee who have been charged with the affice of electrica a memorial to the late Bishop Mooth use state that they have ac-cepted Sir Charles Nicholson's design for a new throne in the choir of the Cathedral of Manchester. The estimated cost is £500.

What is probably the long-distance record in pla and concrete by the pneumatic method was made recently in connection with the Mile Rock tunnel work in San Francisco Bay, when the mixture was a neveral 2015 ft, through a pain, p.pe. The air compressor capacity in stalle I was 1.2 cubble feet a minute, and the receiver pressure was kept at about 115 lb, the square inch.

The vigor us and persistent efforts of the Institute of Local Government Engineers of Australasia have been successful, we are pleased to learn, in socialing a promised amendment to the Local Government Bill, under which it is provided that in Quoensland municipalities with annual revenues of £1.5.1 and upwards shall be compelled to employ permanent qualities to be provided that in Quoensland municipalities with annual revenues of £1.5.1 and upwards shall be compelled to employ permanent qualities for the provided with the provided provided to the provided provided to employ permanent qualities and the provided provided to employ permanent qualities and the provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided provided pro

The corporation of Worthing have approved the second of three alternative schemes presented by the lordersh surveyor Mr. F. Becomes, for the widening of South Street and Montague Street, parts of the main thorough to from the railway station to the sea front, showing part of Montague Street with a width 350 ft, and South Street a similar width, with 714-4, yds. of surplus land for disposal.

The Local Government Board for Ire-land has for the second time declined to absorve of the appointment of Mr Harh McCarne, a mason as engineer to the Monaghan Rural District Coun-Herein M-Cagne, a mason as engineer to the Monghan Rural District County. The engineer as given rise to a caux of the county mass given rise to a caux of the county mass meetings, and after a heated e-bare at their last meeting a mother to adject the matter for some time was defeated, and Mr. Peter Finnegan was appointed to fill the vacancy for six months.

A Winnipez despatch states that Mr. S. By-archer a perminent English engineer, will be our sted with the preparation of the plans of the deme for the new Parliament buildings. Winnipez. These will be the third set of the large prepared. A Cheago engineer and d Shankland was paid \$15.0° for drawing the set but investigation during the sitting of the set. But investigation during the sitting of the sect. Royal Commission showed that these to seem, be up in the contractor's favour, Mr. Bellitcher chew the original set of plans, but that were rejected by Sir Rodmond Roblin.

The new Mirers' Hall at Durham was flittely opened on Saturday. It is Renaissance in style, with a cupola over the entrance of ten and is freed with red brickwork and stone dressings. The large assembly room is sented for 300 decerates. Mr. H. T. Gradon, A.R.I.B.A., Market Place, Durham, is the related in our issue of April 17, 1914. Mr. C. Groves, of Chester leStreet, executed the of fact, his tender having been accepted at \$21,376. Mr. J. Pattison, of Gateshead, was the clerk of works.

# TO ARMS!

# 4th Battalion ("Architects") Central London Regiment Volunteers.

Recruits are urgently needed for the Regulars, Territorials, and Volunteers. Intending recruits should apply to Battahon Headquarters, where they will be advised as to the branch of the Service for which they are best suited.

ORDERS FOR THE WEEK BY LIEUTENANT-COLONEL A. W. WARDEN. ENTRENCHING PARADE.

Sunday next, 31st inst, at Victoria Station, L.B. and S.C. Railway indicator board, 8.55 a.m. sharp. Uniform, haversieks, and water bottles. Midday rations to be carried. Refurn to town about 6.49, A full attendance is particularly requested. Railway vouchers will be provided and a special train will be run by the railway company.

# WORKING PARTIES.

Parties are required every evening this week at new Drill Headquarters, where rearrangments must be completed by Saturday next. Parade every evening as soon after 5 o'clock as possible, dismiss at 7 o'clock. Saturday afternoon, parade at 3 p.m.

# DRILLS AND PARADES.

There will be no drills or parades this week.

# CORRESPONDENCE.

Special attention of members is drawn to the fact that correspondence should be answered by return. If this is not attended to the office work of the Corps is immensely increased. Enrolment forms of new members and all correspondence not referring to recruiting for the Army or to financial matters must be addressed to the Adjutant, 10, Condust Street, W., and regarding recruiting for the Army to the Recruiting Officer at Buttalion Headquarters, and regarding accounts and subscriptions to the Paymaster, W. R. Hughes, 146, Dushwood House, E.C.

By Order,

L. R. GUTHRIE, Adjutant. BATTALION HEADQUARTERS, 18, TUFTON STREET, WESTMINSTER, S.W.

# MEETINGS FOR THE ENSUING WEEK.

WEI-NESDAY (To-day).-Institution of Electrical Engi-

MEETINGS FOR THE ENSUING WEEK.

WEIGHTSDAY (To-day).—Institution of Electrical Engineers: Estimingham Section. Chairman's Address by Col. J. F. Lester.

Brimangham University, Edmund Street. 7 p.m.

SHUEDAY.—Institution of Municipal and County Engineers. North-Eastern District Meeting at Mun.cipal Buildings, Brighouse. "The Duties of a Municipal Engineer," by S. S. Haywood, Borough Engineer, of Brighouse. 2.30 p.m.

Manchester Association of Engineers "Some Recent Researches," by Professor Petavel.

Monday.—Royal Institute of British Architects, Presentation of Portrait of Mr. Reginald Blomfield, R.A., Past-President Opening Address by Ernest Newton, A.R.A., President, 3 p.m.

Webnerday (Nov. 3).—Royal Archieological Institute. "The Will of Master William Doune, Architects of Company of Antiquaries" Room, Burlington House, W. 4.30 p.m.

Institute of Sanitary Engineers. "Disposal of Night-Soil by Distillation," by James Menzies, Caxton Ball, Wess minster, S. p.m.

Town Planning Institute. "Limited Owners and Town Planning," by J. S. Birkett, M.A., 92, Victoria Street, S.W. S. p.m.

Friday Nov. —Glasgow Architectural Craftsmelb Society. "A Modern Dwellings In

S.W. 8 p.m. —Glasgow Architectural Craftsmen's Society, "A Modern Dwelling: In Design, Construction, and Cost," by A. Davidson, D. Pringle, R. Anderso, and J. Mur., S. p.m.

Mr. C. R. Fort me, city surveyor of Bath, and an ex-president of the Hearts of Oak Society, has died, aged 71.

The city architect of Toronto, Mr. W. W. Pearse, reports to the Board of Control of that city that thirty-eight persons are employed in his department—the same number as a year ago; that two members of his staff are busily ago: that two members of his stall are loss, engaged on the revision of the building brlaws; and that the inspectors have nearly 1500 jobs on their hands. He also states that his department has assumed fire-preventive work in connection with the theatres.

An extensive Government housing scheme is An extensive Government housing scheme is about to be carried into operation in the Mossend district. Lanarkshire, and factors have been invited to tender offers immediately of suitable sites. The houses will be erected by the country council of Lanark, and the issue is whether the number of houses shall be 150 or 200. The Minister of Munitions will give a grant of £30 per house towards the cost of the scheme, which is estimated to amount to £39.960, and he has to have first call on the houses for munition workers.

# LATEST PRICES.

N.B.—All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

# TIMBER.

Owing to stoppage of supplies all prices have advanced considerably.

have advanced considerably.	
IRON.   Per ton.   Per ton.   Per ton.   Rolled Steel Joists, English	6
Do., Staffordshire Crown. 14 0 0 , 14 10 0  Boiler Plates, Iron— South Staffs 8 0 0 , 8 15 0  Best Snedshill 9 0 0 0 9 10 0  Angles, 10s , Tees 20s. per ton extra.  Builders' Hoop Iron, for bonding, £13 5s. to £13 15s.	
garvanised, 220 to 220 tos, per ton.	
Galvanised Corrugated Sheet Iron—No. 18 to 20. No. 22 to 24.	
gauge	
Cast-Iron Columns	
B.B. Drawn Telegraph Wire, Galvanised -	
3 in. diameter	
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# SCRAP METALS

# ATHUR P. COLLINS, Snow Hill, BIRMINGHAM.

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	Delivered on road waggons at Nine Elms Depot Portland Stone Brown White	0	l	9;
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	trucks at Westburne Park (G.W.R.), Seath Lambeth (G.W.R.), The Films (L.A.S.W.R.)	0	2	51
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1	Mr. F. Oscar Kirby, bosongh survey Joneaster, has obtained a commission i	or n	of the	

Mr. F. Oscar Kirby, bosongh surveyor of Doncaster, has obtained a commission in the Army. He will be attached to the Kent (Fortress Royal Engineers, and is at present stationed at Gillingham, near Chatham.

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1 The foundation stone of the new church of St. Saviour's, Great Moor, Stockport, has been formally laid. The architect is Mr. R. B. Preston, of Manchester, and the contractors are Messrs, R. Rathbone and Sons, of Atherton.

# 10 CORRESPONDENTS

We control ourselves responsible for the opinions of articles pricing All communications should be drawn up as briefly as possible, as there are many communications up in the space allotted to correspondents.

e rrespondents.

It is part cularly requested that all drawings and all communications respecting illustrations or literary matter, books for review, etc., should be addressed to the Editor of the Bunding News, Effingham House, I. Arundel Street, Strand, W.C., and not to members of the staff by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributors' risks, and the Editor will not undertake to pay for, or be hable for, unsought contributions.

for, unsought contributions.

\*\*\*Prawings of selected competition designs, important public and private buildings, details of old and now work, and good sketches are always welcome, and for such no charge is made for insertion Of more commonplace subjects, small churches chapels, houses, etc. we have usually far more sent than we can insert, but are glad to do so when space perforts, on mutually advantageous terms, which may be ascertained on application.

When for more us with downess or photographs.

When favouring us with drawings or photographs architects are asked kindly to state how long the building has been steeted. It does neither them nor us much used to illustrate buildings which have been sline time excuted, except under special circumstances.

Telephone: Gerrard 1291. Telegrams: "Timeserver, Estrand, London."

### NOTICE.

NOTICE.

3. Advenues of Vd CVIII are now ready, and stored her ordered early open 12s, each, by post 12s of as only a amond number are done up. A few hours follower of Vols, XXXIX, XLI, XLV, XXXIV, MALL, LXVI, LXVI, LXVI, LXVI, LXVI, LXVI, LXVI, LXVI, LXVI, LXVI, LXVI, LXVI, LXVI, LXVI, LXVII, LXVII, LXVIV, LXXIV, LXXXV, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXVI, LXXXI, LXXXVI, LXXXVI, LXXXVI, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXXII, LXXII, LXXII, LXXII, LXXIII, LXXII, LXXII, LXXII, LXXII, LXXII, LXXII, LXXII, LXXII, LXXII,

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The charge for advict ements for "Situations Vacint" and "Partnerships" is One Shilling for Twisty fear Words, and Sixpense for every Eight William Advertisements must be prepair.

SITUATIONS WANTED.

Abort error's not evoiding Thety Words, the's wolf rane and address are inserted under the hadra "Sountions Warted," free of charge.

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Ren is to discuss in the can be received at the Otto Editidian House, I. Arindel Street, Strand, Will, this of himself to be forwarded under ever to a fertie to be forwarded of strenger made. See Notice at head of "Situations.")

Advertisements for the current week must reach the office not later than 3 p.m. on Tuesday. Front page advertisements and alterations or stop orders for serial advertisements must reach the office by first post on Monday to secure attention.

M.—Yes,

R to D -- Thanks, no

PREMIUM. No. You might write us again later.

H. R. G. We know of no other address than that

MERCHANT.-1. There is no recognised limit. 2 Probably it may be as you say, but naturally these naturations are confidential.

others are confidential.

Timily Reminded that the Building News is now published on Wednesdays instead of Fridays, at 2 and, and that it should be obtained as a carly in the day anywhere. It delay occurred can be posted direct from the office on recept of a quarter's subscription, or single copies can be similarly sent to readers in camp or moving about the country.

HM Office of Works propose to proceed with the chlargement and reorganisation of the post office at Dunder at a cost of £20,000.

Mr. H. J. Chapman, borough surveyor B ackingham, has been appointed surveyor to the Hartshorne and Seals Rural District Council.

Mr. Themas Owen, of Llanfihangel, Aberyst with has been appointed surveyor to the rural district conneil of Conway, out of twenty candidates.

Among those sentenced to death last week by a German court marrial at Brussels for alleged espionage was M. Philippe Dancq, an architect in practice in that city.

A new Council school in the garden suburb Pengam, has been formally opened. The cost was over £3,000, and the entractor Mr. R Jones, of Campbilly.

Gledhow, one of the prettiest suburls of Lods, is to be developed at the hinds of the hulder the Lord Government Board having made an order authorising the preparation of a town-planning scheme for the district. The terrogramion's scheme is expected to be ready shortly.

An inspector under the Local Government Board for Scotland will hold an inquiry at Newton, N.B. on November 15 into the application of the Middle Ward District of Lanark-hire for authority to prepare a townplanning scheme for the Newton, Carmyle 12 12 311 for the Newton, Carmyle and Baillieston area.

At the meeting on Thursday of the town comer of Glasgow a long discussion took place regarding a recommendation by a special committee with reference to the reiningeration for rattree with reference to the remuneration for the point office of city engineer and master of works. Utionally it was carried that the salary of £90) per annum at pre-ent paid to Mr Nisbar as master of works be the salary built to him for the combined office until after the war, and that thereafter the salary be £1,250 per annum.

The new church of St Francis d'Assissi on Grace Screet. Teronto, is nearing completion. The style is Italian Gothic of the thirteenth century. The auditorium will have a scating capacity of 350. A feature of the building will be a large number of stained-glass win dows testimated cost \$6,000; illustrating the mysteries of the Rosary. The building, with out furnishings, is being creeted at an expenditure of \$112,000. Mr. R Shochy, of Peterborough, Ont. is the contractor. The new church of St. Francis d'Assissi

The Council of the Institution of Civil The Council of the Institution of Civil Engineers have just awarded for paters published in the Praceedims a Telford Gold Medal to Mr. James Forgie New York); Telford premiums to Mr. J. B. Mason (Junedin, New Zorlock, Mr. Harcod Berridge Adem, Mr. C. R. White London, and Mr. C. S. Curschill Reanoley, Vancouvers, and the Trevithick recomment to Mr. A. Poulsen (Lemvig, Demmark of to Mr. A. Poulsen (Lemvig, Demmark of to Mr. C. W. Andersen, Midnipore India.

India

The amening meeting of the new session of the Engineering and Scientife Association of Pollute India to know at the Royal College of Source, Under Merrian Street, Dublin, on Meeday in last week, when a paper was read at the Royalet Lodes. The Mr. Potter E. Potte M. F. E. M. I. C. E. I. Mr. Potte fully dealtwith the subject of artifett lights and case with the subject of artifett lights and case with the subject of artifet lights and case with the subject of artifet lights and case with the subject of artifet lights and case with the subject of the late problem, who referred to the death of the late problem, Critical John M. Ter, who was killed in action at the Darda 1998.

OGILVIE & CO. Many years connected with the labe from of W.H. LASCELLEN & CO., of Bunhill Row.

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### TENDERS.

"." Correspondents would in all cases oblige by giving the addresses of the parties tendering—at any rate, of the accepted tender: it adds to the value of the information.

Battersea. For the supply of new cast-iron rib segments in connection with the repair of Batterea Bridge, for the London County Council:—

Fracer and Chalmers, Ltd., Eitht £575 0 0 Lillie half Co., Ltd., Gakengates 455 0 0 Cochrane, J., Barrhead, near

Glasgow
Potter, R., and Sons, Govan
Oakes, J., and Co., Alfreten
Stanten fromworks Co., Ltd., Nottingham (accepted) 475 0 0 375 7 6 321 10 0 951 7 0

BATHER-For the bandage of 400 tons of broken stone, for the rural district council. Mr. H. Blackman, sorveyor. Accepted tenders:—

Horse haulage:— Steam haulage:—
R. H., Rassi Thomas, C. R. H., Battle .. £80 0 0

Bray.—For the supply of read metal, unbroken stone, and granite boulders, for the urban district could. Accepted tenders:—
Whelm, F., Shaukhill, Co. Dubtin, broken stone 4s, 8d, per ton, unbroken stone 3s, 4d., tailings 4s, 8d.

4s. 8d. Brack, P., Ballycorns, Co. Dubl'n, granite boulders 4s. 9d. per ton.

Curphyller. For reconstruction of the Piccadilly Hotel, for the Pontypridd United Breweiles:—
He wells, T. F., Car(lift and Caerphilly, (Accepted))

CAPE TOWN. For the supply of low-tension feeder cable, joint boxes and disconnecting pillars, for the electric lighting department:—

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# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

# Effingham House.

The Survey and Repair of Bombstruck But	ld-
mgs	
The Royal Society of Painters in Wa	
Colours	
Royal Institute of British Architects	
The "Building News" Designing Club, 1914	15
The District Surveyors' Association	
Painting by Immersion and by Compres	ved.
Air	
The Capital of the Canal Zone	
Housing Conditions and Rents in Scotland	
Currente Calamo ,,	
Correspondence	

THE SURVEY AND REPAIR OF BOMB-STRUCK BUILDINGS.

of work for builders, and of a kind pre-senting some quite special problems-

rotably the peculiar injuries wrought by high explosives. The ravages of the incendiary bomb present no new conun-

drums, because repair in such cases is of a type with which we are, of course, tamiliar, presented as it constantly is

The air raids have made a good deal

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	OUR ILLUSTRATIONS	
New	Restaurant, Zoological Gardens,	Begent'

Park, London, NW. The late John Belcher The bomb fell between substructure the railing and building indicated on the sketch, and although all was open

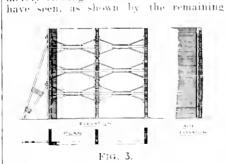
and unconfined about the railing, the

plinth, originally occupying the position



FIG. 2.

shown in the straight, strong lines on our plan, was shifted to a position indicated approximately by the dotted lines. First impressions, as we have said, may be de-We made a rough sketch from memory (Fig. 2) of something we witnessed in one of the districts attacked, and put the double-headed arrow as an example and illustration of that which we thought might be preserved after pulling down the wrecked brick gable. To refresh our memory we again visited the spot, but sent to be been the premises. We think, failed to locate the premises. however, that it was the left hand building shown in Fig. 3, and, if so, those who more carefully examined the structure no doubt found the whole front un stable, and dealt with it and the adjoining premises in the drastic manner indieated. Had we originally taken a lateral view of these premises, in addition to merely viewing from the front, we should



# Strand, W.C.

R.A. and Mr. J. J. Joan. TERTBA. Astects.

Church of St. Barnadee, North Frielde, V. V. Veres the Chorr, Photographed b. Mr. Birth of Moreland, Mr. J. S. Alder, Architect.

New Picturedrome and Concert. Hall. Worthin, Suisvey, Two years and plane. Mr. Ever 10. Stoncham, M.S.V., Vrebebet.

Some Medallion and Trivelling Students. Some Medallion and Trivelling Students. Steeches in Its St. The Intrance to the Polor Tergi, Bergamo Drawn to Mr. Visk a Hor

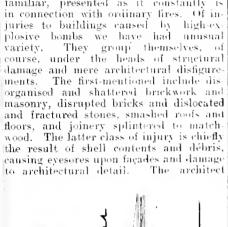
New Buildings Foundating the Oriol, Broin 2 ex-School, Worrestershire View and plans Mr Arthur Bartlett, I R I B V., Architect

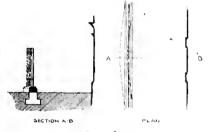
juries, but the study of the results shock evidenced to the eye are valuable as giving a clue to hidden flaws in struc-Both the damage shown in Fig. 3. Inre. and Fig. 4 must be considered the direct effect of high explosive, as distinct from injury by shell contents and debris.

As bearing upon direct shock, the case As bearing upon direct shock, the case of Fig. 5 is instructive. The sketch as are all given herewith approximates more or less to the actual occurrence and premises. The upper parts of the building shown in Fig. 5 were oblibut the lower story has a concrete floor over. As our diagram indicates, this substantial horizontal stratum assisted to priserve the lower part of the building. The whole of the brickwork above, the concrete floor not actually blown down by the explosion needed to be clear d away. Where there exists such a strong floor as C, Fig. 5, some distance below a roof, and specially where there are several superimposed floors, we may look for sound work below. Where a bomb passes through even a slight roof, this obstruct on seems sufficient to ensure letonation. The



instant of actual explosion apparently following very rapidly, the upper part of a building seems to suffer most from shock, and any such solid floor, as C. Fig. 5, has chiefly to r sist the impact of shell contents and debris. Since it seems to be nearness to actual point of explosion that causes solid material and building construction to suffer from sheen. such as is lik ly to produce structural insoundness, these considerations may be worth bearing in mind when proceeding to survey damaged premises. Where, as in the case of an exterior explosion, a few yards from a strong modern (milding the nearest point of attack for the explosion wave is overhorne by a vast dead weight of material, this seems to enable the part immediately attack d to hold up soully and homogeneously against concassion and vibration. We here, again, alvator the opinion with reserve. It is not easy to conceiv show some of the broken and splin-



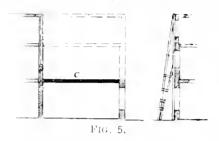


IIG. 1.

talled upon to survey wiccked buildings nd to specify and supervise repairs will o well to study carefully the effects of igh explosive upon material and strucure. Mere repair is comparatively easy, ut the subtle and hidden effects of shock i explosion on the stability of structure eeds care, otherwise reinstalements may e made upon unsound substructure.

Of the two kinds of repair work renired-internal and external-as a rule, ie one is the result of explosion actually a the premises, and the other is necessiited by externally falling bombs, as in ie street. Strong modern buildingsheir main organic parts, at any rate-mem well to withstand shock; but it ill be judicious to assume this with To discover damage not at once intion. ident, and not obvious to the eye, should ying premises for repair. We may, of curse, well study the effects of obvious cmage. Thus Fig. 1 affords a good cample of the force of explosion—a scong and heavy iron railing plinth bodily seered, at about ground level, from the the first aim of the architect in sur-

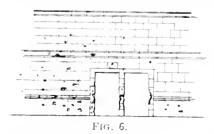
igh su stanti i, outldings him-I is away from the actual point Sec. are hable to convert sound he kwite and masonry into unreliable structure principe fail later if we again plas meany loads upon it. The main ten-A - 1 migh explosive must be to breeze end, as in enckwork. In most instances you may would suffer. Given plumbnoss and squareness, on test, apparently indi-cating sandness, the signs of hidden were so nery possibly be bost revealed in



affections at joints. Except in special circumstances, foundations are unlikely to be disturbed; but in the worst cas's everything will have to be cleared away to ground-line and the premises

wholly rebuilt.

Shell contents, as distinct from the shock of the explosion wave, splinter and disfigure stone and granite façades and pullerise bricks. To appreciate the effect of projectile emanations from exploded bombs, we must give credence to the statement that the shrapnel contents of these shells are of chilled iron. It was represcated to us on visiting the site of the damaged building illustrated last week that such chilled metal was found on the spot. This being so, it is not a matter of surplies that soft iron, such as railings. is cut through so cleanly and that the injury to bressed stone and granite indicates so violent an impact. How to repair the fronts of the many beautiful buildings disfigured in this way is one of the problems presented to the architect. Figs 6 and 7 fairly represent the class of injury to be repaired. Much detail of the whole building is beyond repair in the sense that the whole feature requires to be reconstructed. One side of the arch pier resolutioner de cone sone of me aren pier, column und entribluture, in diagram Fig. 7 might as well be rebuilt as re-prired to parchwork. It is eds at least ten new worked stones, and we should call these a onite mild example of many acture commences. In damaged brickwork the inputed bricks will need to be cut our and the bright new patchwork here as I there accepted. In many instances,

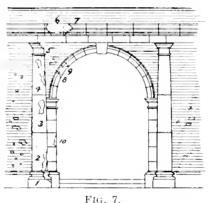


The these notably soft-gauged work, are pulserised, and need entire reinstatement, even should the main walling prove sound

Insurance worth the name should insure the exact replacement of things existing prior the rank and some very expensive builders work is foreshadowed. too probaidy, the uninsured premises will a pat liwork repair at the best. stores preced in and at times holes made good in sement but our ruate public and up tant private buildings carnot

stone work, must be considered one of the beauties of masonry, and, indeed, one of the most effective and expressive attributes of architecture. If, then, having an ornate façade, largely dependent upon stone jointing for its effect, we piece in a patchwork repair, we are spoiling its beauty. Such a necessity should certainly be obviated by insurance. Then, again, in the case of solid stone and granite fronts, constructed, as is often the case, of facing material right back to the steel stanchions—it may be to a depth of 20 in. reinstating, say, a 4-in, facing is not "making good" as before the aerial attack. An effective insurance claim will no doubt include both structural correspondence and architectural concord.

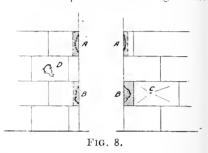
If Fig. 8 represents the two elevational views of the angle of an injured stonefronted building, we may certainly piece-in, as at A and B, and the repair will be constructionally sound. But, as we have said, the beauty of regular-coursed masonry resides in its jointing, and this effect has been in part ruined by the discordant joints introduced by the pieced repair. Small injuries, of a fraction of an inch in depth, such as C, could no doubt be faced off as indicated; but to make good as before the damages at A and B necessitates drawing the damaged stones and replacing with blocks of similar size; and if D be a deep defacement in granite, it seems a little bit of a problem to



remove D and maintain sharp arrises on the surrounding blocks. Constructionally, perhaps, a thin facing, in place of deep stones, would leave the structure practically as good as before, but it would certainly not be the state of things existent before the damage. Fig. 9 is an elevation of stone or granite work, of a solid order of workmanship, backing right on to the stanchions of the steel-framed construction. We may face back, say, 4 in. for repair to injury B, but, constructionally, the work cannot be compared with that effected by drawing a stone, as at A. No doubt many compromises will be made by insurers, but it is plain that a deeply injured building can only be effectually repaired by with-drawnl of damaged stones and replacement by blocks of similar size, similarly dressed. From "patriotic" motives, at a time when money is urgently needed for national purposes, we may be persuaded by insurance offices that 4-in, replacement is practically as good and substantial a repair as a new stone 20 in. dep, but we shall remain incredulous and unsatisfied.

A general clearance and a start de noro em absolutely necessary in a great number of cases, repair being impossible The peculiar partial effect of high ex plosive is, however, a circumstance indicuting the possibility of saving much that and in this market. Jointing, in Cotherwise one would consider, viewing the may be repaired,

destruction wrought in the immediately adjoining parts, certain to be rendered quite unsound. We have recently seen some hollow brick walls the subject of explosion not many yards distant. The explosion certainly pulverised the outer 4½-in, casing, but the backing appeared sound, the galvanised iron bonding ties standing out at sharp right angle, as originally set by the bricklayer. One would have expected the backing to have



been blown in, if high explosive did not act in such curiously inconsistent fashion. Possibly the weakest part yields, and, so yielding, relieves the stress on another part; so that where a front wall may be blown out, the back wall may stand, and the general relief by blown-off roof, flying quarter partitions, and the throwing down of the front, may leave party walls sound. It will, however, be always we'l to view the whole with suspicion. from high explosive is just that kind of stress that bricks and mortar and comented masonry are least suited to withstand. Earthquake tremor is far less trying, and it has been demonstrated that well-tied steel-frame construction well resists seismic disturbance. Appearance, in estimating necessity of repair, should go for nothing. We have noted a granite pilaster to a shop front, greatly injured by impact from shell burst and debris thrown up by the explosion. Some 3 ft. of one arris was deeply scarred, and about 2 ft. on the other side injured, the pilaster being about 4 in, thick. To all outward appearance the central part of the pilaster i.e., between the two points the subject of heavy impacting force—was as good as ever; but we doubt not that it would, on a slight blow, be found absolutely void of cohesion and strength.

Timber, as a rule, seems to withstand well concussive shock and vibration—no doubt owing to its semi-elastic nature. Whole roof slopes may be seen with rafters intact, blown clear of natural

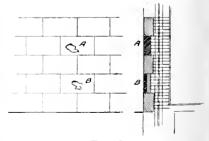


FIG. 9.

support. Window frames, too, seem to hold up remarkably well, as a rule, affording little hold to the explosion wave. and, moreover, possibly saved to some extent by the yielding of the glass. Doors suffer more damage than windows, and are blown forcibly away from frames and splintered. Taking, as it were, the place of glass, they offer a wide area of resistance, conducive to their destruction. Doors and joinery of like nature appear to need complete reinstatement, where often the apparently fragile window sashes

# THE ROVAL SOCIETY OF PAINTERS 1N WATER COLOURS.

The winter exhibition—the 165th Royal Society of Painters in Water Colours is a good one. The group of twenty works by the late Comm. Walter Crane (173 192) alone is well worth the admission charge. including as it does several of the deceased artist's best efforts and some of his earliest. The majority are Italian scenes, and all sympathetically rendered, the architectural subjects, "The Arch of Construction" (177) and the "Arch of Titus" (182), both at Rome, will most interest our own readers.

Mr. Alfred Parsons, R.A., the President, sends four subjects—the Old Arbutus in South Wales" (5), "Lilies and Loosestrife" (9), "The Chinney Campanula" (28), and Cardiff" (228), the floral beauties of the first three being done full justice to. Mr. Laonel Smythe, R. V., has an able and pleasing rendering of Young Gleaner (4). Mr. Edwin Al Young Glenner" (4). Mr. Edwin Alexander, A.R.S.A., successfully devotes two contributions to birds Woodcock" (5) and "Bullfinches" (49); his third is "The Desert—Egypt" (71). The majority of Su Ernest A. Waterlow's contributions are Sussex scenes, but the eighth is a good view of "The Ogmore Valley, N. Wales" (135). Mr. Reginald Barrett sinds a well-drawn "Holy Water Basin, from Siena Cuthe-"Holy Water Basin, from Siener Cuth-dral" (17), a charming "Evening Glow, Venice" (51), an "Entrance of the Grand Venice" (51), an "Entrance of the Grand Canal, Venice" (80), and The Taj Mahal, from Agra Fort" (223), and A Corner of a Venetian Palace" (229). Mr. F. Cayley Robinson is represented by his excellent design for a mural decoration for the Dublin Art Gallery, "The Landing of St. Patrick in Ireland" (84), and an "Autumn Evening in London" (231).

Mr. T. M. Rooke contribut's some good Mr. T. M. Rooke contributes some good architectural studies, "The Towers of All Souls, Oxford" (10), "The Choir, Southwark Cathedral" (102), "The Porch, Malmesbury Abbey" (108), "The Temple Church, London" (157), and Westminster Abbey" (197). Mr. C. Napier Henry, R.A., may be well congratulated on "A Patrol Boat" (37), with its stormy sea Very good also are "Wind on Shore" Very good also are 'Wind on Shore' (92), "On Wutch' (98), "A Muckerel Boat.—The Run Home" (118), "Here She Comes" (146), and "The Torpedo Boat." (212). Mr. S. J. Lamorua Birch is to the fore with some of his always welcome West Country scenes. There are The Junction of the Plym and Meavy, Shaugh Bridge, Devon'' (36), "On Wigford Down, near Meavy'' (56), "The Sketcher'' (91), The Rocky Plym'' (193), and "A Devonshire oftage on the Tamar'' (231), Mrs. Allingham sends four welcome floral pur-ares—"Roses in a Venetian Garden" 46), "Bluebells" (82), "In a Surrey 46), "Bluebells" (82), "In a Surrey Farden" (86), and a "Bit of Garden Border October" (166). Mr. Robert Anring Bell, A.R.A., has only one subject in the walls, "A Flight of Fairies" (136). fascinating group of ethereal visitors. Ir. Byam Shaw is fully up to his standard ith "The Abbot's Niece" (22), "Illustration to the Boylood of Akbar" (165), and ion to the Boylood of Akbar. In Memory of Private Maurice Godfrey, 3rd County of London Regiment " (202). Liss Eleanor Fortescue Brickdale embodies Il the title suggests in "The Enchanted (100). Her four oth r contribuons are "Evening" (109), a Portrait f Mrs. Noel Buxton" (113). The First wen of Payeocks" (131), and "June is · (235).

Lende b Bridge (218) is perhaps the best of his their co-contributions. Of Soutish scene by the test examples come naturally from Mr. D. A. Cameron, A.R.A. A.R.S.A. They are the Anle of Porth (45). Inverse hy (50). Uplands in Montenth (147). Spring (211). Balquindae i (232), and The Stack (250) Mr. J. C. Dollman's a meeting (211). Balquindada Stack (25m vi. tack (250) Mr. J. C. Dollman's Korper's Cottage (59) is excellent, and (25h) VI.,

Kyper's College (59) is excellent, and so are his Sussex Summer (116).

Gorse'' (122), and A Sussex Term'' (220). Mr. Hughes Stanton, A R.A. sends A Suarry Evening'' (41), and a pleasant view of Hindherd, Looking Towards Haslanere (61).

Among others which will deservedly be noted are Mrs. Laura Knight's "The Two Fishers" (67) and her—Bathing From the Supway" (114). Mr. W. Rusself Flint's Sipway (114). Mr. W. Russen runes. Three Dams is (130). Mr. Churles Sim's Bathers (127). Mr. Henry Henry shulls 'His First Steps' (148), and Mr. J. W. North's two subjects, a Water Mill J. W. North's two subjects. in South Wales" (164) and When Houses Were Built Round the Chimney farmhouse.

# ROYAL INSTITUTE OF BRITISH ARCHITECTS.

>-00

The eighty stood Essission of the Royal Institute of British Architects was held on Monday afternoon, on the western, or smaller gallery, at 9, Conduit Street, W. Arnong those present were three Past Presi denes, 8 r Aston Webb, R.A., Mr Regual I Blomfield, and Mr Leonard Stokes, and the visitors included several ladies.

# V 1086 OBILITARY LIST.

A sombre note was struck at the outset of the proceedings by the announcements made by Wr. E. Gny Dawber, hon, secretary, who remarked that it was his said duty to record the losses which the Institute had suffered since their last meeting. These losses were except onally severe numbering no tower than tweaty members, including four Fellows, five Associates, eight Licentiates, and three Students, Name among them were young men, who came forward to the call of ducy to fight in defence of their country, and had perished on the battlefield. Their names were: Lance-Corporal Alexander Wingate, 9th Battahon, Highland Light Iorantry; Captain George Prigram Bowie, 5th Battalion, First Canadian Contingent: Charles Henry Rowed Heman Contingent: Chirles Henry Rowed Henran Royal Naval Daysson a son of their steemed Fellow, Mr. Charles Henrant; Henry Charles Pullen, Rifle Brigade; 8nh Laentenant Aldersly Dicken, Royal Naval Volunteer Reserve all the above were Licential 8: Private Charles Joseph New bery, 5rd Royal Fus, hers; Second Leutemant James Bernard M Jurd Walch, 2nd Quen's Royal West Sarrey Regiment; Edmund George Dawson Fromunt; and Capta in Frederick Henry Lawson, 5th Battalion, Nor thumberland Fusibers, the last four namel having been Students. He moved that there he recorded on the minutes an expression of the Institute's deepest surrow at the loss of these gillant young here's, and that noss of these gillant young here's, and that mes-sages of sympathy in Leondolence be con-veyed to the bere's of relatives. The motion was put by the President and was agreed to.

we yell to the belonged builties. The moreovers put by the President and was agreed to. Continuing, We conv Dawber further announced the death of Mr. Gorge Bell, F.I. low, a Past Possilent of the Glasgow Institute of Architects, and a former member of the Dawber and and Mr. Gorge of the RIBA C med, and Mr. George Bertram Bulm : Fe low, Past President of Bertram Buim v. Fe low, Past President of the Lee Is and Yorkshine Architectural Soviety, who had also served on the R.I.B.A Council. With regard to Mr. Ber-tram Bulmer, he had the pleasure to an-nounce that under his will the Architects' Benevolent Soviety, on the expraison of cer-tain life interests, would benefit to the extent

Mich M Smith A do A With this on the Color Henry House Heart and L Arthur Color Heart and L Color Proceedings (Fig. 1) and A conduct application of the conduct application of the conduct application of the conduct application of the conduct application of the conduct application of the conduct application of the conduct application of the conduct application of the conduct application of the conduct application of the conduct application of the conduction of the co

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Professional Water Land Architect Research Professional Architect Research Professional Appears | Figure Venute Professional Architecture Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute Venute

And in addition there is a considerable our from sales of the Arrists We Recet E., hibition, which was opened by her Royal hibition, which was opened by her Royal Highmess Prances Louise in July and re-mained open during Viguet and September. The most important of the Way Committee's schemes for dealing with incomp cyment is the Civic Survey. Throughout the viewe have kept in touch with the Probessional have kept in touch with the Probissional Classes Relief Committee, and this committee has helped architects' families by receiving their wives into the materiary long and assisting in the education of their chadren, It has also organised summer be of cysfer volument to behave a group after the children and has helped in many other ways. In connection with this committee we have undertaken to help in a Christmas Side at the Affect Hall, and a special committee has been formed for this purpose. We shall be glad to receive the names of ladies who are willing to make articles for this sat

# VOLUNTARY REGISTER OF ARCHITECTS

The Selection Committee is now engaged in preparing a voluntary register of architects suitable for inditary, civil, or munitions work. It has been felt that the Government has not been able to make sufficient use of achitects, as the information at its disposal was not sufficiently complete. It will be remembered that early in the war we made, through the Architects' War Committee, a general offer Architects' War Committee, a general offer of service from the whole body of architects. When the war broke out an enormous amount of work suddenly fell on all Government Departments, and more especially in the War Office. Probably on this account our general offer of service did not receive as much at tention as we hoped might have been the case although we have been able to supply several men for responsible positions, but is the offer had been made by me as Chroman of the Architects' War Committee and President of the Royal Institute of British Architects, I thought it well to call at the War Office personally in May last and renew it in greater detail. The suggestions I then made were most courteously received, and I inderwere most conflootsly received, and random-stand have since been circulated to all the commands in the Bu sh Isles, Mr. Stanley Peach, who, with Mr. Munby, has communist indefatigable, and devoted an anomal samount of time to this branch of the activity of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the ties, finds that even now the fitteties, finds that even now the fetres at the disposal of the Government are in the subject and that the only way of which we are held real service is to have names at the afficiency quired may be provided at the latter very much that some controvers, so additionally and the controvers. arisen out of our office of a constant object was, and is, to assist the Green ment by every means in our rower cost night in the way of contraversy said there and a waste of energy.

THE PROFESSIONAL BY 1970A in addition to the time Second alluded to, his been able to the condof a very varied note that the transfer of a very varied note to each each of a very varied note in there are, of course, certain loss where no suitable employment can be read, it d in these cases the A latters Berevolent Society and the A tises General Benevolent Mr. W. J. Wainwright's only work. 'A laid of the Hostel' (145), modestly catagued "A study," is one of the lest things the exhibition. Mr. G. Clausen, R.A., is two good sky studies, "Evening Sky" (215).

Benevolent Society, on the expiration of circular tain life interests, would benefit to the extent of no less than £5,000. He had further to amounce the decease of George Henry Hunt. Graham Nicholas, George Lister Sutcliffers to the committee has held at smeetings at the present of the Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the A tisses General Benevolent Society and the or positions to tide over a

S . TABLE OF INCOME IND

. .... not been unmander. adder of roome tax on those - professional income has sued and promises to value A letter was addressed to the Review Office in August last calling to the fact that it would be imposmay ar litter to the pay and me tax years basis, and suggesting that sable to make the return sam apthe a trul year. The Institute is with the Institute is with the Institution of Civil at loother bodies in sending a ston of a sinclar kind to the of the Exchanger. A certain facility has been appeared. firely! has been promised on pro-somes, but it hardly meets the at the ts whose in omes are practice to existent. Architects are in the thar position of not only having to face hanv dimination of work obsequent the war, but of having their means of d st.ll further reduced by the action f the G vernment in stopping public build-12, and of the Government committee in reintroduce the stoppage of all private on bing. In these circumstances we have a calm claim to consideration, and a further letter has been written to the Chandler of the Exchequer.

# ARCHITECTS ON SERVICE

13 - Architectural Association has con-red its re-runting work, and has sent large shors of resruits to various branches of Something like 850 men have een rided to the forces through its agency. of in many uses, where a special type of on was required, the commanding officers are expressed great satisfaction with the on, but to them through the Architectural can sent to them through the Architectural Association War Service Bareau. The Association is keeping in touch with all these entert is now asking for contributions them it is now asking for contributions them falls for them. I hope everyone who is will spare something for this fund Vingether we have serving in his Majesty's Figure 1997. The Association of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Con HE URGENT NEED FOR MORE RECRUITS.

The end appears to be far off, and there very few of us who do not leve in daily al hearty anxiety as to the fate of those are very dear to us. It is a weary mess wating, but it is the lot of those to eat too old to fight. Many of us, too, we the a 'ded anxiety of vanishing meomes and increased cost of living and taxation; it as the character of the younger generations to we take the character of the younger generations to we have the character of the battleheld. has der of the older generation is also of full to the test. The situation is g jut to the test. The situation is some recoding and was not to look with a feminal eye on the coverage man who wask our streets, let by adding our title stern claims of Bac while we are tempted to judge The situation is harshly let us remember that course ery special kind is needed row. Then say special and is needed flow. Then
the are the surroundings of those
there is specified a specifie
to Do they lead a stern resident to the
address of the community. Deschap the entrary see the war exprosted drawsed for advertisement. Are not s at donois cohalls filled to overflow a 2 populately thoughtless so wd 2. Is not a compensation just as it was 2. Are z men led and insured by noble to throw aside comfortable case themselves to all the horrors of The President said he had now the pleasure of the policy of the pleasure are often at later than 1 flattered or limited and threat and years. I am certain that the large half of substributes. Me J. J. Shannon's fine

s statted a Loan F and to majority of them are sound at heart and, if the right note is struck, will do their duty as those who have already gone have done thous. We who are too old for active military service must let them know that we treatise all that we are asking of them. It is easy for us to say "Would I were a young man". I hope we should all how. man — I mope we should all have gone, but none of us can realise the struggle of the man was hesitated to go at first, and is now asked tor what has been well described as " 5-o'clock tor what has been occur in the arounding courage." But the decision course to the for choice is anything to the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the course of the co " But the decision can charger be put off. The time for choice is ver No one ht for his country's service has a right to live at ease and carry on his work motected by those who have not weighed the peas and cons but have seen only me path and have trodden it fearlessly Many of these men have given up promising careers and good positions, and it is unthinkable that, now the need is so great, others should he state to make the same

# OUR IMMEDIATE PROSPECTS

It is hard, too, for some of us older men sit still and not criticise this or that appa rent act of omission or commission of the Government. Nearly everyone has some where in his secret recesses the conviction that he could do the work better himself, but let him remember that the slashing critic is often a very mediocre performer. We are is often a very mediocre performer. We are passing through the accustomed phases. passing through the accustomed phases. First, the light-hearted disdain of the enemy. the unreasoning certainty that everything all right and that victory is ours merely by wishing for it. Then comes the second period, the period in which we are now, when there is a sort of uneasy feeling that we cannot go on in a nice comfortable optimistic everything as usual kind of way, that some thing has to be done, we don't quite know what, we are depressed without quite know me why, and we begin to look about for scapegoats. But when we are tempted to be impatient, let us see what actually has been done in fifteen months. We have performed the miracle of raising, training, and equipping an immense army. We have entirely reorganised and immensely increased our munition factories. Germany has lost practically all her colonies, and all her ships have driven from the seas. These months of mutual anxiety and fierce fighting ive consolidated the British Empire as no thing else could have done, have revealed to us the splendid character of our manhood, and given the lie to the croakers who declared that we were a decadent race. have, too, tightened the bonds of friendship with our Allies—particularly with our great neighbour, France, a country especially dear to architects—and out of the great welter of war is emerging a clearer view of the im-image issues at stake. I think, then, that it is our part to have a fixed and serene intention to be victorious, to remember the tremendous responsibilities of our Government, and to lighten those responsibilities by doing everything that we can to assist and support it, and so help to form a united public opinion resolute to do everything possible, and impossible, to bring the war to a letorious end.

I feel, ladles and gentlemen, that I owe or an apology for dwelling so much on the ar and not at all on architecture. I will confess that I had intended merely to give a short account of what we were doing for a snort account or what we were doing for our brother architects, but my pen has run are ay with me. After all, what is there really it importance except this great war. On the could everything depends, and every he on contribute on thing towards this result. tot by marbid broading, not by zhoomy fore bodates, but by realising its tremendous sytionings, understanding the sacrifices which must be made by us all, and by belowing that victory is certain, if we as a ration bend our whole energies to the task, and shrink from nothing which will give sictory, without which life would not be

portra.t of Mr. Reginald Blomfield, work which would be, he believed, one of the most appreciated of their valuable col-lection. Mr. Shannon had had an unusually lection Mt. Shannon had had an unusually difficult task. They all knew their late difficult task. They all knew their late President had almost every aspect but that Laughter and applause.) of repose. of repose. Laughter and appliance.) Mr. Shannon had had to suggest and convey to canvas a president full of movement, energy, and brisk decigon, and he felt size the members would realise that he had produced not only a fine picture, but what was familiarly called a "speaking likeness. withdrawal of the curtains the portrait was revealed, in three-quarter face and kit-cat length, which was a noted feature of the water-colour room at the Academy exhibition last summer.

Mr. Blomfield said he could not pronounce as to the merits of the portrait, but was sure the Institute had obtained a gool pic-He proposed a hearty vote of thanks Mr. Newton for his address.

This was seconded by Mr. J. Alfred Gotch, who thought that perhaps the President took rather too gloomy a view of the amount of recruiting that was going on. Whatever Whatever might be the case in London, there seemed very few eligible men in the Eastern Midlands who had not yet offered their services

In response to the motion, which was carried by acclamation, the President said he supposed every occupant of that chair felt surprised at being expected to play the part of "first old man." No one, he supposed, felt old until he was called upon to fill this kind of position, when he made a mental calculation of a very sobering kind. The war had added much to the responsibilities of the position, and had created all sorts of situations without precedent to guide one. But he found himself surrounded by friends who helped him to steer through these nucharted waters, and he trusted that when he handed over command to his successor it might be in times of calm.

# ---THE BUILDING NEWS" DESIGNING CLUB, 1914-15.

After due verification, the prizes awarded to the winners who submitted designs during the past session, as announced in our issue of October 13, have been despatched to their recipients as follows:

recipients as follows:—
First prize of £10 10s.: "September
Morn"—Mr. H. W. Smith, care of Mr. E.
W. Allfrey, M.A., 57, High Street, Oxford,
Second prize of £5 5s.: "Penwith"—Mr.
J. Clark, care of Messrs, Cowell and
Drewitt, architects, Lennard's Chambers, Penzance.

Penzance.
Third prize of £3 3s.: 'Walbroke'—
Mr. W. Brooke, care of Messrs. R. Castle
and Son, architects, London City and Midland
Bank Chambers. Cleckheaton, Yorks.

In reply to inquiries, we do not contem-plate continuing the Club during the ensuing It was founded for the twelve months. It was founded for the length of the students and junior members of our profession, and the present time demands the whole service and self-sacrifice of all such. It is getting it, we are proud to say, in larger measure than from any similar valling, and we are little likely to get much worth attempting from the very few whose place is in the ranks with their brethren, but who have not yet taken it.

New Wesleyan day schools in Ribbleton Avenue, Preston, Lanes, have just been opened. They were built from plans by Mr. F. Howarth, M.S. V. at a cost of over £4,000.

M.S. V. at a cost of over £4,000.
A set of carved oak alter rails in a design adapted by Mr. C. M. Oldrid Scott from the carving of the Watching Gallery in the Saints Chapel, was dedicated on Saturday in the nave of St. Albans Cathedral. They form a memorial to the late Mr. Charles Woollam, for twenty-six years a churchwarden for the Abbey parish.

years a churchwarden for the Abbey parish. The death was announced on Saturday of Corporal W. H. Marley, R.F.A., of Buttris Road, Barry, Glam, killed in action in France. H. was a son of Mr. W. Marley, of Barry, and was atticled to Mr. W. E. Knapman, M.S.A., of that town, and joined the Society of Architects as a student in 1912. Corporal Marley enlisted in the R.F.A. on the outbreak of war, and has died on the field of honour in his and has died on the field of honour in his twentieth year.

### THE DISTRICT SURVEYORS ASSOCIA TION.

We briefly acknowledged the receipt last reek, just as we were going to press, of an nteresting account of the District Surveyors Association, by Mr. Henry Lovegrove, F.S.L. A.R.I.B.A., a Past President and Hon. Secre ry and Treasurer of that body. In twenty our pages, it covers the main incidents of the istory of the association, and gives many tore or less brief notes about its members.

The association embraces the District Sur eyors of Buildings appointed under the Acts nce the passing of the Metropolitan Building et in 1844, although Acts of Parliament of huildings visted many years before; in fact, after the reat Fire had swept away the picturesque ut insanitary old City of London, an Act as passed in 1667 giving the Corporation of ne City power to appoint surveyors or approvisors. In 1725 the buildings law of the ity was extended to include four large Lonon parishes, viz., St. Pancras. St. Mary lebne, Paddington, and Chelsea. The Act of The Act of 44 was a more comprehensive Act, and gave officers the title of District Surveyors. aking provision for an examination to show at the surveyors were competent to per em their duties. The Metropolitan Building t of 1855 repealed the former Act, conmed the district surveyors in their offices, d transferred their appointments to the wly created Metropolitan Board of Works The more elaborate Act and the many quesfins of law and procedure appeared to render icessary some special society where the trict surveyors could meet for mutual sistance.

The first minute book records the sending of a circular letter, dated January 20 45, calling a meeting at the London Coffee lose, Ludgate Hill. At this meeting the flowing attended:—Mr. John White (in the Llowing attended:—Mr. John White (in the cir), Messrs. C. R. Badger, George Aller Corge Pownall, Robert Sibley, George Utch, H. E. Kendall, William Lovell, E. Foxhall, Charles Beachcroft, H. E. Kendl, junr., William Grellier, T. L. Donaldson, E. Corpector, George Administration of the Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator Corporator F.C. Carpenter, George Aitchison, George Leter, John Blyth, Edward I'Anson, junra-Squel Angell, Robert P. Browne. Richard SMartyr, T. H. Wyatt, William Rogers, Jin Mullins, W. Crawford Stow, James Twell, E. Woodthorpe, H. Baker, J. Collis, Cirles Mayhew, E. N. Clifton, E. C. Hake-J. C. Christopher, Rawlinson Parkinson. a W L. Donaldson, honorary solicitor.

a July, 1849, the members dired together i the first time.

1 July, 1851, the death of Mr. White was arounced.

lessrs. J. A. White and J. Jennings were el ted members, having been appointed to Nth and South Marylebone respectively.

1 January, 1852, it was decided to issue reprts of cases. In April, 1853, a piece of ple was presented to Mr. R. Hesketh for valable services rendered as hon, sec. In 18 meetings were first held at 9, Conduit Hanover Square, W. In January, 18), Professor Donaldson, on behalf of the mobers, presented a handsome silver salver notes. presented a nanosome saver saver to Mr. Charles Fowler for his services as no sec. In January. 1875, a successful dier was held, twenty-four members attered, with Mr. George Vulliamy and Mr. Hege Godwin as guests, and Mr. Edmund W. Attense in the shair. In April 1883 Widthorpe in the chair. In April, 1883, The C. Fowler received a silver loving cup an other articles in commemoration of his sences as hon, secretary for twenty-one ves. In 1884 the constitution of the society wa altered, Mr. Edmund Woodthorpe being cleed the first president.

Irly in 1887, after a very severe contest, MrThomas Blashill, F.R.I.B.A., F.S.I., was eleed superintending architect to the Metropolan Board of Works. He was born at Subn-in-Holderness, near Hull, and after son time with an nucle, a land agent at Heford, he entered the office of Mr. J. W. Peyld and afterwards that of Mr. T. F. Knowley. In 1861 he commenced practice in Oldfewry Chambers in partnership with Mr. C. finslie. He was associated with Mr. Wilam Hayward, engineer to the City, and

assisted in the ending of the Holbert Vaidue

In April, 1887, Mr. Henry Lovegrove, D.S. for S.at. I region, Mr. R. Plumbe having book tear-ferred to West Hampstead, was est is a member by 1889 the Lendon Cerety Council took the place of the Metropolitan Bond of Works in December, 1898, the members were informed of the resignation of Mr. Thos. Blashill, superintending architect, and in March, 1699, Mr. William Edward Riley was elected superintending architect after a wide expensive in architectural matters. For about twenty one years he was in the service of the Government, the last three years as Assistant Director of the Works of the Voluntarity, when he had the super vision of a very large number of important buildings. He is a Fellow of the Royal Inst. tute of British Architects a most inde fatigable worker, and at is not generally known that he is an artist of consideraba merit, and hon, treasurer of the Royal Society of British Artists. In July the members of the D.S.A. dined together, with Mr. Thos. Blashill and Mr. W. E. Riley as guests, when an illuminated address signed by all the district surveyors was presented to the former as a testimony of the high esteem in which he was held. In January, 1905, Mr. T. Blashill, the late superintending architect, died some what suddenly, to the great regret of a large circle of professional friends.

In February, 1905, the association was in corporated as the District Surveyors Association (Incorporated), and the first meeting under the incorporation was held, the election of officers and other acts of the old body confirmed.

It is difficult to obtain particulars of district surveyors before the Act of 1844, but one name stands out from the rest. Charles James Matthews was articled to Augustus Pugin in 1819, and through his father's influence was elected surveyor for Bow, a post which he soon resigned, and, taking to the stage, became a famous comedian. When the 1844 Act was passed, many eminent architects held office, one being Mr. Cockerell, father of Professor Cockerell.

Prior to 1891, it was usual, on a vucancy occurring, for between thirty and firty pro-minent London architects to effer themselves. but since that time the candidates have usually been assistants, or young men who, from no fault of their own, have not seen their way to make a successful practice. Giving the whole time to the office, remarks, Mr. Giving Lovegrove, is probably to the public advantage. but with the change there should have been some guarantee of a minimum income, with a pension on resignation. Through all the years since the District Surveyors Associa tion was founded, the Building Acts have been well administered, one or two members have been their own enemies and had to resign, none were ever charged with conduct unworthy of professional men, and no class of official stands so high in public esteem.

## COMPRESSED AIR.\* PAINTING BY IMMERSION

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This book is the first on its subject, and as well thought out as it is greatly The necessity of paint to many industries is paramount, and as universally recognised as we wish the desirability of applying paint in up-to-date fashion was. In America lipping and spraying have very largely superseded the brush and the man muchine, especially in connection with metal-work and engineering. Here, as yet, only the firms whose enterprise is the secret of their success and good standing have troubled themselves to instal a dipping or spraying plant, and have benefited, but the indications inand have benefited. crease that ere long no factory will be complete without one, and to all wise enough to recognise this Mr. Jennings' book will be of the utmost service.

Dipping, of course, is no novelty as far as the principle goes. But recent improvements in the form and construction of the dipping

tank and its approbles hoists, etc. have so in a had gibig linears so in atited operation that speed and efficiency have been visitly as that spend and efficiency have both visity di-creased. On these many, its right is a given, together with lite or hadding factories where they are in successful operation. One of the most simple but effective panel may be seen at the words of Mesers. Haywards, Limited, I mon. Street, Borough, S.E., a him better above it is most of our own is addi-tionally and handless the most of sexual conthan many, and one the uniterior excellence of whose productions is due only in a less degree to the initiative of its able successive diretors than to the foresight which has always anticipated all practicable improvenouss the process of marmon ture of its special tree The plant consists of a shallow tind, in who iron and steel goods are dipped in horizonta position. The lottom is slanted, and the contents duly stirred from time to time. The principal goods painted are Haywards lights. ubiquitous in every street of every city; then metal casements, searchy less familiar; and their patent steel collapsible gates.

The older methods of painting by com-pressed air of the pump and kettle type were

only partially successful, and attention, therefore, was directed to the concentric form of sprayer, now almost universally used often to the astonishment of uniternia observers, who are unable to understand how far superior is the result of the control of the paint by a suitably constructed spray then that achieved by the human hand and a hog schair brush. Many forms of air-sprays are shown, with their accessories.

With both dipping and spraying the saving

of time as compared with hand painting is enormous in many cases the work can be done in one twentieth part of the time it would take with the ordinary brush, and infinitely better. Failures, wherever they have occurred, have been found the result of the injudicious selection of one process or the There other, or the defects of the paint used. drawbacks are easily overcome by the exercise of a little common sense, and the means of doing so are explained at useful length by Mr. Jennings.

Altogether, the book is a unique one as

regards subject and treatment. Many ably-written trade manuals are noticed almost weekly in these pages, but it is at rare intervals that we find advantageous and complete novelty so clearly demonstrated or with

such convincing testimony.

## THE CAPITAL OF THE CANAL ZONE

Gary, Ind., and other made to order extres will find a sister in the new city of Balboa, which Governor Goethels, of the Canal Zone. is constructing at the Pacific entrance of canal to be the capital of Uncle Sam's newest province. The administration building at Balboa, which will be the capitol of the Zone, differs from similar buildings else where in that it contains no legislative halls. the government being administered from the War Department at Washington, all the chief officials, according to executive orders.

being officers of the Army and Navy

The new administration building is modern construction, concrete and steel being The building is firepredi larzely used. throughout even to the office furniture, desks tables, and book and filing cases being of

Practically the entire town of Balboa will be of concrete, and to alleviate the glitter ing newness of the city a supervising hort. culturist has been appointed to promote the "city beautiful" movement, both there an at all points along the conal. It is pointed out by the Ohio Archivet that no other climate in the world offers better opportunities for the development of beautiful garder schemes.—Plants, trees, and shrubs are being furnished free to the residents by the Govern-

Mr. W. D. Caroe, F.S.A., F.R.L.B.A. has been offered, and has accepted, the appointment of honorary consulting architect to the discess of St. David's.

At Southgate, the district church of St. At Southgate, the district church of set Morey, built in 1903, is about to be chlarged from 240 to 709 sittings, at an outlay of £6,679. The architects are Messrs. Barker and Kirk, of Buckingham Street, Strand, W.C.

### HOUSING CONDITIONS AND RENTS thick, as at present, The heavy houses in IN SCOTLAND

At a region Land Hunter and Professor it is held a majory on behalt of the Secretary for Scotland into the increases of tris of small dwelling houses in the adistrial districts in Scotland.

Mr. Alexander Walker, the City Assessor of to asgew, was the first witness examined. He cave figures revealing the fluctuation of erts in certain houses in the different wards the city, and also showed that since the regarding of the war the number of vacant cess had greatly dminished. In regard to 77 selected houses, he stated that in the asc of 185 there had been no increase in the fert side May, 1914. In 208 there had been

a teases ranging from 1d, to 3s, 4d, pet month.
Mr. Walker Smith, M. lust, C.E., Controlle, of Housing and Town Planning and Chief En-giseer to the Local Government Board for Scotland, said there was no doubt that the standard of housing for the working classes of Soutland was by no means a high standard and in many cases and in many areas the Contrasting standard was distinctly bad English industrial parts with those of like for like, the England, he said that, lish working man had about 40 per cent, more house accommodation on the average, for which he paid an additional rental of only about 13 per cent. Private enterprise had been more or less stagmant in relation to the provision of working-class houses within the last seven years. As to the reasons given by owners for this stagnation, they were legislation, actual and feared, and increased cost of labour and materials—the cost having advinced generally from 20 to 25 per cent. Only when economic circumstances owners to obtain increases in rents would private enterprise be automatically switched on again. The present builting conditions in the West of Scotland did not permit of a olution on the normal process of evolution. The witness said housing difficulties were becoming extremely acute. Clydebank and Renfrew were more than full—they were overflowing, to the extent of about 16,000 vorkers at Clydebank, principally at the Dalmuri Shipbuilding Works, and about 5,000 workers from Renfrew, from the boilermakers' and machine tool works there, believed that at the present time the provision of permanent houses in the area neigh-boaring Glasgow was a physical impossi-bility. Neither the labour nor the time for the provision of houses could be found, and in any case the cost at the present time would render it financially impossible. only place (witness went on) where any addi-tional houses could be obtained in large numbers in the Clyde valley at present was in Glasgow itself, and these numbered only 8,799—It was common knowledge that a very in Gasgow itself, and these numbered only 8.799. It was common knowledge that a very considerable number of houses in Glasgow were unfit for habitation. The witness after-wards expressed the view that in the near future the whole of the existing accommoda-tion must be taken up, and there would then be too open market in the ordinary sense of the term. He estimated the additional expenses property owners had to hear as a result of war conditions, and gave what he considered a fair adjustment of the rent of a £14 house. He allowed an increase for repairs and for the alyance in interest, but held that insurance and collection and man agement expenses were not affected. As to empty houses in Flori delets, he thought that there should be some billed on. The result of his calculations was that he estimated the total larease on a Lose of £17, rent and rates combined, at 18s 94. That was to say, 55 per cert on the maximum payment.
67 per cent on the reason proper of £14.

M: Thomas Brunne, member of the Scattish tandled referees under the Finance Act, and the great realt of housing in Scotland was the exect at of tenements which hast 150 years and can be their day, ultimately becoming some It local mathemates were allowed to put as healthings which would full to pieces in - cry years this would solve the Scott, sh housit 2 problem more than anything C-e. Witness would allow brick walls 14 instance in Sectland a stead of stone walls 2 ft.

Scotland accounted for dearer rents compared

with England.

Mr. William Gillies, Dean of the Faculty of Procurators in Glasgow, dealt with the fluctuations in the value of heritable pro perty in Glasgow, beginning with the boom in 1875. It was in 1910, he said, that they had the greatest number of unlet dwelling houses in the area of Glasgow as it then existed, and not including Partick or Govan. Rents naturally tended to fall, and the rates were going up all the time. This caused in a good many instances that came under his notice no return at all to the property owner.

Mr. William C. Faulds, President of the

Association of House Factors, said that in regard to property factored by him east of Glasgow Cross and north of the Clyde, inreases had been intimated or were to be intimated varying from 10 per cent, to 5 per cent, on the assessed rental. Upon the gross rental, including rates, the increase varied from 12½ per cent. to 6¼ per cent.

Mr. William Menzies, manager of the City

Improvement Department of Glasgow Cor poration, gave evidence as to the smaller houses owned by the Department.

Other witnesses declared that 10 per cent. increase on the net rental was imperative to

recoup owners for the burden of increased rates and higher cost of money and repairs. It was stated that there is a complete house framine in certain Clydeside towns, while the margin in Glasgow is very small.

Witnesses stated that the War Loan at 4½

per cent, made lenders less cager to invest in property. Some demande l 5 per cent. All lasses of tradesmen were benefiting from the higher wages. It was said that the only people who felt the pinch of living were ware It was said that the only honsemen and salaried folks. Owners asserted that the increases made were

instified.

Mr. Andrew M'Bride, who represented the Labour Party Housing Committee formed two years ago, deposed that as private speculators had practically reased building, and that as many of the houses were admitted to be unfit for human habitation, they were in Glasow within easy reach of a famine in houses. The standard of housing in Glasgow was below that of any other city, and per acre they were the most congested city in Great Britam, with 53 per acre, while Liverpool, the next worst city, had 45 per acre. They inged that at the eurliest moment the town council should, on a definite and permanent plan. start building cottages in order to secure healthy houses for the citizens, and that for this purpose a loan free of interest should be taken from the tramway surplus. He held that it was impossible for private enterprise, either when the conditions are normal or under the present abnormal conditions, to build healthy houses at a rent which could be paid

Bailie James Stewart, representative of Townhead Ward, a member of the Labour Party's Housing Committee since its foundaalso spoke as an opponent of private enterprise. Any loss, he held, ought to fall on the State and not on the municipality. turther evidence, witness admitted that there hal been an increase in the cost of labour and material; but he submitted as against that that the repairs carried out just now were less than they were three years ago, and the amount expended on repairs would conse

quently not be so great

The city surveyor of Glasgow stated that in his area there were only five unlet houses, ompared with 1,200 five years ago. In three firms over 30,000 men were employed. The rent- leid risen, and some tenants had had to pay two advances this year. He did not agree with the landlords plea regarding the The advance extra cost of require. rate of interest demanded by the bondholders was soid to be helf the reason for dearer rents; the lost of reprirs accounted for the other half. In reply to Lord Hunter, wit ness stated that in order to return to pre war rents the extra cost of labour and material would require to be considered.

Mr. Genree Boss, burgh surveyor, Clyde bank, stated that in that burgh there were

at present 8,947 houses, which were almost entirely occupied by the working classes. In 1871 there were 105 inhabited houses, with a population of 816, and these ligures gradually increased till in 1914 there were these ligures 8,730 houses and 44,741 of population. In 1910-11 there were 1,276 empty houses; in 1913-14 there were 218; and in 1915-16 the number was five. Building in Clydebank generally came in spurts. For example, generally came in spurts. For example, between 1905 and 1908 almost 3,000 houses exampie, were built, and consequently the supply was above the demand. Messrs. Beardniore put up a lot of buildings, and speculative builders also came into the field. During the last two years only fifty houses were built, but since May, 1914, plans for 565 houses had been passed by the Dean of Guild Court. There was at present a big lot of building going on, and there was a large demand for houses, arising from extra work and more people being auxious to reside near their place of employment. A scarcity of houses always meant a tendency to increase rents, and that tendency had been showing itself recently. Increases had been put on rents of single apartment and room and kitchen houses of from 9s. to 10s. to about 50s., or about from 5 to 13 per cent. In some cases there had been two increases since the war started. The rates on owners and occupiers for the current year were lower than they had been for some years.

In answer to Professor Scott, the witness said that the expenditure on repairs during a period of five years was as low as 4 per cent, and as high as 25 per cent, but in some of those cases the property had not

been repaired for twenty years.

Mr. James Steel, vice-president of the Glasgow Factors' Association, said that for some years the result of the excessive number of houses had been disastrous. Within the city the depression was not so acute as in Govan and Partick, where for some years proprietors, instead of receiving any return on their capital, were paying debit balances half-yearly. Witness offered instances of increase I tradesmen's charges. Thirteen items usually found in bills for plumber work had risen from 32s. 2d. in 1905 to 49s. 5d. in 1913. and the present price was 66s. 1d. Then there was the interest on bond interest, and fully 95 per cent, of those he represented

had horrowed money on their properties.

Mr. Archibald Speirs, president of the Glasgow House Owers' Association, said that from 1900 to 1905 rents remained practically stationary, and after that, owing to the over supply of houses, a fall took place, which had not yet been made good. In rents that were increased prior to the var they were only trying to get back a portion of the rent that had been previously reduced. Houses not let in ordinary circumstances had been let to a small extent, but there were still many houses in Glasgow unlet. Owners required 10 per cent, increase to put them a position similar to that before the war.

Mr. Samuel C. Eadie, builder, said that on the whole rents were rather lower than were fifteen years ago. Subsequently evidence was submitted regarding the situition in Rutherglen and Greenock, the views of the respective particles and Greenock, the views of the respective parties being generally along the lines of evidence already reported.

A new church hall has been erected at Shelton. North Staffordshire, adjoining the Rectory grounds. The building contains a hall 60 ft by 35 ft., with ante-rooms, secretary's office. by 35 ft., with ante-rooms, secretary's office, men's club, parlour, kitchen, and is lighted by electricity. A bowling green and tenus court are included in the scheme. The court actor is Mr. Thomas Godwin, of Hanley, and the work has been designed by Mr. A. W. Moss, architect. Hanley.

The Westminster City Council on Friday de the Westminster City Council on Friday decided, subject to the approval of H.M. Office of Works, to offer the large triangular paved island in St. Martin's Place, between the National Portrait Gallery, the Westminster Hall, and the end of Chandos Street, as a site for a memorial to Miss Cavell, to be even ited by Sir George Frampton, R.A. The site is that on which the Gordon statue stood executed by Sir George Frampton, R.A. the streets is that on which the Gordon statue stood for a short time. Mr. Lewis Harcourt, a First Commissioner, has susceited the expropriation of the site for the purpose.

## Currente Calamo.

The President's address at the opening of he eighty-second session of the R.I.B.A. on Monday was delivered to a small audience it 3,30 p.m., and the whole proceedings inished in less than an hour. Naturally Mr. Ernest Newton had little to say about matters hat members usually look to the President or comment on. All will be glad to note hat a further appeal has been made to the hancellor of the Exchequer to deal fairly nd honestly with those of us whose incomes re falling to zero, or have vanished alto ether. Certainly, as Mr. Newton said, relief "hardly meets the cases of those ho have nothing to be relieved of, and hose present impecuniosity is due to the port-sighted eagerness of the Treasury to op building operations, which it was romised by the Local Government Board fould be encouraged. One hopes, almost gainst hope, that Mr. McKenna may realise atter than some of his colleagues elsewhere hat architects have done to help the mmon cause. The President's summary ereof is familiar to our readers, and the cord is a noble one. We trust his conading appeal to all of us will hearten the able-minded and touch the hearts of the ckers. We are glad be endorses our own pevious criticism of some of the methods of ane of our authorities-notably those responsile for "the exasperating and dead appeal the picture poster"!

Accidents will, or must, happen durn ; kilding operations. When these affect those eaployed on the work compensation is paytle under the present law, which practically arounts to an insurance. But when third prties suffer, who are neither in the service the builder nor under a contract with him, oficult legal questions often arise. The last example is the case of Elliott v. C. P. Rierts and Co., Ltd., heard before Mr. Just . Lush and a common jury. The defendants we re-building a school for the L.C.C., and b their contract they were bound to provide a plant, etc., and afford facilities to any o er tradesmen employed by the Council, in clling the reasonable use of any scaffolding. The defendants had control of the premises ar building. The plaintiff's case was that howns lawfully using a gangway on the job. mle of two unfixed planks placed diagonally hir up across an open space, with no fence or ail. The plaintiff had used this safely fosix weeks, and the planks were obviously no fixed. Then he fell and was seriously The jury found negligence by the in red. dendant on the facts and gave plaintiff a e ict with £2,000 damages. But the judge ersed this on points of law and entered u ment for the defendants, the builders. Ashere was no contract between the defendand the plaintiff the question was what u they owed to him in law. The builders La allowed him to come on the job and use the gangway, but they did not invite him to a so. Holding there was no duty to provic a safe gangway as between the parties the udge decided for the defendants. The cas will go to the Court of Appeal, where we hall hope to get a clearer view of this ver important practical point for builders ancontractors and tradesmen.

Clar flaps, opening in the highway, have the gal principles of liability may seem to be average of that submitted at the bi-monthly

sett od, the stempton pplied in pract In the resent case of W on r. Hodgson -King for Bossey Co. Limited, the first were common and tare a coough, but the lawyers differed a dear. There a how tell through a cell in flancing or in an the pavement and sued, through he tather, for damages. The defendants were the corners of the place which was a fiel pub., house where they were delivering beer to in ans of a contractor engaged for that work. The plaintiff sued both the ewners and the tenent, and the County Court judge doubled against them both. But, on the owners' appeal, the High Court has now reversed this ruling, and so no me is yet made halde. The Court held that, as the defendants, the brewers, and owners of the premises, had engaged an independent contractor to do the carrige of their beer, they were not legally responsible. Certainly, the carter was not doing work on the surface of the highway which would necessarily be a public danger, and thus bring in the owners as liable. The plaintift had sued both the owners and tenant, not adding the contractor. of whose existence he may not have been aware. But it would have cost no more to include him in the action and so brought it against the three as being liable, jointly or severally, in the alternative. If he was known this would have been the proper and the safe course to adopt. The carting contractor can still be sued if negligence can be shown against him. Obviously, someone should be liable in damages, unless, of course, it was all the boy's own fault

In view of the part taken by the Society of Architects in the establishment of the first Atelier of Architecture in London by the Beaux Arts Committee, the following account of a similar movement in Sydney is of interest. Its inception and success appears to be entirely due to the single-handed efforts of its promoter and patron, Mr. Gordon 8 Keesing, A.I.A., late of the Atelier Prevot. New York, and Atelier Gromoet, Paris. In the course of an article published in "The Salon," Mr. Keesing says: "Realising the disabilities under which the more ambitious architectural students of Sydney labour as regards their studies. I evolved a scheme by which the regular functions of an Atelier are combined with the most important elements of a University course. I drew up the curriculum as a result of criticisms I beard whilst in England, of the work our students submitted for the R.I.B A examinations, as well as from the observations of local architects and in addition from my own experience having had the experience of being an Australian trained draughtsman in commetition with the Atelier and University trained men of New York," The quick success which has met Mr. Keesing's endeavours justifies the methods he is employing, and the improvement which has been accomplished, in a few months, in the work of some of the members of the Atelier is surprising. The novelty to the students of the new methods, the sudden ness with which they were being thrust upon them, and the deflerent conditions which obtain in Australia from those existing in Paris, New York, or even London, where the first Atelier started with Paris-trained men among its members all threatened to he insurmountable. Quite the contrary has happened. Some of the members frequently do quick "design" problems which would gain a pass in the rather severe examination of l'Ecole des Beaux Arts. Some caust a good deal of litigation, but though of their more finished work is above the

exhibition at the Ne Bessia Arts Somety that attack And the one · Theo goal been in existence for to members have a good to all and the state of the geography of his transaction that in The the following filat year items : A sheet of Classic details, parefully drawn, mked in and a cood; a short of measured work if rither or the detail measured work if rather  $0 \le r$ , as detail of a reature, the visco because or, anyhow, sufficient to show the relation of the feature. must be encorted a protection and and planning in each important its.e, fin shed in pencil and colour, and a number of additional problems giving treedom - le-ign, plan and construction (this class of work has the additional objective of developing speedy draughtsmanship, and each problem has to be finished in about twelve hours : freehand sketches, lectures in history, design, and allied subjects. Mr. Keesing's only trouble is the lack of any supporting institutions, which devolves such a comprehensive curriculum on him single handed

With a much larger army in the field than we have ever had before, the percentage of disease is much smaller than in previous campaigns on foreign soil, owing to the excellence of the sanitary arrangements, and the efficiency of the medical staff. Sir James Crichton Browne, in his presidential address to the Samtary Inspectors' Association, is responsible for the statem at that if the sickness in the present war had been at the same rate as in the South African War in proportion to the number of troops engaged, we should have lost more than a million men from sickness. Our losses in killed. wounded, and missing, in all fields of operations, now total nearly half a million, or, to be precise, 493,294 Sr James contended not only that the paw of sanitation lad been conspicuously shown in relation to sick ness in the field, but that it had also enabled us to send our troops abroad in a sound and efficient condition. Of the men who offered themselves for service in the first year of the war, one million were sail to have been rejected-all born from eighteen to forty years ago, in the bad old insanitary days, as Sir James described them

Dr. William Martin's unteresting lecture last week to the British Numesmatic Society on "London as Illustrated upon the Great Seals" will, we hope, second his desire to draw attention to a source of information, hitherto somewhat neglected, concerning the appearance of Stuart London, and by so doing lead possibly to the discovery of the original view of Old London from which the illustration on the Great Sals and Similar pictorial efforts had been drawn. The carbest view shown on the screen was the wonderfu! cartographical attempt at pertraiture les the well-known corporate Sea, of the City of London, 1224, and pictures were ilso given of London and its vicinity as shown upon the Barcheston tapestry, and of the yew occurring as an inset to the map of Hondius, to be seen in Speed's Atlas of Italy. From these there was a natural transition to the equestrian portrait of James 1. 1 who has panorama of London appears between the horse's legs. The beturer then passed to the Great Seals, and showed a successor of slides from Charles I. to George I., where between the horse's legs panor mas et L n lon occur. in which buildings such as St. Pau's and Lambeth Palace could be identified. It was noted that the horse shown on the seal of Richard Cromwell seemed to be exactly like the horse on which Charles I, is mounted at

-- In addition, by permission of . i. . authorities, several medals were of ch landon was depicted. These - 1 the rare medal of 1633, commemorat-aten at Edinburgh. If any of our readers st. aid happen to possess scals or ils with architectural subjects on them of and interest we should be glad to illus-. such, i favoured with photographs or

Mt. H. Percy Farris, M.P., presided over a meeting at the Whitehall Rooms on Octoar to consider the Government insurance - lene for war damage, when Mr. Mark H. Judge proposed the following resolution:-That, in the opinion of this meeting, the Government scheme for insuring against loss r damage by aircraft and bombardment, e ich has made individual citizens responsito for war denage inflicted on them by the enemy, is manifestly unjust; and it is netchy agreed to present a memorial to the Prime Minister arging the abandonment of the scheme, and T the adoption of an Act recognising national responsibility somewhat on the lines of the Riot Damage) Act, 1886, or 2 revert to the policy adopted in connecton with the Zeppelin raids on the East Coast and the bombardment of Scarborough and Hartlepool prior to the introduction of the surance scheme, and compensate sufferers out of national funds, a condition of the withdrawa, to be that the premiums already paid under the scheme should be returned." Mr. W. H. Souther, seconded, and, after discassion, the resolution was passed unani monsly. A committee was elected to prepare and present the memorial, and Mr. W. H. South on Southon and Robinson, Chancery Lane, W.C., was appointed hon, secretary. We trust support of this movement will be promptly given. A more ridicuions, unfair, and short-sighted course than that the Government has adopted could so are ly be conceived.

Realers who receive their copies by post direct from our office and notice that we are composited this week and henceforth to pay a penty instead of a halfpenny postage on each gy, the fulfperry but having been fixed at 5 ez. by the Postmaster-General. We ard others have pointed out to that official that in extersion to 5 or would have met the ree is of all menhands newspapers, but to attention to our representations has been voir Esifed. It is no use grambling at the Post aster General. He is simply in the grap of the Treasity, those idea of good finit e seems to be to raise the Imcome-tax to ten shalings in the pound and then to awaken to the fact that we shall all be torking at a loss, and that no "profits" will be available for assessment. Since the war connenced, at considerable sacrince we have kept the BUILDING NEWS intact as it gar Is size, quality of paper, and the number of ir illustrations. We shall still do so d (a realers and advertise, support us. For the presett, at my rate, we shall bear the all his car postage charges carse ves, and our that are many part of the superior of the contractors of the contractors. We mention this now because the contract of the amount of the amounts so carried to the contract of the amount of the tender, such difference with the adjusted by a percentage equal to the amount of the tender, such difference with the adjusted by a percentage equal to the variation added to or deduct of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contractor of the contra se scription rate vil. as heretotore, be £1 ret artim, post free, 10s half-yearly, and User the free ground of our determina-tions to flag flying are unreal soft we

## Correspondence,

DEDUCTION FROM AND ADDITION TO PRICED BILLS OF QUANTITIES

Sir, -- Your account of the resolution come to by the Works and Stores Commutee of the Metropolitan Water Board, given in your issue of the 20th, is quite interesting.

It shows how public bodies ignore gene rally accepted methods of carrying on bus. For a considerable number of years it has been the practice of contractors tender-ing to alter the total amount as priced out by adding to it or deducting from it an amount, not as a rule any particular per centage, but a sum which might approx. mate to a percentage on the total of the estimate as made up in many instances by an estimating assistant in the office. The est mating assistant in the office. The amount deducted depends in some cases on how anxious, or the reverse, the contractor is to get the work, and perhaps on his views as to the prices put down by the estimating assistant. No matter what the object in view assistant. No matter what the object in view may be, the custom prevails, and in many cases it has the following effect: that where alterations or variations are made in carrying out the work, the alterations have to be priced out at the original prices, paying no attention to the sum deducted at the end of the bills of quantities, and so the work done under items of alterations costs more than the original prices as reduced by the percentage. This may be all right for the contractor, but it is not fair to the client, who naturally expects to pay pro inter for any extra work or variations he may desire to

My object in writing you is to call the attention of members of the profession in general, and the Metropolitan Water Board in particular, to the fact that their proposed clause is not as clear as it might be.

I take it the object of every contract between employer and contractor is to make the obligations on either side as clear possible, not an easy matter in a building contract; some may say that some particular form is "too hard" on the contractor, some others say a form does not sufficiently tect the employer, and so there can be no real agreement between the parties, and the result is a compromise.

A building contractor's business is always

of an eminently speculative character; low prices necessary to get work sometimes mean loss, high price in tendering often means want of work. But, given a particular form of contract, no builder need accept it; he need not tender, and then both parties are satisfied more or loss.

What, in my opinion, is required is a form of contract as fair as possible to both sides and set out in such clear language that there and set out in such clear language that there cannot be any mistake, even to the legal mind, as to what the meaning is. This, I do not think, is attained in the clause suggested to the Water Board.

In nearly every bill of quantities there are some "provisional sums," the amounts of which cannot, or should not, be subject to any deduction by way of percentage of otherwise, so to these the percentage should not apply, and this is the point which I think is not made clear in the clause suggested to the Water Board.

In my own practice I use the following tause, which I suggest is better and clearer than the one in question; - "Should the said schedule of quantities on examination show that the prices when carried out do not with the amount of the tender, or if any sun is a Hed to or deducted, to add to or reduce the total of the amounts so carried

visional sums, and it is found on examination that the prices when carried out amount to £1,100, the first thing to do is to deduct the amount of the provisional sums, viz: £100 from the total of £1,100. From the remainder (£1,000) £100 has been deducted by the contractor, which equals 10 per cent. This reduction applies to every item in the bill of quantities except provisional sums, and it would be deducted in one sum at the end of any variation account, after taking off the amounts of the provisional sums.

I hope I have made my system clear, and I should like the opinion of your readers as to whether it is clear, and, what is of more importance, whether it is fair between the parties concerned.

Apologising for the Action am, S.r., yours faithfully,

MAX CLARKE. Apologising for the length of my letter, I

4. Queen Square, Bloomsbury, W.C.

### RISE IN HOUSE RENTS AND MORT GAGE INTEREST.

To the Editor of THE BUILDING NEWS.

Sir.—The Land Union has had under con sideration the policy of owners of small house property of raising their rents, and the tendency of mortgagees (particularly of that class of property) to increase the rates of interest upon mortgages created prior to

As regards house owners, no one having any knowledge of the subject can deny that heavy burdens have fallen on them owing to the increase in the cost of repairs, extra premiums for insurances, and other causes, which in normal times would justify an increase of rent, but the Land Union has no hesitation in asking owners to refrain from raising their rents during this war, and it cannot too strongly condemn attempts to shift the burdens of personal taxation on to their tenants.

As regards mortgages, the Land Union re cognises that money has become dearer since the war, that lenders are often borrowers themselves, the bank rate has risen, bankers charge higher rates of interest, and mortgagees, especially those who have lent money on small house property, are often them-selves comparatively poor people. Notwithstanding these facts, it considers

the present time most inopportune to disturb existing mortgages or to raise the rate of interest, the consequent effect of which must be to cause a rise in rents or to give a plausible excuse for raising them.

The Land Union is therefore well aware that the course it advises will in some cases involve considerable sacrifice, but in these times sacrifices have to be made by us all.

On behalf of the council, I make an earnest appeal to the patriotism of house owners and mortgagees to abstain from raising rents and rates of interest now-a course which I am convinced is in the best interests of the whole country during this world-wide crisis.—I am, yours obediently.

DESBOROUGH, Chairman of the Council

The Land Union. St. Stephen's House, S W.

## Our Illustrations.

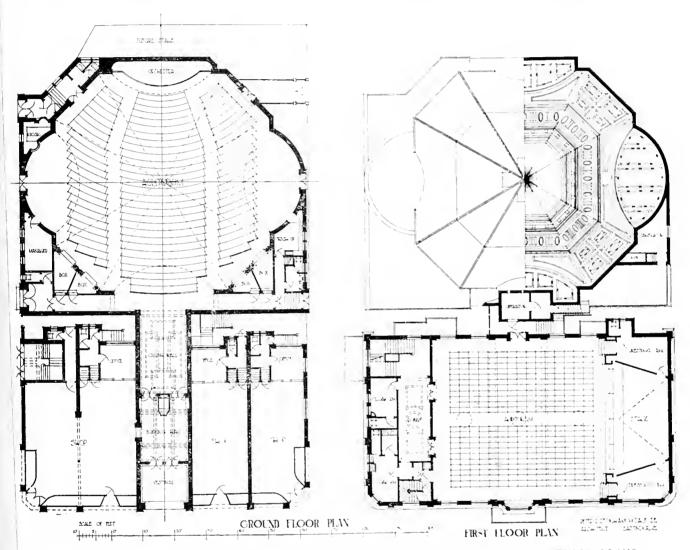
ZOOLOGICAL V RESTAURANT, ZOOLOG GARDENS, REGENT'S PARK

The accompanying drawing from the Royal Academy shows a view of the new restaurant to be erected in the Zoological Gardens. Regent's Park. It is part of the scheme for the general improvement of the N.E. section of the Gardens, and will form one section of the Gardens, and will form the side of a spacious open piazza, with band stand, lawns, etc., in front, giving ample room for all classes of visitors and for the fietes and other public gatherings which are becoming increasingly popular at the Gardens. The building itself will be constructed of 2-in, bricks with wide joints and will accommodate a large number of the and will accommodate a large number of the is £1,000, which contains £100 of pro- public both on the ground and first floors

The wide verandah on the first floor is a feature of the design, and from it an ex-tensive view of the Gardens and the park beyond will be obtained. Special accom-modation has been provided for the Fellows, and the kitchens and service arrangements will be of the most up-to-date description, in order to deal with the large numbers people who now frequent the Cardens The construction was arranged for before the war, and it was intended to be opened this year, but it has been postponed for the present. Messrs. John Belcher, R.A., and J. J. Joass are the architects.

phaster and seating 1. Messrs, Wilson, Rae, Pixton and Co., Ltd., of London, while Messrs, Day d. Rooy 1 and Co., Ltd., were responsible for the vertication. The pixture drome has been do cated in cream and gold, relieved with base, the colour of the drome has been do cated in cream and binding of Romanesque date in black and gold, relies of with base, the colour of the twhite marble, very often described and panels and senting being gose du barri. Mr. dlustrated, as by the late George Edmund Peter D. Stonham, M.S.A., F.L.San, E., of Eistbourno and Beel fl. is the architect. Brick and Murble of Italy." The drawing The plans here repositived show the some what unusual shape and capital arranges to the Palazzo Tergi, from the Trush ments of the premises, which are near the of Mr. Alick G. Horsnell, Scate Mediclist School of Art and not fir from the Public and Title Prizeman of the RTBA, who Labrary and Art Gallery on the other side kindly lent us this sketch.

were made in the 14th century dral is of secondary importance compared with the Church of S. Maria Maggiere, one of the most remarkable and well kneed to burshing of Romanesque date in black and



PICTUREDROME AND CONCERT HALL, WORTHING, SUSSEN: GROUND AND FIRST FLOOR PLANS. Mr. PETER D. STONHAM, M S.A., Architect.

HURCH OF ST. BARNABAS, NORTH of the way, the heart of

We published the plan and some particu es of this building in our issue of August last, when a view of the apee from the rrth transept formed one of our double-ige plates. To day we give another of r. Richard Moreland's very fine photoaphs of the church, the subject being a pw across the choir. Mr. J. S. Alder, of Lundel Street, Strand, W.C., is the chitect.

## EW PICTUREDROME AND COL CERT HALL, WORTHING, SUSSEX.

We give exterior and interior perspectives o'a new picturedrome and concert hall just Kely built at Worthing, in Chapel Street, to main road from the station to the pier. t) main road from the station to the pier. The picturedrome accommodates one thoused people, and the concert hall four hundled. The general contractors were Messrs, the Messrs, and the walls are covered with snapdragon and scirlet valerian, walks being formed on the picturesque ramparts facing the mountains on the one side, and on the other the vast Lombard Plain, where mulberies grow in immense profusion. The Duomo was originally erected from the plans of Antonio Filarete, but many alterations

of the way. The site is a corner one, in the heart of the toevn, and very central, between East and West Worthing.

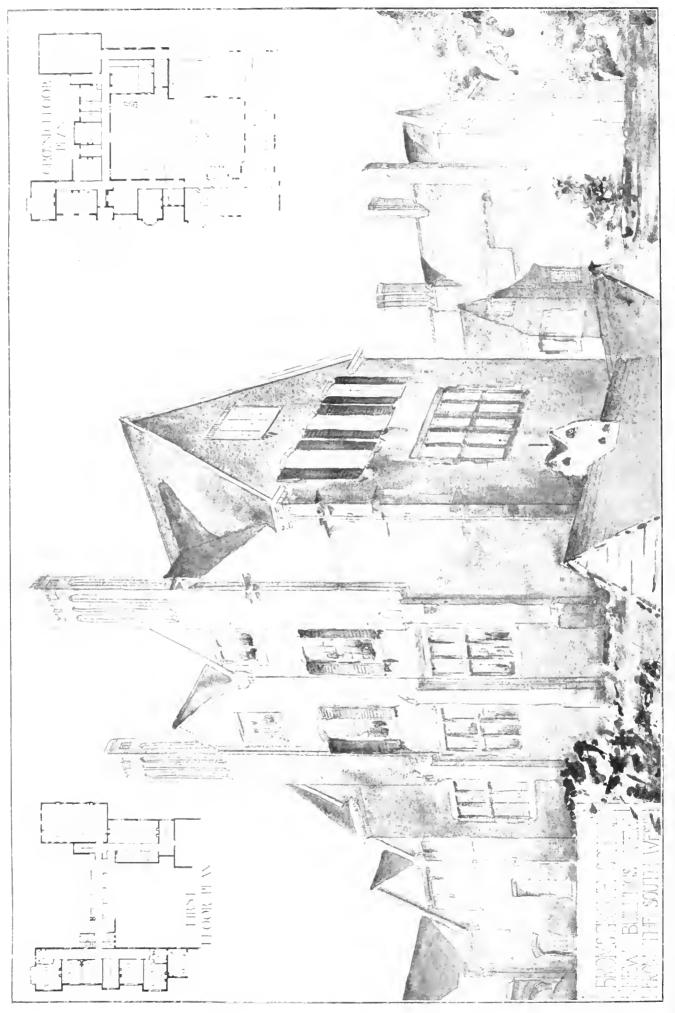
## SOANE MEDALLION AND TRAVELLING STUDENTSHIP SKETCHES IN TTALY.

THE ENTRANCE TO THE PALAZZO TERGI, BURGAMO,

Bergamo is a delightful town, embracing a good deal of variety. The Citta or upper part forms the arist cratic quarter, and the Borgo or the lower town is devoted to shops and conuncreial buildings. The principal objects of historical interest and architectural main are within the immediate present tural merit are within the immediate pre-cincts of the cathedral. The bastions and gates of the city are planted round about with chestnut trees, and the walls are covered with

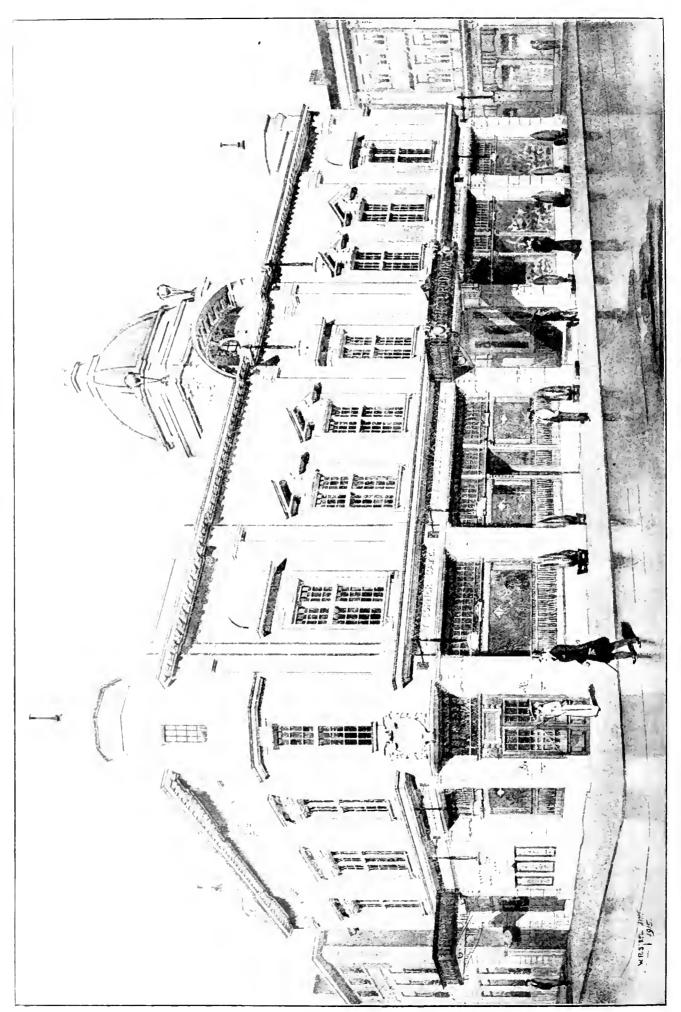
These buildings were finished this year. They consist of additions to the school-house in the shape of a new residence for the headmaster, with a new dining hall and with house the first transfer to the headmaster. headmaster, with a new dining hall and sick-house block for the boys in his home, and quarters for servants. The buildings on the south side of the quadrangle are kept low, to interfere with the sunlight as little as possible, and the sharp fall of the ground is utilised for the formation of cellars. The contractors were Messis. J. and A. Brazier, of Bromsgrove, and the of cellars. The contractors were J. and A. Brazier, of Bromsgrove. J. and A. Brazier, of Bromsgreee, and the architect is Mr. Arthur Bartlett, F. B.I.B.A. of H. Adam Street, Adelphi. The drawing from which this illustration was taken was exhibited in this year's Royal Academy.

The town council of Edinburgh have acc with thanks the offer from Sir Robert Maule of a decorative panel for the council chamber. The name of Mr. Joseph Parr, builder's merchant, has been added to the commission of the peace for the county borough of Bootle.

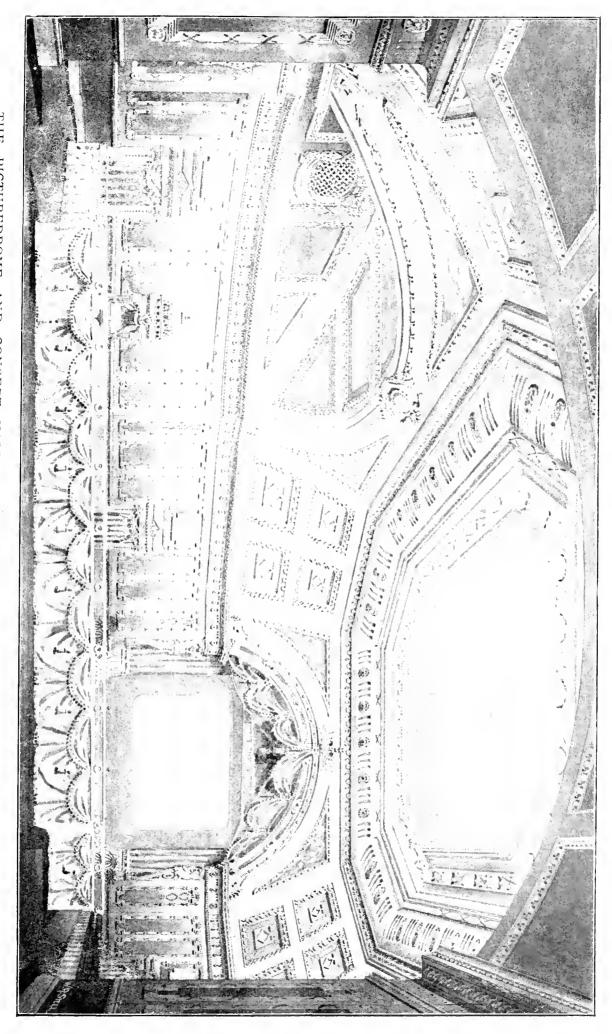


NEW BUILDINGS COMPLETING THE QUAD, BROMSGROVE SCHOOL, WORCESTERSHIRE.-Mr. Arthur Bartiett, F.R.L.B.A., Architect.



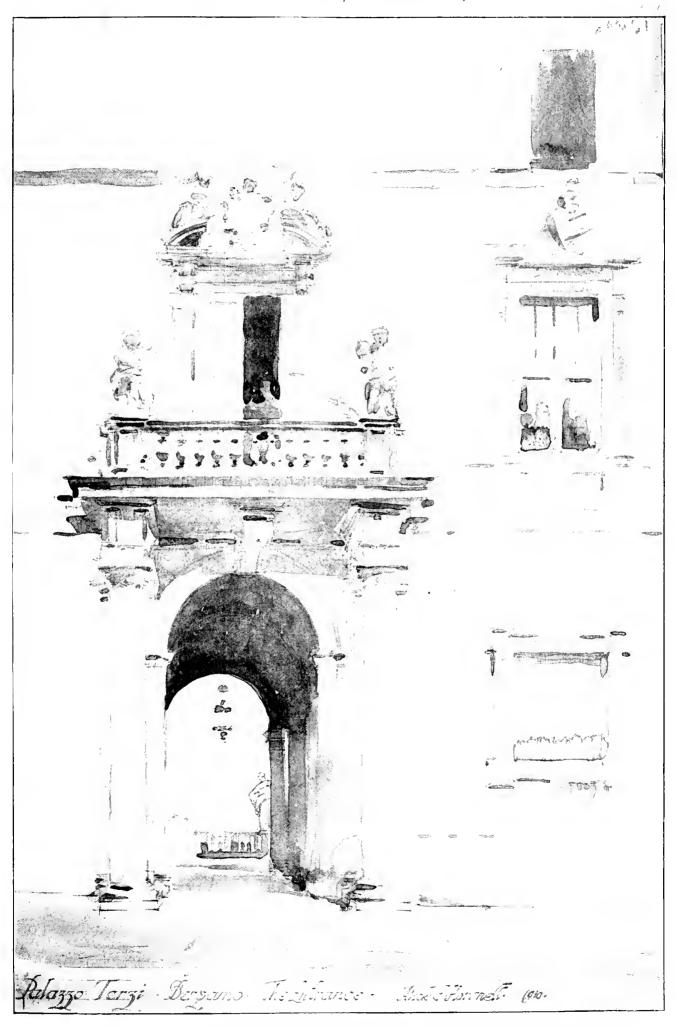


THE PICTUREDROME AND CONCERT HALL, WORTHING, SUSSEX.-Mr. Peter D. Stonham, M.S.A., Architect.



THE PICTUREDROME AND CONCERT HALL, WORTHING, SUSSEN. -Mr. Peter D. Stonham, M.S.A., Architect.





PALAZZO TERZI, BERGAMO: THE ENTRANCE. SOANE MEDALLION AND TRAVELLING STUDENTSHIP SKETCHES IN ITALY.—By ALICK G. HORSNELL.

FRIBA. prin Canac true\_ s. estat was the construc- $J(a)^{\prime}/S(q)an$ H i. Chene

the dread Britis. 11 of Vierto d is any year of Bath frankicy Villa, On trending in last week

sales and was obtained Hararey Board of Works Bath in 1879 he was ap appoint a ling surveyor, Horter ty surveys. At Formal's solary in Albert exacts solary in A been to eved \$525 per arminimation had to pay certain a cls. During his tenure. B is firing instending. Fiture effected many arts in the city performally as at Lampar Ts Bandings, process for art sats have matter of severage and Mr. Forture took the W. H. Belf, d brought

and Barber, J.P., a well as held at the wellir have and sur and respected and resided at 117 the architect rull c build the schools. and rt, and Ed to to since

and R

Motor, at Fletener Gate; Manyers Street, Daybres is; Heaner, Loughbrouogh, Sutton-in-Aslineld, Le cester, etc. In 1894 he took into-pertucyd, p. 1888 n. Ernest Richard Sutton, le 1 : 13 b. Mr. R. C. Sutton retired, the base has being carried on by his son. He was a member of the City Council from 1887, and retired in 1931. The was a member. was a member of the City Conneil from 1887, and retired in 1901. He was a prominent Freunison, and one of the oldest members of the ciaft in the province. He was initiated not the Newstead Lodge (No. 47) in 1865, and twelve years later was appointed Worshipful Master. Among other effices which in filled was Prov. Grand Supt. of Works, Drov. Grand Treasurer, and Prov. Grand Warden. He was formerly a member of the Vibey Chapter. Mr. Sutton was twice martied, and leaves a widow, two sons, and three langueters.

We regret to hear of the death of Mr. Lunes Brady, one of the founders of the Clerks of Works Association in 1882, who as passed away after a long and painful all passed away after a long and painful sillness, at the age of seventy seven years. Wr Brady was elected to serve upon the first committee of the association, and in September, 1833, was appointed managing editor and publisher of its Journal, and continued to hold that position with the exception of a two and a helf years interest. ception of a two and a half years' interval— until the end of 1909, when, through failing health and advancing years, he retired from its management. He continued to take an interest in the progress and welfare of the association to the end of his days.

### ----LEGAL INTELLIGENCE.

BIRMINGHAM BI'LLDER'S AFFAIRS
A meeting of the creditors of Albert Victor
Hopkins builder and contractor, 39. Thorp
Street, Birmineham, was held on Friday at
the Board of Trade Offices in that city. The
debtor's statement of affairs showed gross
liabilities amounting to £2,334,10s, 10d, of
which £1,905,16s, 8d was expected to rank for
dividend: the deficiency was set at
£1,634,0s,1d, The debtor alleged as causes of
failure loss on contracts by the increase in
wages and cost of material since the commence
ment of the war. The Official Receiver (Mr.
A. S. Cully stated that the receiving order was
made on the 30th ult, upon the petition of a
creditor. At the date of the receiving order was
made on the 30th ult, upon the petition of a
creditor. At the date of the receiving order
lave judgments amounting to £250, 11s, 6d, were
entered up against the debtor, and eight
creditors, whose claims amounted to £342,
13s, 3d, were suing. The debtor, who is thirty
eight years of age, stated that he commenced
has iness in September, 1910, as a builder and
contractor, without capital. He was financed by
a friend, with whom matters were settled up in
November, 1913, when a balance of £30 was
found to be owing by the debtor, and which
was still unpaid. The debtor alleged he was
successful until the war commenced, when
was said until the war commenced, when
was said until the war commenced, when
was said advanced to such an extent
that his existing contracts resulted in heavy
losses. Six months ago he entered into a BIRMINGHAM BUILDER'S AFFAIRS successful until the war compressed, when that his existing contracts resulted in heavy losses. Six months ago he entered into a contract to erect a post office at West Brom wich, which he alleged was a very beneficial contract, having regard to the price at which to had contracted for the supply of material. The debtor's interest in this contract was the next immertant matter connected with his elies. It was voidable on the insolvency of the obtar and the meeting of creditors had see all the supply of the contract was the read blos advisers would be able to formule the next supply of the contract could be necessary to be a pleted and the henclit therefrom accrues the reditors in the shape of an acceptable residual to the authorities having control of the contract the authorities having control of the contract the authorities having control of the contract the authorities having control of the contract the authorities having control of the contract of the set of left proper beoks of account the contract was the authorities having control of the contract of the contract was the count of the contract was the count of the contract of the contract count of the contract of the contract count of the contract of the contract was the count of the contract of the contract of the count of the contract of the count of the contract of the count of the count of the contract of the count of the contract of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the count of the co The time years, and measure successive residually propored. They how dold is posses estimated profits experience from current contracts but not robe ialise. Mr. J. D. Kerr, Stock westpreinted trustee.

BUILDIES TIABILITY IT THE TABLE TO THE PARTY AND STREET AND STREET AND STREET AND STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET AND A STREET

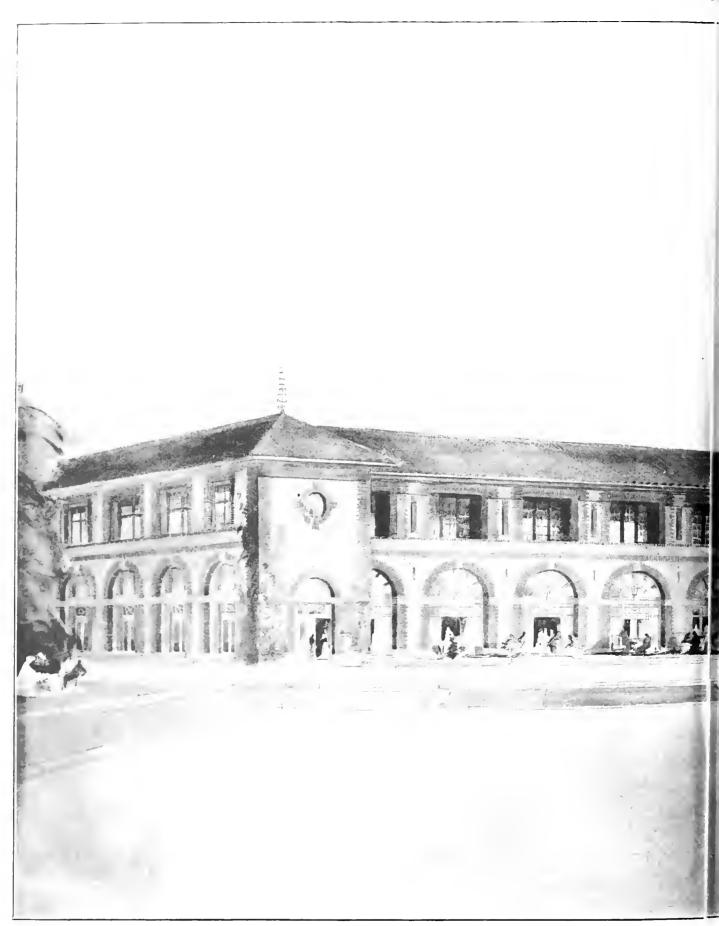
serious personal injuries. The hearing took place, as reported in our last issue, p. 488, on October 20, 21, and 22, when the jury gave judgment for plaintiff, assessing the damages at £2,000, but the learned judge reserved judgment on the legal issues raised. On December 21, 1914, the defendants were engaged in rebuilding a school at Boiner Road, Bethnal Green, under a contract with the London County Conneil, and the plaintiff was employed by the County Conneil to do certain work. While walking across a gangway formed by two planks, not fixed at either end and unprovided with fenced rad, the plaintiff fell, and received serious injuries, resulting in paralysis. The with fenced rail, the plaintiff fell, and received serious injuries, resulting in paralysis. The gangway had been used without accident for three months, and during six weeks plaintiff had crossed it many times each day. The plaintiff said the defendants were guilty of needligence in not providing a safe and suitable gangway. Mr. Moyses, for M. Davies and Co., appeared for the plaintiff, and Mr. McCall, K.C., and Mr. Henderson for the defendants. Mr. Justice Lush, in his judgment, said that in his opinion the defendants were under no duty to the plaintiff to provide a gangway which was safe in fact, though they were under a contractual duty to the London County a contractual duty to the London County Council to afford facilities to any tradesman, meluling the reasonable use of any scaffolding. He did not see how a stranger to the contract between the defendants and the County Council between the defendants and the County Council could take advantage of it. The defendants were mere licensors, and the only duty they moved to the plaintiff was not to expose him to a conceabed danger or trap. It was admitted by counsel for the plaintiff that there was no hidden danger or trap. He referred to the judgment of Lord Justice Phillimore in "Norman v. Great Western Railway Company" (1915) and "Smith v. London and St. Katherine Docks." As in his view there had been no breach of duty, he entered judgment for the defendants, with costs. It was intimated that there would be an appeal. Mr. McCall, K.C., applied that the sum of £200 which had been brought into court by the defendants should be paid out to them. Mr. Justice Lush made the order asked for.

live the defendants should be paid out to them. Mr. Justice Lush made the order asked for.

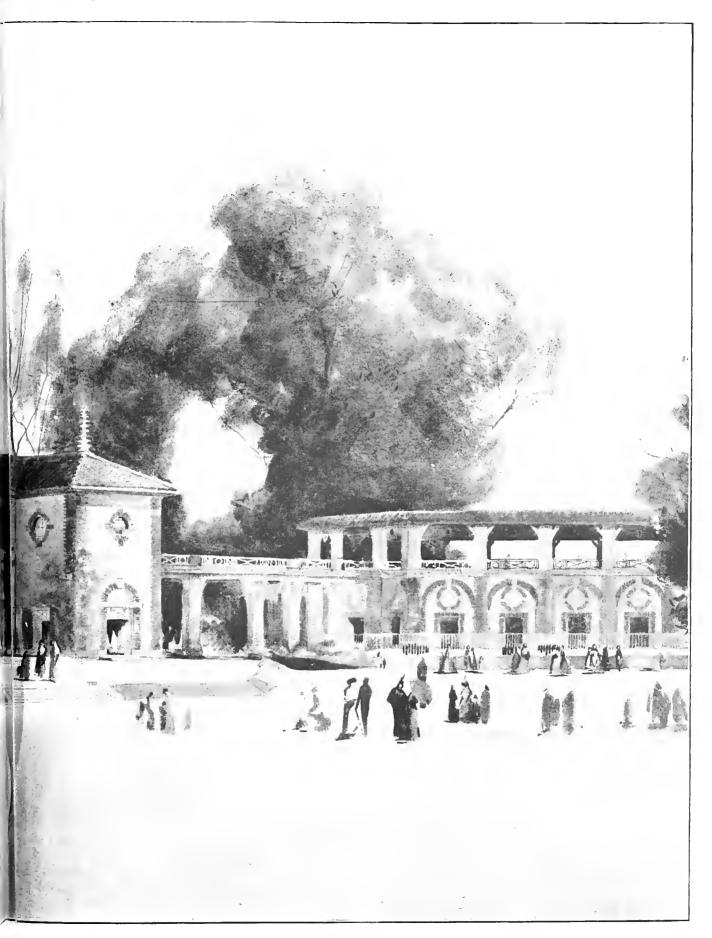
CLAIM FOR COMPLETION OF PURCHASE OF AN ESTATE.—KECK V. FABER (HELLETT AND KEEBLE THIRD PARTIES).—Mr. Muir Mackenzie, Official Referee, sitting at the Royal Courts of Justice, Strand, concluded the hearing on Wednesday of an inquiry as to the damages alleged to have been suffered by Mr. Thomas Charles Leycoster Powys Keck, of Palliser Road, Baron's Court, by reason of the failure of the defendant, Major Walter V. Faber, M.P. for Andover, to complete certain agreements made in May, 1915, for the purchase from the plaintiff of the Stoughton Grange Estate and other property in Leicestershire, of which the plaintiff was tenant for life. The estate of 7.2°1 acres included the manor known as Stoughton Grange and the lands comprising Stoug'ton, Evington, Thornley, Bushby, Oadby, Greaf Stretton, Little Stretton, Houghton-onthe-Hill, King's Norton, Galby, Frisby, Billesdon, Burton, Gwery, and Knighton. The purchase money was £251,700, of which only a deposit of £12,500 was paid by defendant, the balance being due six months later in November, 1913. Mr. G. J. Talbot, K.C., and Mr. H. T. Methold americal for the plaintiff, and Mr. A. J. Ram. K.G. and Mr. W. J. Jeeves for the defendant and the third parties. The action was originally one for specific performance, but by a judgment of Mr. Justice Neville dated July 9, 1914, as the plaintiff had asked for damages in lieu of specific performance, the present inquiry was ordered. The judgment further directed that the deposits amounting to £12,65 paid by the defendant to the plaintiff on entering into the agreements should be forfetted, and ordered that the third parties should indomity the defendant in respect of this is Militar and killed in the present inquiry was ordered. The judgment of the plaintiff on entering into the agreements should be forfetted, and ordered that the third parties should indomity the defendant in respect of this on entering into the agreements should be for-fetted, and ordered that the third parties should ind-unify the defendant in respect of this liability under the judgment.—It was stated in evidence at the present inquiry that there was a great deal of dissatisfaction among the tenants, who could not get their titles. Public meetings were held, and a deputation attended before the Board of Agriculture. Much expert testin only was given as to the value of the property. At the close of the inquiry the Official Referee intimated that he would report his findings to Mr. Justice Neville, the Chancery judge who originally had the act in before him.

IS PAYMENT FOR EXTRA COPIES AN INVESTIGATE C. P. POBLIRTS AND MALEGED SECRET COMMISSION?—At MLEGED SECRET COMMISSION?—At MLEGED SECRET COMMISSION?—At the Westing as side the vertice of a side of the defendants in the first of the defendants in the first of the defendants in the first of the side Shows Elliott, how water read Copies Street Stoney against C. Street Opening and Copies over an architect is entitled to obtain payment from a contraction of Street Dalston, to recover damages for



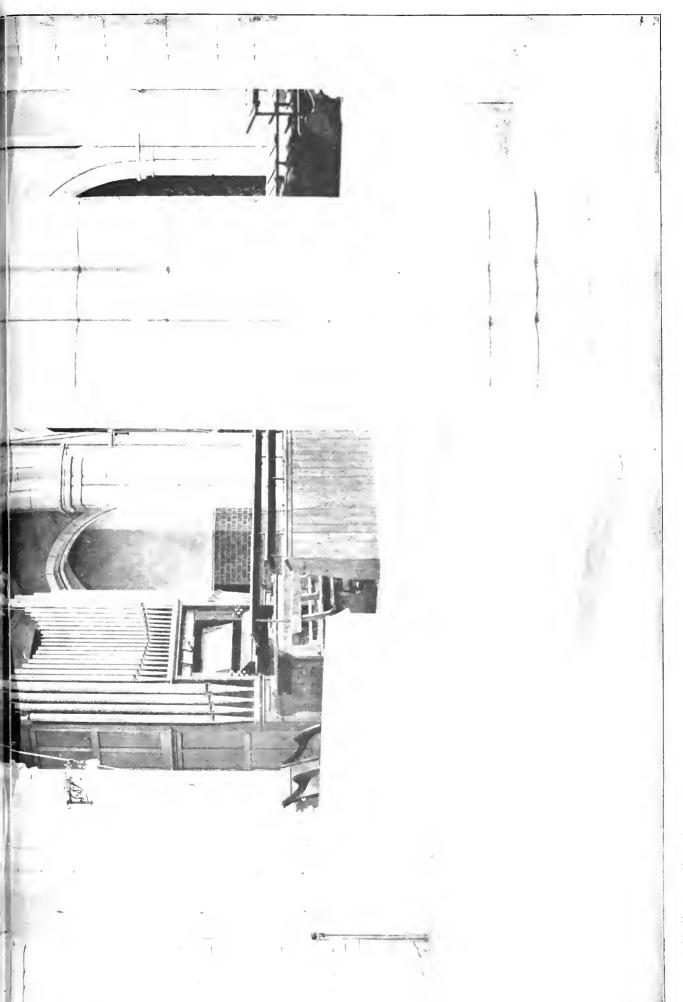


NEW RESTAURANT, ZOOLOGICAL GARDENS, REGENT'S PARK, LODG



 $\P, N.W. — The late John Belcher, R.A., and Mr. J. J. Johns, FF.R.I.B.A., Architects.$ 





ST. BARNABAST CHURCH, NORTH FINCHLEY, VIEW LOOKING INTO CHOIR, Mr. J. S. Arters, Architect.

far an architect can be deemed negligent in superintending the carrying out of works—when the time of maintenance has expired and no defects have been discovered. In December, 1912, the late T. Woodbridge Birgs received instructions from the plaintiff for the re-erection of a greenhouse at "Chalkpit," Maidenhead. The specification, drawings and forms of tender were prepared in the usual way, a tender of Messrs. Duncan Tucker, of Tottenham was accepted, and they, in accordance with the form of tender, paid a sum of three and a-half guineas for the extra copies required above those provided for in the R.I.B.A. scale of 5 per cent. The plaintiff claimed that such payment was in the nature of a secret commission. From the cross-examination of the plaintiff it appeared that credit was given for the amount received, and also that he was informed of the same. The defendant (the executrix of Mr. Biggs) gave notice of special defence under the statute of William and Mary, saying that what was complained of by the plaintiff was a tort; this his Honour upheld. Another portion of the claim was that Mr. Biggs had acted negligently in passing certain work, but in the statement of claim the plaintiff had stated that the said architect had negligently and improperly issued his cert ficate, thereby complaining of the architect had hegigently and improperly issued his cert ficate, thereby complaining of the architect had negligently with it as a set-off to the action Mr. Biggs brought against the plaintiff. The plaintiff's answer to this in his cross-examination by Dr. Herbert Smith was: "Because we could not get the papers from Mr. Biggs' brought against the plaintiff. The plaintiff's answer to this in his cross-examination by Dr. Herbert Smith, the counsel for the defendant, that the papers the witness referred to were handed ever on December 1, 1914, and the defence was not delivered until February, 1915. At the conclusion counsel for the defendant informed the Court that he had a full answer to the claims made by the plainti

## WATER SUPPLY AND SANITARY MATTERS.

ABERDEEN WATER PROVISIONAL OR-DER.—The Parliamentary inquiry concerning the Aberdeen Water Provisional Order for an improved and extended supply of water for the city of Aberdeen from the River Dee at Aberdeen (referred to in our last issue, p. 489), was continued on Wednesday. Evidence was given by Sir Thomas Burnett, Bart, of Leys, Mr. William A. Carter, C.E., Edinburgh, and by Mr. R. W. Walker, C.E. The Commissioners, after being addressed by Mr. Horne, K.C., for the Dee Fishery Board, and Mr. Macmillan, K.C., for the Aberdeen Corporation, found the preamble proved, and did not find it necessary to insert any provision as to compensation. The adjustment of clauses took place on Thursday, and the Bill was ordered to be reported to the House.

The Oxford Corporation are about to spend £30,000 on the improvement of their roads.

Mr. William Lovell Mason, of Ambleside, architect and surveyor, who died on May 28, left estate valued at £4,750 15s. 9d. gross, with net personalty £2,825 14s 3d.

The new cottage hospital at Oakdale, near Blackwood, Mon., has been formally opened. The architect was Mr. Webb, of Blackwood, and the builders were Messrs, Lewis Bros., of Bargoed. The cost was £4.500.

The length of the railways of Canada was, on June 30, 1914, 30,795 miles, an increase of 1,492 in the previous twelve months. The capital spent during the year was 276,990,069 dols., and the total capital expenditure was 1,808,820 961 dols.

It was reported at the last meeting of the Somerset County Council that the Rhodyate Hill improvement had been completed at a total cost of £1,111, and that the Road Board had paid the balance of their grant. The estimated cost was £1.053, and the excess of £53 was attributed to the increased cost of labour and materials as between the date of the estimate and the completion of the work.

# Anilding Intelligence.

CHESTERTON. STAFFS.—The informal opening of the extensions to the Bradwell Joint Isolation Hospital at Chesterton took place last week. The extensions, which have been carried out under the supervision of Messrs. A. R. Wood and Son, architects, of Tinstall, involved the repair and rearrange ment of the existing buildings, the removal of some of the old blocks, and the erection of a new fever pavilion, steam laundry, administration block, and dis large block, a fresh system of drainage, and the laying out of the grounds. The administration block comprises diangeroom, murses' sitting room, matron's room, waiting-room, kitchen, with larders, and two floors above, used for bedrooms and bathrooms. The old house will provide the hoardroom, doctors' room, and scullery and he brooms for the maids. The new steam laundry comprises a wash-house, ironing room, engine-house, boder shed, steam disinfecting room, and electric storage room. The general contractor is Mr. Paul Pemberton, of Tunstall

DEAN'S YARD, S.W.—A new choir school has been built by the Dean and Chapter of Westminster on the west side of Dean's Yard, at a cost of about £30,000. The new builting, which stands on the site of modern buildings where minor canons used to reside in the Collegate style, is designed for thirty boys, as compared with twenty in the old school in Little Smith Street. On the roof there is a covered playground 106 ft long. Besides a school-master's house, there is accommodation for two assistant masters, a matron, and a domes tie staff. A residence for a minor canon is also included in the new buildings, which have been erected from the designs of Mr. Arthur G. Wallace, of Dean's Yard. The builders are Messrs, Holliday and Greenwood, of Millbank.

DORRINGTON. St. Edward's Church, Dorrington, Salop, was reopened by the Bishop of Hereford last week, after the completion of improvements and an enlarge ment effected under the direction of Mr. Lloyd Oswell, of Shrewsbury. The chancel has been extended 8 ft., the vestry enlarged, new oak choir stalls supplied, a new organ chamber provided, and a new stone chancel arch erected in place of the old one of plaster and brickwork, the seats widened and improved, the heating arrangements improved, new umbrella stands to seats provided, the walls of the nave decorated with cream enamel, and the chancel floor laid with Broseley tiles. The builders were Messrs, R. Price and Son, of Shrewsbury.

MIDDLETON-IN-WHARFEDALE. - The Middlecon-in-Wharfe tale Sanatorium is to be Mr. Adk. con-in-Wharfe fale Sanatorium is to be opened on Welmesday afternoon in next week. November 10, by Alderman T. B. P. Ford, chairman of the West Riding Public Health and Housing Committee. The git occupied by the buildings is a fairly level plateau, part of an estate which comprises 1451 agree Trailly level plateau. 1452 acres. Two blocks of pavilions, each for twenty-five patients, have been completed, one being for women and one for men, and there are also shelters on the ground for twentyfive more patients of each sex, thus providing accommodation for 100 patients in all.
To the north of these payalions two more blocks are in course of erection. Each will be two stories in height, and each story will accommodate fifty persons. Between the blocks of finished and unfinished pavilions there is enough space on each side for a third block of buildings, each accommodating fifty sufferers, so that when these are com-pleted there will be room for 300 patients. The electric lighting plant will illuminate all the institution. For the 100 beds now in use, the cost per bed, including land, buildings, furniture, and also the cost of conveying water for putting in the electric light for the Jaundry, etc., for the first ICO patients, comes to about £170, while, when

it be eventually decided to complete the design and accommodate 300 patients, the cost will be £156 per head. Fowards thicapital expendience the Government is contributing three-fifths, leaving two-fifths of the basis cost of £150 per hed to be raised by the county council.

ROSVTH. Interesting evidence of the progress that has been made in meeting the housing needs at the Naval Base, Rosyth. housing needs at the Naval Base, Rosyth, was provided at the first statutory meeting of the Scottish National Housing Company, Ltd., held at 111, George Street, Edinburgh, on Wednesday last. Mr. John F. Findlay D.L., Master of the Edinburgh Merchant Company, chairman and the control of the Edinburgh Merchant of Scotten. who presided, stated that on September 1 last they were able to sign the first contract for the election of houses at Rosyth. Since that date four other contracts had been entered into, and another one would be eigned almost immediately. The effect of these contracts was that the company had already made arrangements for the erection of 292 houses. A considerable number of houses would be ready for occupation in the beginning of the year. In addition to these 292 houses actually constructed or in course of construction, and preparations for a second lot of houses 300 in number, were being rapidly matured. and schedules would be issued and contracts accepted for them before the end of this year. Some of the houses for which con-tracts had been made were in an advanced state of construction, and no fewer than ninety-nine houses had actually been begun. In some cases, the walls were up and rafters and tiles fixed, and in others the walls were up to the roof level. Concurrently with the arrangements for building those houses. arrangements were also in progress for the making of the necessary roads and sewers. Overtures had already been made to the company to undertake very similar work for the Government in other places. ing to a question, the chairman said the type and size of the houses to be built were determined by the Admiralty.

# PROFESSIONAL AND TRADE SOCIETIES

ARCHITECTURAL ASSOCIATION WAR SERVICE BUREAU: RECRUITING FOR THE ARMY.—We are informed that the Architectural Association War Service Bureau, which has already recruited nearly 1,000 men for the various specialised branches of the Service, is now endeavouring to raise 100 men for the 2. d London Sam tary Company, R.A.M.C. (T.) The work required of members of the corps should specially appeal to members of the archi tectural and surveying professions and others with a good knowledge of sanitary matters. The secretary will be very glad to forward particulars of rates of pay, etc., to anyone ending a stamped and addressed envelope. The War Service Burean is still open to assist all those connected with the architectural and surveying professions and build ing trades by supplying them with informa tion and assisting them to enlist in those special branches of the Army where their professional training is likely to be of value. Men are also required for the Home Counties Divisional Artillery for Imperial Ser vice, ages 19 to 38. Aptitude for map read ing, etc., is an advantage. Arrangements will be made for parties of men enlisting through the bureau to be kept together.

accommodate fifty persons. Between the blocks of finished and unfinished pavilions there is enough space on each side for a third block of buildings, each accommodating fifty sufferers, so that when these are completed there will be room for 500 patients. The electric lighting plant will illuminate all the institution. For the 100 beds now in use, the cost per bed, including land, buildings, furniture, and also the cost of conveying water for putting in the electric light for the laundry, etc. for the first 100 patients, comes to about £170, while, when the second 100 beds are completed next year, the cost will be about £162 per bed. Should

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### -TRADE NOTES

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### Office Cable. (1) III

T Hulmo Hall Art Gallery, Port Sun Into was convided to its nimost capacity on Wednesday by an audience who came to see the specimen cottage interior recently ejected the water colour gallery, and to hear a set use in the Colour and Arrangement in the Home," by the curator, Mr. A. H. Howe," by the curator, Mr. A. J. H. Howard. The rooms were very attractive by teasons of the combination of richness of appearance with cheapness of material, and oppear thee with encaphess of matterial, and this was enhanced by the warm glow of the hearths, the beautiful lighting effects, and the final touches indicating occupancy and none life. Colour and arrangement were not matters of expense, but of thought, was the theme of Mr. Howard's lecture. There should be a definite colour scheme for each room, and every apartment from the hall to the bathroom should have its own apprepriate atmosphere or teeling. The exhibition will remain open throughout November, The exhibition will

Mr. Array Tipping, F.S.A., lectured at the Birmingham and Midland Institute the other night on Gardens, Old and New. He said that although originally taught by the Continent, England was now the premier nation for gar dens. Of early seventeenth century examples that at Wilton was the most important, and was recorded in a print. After the Restora-tion, and still more on the advent of William from Holland, there was a great development, both as to size and number, of formal lay-outs. Westluny Court, Owlspen, Levens. Bramham, were among surviving examples, small and large, typical of the best period of our tormal gardening school. The taste for this went out by the middle of the eighteenth century, and the so-called landscape school of "Capability" Brown destroyed the large majority of examples. With the nineteenth continy there began a revival of formal methods, but the full taste for gardening, both formal and natural, did not develop till the century drew to a close. Within the last twenty five years many very important gar dens had been Laid out by leading English architects. Athelhampton, Hestercombe, East on Lodge were examples, but equally good of their kind were innumerable small gardens laid out by architects and also amateur gar-The art was at its zenith and in den lovers or thoroughly wholesome state when the war broke out, and it was to be hoped that so humanising an influence will not receive a per-

The historic stained-glass window is being removed from the east wall of St. Margaret's. Westminster, to a place of safety. The window was made at Gonda, in Holland The window was made at Gonda, in Holland, and was a present from the magistrates of Dort to Henry VII., who intended it for his chapel in Whitehall Palace, but died before it could be set up. Henry VIII, gave it to Wiltham Abbey, where it remained until the 1-s dution of religious houses, and was then could be the last Abbot of Waltham to a convate chanel at New Hall, which was attentional bought by the father of Anne Bright Queen Elizabeth. Thomas Batcliff Energy Sussex, Villiers Duke of Buckingham, the Commell the second Duke of Buckingham, Canvell the second Duke of Buck-on and General Monk cach own lat in and the never large was sold to the management of St. Margaret's in 1758.

The painted glass was sold to the management of St. Margaret's in 1758.

The Author of St. Margaret's in 1758.

The author of the harmonious arrangement of the management of the transmission of the first of the state of the first of the state of the first of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of

which had since been dissolved. The lowest tender of those since obtained was that of Mr Samuel Forguson, Newcastle, amounting to £135,303–15s. 7d., or an increase of £32,892–8s. 11d. on the tender originally accepted, whilst the total cost of the scheme, inclusive and anothers is commissions. accepted, whist the total cost of the stability inclusive of architect's commissions, was brought up to £151,400. It having been re-presented to the Local Government Board that some portion of this cost should be borne from Imperial sources, the Local Government Board now offered to bear 20 per cent, of the increased cost of the scheme, exclusive of the cost of streets and sewers, on condition that the scheme was immediately proceeded with, and that munition workers engaged by Messrs, Armstrong, Whitworth and Company were given the preference during the period of the war as tenants and lodgers in the houses to be erected. The committee recommended that this offer be accepted, and that the tender of Mr, Ferguson be accepted. The proposed contribution of the Local Government Board amounted to £27,568, deaving the Council to bear the sum of £6,150 more than they had already voted for the scheme. Sixpence a week increase in the rentals would bring in £900 a year. He thought that for the period of the war the committee would be justified in charging the extra amount. A long discussion ensued, but eventually the report and recommendations were adopted by 39 votes to 15.

Mr. John Atkinson, Assoc, M.I.C.E., the borough surveyor of Stockport, has just admitted to the corporation his twenty-fifth annual report for the year ended March 51 last. Inclusive of the area of 1,574 acres in Heaton Norris, added to the borough in November, 1913, Stockport has now an area of 7,7050 acres along the property distributed by of 7,059 acres, almost equally divided be tween Lancashire and Cheshire, au estimated population of 126,400, and a rateable value of £585,091. There are 30,020 inhabited houses and shops, 1,165 workshops, factories. and lock-up shops, and 699 uninhabite-houses and shops. The parks and open spaces cover an area of 1224 acres. The total number of plans submitted and approved number of plans submitted and approved during the year was 203, the smallest number for many years past. 252 houses and 120 other buildings were completed during the year, and 130 buildings were in course of erection. The length of new streets and 9-ft, passages opened out was 1,250 yds., and 17 acres of land were absorbed for building operations during the year. A number of improvements and street widenings have been effected or were in progress during the twelve months, including those to Banks Lane, Dualstone Lane, and Warren Lane—now not less than 60 ft. wide, which was estimated to cost £17,300 (Road Board grants of £4,167 were made towards this improvement); Bramhall Lane, to 50 ft. adth.cost £7,780 (Road Board grant £1,500); and a further instalment of High Street widening between St. Petersgate and Lower Hillgate.

"Limes and Cements." by Ernest E. Daneaster, B.Sc. (London, Crosby Lockwood and Son, 5s.), is a useful compilation likely to be of service to beginners. It is based on G. R. Burnell's well-known book, but, of course, with much alteration, necessitated by the immension trides update. by the immense strides made, more especially with regard to the manufacture of Portland cement, since his day. The author seems to expect as much more change in the next twenty years as during the last. He says:— A typical modern Portland cement works bears little resemblance to one of twenty years ago, and the methods of manufacturers and machinery of to-day will be obsolete to-morrow.

At their last meeting the trustees of the National Gallery accepted a number of works from three cources destined for the collection from three cources destined for the collection at Millbank. Mrs. Fernandez presented a penerl portrait of herselt done by Dante Gabriel Rossetti; Mrs. Macloghlin a bronze bust of herself by Mr. Altre I Gilbert; while four pictures, a water colour drawing, and to it dio of hthographs were presented to supplement these above. four just we water colour drawing, and a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.com/drawing.and/a position of https://docs.co

in 1913-14. The first gift of twelve works included examples by Messrs, John Lavery, William Orpen, Charles Shannon, W. W. Russell, Oliver Hall, Ambrose McEvoy, and Gerald Kelly, to the latter of whom a special room has been given at the current exhibition at the Walker Art Gallery, Liverpook, The pictures now added are "An Interior howing a doorway hung with a heavy purple curtain, by Mr. James Pryde; the second of the "Beggarstaff Brothers"; Mr. William Strang's "Bank Holiday," a strongly belief degroup, hung in Gallery X. of the Royal Academy in 1912; Miss Flora Lion's portrait of her mother in black, entitled "The Wheel Fan"; a landscape, "The Path by the River," by Mr. A. D. Peppercorn; and, in water-colour, Mr. A. W. Rich's "Shædeloes Park." In addition there has been accepted a portfolio of coloured lithographs of dramatic war incidents in Belgium, done at the front by Mr. G. Spencer Pryse.

In spite of the war the Pasant Arts Fellowship, whose object is the encouragement of the hand industries of old, and finding a market for the output, has had a successful year, says the third annual report, the number of new members being gratifying. Classes of instruction in pasant arts, spinning, weaving, wood-carving, and so forth, are conducted under the auspices of the parent (the Peasant Arts) society. Miss Kate Sperling, the fellowship's teacher of spinning and weaving, is enthusiastic concerning the results of her first year's work.

The subject of "The Art Annual" (Virtue and Co.) this year is Mr. Henry Woods, R.A., whose Venetian pictures have given pleasure to so many people. Born at Warrington in 1846, Mr. Woods, while still very young, heard the clear call of art, and for timately he was able to respond to it free from any serious interruption. Unlike many British artists he did not "drop into art from some other profession. He began the study of art much in the same way as a young man studies law, medicine, or divinity Art was to be his lifework, not a delightful hobby or a crutch to help to support him in his effort to master some other metier. His diligence and talent won for him a bronze medal in 1857, and a few years later he came to London with a scholarship from South Ken sington. His draughtsmanship grew sure and strong, while he developed a distinct apprestrong, while he developed a distinct appreciation of character, Mr. Woods soon became known as an illustrator, and his subsequent career shows how much benefit he derived from his early training in connection with magazines and novels. This illustrated story of his life and achievements is told by Mr. James Greig.

Cardinal Bourne on Saturday laid the foundation stone of the new Roman Catholic Church of the Blessed Sacrament, which is being built in Copenhagen Street, Caledonian Road. The founder of the church, Commendatore Hicks, has given the site, church, presbytery, and parish hall.

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The Archdeacon of Winchester, on Saturday, laid the foundation-stone of a new church which is to be built at Rudmore, Portsmouth, by the Winchester College Mission, at a cost of some £12.000, the total expenditure, including furnishing, being £18,000. Of this sum £15,000 has already been obtained.

The church of St. Bartholomew, St. Paneras, N.W., built in 1800, is now in a bad state of repair. There is extensive dry rot in the woodwork, and the rain penetrates through the main roof. It is proposed to renovate the structure from plans by Mr. F. C. Eden, of Gray's Inn Square, the estimate only being £1,760.

At the annual meeting of the Court of Governors of the National Museum of Wales at Cardiff on Saturday, it was stated that the position of the building fund caused anxiety, £54,000 was due to contractors, etc., to meet which £21,150 was available, leaving £32,850 to be raised. If half could be obtained from local sources the Treasury would provide the remainder. There was no power to stop or suspend building under the contract, and there was the possibility of a loss of £10,000 to £20,000 and the difficulty of a new contract to face. The architects are Messrs, Smith and Brewer, whose design, selected in competition, was illustrated by plans and elevation in our issue of January 5, 1912.

### CHIDS

New premises which have been built in Union Street. Larkhall, N.B., by the Larkhall Victualling Society have been formally opened. The architect was Mr. Win. Baird, Main Street. Bellshill, and the cost will be fully £4,000.

A church of St. Thomas is to be built in the mining district of Maesyewinner, in the parish of Fleir de Lys, Mon. It will be scatted for 500 persons, and is estimated to cost £5,170. The architects are Messrs. H. G. and P. V. Jones, of Hengoed.

Alderman Archibald D. Dawnay, the principal of the well-known engineering and steel works at Bittersea and Cardiff, has been offered and has accepted the mayoralty of the metropolitan borough of Waindsworth for the eighth year in succession.

Mr Herbert Thomas Scoble, of The Dell, Twyford, near Winchester, and of Victoria Street, S.W., consulting engineer and surveyor, who was accidentally killed by a fall from the cliff at Bude, Cornwall, on August 24 last, left estate of the value of £6,501.

The new Spa sewage disposal works at Ossett, completed for the corporation at a cost of £11,859, were formally opened recently. The works were designed and carried out by the borough surveyor, Mr. H. Holmes, with direct labour.

At Shocburyness yesterday (Tuesday), Mr. R. H. Bicknell, an inspector under the Local Government Board, held an inquiry as to an application from the urban district council for sanction to borrow £2,000 for the enlargement of a sewage tank.

The city council of Gloucester resolved on Wednesday to apply to the Local Government Board for sanction to borrow a sum not exceeding £25,000 for providing the required highersion generating plant, and also for defraying the cost of providing and laying special mains recently laid down.

The meeting-place and hour for the delivery of the Chadwick public lecture by Mr. Alfred Saxon Suell on Wednesday next have been altered. It will be given at the Royal School of Medicine, I. Wimpole Street, W., at 5.15 p.m.; the subject as already announced, is "Emergency Military Hespital Construction."

The Markets Department of the Manchester Corporation opened on Thursday two new rooms for cold storage, situated just under the wholesale lish market at Smithfield. They were designed by the city architect, Mr. II, Price, and add 25,730 cubic feet to the cold storage department, raising the total to 105,880 cubic feet.

At a cost of about £3,000, the Sleaford Urban District Council has provided a new water supply for the Ewerby district, and on Tuesday last the Earl of Winchilsea formally opened the water-tower and started the pumping-engines. The water is drawn from a bore on Evedon Hill, the site of which was given by Lord Winchilsea.

The new Roman Catholic church at Batley Carr, which was opened a few days ago by the Bishop of Leeds, will accommodate 320 people. It has been erected, at a cost of £1,752, from the plans of Mr. Edwin Simpson, architect, Manninghun, Bradford, It supersedles a school-chapel, which will now be used exclusively as a school.

Having accepted a commission in the Royal Engineers, Mr. F. O. Kirliv, the borough engineer of Donerster, his resigned his position as hon, secretary to the North-Eastern District of the Institution of Municipal and County Engineers, Mr. W. E. H. Burton, of Wakefield, has been appointed as acting-secretary during Mr. Kirliy's absence.

Extensions to the Girls' Industrial Home, Ipswich, which have been opened by the Bishop of Suffolk, comprise a large entrance hall, with matron's office, heard-room, staff-room, store-room, class and sewing-room, schoolroom, three domitories, staff bedrooms, and bath-room with four baths. Mr. Henry J. Wright, M.S.A., of Museum Street, Ipswich, is the architect.

The funeral of Mr. John Coates, formerly a well-known builder and contractor in Rochdale, who died on Sunday in last week, in his 76th year, at his residence, 400, Shawelough Road, Lowerfold, took place at the Rochdale Cemetery on Wednesday. In addition to the family mourners, a deputation, consisting of Alderman Taylor, Mr. T. Elvyn Kershaw (secretary), Mr. John Fountain, and Mr. Joseph Whitchead, attended, representing the Rochdale House and Estate Company, of which Mr. Coates was vice-chairman.

The urban district council of Epson have approved plans submitted by Messes. Softi-Smith and Munro, of Lincoln's Inn Fields, Orthogonal Chases trustees, for thirty cottages it Hotton-Hill to be built by Messes, H. and F. R. II.

Having considered the question solely from the point of view of special war requirements, the Treasury have decided to grant the application for a loan for the erection of a hundred houses at Letchworth to accommodate the big ieffax of Belgian workers.

Following Sir George Frampion's generous offer to execute as a labour of feige a statue of the late Miss Edith Cavell, judicially morslered by the Germans in Brussels, Mr. Henry Holiday offers to contribute the cartoon for a stained glass window. As he felicitously aggests, the appropriate place for such a memorial would be Norwich Cathedral.

St. Peter's Church, Whitstable, or which the chancel was built in 1903 from plans by Mi-G. H. Fellowes Prynne, F.R.I B V. is about to be completed by the addition of a taxe, on a less expensive scale than was originally proposed, from the same architect's designs. The nave will provide 437 scats, making in all 513 and is expected to cost £4,000.

The funeral rook place on Wednesday in Warriston Cemetery, Edinburgh, of Mr. Robert Ferguson Laing, partner of the furn of Laing and Thorburn, slate merchants. Quality Lane, Leith, Mr. Laing, who was sixty-one years of age, and unmarried, succumbed to an illness which has seriously affected him for several months past.

The standing joint committee of Renfrew-shire have completed the erection of new police buildings at Giffnock, to serve the eastern division of the country. The scheme, which was rendered necessary by the inclusion of a large part of the county area within the boundaries of Glasgow, cost between £5,000 and £6,000. The Count Hall was used for the first time of Friday.

Plans were recently passed by Dunfermline Dean of Guild Court in connection with extensions at the Carnegie Swimming Baths. The alterations involve the demolition of several small dwelling-houses in Campbell Street. The Carnegie Dunfermline Trust decided on Friday to delay proceeding with the extension meantime in view of the scarcity of dwelling-houses in the town.

Mr. John Hunter, managing director of the firm of Glasgow engineers and contractors, Sh William Arrol and Co., Ltd., has resigned his seat on the board of directors of that company, and has accepted the invitation of the Minister of Munitions to become Director of Factory Construction, in connection with the National Projectile Factories now being elected in various parts of the country.

A postmen's office in Kuk Street, Leith, built by H.M. Office of Works, Edinburgh, was opened on Saturday. Constructed of buck, with stone facings, the building consists of one story, and comprises a large half, with inspector's office and other aparaments. The half, which is 65 ft, long and 48 ft, wide, has a girdered roof, and is well lighted. Messis, Scott and Brown, Edinburgh, were the builders.

At a meeting of the executive of the Lord Roberts Memorial Commutee, held in the City Chambers, Glasgow, on Wednesday, it was stated that the work in connection with the statue, which is to be a replica of the equestrian statue at Calcutta by the late Henry Bates, R.A., was nearing completion. In connection with the question of a site, it was decided to make representation to Glaszow Corporation on the subject.

The old timber Ackingford Bridge, carrying the Epping and Chelmsford main road over Cripsey Brook, near Ongar, has just been reconstructed for the Essex County Conned in ferro-concrete. The new birdge, designed by Mr. Percy J. Sheldon, M. Just C.E., the county surveyor, and carried out by Messes J. Gairett and Son, of London, is 31 ft, between purapets, whereas the prior structure was only 14 ft, wide, involving a serious nurrowing of the roadway and a suppression of footpaths.

Last week the Bishop of Chichester attended at St. Leonard's Church, Turner's Hill, and dedicated a side chapel, which has been titted up as a memorial to the late Rev. C. R. Blaker, the first Vicar of the parish. Its east window has figures of St. Augustine of Canterbury and St. Richard of Chichester, whose respective faces reproduce those of Mr. Blaker and Bishop Durnford (who consecrated the edifice in 1895). Windows in the north aisle, in memory of members of the Martin family, were dedicated at the same service.

### LO CORRESPONDENTS

or versep usible for the opinions to All communications should be any as p soldle, as there are yen the space allotted to

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When favouring us with drawings or photographs, which is are asked kindly to state how long the conductor harden being resetted. It does negligible them not some highest to flustrate hubbings which have been some highest account of except under special circumstates.

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Telephone: 'I'meserver, Estrand, London.''

### NOTICE

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page advertisements and alterations or stop orders for serial advertisements must reach the office by first post on Monday to secure attention.

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D. Thanks, y MASSIN Ares, it fairly brief.

Vest Yes, it fairly brief.

L. C. The cleansing and disintesting of the pit mess would have a be done by the owner of occupied on recept of hedae in writing from the clerk to the local authority, and if not so done within the time fixed by the notice, it would be carried out by the officers of the local authority, at the expense of such owner or occupier.

Timity Remixiers Architects, builders, and others are reminded that the Builders Arews is now published on Wednesdays instead of Fridays, at 2 a m, and that it should be obtainable early in the day anywhere. It delay occurs it can be posted direct from the office on recept of a quarter's subscription, of single copies can be similarly sent to readers in camp or moving about the country.

A nave has just been added to the church of S<sub>1</sub> Pidein, Llanberts, Carnarvonshire, from plans by Mr. H. Harold Highes, R.C.A., A.R.I.B.A., of Bangor, The expenditure was £1.600.

The church of St. Augustine, Bermondsey, erected in 1875, and enlarged in 1881, is ab ut to be repaired at a cost of about £1,200, under the supervision of Mr. A. Lloyd Edwards, architect, of Brockley, S.E.

Whilst many landlords are raising rents, the Metropolitan Industrial Dwellings Company, Ltd., has allowed 25 per cent, off the rent of 127 tenants who have gone to the war. The sum allowed amounted to £388 7-

The Royal Assent was given by Commission on Thursday to the London County Council General Powers Act, the London County Council Trainways Improvements Act, and the Glas-gow Water Supply O. er Confirmation Act.

The death is reported from Bromley, Kent, of Mr. W. H. Wheeler, M.I.C.E., formerly borough surveyor and harbour angineer of Boston, Lincolnshire. Mr. Wheeler was the designer of Boston Dock, and advised the present outfall of the River Whitham.

The Whitstable Urban District Council have found it necessary to apply to the Local Government Board for sanction to horrow another £3,726 for the sewerage scheme, making a total of £40,000. The increase is due to additions to £40,000. The increase is due to additions to the scheme and higher cost of material.

The death has occurred, at his residence, 10. Esplanade Place, Whitiey Bay, of Mr. George Patton, aged 80 years. The deceased was a plumber and cantary engineer, and had been in business in Bath Lane, Newcrstleon-Tyne, since 1860, latterly in conjunction with

At a meeting of Ecclesall Board of Guardians At a meeting of Ecclesiil Board of Guardians a letter was received from Mr. A. W. Kenyon, A.R.I.B. A. architect for the new children's hospital stating that he had accepted a commission in the Royal Engineers, and would be obliged to take up duty in the So ith of England shorth.

finance committee of the county The liminor committee of the county comi-cil of Conwail have received the sanction of the Local Government Board to the raising of 5.1.25 by loan for the purchase of the somatarium site at Castle-on-Dinas, near St. Columb. The Board will refund to the council two thirds of the total expenditure on building

. R 21 r Rev. Bishop Ormsby, D.D., at J. St. Nicholas' Cathedral, Newcastle-on-The R 224 Rev Disnop Craisso, term as rended St. Nicholas' Cathedral. Newcastleson Tyme on Thursdry, and dedicated in the Latiychapel the monoral creeted to Mrs. Gough, wife of Cmon Gough, Vieur of Newcastle. The momental takes the form of oak panelling around the cast end of the north aske of the contribution. cool. The work has been carried out by Messis Riph Hidley and Sons, from the dession of Mi W. H. Wood, F.R.L.B.A., both firms of Newcastle.

The found-tion stone of the new Bethesila shoo, (nap)d in Langer and Cavendish Roads Felixstove, was laid on Wednesday. Mr. R. J. Girling survey at of Felixstowe, prepared the plans, and Mr. W. F. Cross is the builder. pairs, and All, W. P. Cross is the builder. The school-chapel will be one story in height, built of red brick, with stone dressings, and with millioned windows of Cothic character. The large room will be 52 ft, by 23 ft, 6 in, with a wood block floor. At the end are two small class rooms.

### TO ARMS!

### 4th Battalion ("Architects") Central London Regiment Volunteers.

Recruits are inigently needed for the Regulars, Territorials, and Volunteers. Intending Recruits should apply to Battalton Headquarters, where they will be advised as to the branch of the service for which they are best snated.

ORDERS TOR THE WEEK BY LIEUTENANT-COLOMEL A. W. WARDEN.

COMMITTEE MEETING.

A meeting of the Civil and Military Committee will be held this evening (Wednesday), at 7.15, at the Officers' Mess, Chester House, Eccleston Place, 8.W. A full attendance is requested.

GENERAL PARADE.
Saturday, (th inst., at Drill Headquarters, Chester House, 3 p.in., for drill and bridging instruction. Uniform parade. Full attendance is particularly requested.

### ENTRUNCHING PARADE

Sunday next, 7th mst., at Victoria Station, L.B. and S.C. Railway indicator board, 8.55 a.m. sharp. Uniform, haversacks, and water bottles. Midday rations to be carried. Return to town about 6.40. Railway vonchers will be provided and special train will be run by the railway company.

special train will be run by the railway company.

DRILLS AND PARADES.

"A" Company, Tuesdays, immature range, Gas Light and Coke Co.'s premises, Monck Street, Westmunster, 6 to 8.30 p.in.
Wednesdays, Company parades for drill and technical instruction, 5.15 to 7.15 and 6.15 to 8.15, at Chester House. See Orders from Acting Battation Signalling Sergeant Chesile.

Cheadle, "B" Company, Miniature range and company parades as for "A" Company. See orders at local headquarters.

headquarters,
"C" Company, See orders local headquarters,
Payilion A.A. Athletic Ground, Boreham Wood,
"D" Company, Platoon and section drill at
Chester House, Tue-days and Thursdays, 6.45 p.m.
Company parades, for drill and technical instruction, Wednesdays, as for "A" Company.

bon, wednesdays, as for "A Company.

SCHOOL OF ARMS.

Drill Headquarters, Chester House. Instruction in bayonet fighting, gymnastics, physical drill, boxing, and single-sticks, on Tuesdays from 6 to 8 p.in.

RECRUIT DRILLS.

"A and "B Companies, Chester House, 6.15 to 7.15 and 7.15 to 8.15, Mondays and Fridays.

"C" Company, Boucham Wood and Elstree District. Headquarters, A.A. Athletic Ground, Borcham Wood, For full particulars, apply to Alan Potter, Grey Gables, Borcham Wood, Herts.

"B" Company, Chester House, Tuesdays and Thursdays, 6.45 p.m.

NOTE.—For the present the School of Arms and Recruit Drills will be held jointly with the Engineering Institutions V.T.C.

By order,

L. R. GUTHRIE, Adjutant.

BATIALION HEADQUARTERS,

18, TUFTON STREET, WESTMINSTER, S.W.

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### MEETINGS FOR THE ENSUING WEEK.

MEETINGS FOR THE ENSUING WEEK.

WEDNESDAY (To day).—Royal Archaeological Institute, "The Will of Master William Poune, Archdeacon of Lecester," by A. Hamilton Thompson, M.A., F.S.A. Society of Antiquaries' Room, Burlington House, W. 4.30 p.m.

Institute of Sanitary Engineers, "Disposal of Night-Soil by Distillation, by James Menzies, Caxton Hall, Westminster, 8 p.m.

Town Planning Institute, "Limited Owners and Town Planning," by J. S. Kirk ett M.A., 92, Victoria Street, S.W. 8 p.m.

8t. Paul's Ecclesiological Society, "The Oxford Movement and its Effects apon Churches," by Clitton Kelway, F.R.Hist, S. 8t. Paul's Chapter House, E.C. 8 p.m.

Friday,—Glasgow Architectural Craftsmen's Society, "A Modern Dwelling; Its Design, Construction, and Cost," by A. Davidson, D. Pringle, R. Anderson, and J. Muir. 7.45 p.m.

Monday,—Architectural Association. "The Military Hospital, Cambridge," by Dr. A. S. Shipley, F.R.S., President of Christ's College, Cambridge, "by Dr. Surveyors' Institution, Presidential Address by John Henry Hauson, 8 p.m.

Address by John Henry Hanson.

tial Address by John Benry 1988, p.m. (ov. 10) Chadwick Lecture, "Emergency Military Hospital Construction," by A. Saxon Suell, A.R.I.B.A. Boyal College of Medicine, I, Wimpole Street, W. 5.15 p.m. Manchester Society of Architects, "Athens and Some of the Isles of Greece," by J. B. Gass, F.R.I.B.A. 6 20 (0.10). WEDNESDAY (NOV

THURSDAY (Nov. 11).—Society of Architects. Members Meeting for electron of new members, 28, Bedford Square. 6 p.m.

---The Dartford Urban Council propose to erect forthwith 72 houses in their district under the direction of their surveyor.

# THE BUILDING NEWS

## AND ENGINEERING JOURNAL.

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List of Lenders Open OUR HILLUSTRATIONS New Cathedral, Colombo, Ceylon, South-west view, South-east view, Interior looking east, and ground plan. Mr. Goo, H. Fellowes Prynne, F.R.I.B.A., Architect.

### WAR SERVICE FOR ALL.

The appeal of the Architects' War Committee, which we print this week, is a trumpet-call we desire to echo to the best of our ability. Not one reader who is not already on active service should fail to respond to it instantly. Lord Derby approves of it, and the War Office can hardly fail to take advantage of our respouse if that is prompt, complete, and

pertinent.

As all readers know, lists compiled by the various architectural bodies show that at least 1,800 members of the profession are serving either as officers, noncommissioned officers, or privates. It is probable that this figure falls far short of the real number, as there is great difficulty in tracing members. According to the census, there are between 7,000 and 10,000 architects in the United King-Probably both figures include dom. assistants.

The work of architects being of an intellectual character, and a great number being of the officer class, it seems to the War Committee desirable to classify members of the profession so that those who are suitable should receive commis sions, and others who have the technical knowledge useful in various special branches in which their experience and technical training can be applied to assist the country should be advised which to join.

Hitherto it has been-and, in fact, it still is-difficult to obtain information of vacancies. Frequently such information has reached the Committee too late to do more than make one or two recommendations. From experience gained in filling such vacancies there is reason to believe that if complete lists, properly classified, were in hand, the Committee would be in a position not only to obtain more and better information, but the waste of men joining the Army from the profession could be to a great extent prevented, and the special knowledge passessed by architects could be directed into the proper channel and be used to its full extent. For instance, inquiries can be made in each district of commanding officers (to whom to some extent selection of officers is now delegated) to ascertain what vacancies they have or are likely to have, and to keep them informed of men whose names are on the list, and whom the Selection Committee, having interviewed, can recommend. It is found

time. From the results obtained the Committee are hopeful that, if now published as a general and official appeal from the War Committee and supported by the technical Press, it will be not only the greatest effort which the profession can make in the direction of National War Service, but also may be the means of finding suitable military employment for a large number of the profession of military age who have not yet joined the

It has been suggested by the War Committee that we should publish the Information Form in place of one of our double illustrations, so that it will reach not only architects, but also members of the building trade. The Committee also express a hope that, as applicants are advised to keep a copy of the form sent in, they will buy two copies of this issue, although forms can be obtained at the Royal Institution of British Architects, the Society of Architects, the Architectural Association, and the allied societies.

The forms are based partly on Army Forms for Appointment of Officers to Temporary Commissions and Army Forms for Appointment of Officers to Territorial Forces. The information is directed to meet points which from experience we have found are required by applicants or necessary in order to make recommendations for appointment. The Committee also hope by means of these forms to be able to assist architects who enlisted early in the war to get promotion, which for some reason or other professional men do not get, although the promise was held out to them on joining that suitable men would be promoted from the ranks

We may remind all that no offers of anything but whole-time service, anywhere, at home or abroad, can be considered. All applicants obtaining ap-pointments will receive the ordinary pay attached thereto by the War Office other authority concerned. Men thus rendering war service cannot expect to receive pay of a greater amount than would provide for the bare maintenance of the families of members of the professional classes, and it is unlikely that any appointments will be made at higher rates of pay for junior commissioned ranks than from seven shillings to four teen shillings a day, with certain allowances, except in rare instances in connection with which exceptional knowledge and qualifications will be indispensable.

For all ordinary work the technical

interviewed, can recommend. It is found that the information in the National Register, although perhaps useful as a general guide, is not sufficient in the case of a profession of such versatile attainments and experience as that of architects, and fuller detail is essential.

The scheme has been working in a small unofficial and tentative way for some

Mechanical Transport, Army Sorvice Corps, Army Ordnance Corps, etc., they can hardly fail to render good service.

Expert knowledge of surveying, mapreading, use of the prismatic compass, sketching, ground and water works, roadmaking, repairs, timbering, scaffolding, and rough temporary work of all kinds will be most valuable. Mere routine and ordinary practice, particularly domestic and school work, will only be of service as far as construction is concerned. Know-ledge of country pursuits, such as riding, shooting, and boating, will be advantageous, as also experience in forestry, rough timber, and underwoods, land dramage, horses, cattle, and ment. For inspectors of factories and works special knowledge of the processes of manufacture of iron, steel, canvas, paint, textile fabrics, all kinds of food, and of methods of conversion of all raw material into the necessaries of life, or means of destruction by explosion or fire, is wanted.

The Information Form we give elsewhere must be filled in, signed, and sent in at once to any one of the following centres which is most convenient to the applicant to be subsequently interviewed at. The envelope must be marked "W.S." on the top left-hand corner, and must be addressed to the secretary at that centre, as must all subsequent correspondence till the applicant is informed that he has been placed on a selected list, when further correspondence should be addressed to the London Centre.

### CENTRES FOR RETURN OF FORMS AND INTERVIEWS.

London.—The Secretary, War Selection Committee, Royal Institute of British Architects, 9, Conduit Street, Regent Street, W.
Aberdeen—Robit, G. Wilson, Esq., Hen Secretary, the Aberdeen Society of Architects, 375, Union Street, Aberdeen, Belfast.—The Hom, Secretary, the Ulsten Society of Architects, 9, Howard Street, Beliast Birmingham.—F. Marston Endland, Esq., Secretary, the Birmingham Architectural Association, 14, Temple Street, Birmingham.
Bristol.—A. B. Rotterill, Eq., Hon Secretary, the Birmingham, Bristol Sengty of Architects, Gaint Hone, Orchard Street, Bristol.
Cardiff.—The Hon, Secretary, the South Wales Institute of Architects, 1, St. John's Square, Cardiff, Dublin.—The Hon, Secretary, the Royal Institute of the Architects of Ireland, 31, South Frederick Street, Dublin.
Dundac.—William Salmond, Usq., Hon Secretary, the Dundac.—William Salmond, Usq., Hon Secretary, the Dundac.—William Salmond, Usq., Hon Secretary, Leading Street, Dundac.—William Salmond, Usq., Hon Secretary, Leading Street, Dundac.—William Salmond, Usq., Hon Secretary, Leading Street, Dundac.—Edinburgh — John Wilson, Usq., 175, Great & Street, Dundac.
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Dundee. Edinburgh.—John Wilson, Esq., 125, George Strot,

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### RVEY BS INSTITUTION

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re than to percent, repayment of a propor de part of the additional duty will be allowed

### THE VALUATION STAFF.

leaving this part of my address uld like to say how greatly the difficulties connection with the Land Valuation have been cased by the fact that so many of the Vilhatian Staff. I believe something like one thousand men possessed the Institution qualifications. They have been imbued with our professional feeling, and were able to meet and discuss questions with surveyors in private practice in a spirit of mutual in deistanding and freedom which could not stierwise have existed. It is pleasant to think, that even in the face of the great changes which are being made, the future administration of the department by the established staff will be in the hands of men assequable attor for office is their membership of our body.

### WAR AND OUR WORK.

I now turn to the second part of my others the main points in which, the effects of the war and the resusing legislation, iffect our work is surveyors.

The conservation and augmentation of our home produced food supplies were naturally among the first of the national requirements to which the attention of Parliament was directed, and a number of statutes having this object were passed in the early days of the war (4 and 5 Geo, V., cap. 26, enabling to d. forage, and stores for his Majesty's Forces to be requisitioned in case of emer-gency, passed August 7, 1914; cap. 51, enabling the Beard of Trade during the period of the present war to take possession of foodstuffs unreasonably withheld, and cap. 75 of the following year, anthorising the regu lation and restriction by order of the Board of Agriculture of the slaughter of animals used for food, passed August 31, 1915.

In July of the present year it was found necessary to amend this measure by Act to make provision for securing the main tenance of a sufficient stock of cattle, sheep, and swine, and for purposes connected there with 5 and 6 Geo, V., cap. 65. This Act extended and defined more accurately the power of the Board of Agriculture to prohalat or restrict the sale of animals, except male calves, and the sale, or exposure for sale, of the mest of immature animals.

### REAL PROPERTY AND ITS OBLIGATIONS

More important perhaps from the surveyor point of view, however, are the provisions of the Deteror of the Realm Consol dation Act the Seed of November 27, 1914, and the regulations of the consolidation of the Provisions as ctug test property generally and its and I propose first to refer, and then to easily the main kindred provisions or to shoth the monoton to all a critics times

It may be said. I think, generally speaking, 19. 2 1 then has reaching operation the recent to the one exceed anything that has gone more, as indeed from the extreme gravity to the times and the modern conditions was to be appeted. We shall, however, also see to to they are not so drastic in their effect ages the individual owners affected as were prices one of the first enactment of the

It : Act goes to his Majesty in Conneil cors, during the continuance of the present to issue regulations for securing the safety and the defence of the readm. is such regulations to provide for the discrete of any restrictions on the acquisiuser of land under the Defence Acts, 1 175 and the Military Lands Acts, 1 175 and the Military Lands Acts, 1 19 5, to which reterence will be made 8 1% regulations were subsequently a 1 % the obesite paragraph 1 is The ordinary avocations of if the stopment of property will be if the stopment of property will be if do the as little as may be permitted to a zero so of the measures required to a jet occurring the public safety on the measures required securing the public safety of the realm is and it is security to the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of the real of die to it to be for the realm "; and it is die to i that those carrying the regulations into effect we to observe this general principle. But subset only to this declaration If general is resplie, the competent mixal or bulwarks, braies, walls, ditches, and all other fortifications for the same, and that attracted by him, is authorised, where for every mayor and constable appointed by the

the purpose of securing public safety in the defence of the realm it is necessary : to take possession of land, to construct mulitary works (including roads, thereon, to remove the and fences, to take possession of buildings or other property, to place buildings in a state of defence, to cruse buildings to be destroyed. or property to be removed or destroyed, and to do any act involving interference with private rights of property necessary for the defence of the realm. Power is also given to the like anthorities to use land for the training of his Majesty's Forces, and to stop up roads. And so far no provision is made for compensation, as to which therefore no claim as of right would presumably lie against the Crown. But this matter has not been overlooked, and a Royal Commission of Inquity, dated March 31, 1915, has been issued appointing Mr. Henry Edward Duke, K.C., and Sir James Thomas Woodhouse, and Sir Matthew Yemmill Wallace to inquire and determine and to report what sums in cases not otherwise provided for ought in reason and fairness to be paid out of the public fund- to applicants (not being subjects of any enemy State) who are resident or carrying on business in the United Kingdom, in respect of direct and substantial loss incurred and damage sustained by them by reason of interierence with their property or business in the United Kingdom through the exercise by the Crown of its rights and duties in the defence of the realm. Thus it is to be noted compensation is not of right but of grace, but I am sure we may all feel that individual property owners who may be affected will be fairly treated by this tribunal and the Crown.

These provisions are, as I have said, both drastic and far-reaching, but I think we shall all agree that they are quite necessary and proper, and may be said to have their foundation in the ancient common law prerogative of temporarily occupying and using the property of a subject—a right that has been emphasised by the Master of the Rolls in a recent case, in which he accepted as authoritative its expression in an old state-ment of the law to the effect that "When enemies come against the realm to the sea coast it is lawful to come upon any land adjoining the sea coast to make trenches or bulwarks for the defence of the realm, for every subject hath benefit by it."

This, after all, when one comes to think about it, is but a declaration to which surely all will subscribe, that the needs of the realm are to be and must be the paramount consideration, else our rights and our privileges cannot be maintained or be of value.

### FORMER LEGISLATION.

In this respect it is especially interesting to turn to the first statute bearing on the operation passed in the year 1512, 4 Hen. VIII., cap. 1, in circumstances and for reasons in striking contrast to the present, yet in words which, with little alteration and extension, would be quite appropriate to-day. venture to quote them. They are as follows :-

For as much as the Land of Bretayne (Brittany) and also the haven of Brest lyth streight against the South Secrestes of the Countre of Cornwall, and that the French oar anneient enemyes and Bretaynes enemyes by reason of their fyshing upon the secretic showe as well every haven and creke within the said Countre as every landying place in as latte maner as any subject of our Sovereign Lors the King dooth and that the said Countre is three-soore and ten myle in length and the substance thereof right little more than six myle in breite from the southese to the Vorthsee by reason win real they also knowe that grete multitude of people can not shortly resort to put they most after their landying places nother pile blokhouse ne Bulwork is made to greve or annoye theym at their landying which considerations unto our sayd enemyes grete code the confort and corage giveth to arrive and land in the same parties to the grete annoyance of our said Sovereign Lords subjust there and to the utterly undoying of divers and many of theym confes

This statute, which was to endure to the following Parliament, went on to enact that the justices of the peace and sheriffs should survey the county from Plymonth to Land's End, and appoint towns and parishes to make bulwarks, braies, walls, ditches, and all other fortifications for the same, and that

justices and sheriff were to command all the inhabitants within the precincts of their office to be at the seaside with such instruments as they had or could get for making such works, under penalty of not exceeding ten days' imprisonment, without bail; and there were similar provisions as to landing places in other parts of the realm. This, 13 may be said, was a kind of "national serwith a vengeance, as by it personal service was commandeered, subject penalty and without reward, and it went on further, you will be interested to hear, to provide a power "to enter upon every man's ground, of what estate or degree he be of, and also to dig for and take materials for the said works, and this expressly without any manner of payment to be demanded, or any minner of action to be attempted in respect thereof."

After this, I understand, there were a number of statutes passed, as, in fact, there have constantly been right up to recent times. with the object of enabling the State to acquire specific lands for special purposes.

The earliest statute of the kind was passed in 1708, in the reign of Queen Anne, and between that time and the year 1803, to which I shall next refer, twenty-eight of such

statutes were passed.

The chief point of interest for us in these statutes is that, generally speaking, in those up to 1845, when the Lands Clauses act, with which you are all familiar, was passed, the lands in question, "to the end that the true and real value of the estates may be ascertained and the owners and proprietors thereof may have just and reasonable satis faction.' were vested in trustees in trust for the owners until compensation should be paid, and thenceforth in trust for the Crown. and commissioners were appointed to decide claims. Owners, if they wished, could have compensation settled by a jury to be sum moned by the sheriff upon warrant from the commissioners—a provision which may be said to be the forerunner, as it were, of the procedure under the Lands Clauses Act, and which, since it passed, has usually been in-corporated with the Acts in question.

THE THREATENED NAPOLEONIC INVASION.

At the beginning of the nineteenth century. however, as you will remember, there was the great impetus due to the apprehension of invasion by Napoleon, and we come to what may be said to be the first of the statutes of general application, which later came to be called Defence Acts. It is the statute of 43 Geo. III., cap 55, passed in the year 1893, and contains words which, on the authority of the present Master of the Rolls. contain a plain assertion of the prerogative right in its recital that "It is expedient that his Majesty should be enabled to exer cise in the most effectual manner the powers by law vested in him for preventing and repelling an invasion of the United King dom by his Majesty's enemies, and that for such purposes provision should be made . to enable his Majesty to provide grow Majesty to provide grounds which may be wanting for encamping his Majesty's armies and for erecting batteries beacons, and other works which may be recessary for the public service; and also to provide for the indemnity (in certain cases of persons who may suffer in their property by measures which may be taken for the defence and security of the country and annoyance of the enemy."

It then (among other matters), in case of

actual or apprehended invasion, empowers the Crown to authorise county lieutenants, upon request from the military authorities. to order the removal or appropriation of any thing which might be useful to the enemy or applicable to the public service, and in case of necessity to remove, destroy, or render use-less any house, mill, bridge, or other building or any matter or thing whatsoever and generally to do and act in the premises as the public service and the exigencies of particular cases should require. General officers were also authorised to survey and mark out any land required for the public service, and to treat and agree with the owners for the pos session or use thereof during such time as the exigencies of the service should require. No lands, however, were to be taken without the

consent of the owners unless "the necessity" were certified by the lord-lieutenant or two deputy-lieutenants, or unless an enemy had actually invaded the kingdom. If no agreement were arrived at two justices . might be required to give immediate posses sion by means of a warrant addressed to the sheriff. As to compensation in the case of houses, etc. destroyed, the Treasury were to appoint persons to assess compensation, and it their figure was not accepted, two justices might be called upon to settle an amount; while in the case of lands taken, two justices or two deputy-lieutenants were to issue a warrant to the sheriff to summon before them a jury to decide claims and settle compensation. is to be noted that this statute appears only to have contemplated temporary use of land during an emergency,

In the next year a further statute was passed providing for absolute purchase of linds, but with substantially the same restric-Finds, but with substantiany the same reservation on compulsion, substituting, however, "expediency" for "necessity," and in case of no agreement possession of lands could only be obtained if owners failed for fourteen days to accept what was offered to them. while in the matter of compensation an appeal from the decision of the jury was given to either side to bring the verdict before the Court of Exchequer for consideration, which Court might direct a common or special jury to be summoned for the next assizes to re try the matter before a judge, this second verdict being final.

There was a further amending Act in 1809 of no great importance. Then, after a period in which a number of minor Acts, which are mainly special Acts for particular purposes of the kind to which I have already referred, or "vesting" statutes, we come to the or "vesting" statutes, we come to the Defence Act of 1842. This was chiefly a Con-solid tring Act, and, so far as I can ascertain, established no tresh precedent of interest to surveyors, its provisions in this regard being the Acts of 1803 and 1804, with which I have just been dealing, including the provisions for the protection of the owner to which I have already called attention, viz., consent save in exceptional cases, and a period of fourteen days for consideration as to whether the owner would accept the quantum of compensation after the same had icen offered on behalf of the Crown.

### LATER DEFENCE ACTS.

This Act, and other Acts amending it, or passed with like objects, and which raise no points of interest to us surveyors that lave not already been covered, are known as the Defence Acts, 1842 to 1875. But it should be mentioned that in an Act passed in 1891 (the Ringes Act. 1891) it was provided that when any land was acquired under the Defence Acts the person, or authority acquiring it. may require the amount of compensation to

settled by arbitration instead of by jury. In one of the Defence Acts (passed in 1860) may be of interest to you to know that I found what in a sense may be called a provision for betterment in the case of probibi-tion against building upon a man's land, the tribunal being required to consider whether the agricultural value of the land affected has increased by drainage works carried out by the Secretary of State, or whether its available area was increased by the removal of hedges or ditches, and to take the same into

There were also in force in August, 1914, four measures known as the Military Land Acts. 1891 to 1903, for facilitating the acquisirich to 1930, for accintating the acquisi-tion or control of lands for various military or naval purposes, and the Military Man en-vres Acts, 1897 and 1911, but these, generally speaking, seem to have followed the lines of the Lands Clauses Acts as to acquisition of lands and compensation, and it does not seem to me necessary to do more chan inst refer to them.

Summarising these provisions as a whole we see that in the earliest days there was no provision whatever for compensation; that later came a period during which the Crown was subject to definite provisions and restrictions for the protection of owners as to compensation similar to, or the same as, those in the case of the compulsory acquisition of lieutenant Réserviste under lands by subjects entrusted by Parliament the Croix Reage Français at the Hôpital with such powers. And lastly the marker d'Arc-en-Barrois, in the Argonne District.

is now dealt with under Statutory Regulations in which, save so far as may be gona-tained in a general declaration of principle that interference should be limited to necessity, there is no provision or restriction in tayour of owners, nor for payment of com-pensation as of right. Provision, however, has been made for such payment as of grace, the amount to be determined by a Royal Commission specially appointed to dea, fairly and reasonably with the matter.

Exercise of the powers conferred by these Acts of Parliament have necessitated calling in of surveyors thoughout the whole country, and thus provided work at a time when it has been most opportune and accept-

able to the profession.

And now, gentlemen, the most important national problem and duty of to-day is for each and all of us to put asile every personal consideration, and to devote our consideration, and to devote our landing energies in whatever way may be nearest to our hand towards helping to bring this war to a successful and speedy termination with the full and deliberate determination that its conclusion must rest upon ferms that will secure to our children a reasonable prospect of lasting peace, so that they may devote their asing peace, so that they may devote their thoughts and energies to the development of the many social problems and the improve-ment of the condition of life for the com-munity generally which this war has leterrupted.

### THE LONDON COUNTY COUNCIL

At the meeting of the London County Council yesterday Tuesday the Education Committee submitted a report re-ommending a reduction in the estimates for the current financial year of a net sum of £360,225.
This included savings of £71,590 on painting and cleaming (nearly half the estimated amounts). £31,340 on buildings and furniture not chargeable to capital account, £26.520 on repairs to buildings, and £6,990 on furni-

The Establishment Committee reported that Mr. W. A. Green, a senior assistant in the estates and valuation department, will the estates and valuation department, with attain the age of sixty-five years on the 15th inst. They recommended that, as his retirement from the sorvice at the present juncture would cause inconvenience to the Council's service. Mr. Green be tetain d up to and including November 15, 1916, or the conclusion of the war, whichever is the earlier date. They further resonant led that leave of absence without pay be pointed to Mr. B. G. Amey and Mr. L. H. Useke and Mr. 4 Trenaman and Mr. 4 Quilter, assistant foremen and inspective of furniture and timber on the classification. in the Stores Department, in order  $\mathcal{C}(\mathcal{C})$ may undertake war contract work

The Local Government Committee r ported that they had considered the question of the desirableness of sinking a well for the supply of water to the new sessions house at New-ington. Apart from practical lifeculties, there were several objections to the responsal. Having considered the matter in all 's bearings, the committee decided that " would be undesirable for a well to be sun't at the sessions house, and that the most satisfactory method of dealing with the wat r supply would be to arrange for a combin 1 system of mains for the purpose of general surply of mains for the purpose of general strong and fire hydrant service. The concurrence of the Finance Committee, they have in local of the architect to issue from time to be not correctly tificates for advances to the contractors for the erection of the new sessions bouse to an extent not exceeding 50 per cent of the value of materials which are really for manager in the building, such alvances to be made generally on account of the court of an without prejudice to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and object to any liabilities and obj gations of the contractors. The accounts will be adjusted from time to time as the work The accounts will proceeds, and the issue of the certificatis will be subject to the contractors complying with such conditions as may be prescribed

Mr. Edward Warren, F.R.I.B.A., is holding

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FILRAL ASSOCIATION a y meeting for the present in the reserver of the Tarton Street. More High Assertance High presents occupied the More toler, here secretary. More World Halls, of France of the state for members are not stated as the members are not set of the secretary. 1000 i My. T. Mangula ara Mi acts clasted as member of the first sects had gone to the first relations that it is seen after the first sects and gone to the first relations. The appeared that they could to

With the state Communities of a year Selbs, First Eastern Hispital at state they be the state in the state of the period for the first Eastern Hispital at state they so me aftern her in the communities of the opening treatment of the second find the most interpretable of the most interpretable of the most interpretable of the most interpretable of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of Construction and for the proper costing of the tissues of the car is constructed. When its of the array was a sum of the array and was a sum of the car is constructed. 2.5 the waterscan become a transfer of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of the variety of t · in a large scale the min severely tested at Hospital at Cambridge. Gambridge, Cambridge, it is patient from a convent was immediately non-venient to health and uses of notice. Library vol. under the winds Eistern Heptal is situated 1 to of King's and Clare harma's a both the site, and guitar monded for 520 beds 23 for 60 yields for 520 beds 23d to 1,240 bels, and since asks. The wards consisted of 15he is of ion of 28, running. Each be set of 8 outh, and of the corress. Every block 2,21 ft. with 4 ft. Ligh to 1,21 ft. with 4 ft. Ligh to or eastern and a western end, and between them, but to be to the wards. were arranged post to a service reams of a domain of the same service reams and marks, thus enter two products and a for the country. .i were flo r T

were two parallel rows of thirty beds with a central passage. The sun blinds kept out run when let down vertically, but had the The sun blinds kept out great disadvantage of flapping at irregular intervals. The beds as supplied by the Government were cheap, old tashioned, and tar too low for the convenience of masseurs. The ideal height for a hospital bed was 26 in. from floor to iron framework. Mattresses should be of hair, with square sides, and piping at the edges to prevent flattening out. It was talse economy to provide too cheap a bod. Close to the kead of each bod was the regulation Army locker; as flowers stood on these and in hanging baskets, many wards looked like a horticultural show. The lighting was by electricity. Every ward of sixty beds had three bathrooms, a washing place has insee bathrooms, a washing place with basins, a linen capboard, a paintry, and a kitchen. Attached to the wards were other buildings not necessarily open to the air. One range, on the east side, 280 ft, long, con tained the pathological laboratory, a room for electric massaging, officers' mess room, receiving from, post office, clerks' room, linen stores, and other storerooms, and apartments for the other commanding, the matron, the dentist, the registrar and C.V.O.T.C. Then behind this on the cist side was the patients' room to the north, and recreation room 101 ft. long, while to the north-west of the wards was a still larger room for the R.A.M.C. orderly men, and another provided a R.A.M.C. orderly men, and another provincer a domitory for 176 orderlies. The kitchen block is 108 ft. long, and similar in height to the wards. The operating theatre was at first 61 ft. by 23 ft., 14 ft. high to sides and 18 ft. 6 in, to edge, but has since been doubled in size, the mathematical matter, wear fluished with The walls and ceilings were finished with granite plaster and distempered, and the floors were covered with limbeum, the skirting flours were covered with finoleum, the skirting being splayed. It was lighted from above and from the north. The heating apparatus for the central heating and hot water supply was divided into two sections with duplicate boilers to each sections. The scheme sections with approximation points to cache sections coupled up to calorifiers. The schem, of the hospital and its plan were thought ant many years ago by Dr. Joseph Griffith. The buildings were designed and superintended during election by Mr. C. F. Skipper, of St. Andrew's Street. Cambridge, who has since planned many similar hospitals in other towns. Mesers. A. Negus and Son. Regent Street. Cambridge, were the builders; the electric light installation was by the Cambridge Williams. Smally Co. the heating installation ant many years ago by Dr. Joseph Griffith. electric light installation was by the Cambridge Electric Supply Co.: the heating installation by Messrs, F. A. Norris and Co., St. Andrew's Hill, Queen Victoria Street, E.C. and the cooking apparatus in the kitchens by the Cambridge Cos. Co. The cost has been astonishingly low. The expense, which in a scomitry hospital worked out at about £200 a bod and may formly institution at between bed, and in a London institution at between £300 and £400 a bed, and even more, was only about £20 per bed for the first section of 520 beds, and £16 17s. 6d, for the entire establishment of 1.700 beds. The open-un treatment showed a great saving in time; there was in most cases no need for a further stay in a stylescent home and the mortality was astonishingly low among the 6.617 patients who Lad been admitted up to the date of the latest published returns. The patients never complaned of suffering from cold, but looked upon the loogital as a paradisc after life in the truckes, but the mirses, who slept else where in closed buildings, were adversely

M: Flyin T. Hill, F.R.I.B.A., in proand that br Shipley had treated a matter cold that Dr. Shadey had treated a matter for an elect moment in a faccinating manner. The epon are treatment, where carried et a the common sense, as at Cambridge, by D. Bod by a common sense, as at Cambridge, by D. Bod by a common sense, as at Cambridge, by D. Bod by a treatment and others, had common set a consequence in sult, not only a question est a consequence of how rates of mortality. For it the linear does not be patients. The consequence of the attention of the patients, and there e and be no doubt that the patient of world be harded followed, for the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of the consequence of sit extract many tenential for the page many sit extract in this explication. In large towns the six of five would preclude authorities to make matter the world preclude, but the matter than the six of the tendency would be, with important the six of the tendency would be such than the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the six of the recel and note reped means of transport, to report to the Scott'sh Office.

dto ted by the changes of temperature.

locate hospitals further from populous certres. The tobacco smoke grey of asbestos walls was soothing to the eye, and, as Di Shipley had said, Ruberoid was far preferto galvanised from for a roof covering.

Dr. Brydon, medical officer to the A.A. First Aid Department, seconded the vote of thanks, remarking that he was an old student ander Dr. Shipley. The wards described marked a new epoch in hospital construction, and the opportunity for the innovation hap-pily came to men like Dr. Griffith and Dr. Shipley, who had already advocated openair treatment, and had given much thought to the subject before they had occasion to put their theories into practice. Some day he trusted all the great metropolitan hos pitals would be shifted from the densely peopled localities, with polluted atmosphere, now occupied to the open country.

Mr. W. A. Pite, F.R.I.B A., observed that the sweetness of the air in the Cambridge Eastern Hospital, as compared with that in metropolitan hospitals, was very astonishing, and the results to the patients surely justified the experiment. He was impressed when at Cambridge with the fact that no question was raised by the architect or medical staff as to the number of cubic feet or superficial The lesarea to be allotted to each patient. sons he learned from his visit of inspection were the enormous importance to patients free circulation of fresh air and provision for sunlight penetration.

Dr. Mallon, in supporting the vote of thanks, said it was suggestive that pneumonia and bronchitis existed, not where the weather conditions were wintry, but where the rooms were hot. The nurses suffered from the coll and draughts because they slept in closed bedrooms.

The vote of thanks was cordially accorded, and was acknowledged by Dr. Shipley. 

### HOUSING CONDITIONS AND RENTS IN SCOTLAND.

Lord Hunter and Professor Scott, the Committee appointed by the Secretary for Scot-land to inquire into the circumstances connected with the recent increase in the rentals of small dwelling-houses in the industrial districts of Scotland, having completed investigations in Glasgow, as reported Honse, Aberdeen on Wednesday.

Mr. J. M. Gowan, the city assessor, sub-

mitted a statement with reference to houses coming under the House-Letting Act, which showed that during the past year fewer properties had been vacant, and that there was a further tendency towards decrease in the number of unlet houses for the current year. The increased rental seemed to be greater in

the larger houses.

Mr. J. T. Sorley, the city chamberlain, supplied statistics with reference to the workmen's dwellings erected by the town council. The rents were slightly under those charged for the houses belonging to private owners. No increase in the rents had been made since the outbreak of war.

Parish Conneillor David Milne, speaking on behalf of the Aberdeen Tenants' Association, stated that the increases were from 8 and 10 to 15 per cent on the year's rents, exclusive of rates. If public opinion did not rise against a further increase, it would as-

suredly be imposed.

Mr. J. D. Mackle, advocate, justified the increases which, he said were from 5 to 10 per cent, in the case of the rentals he factored by the rise of the rate of interest on bonds, the insistence of lenders on insurance against aircraft and bombardment risks, and the great augmentation in the price of re-

pairs
Mr. Alexander Ledingham and Mr. J. Jeffrey, the secretary to the House Proprietors' Association, gave similar reasons, the latter adding to them the expense of building. Mr. Ledingham said the standard

rate for repairs was from 12 to 15 per cent.

Mr. David Milne, recalled, said he becked that the figure for repairs had be. overstated.

The Chairman said the Commission would

### LOGIC IN ARCHITECTURE.

BY HARRY GILL, M.S.A. "Our World has passed away In wantonness o erthrown,"

but thanks to the courage and steadtastness of the allied armies, and the devotion and self-sacrifice of the younger members of our Society, another, and let us hope, a more beautiful world will spring "phoenix-hke" from the ashes.

Almost without exception the practice of architecture has been brought to a standstill by the war. It behoves us, therefore, to put this temporary surcease to advantage, and indulge in introspection such as we never could, or should be disposed to do, in the throb of normal times. This uncongenial task has been made all the easier seeing that political and religious controverses have been laid aside for the moment, and we can meet on common ground and speak our minds as comrades and Englishmen sans peur et sans reproche.

peculiar Under these circumstances. "Logic in Architecture appealed to me word logic to mean the "science of reasoning" and architecture the "science of building."

I do not wish to infer that "logic" is the only or even the chief thing an architect should cultivate. When I think of the terrible pass to which the German nation has been brought by their dependence upon "logic" alone, I feel that it is necessary to remind ourselves, paradoxical as it may seem, that we must also have ideals which are often illogical, and we must also foster the spiritual side of our nature, which is often impractical, if we would make a real living success of our work.

But these are great themes of which I can only make passing mention in the limited time at my disposal, and therefore I confine my remarks chiefly to "logic."

Logic has been neglected of late, and we have been prone to follow the dictates of

fashion, a dangerous guide where architecture is concerned; for fashion has led to unsound methods of construction and meaningless arnamentation.

If I criticise adversely the details of recent work, my own as much as any other, you will understand that I speak of the work for the work's sake only, and quite without

any personal motive.

many who commenced their training some fifty years ago, the Gothic revival came as a misfortune; for while I would yield to no one in my admiration for mediaval architecture. I feel that the Gothic revival was a mistake, because it was the revival of the outward forms without a true grasp of the inward spirit.

You have only to look round to see what this has done for us in modern ecclesiastical buildings, and more especially as exhibited in what for the sake of classification only I may call the Dissenting places of worship. how many of these conventicles ought it to be said. Our Church at the front is as fine as an abbey, But seen from the rear 'tis remarkably shabby,' But the gods see everywhere.

Let me repeat that I speak of the material fabric only, and no word of my criticism

applies to individuals or sects.

The Presbyterians, who of all people should be the last to respect images of the saints. have placed over the chief entrance to the place of worship in this district a "little Gothic niche of nicest workmanship." which Gothic niche of nicest workmanship." which looks as though "it once had held the sculptured image of some patron saint looking down on all who entered those religious doors." When age has added its mellowing influence, will future generations believe that the iconoclastic spirit of our time deprived that niche of its occupant? For only on the assumption that it was intended to shelter a sculptured image can such a housing be justified.

If the Presbyterians could be outdone in this direction it would surely be by the Baptists; but the Baptists have put two niches on the front of their new church, which again are meaningless unless intended for statuary.

In old time representations of the saints it was not unusual to depict them in the greatest act of their lives, St. Wilfrid giving treedom to a slave, etc. When this terribe war is to a slave, etc. When this terrible war is nappily over, I suggest that it might be approto make these melies commemorative On the one side we could have St. Lloyd George listributing rare and refreshing fruit to the English, and on the other the same saint devising iron rations for the Germ-huns.

The buildings in which men worship nowadays are indeed a strange study, for do we not find that where faith is supported by appeal to reason, the architectural setting frequently thogical and quite out of har mony with the scheme; but where the appeal is to authority and individual reasoning is discouraged, the architectural setting is logical and designed to give an uplitting in-fluence. So that speaking of course on broad and general lines, we might say that the more logical the crocd the less logical the architecture, when it ought to be vice versa.

I would say to the young architectural scudent, study ancient Cothic architecture by all means, but do not attempt to copy it. Remember that the methods of construction and the materia's at our disposal are not so restricted as they were in the days of old when the craftsman had to choose either oak or stone. Let archaeology be your handmaid if you will, but do not make of it a

When we turn from the modern Gothic to modern Classical architecture, we find the

detals are more thogreal still."

Whatever semblance of reason there may be in purting a key-block in a flat brick arch, it is surely a violation of principle to put a key stone in the centre of a stone head of lintel. And yet this anomaly is a feature of modern design. If you study the brick buildings of the 17th and 18th centuries. will find numerous instances where key-blocks have fallen out owing to settlement of the

jambs or decay of material.

In recent buildings not only are key-blocks introduced in flat lintels, but they project so unduly beyond the face of the wall as to

become dangerous.

In my opinion, such buildings will in years to come be almost as great a menace to human life as Zeppelin bombs are to-day.

A key stone in an arch is a structural necessity, but to use a structural necessity purely as an ornament is quite a different thing to the ornamentation of a structural feature, and there surely can be no justification for treatment which offends against all

laws and rules of common sense.

Consider one of the most important details in Classical architecture—the Column. In the hands of the Greeks, the column was indeed a thing of grace and beauty. I wonder what would happen to the builders who lived B.C. if they could see what we "degenerates" emphemistically call a "rusticated" column.

The grace and dignity of a Grecian column is due to its perfect proportion and the subtlety of its entisis, and yet how often do we see these attributes destroyed by the senseless system which is sometimes adopted senseless system which is sometimes adopted in modern work, of building up a column for part of its height, yea, and sometimes the full height, with alternate drums and cubes, until the graceful lines of taper and the effect of entrsis are entirely obscured.

I am aware that the Queen Anne and Georgian architects who used this abomina-tion claimed that "chiaroscuro" was the effect they aimed at; but if light and shade can be obtained only at the expense of the column, I, for one, would prefer share to shadow, and I think the day is not far distant when our successors will wish to dress down these abortive columns to their true

lines I know a modern building with supposed Doric pilasters at the angles. These pilasters are "rusticated" throughout their full height, so that the taper can be only fitfully seen in the wide sunk joints between each block, while the cap and base have to be searched for before they are seen at all, is commendable.

Although an architect with many years' But we must educate the public taste. We experience. I felt it quite a feather in my must convince men that a house need not

cap when I found out that these were really mtended for pilasters. But will such work cause the public bosom to swell with pride at the prowess of the native genus?

Then, again, what liberties we have taken with the pediment! A broken pediment is claimed by some to be decorative treatment. For internal use, especially, when it is broken to admit a medallion or bust, it may be done with a semblance of reason. then it is a long remove from the sculptured or the Greeks; but to build a tympanum broken pediment with masonry can never be commended,

It surely is topsy-turvy logic to put keystone where it is not needed, either for strength or appearance, and to omit the keystone from a pediment where it is needed, both for strength and appearance. To build both for strength and appearance. a pyramid on its apex would not be more illogical than the attempt to give apparent support to a wide arch by dividing compartments with stone or brick multions.

Why do we perpetrate these things? it not because, without stopping to think for ourselves, we follow "rashion" in architecture? We become imitators of one another testure?

instead of designers.

Our society is fortunate in having a copy of "Stuart and Revett's Antiquities at Athens," and the young architect could wish for no better studies, but they should only be used as the groundwork for a logical adaptation to modern needs.

Another very weak point in modern archi-Another very weak point in more artistic trecture, in my opinion, is the shorn and unfinished appearance of the cornice. A parapet wall, perforated with what one might call the "Union Jack pattern," which is very patriotic, but not pretty, and devoid of any sheltering coping, is very much in fashion just now. To me it gives the impresfashion just now. To me it gives the impression of the man who began to build without first having counted the cost, and who, conse quently, had to leave off abruptly before the full height was reached.

I was taught that the top of a wall should always be protected with a projecting coping, and in such an uncertain climate as ours a projection is a logical necessity, quite apart

from the question of appearance.

some difference of opinion as to There is how far the exterior of a building should reveal the interior arrangement of its com-ponent parts. In any case, I think it is illogical to design an elevation without regard to the plan.

An otherwise satisfactory building not far from here has its chief façade disfigured by he staircase string crossing the hall window. We all know how difficult it is to arrange the various levels of a staircase so as to work harmoniously with a symmetrical design; but to plan a staircase without incorporating it with the design can never be

The other day I had occasion to look over a detached house. By standing immediately in front of it the upper story appeared to be in what is known as the half-timbered style. But the timbering! I asked myself. Is it structural? No. It could not be, for the timbers appeared only on the front face, and not on the returns. It was, therefore, applied art, so I asked myself. Is it decoraive? I think that was the idea the builder had in his mind when he did it, but I could not find one pleasing line in it. The work was altogether illogical, and a sheer waste

This is not a condemnation of any attempt to reproduce the timbered style of building There are some who teach that timber build ings should be restricted to sites where tim-ber abounds, and so on, and there was a time when such a practice was necessary Stone buildings in a stone district. I rick buildings in a clay district, and timber framing where neither stone nor brick was plenti ful has produced some delightful But in these days, when every facility is given for carriage of material from one disct to another, there is not the need to adhere to any traditional manner of build In large towns and industrial centres especially any endeavour to relieve monotony

The President's address at the opening meeting of the Nottingham and Derby Architectural Society on October 26.

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## GOVERNMENT CERTIFICATION OF CEMENT INTENDED FOR EXPORT.

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and the last the all The Argentin

### PRITISH COLUMBIA TIMBER

We briefly mentioned recently four books to which are being issued by the Government t British Columbia, with the view of directing ome users to the many woods the province in supply, four interesting booklets about er chean be had tree from the Agent General or British Celumbia. Salisbury House, E.C., and further information by writing the Chief Forester. Victoria, British Columbia. We give a few extracts in one of the booklets, convinced that they will interest all conceined at the practical falines four European supplies.

Practically all the forest products at

Practically all the ferest products at present exported by water from British Columbia are from the coast forests. Four socials Donglas fir, western red cedar, western hemiock, and saka or silver sprince make up the bank of the coast timber, and make up the bank of the coast timber, and, therefore, of the experts by water. Four species are pre-emmently useful. There are, however, many other species in the province, such as various punes, balsam firs, larch, Ergelmann, sprace, etc., from which humber is in create total of of the Eastern, prairie, and divisit itially.

Detains fir, western red codar, western fon a and sitka sprine are all grant tim hars. As a 2r up they belong to the world's reset tumber trees, and are, perhaps, the most severely useful woods obtainable in commerical, quantities, over a amount of them over a suitable for practically every use to which wood can be put. Not only is each the largest at its kind existing, but in quality can thus the best of its kind. These are s ient no facts which can be verified in any textbook on the subject.

### DOUGLAS FIR. Pseudotsuga taxifolaa.)

Denglas fir, also known as red fir, yellow fit, Orego, pine, Columbia pine, Douglas spruce, is the most important timber tree on the North American Continent or in the world. No other one species exists in such great individual sizes, such excellence of quality, and si h vastness of quantity over so wide a range. No other one species is so wel. adapted for such a variety of uses. It is the world's "Ail Utility" wood.
It is found from Northern British Columbia

to Mexico, covering a range of over one mil-lice, square miles, and reaches its best deve-lopment on the coast of Southern British columbia. The total quantity of Douglas fir timber is estimated to be greater than that if all the hardwood timber in North America. With the single exception of the sequence of with the single exception of the seque as a California, it is the world's largest timber time. The average height is 15% to 225 ft., with a drameter of 3 to 6 ft. Exceptional trees ten beover 300 ft. in height and 15 ft.

trees tearly over 500 ft, in height and 15 ft, it diameter.

We stern America and one in Asia. Beth are small, is jubby, and semmercially non-lineportant. Douglas fir timber is produced only it Western North America, and the best of it comes from the Pacific Coast. The wood Douglas in see imparatively light, but very secretary to stee seriouses wood in the world that its weight that is obtainable in common or all sizes and quantities. It is moderately light but very light, but very to the stee and quantities. It is moderately light but very to work, straight grained to give a died of air from a fairly soft, fine grained that it is low to make the grained that it is not a pairwer timed. Sow-growth n parrow raized, slow-growth love in diagray thinged, is owegrowth a larder, is areseguated indigited for growing timber. It takes stain our shade or colour. It holds halls that ally impervious to water, and is. When sawed tangentially slash a pair of the wood is shown in a ratio figurary, which makes it very

Although Boughs for is superior for except to the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the result of the superior of the superior of the strength of Douglas fir. Dry hemlock weight of the result of the strength of Douglas fir. Dry hemlock weight of the strength of Douglas fir. Dry hemlock weight of the strength of Douglas fir. Dry hemlock weight of the strength of Douglas fir. Dry hemlock as against 2,749 lb. for Douglas fir. a matter that affects its price considerably when shipment of important one result of the result of the result of the strength of Douglas fir. a matter that affects its price considerably when shipment of important one result of the result of the strength of Douglas fir. The result of the strength of Douglas fir. The result of the strength of Douglas fir. The result of the strength of Douglas fir. The result of the strength of Douglas fir. The result of the result of the strength of Douglas fir. The result of the result of the strength of Douglas fir. The result of the strength of Douglas fir. The result of the strength of Douglas fir. The result of the strength of Douglas fir. The result of the strength of Douglas fir. The result of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the

known as patch or southern pine. and mining timber, heavy frame and strong planking for ships, scows, dredges, railway painting for samps, ecows, drenges, rainway cars, elevators, stage deals, and shores in shipbuilding yards; piling for wharves; spars; these are forms in which Douglas fir gives superb service, for as a structural

m gives supero service, for as a structural timber it is misurpassed.

The enormous beams manufactured by British Columbia sawmills have long been a feature of the export lumber trade of

the province.

Most structural timber becomes gradually air seasoned while in use. Douglas fir increases in strength as it seasons, and has an advantage in this over the patch or yellow pine from the Southern States, in which would the greater resinous content in the southern with the content in the southern with the content in the season with the content in the season with the content in the season with the content in the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with the season with terferes with the seasoning process. The high resistance to compression perpendicular to the grain, as shown by the strength table to the grain, as shown by the strength table given in the pamphlet, enables Douglas fir to withstand rail cutting, and this property, combined with its durability, has made Douglas fir the preferred railway crosstie or sleeper material of Western America. For many uses to which wood is put, light-ness is a distinct advantage. The use of Douglas fir in the construction of railway cars for instance, means a reduction in the dead weight that is drawn by locomorives. dead weight that is drawn by locomoxies, and, therefore, a permanent economy in operating expenses, especially in mountainous districts. A comparison of this timber with patch-pine from the Southern States, which is some 22 per cent, heavier, though no stronger, gives the following weights for cars of 80,000 lb. capacity :--

	Material required.	If made of Douglas fir.	If made of long-leaf pine.
Gondola car	5,000ft.	13,745lb.	17,0771b.
Box car	3,000ft.	8,247lb.	10,24£1b.
Refrigerator car.,	10,060ft.	27,489lb.	34,15 <b>3</b> 1b.

The durability of the wood, and the fact that its resists saturation by water cauce it to be used in large quantities for wooden piping, for continuous stave and jointed conduits used in power and irrigation works, for silos and tanks. It makes firstclass railway tiles, whether treated with preservative or not. Street pavement of crossited Douglas fir blocks properly laid is noiseless, dustless, economical in upkeeps and is durable and long-wearing, even under heavy traffic such as that of freight and dock yards

### WESTERN HEMLOCK (Tsuga heterophylla.)

The hemlocks are found only in Asia (three species) and North America (four species). Western hemlock, also called grey fir. Alaska spruce, western hemlock fir, western hemlock spruce, hemlock spruce, Prince Albert fir. holds first place in point Prince Affect III, holds like face in point of size, and yields much the best lumber. Mature trees average 125 to 150 ft. in height, and 2 to 5 ft. in diameter. Occasional trees are 250 ft. high and 8 ft. diameter.

The cool, moist climate of the British Columbia coast provides conditions necessary for its hest development, and it is found there

for its best development, and it is found there in great quantities, as well as throughout much of the interior of the province.

The wood of western hemlock is light, fairly soft, strong, tough, straight, grained, not splintery, odourless, and tasteless. It contains no pitch or resin, and is usually light a colour, but often reddish brown in the invision of the transity area of workit colour, but often reddish brown in the interior of the tree. Its strength, case of working, and freedom from warp or shake distinguish it sharply from the Eastern species. Although Douglas fir is superior for very heavy construction work, western hemlock is but little less strong, and for all ordinary hinding purposes is equally useful.

Tests upon green stringers of all grades show that western hemlock has 63 per cent. of the strength of Douglas fir. Dry hemlock weighs 2,240 lb. per 1,056 ft. board measure, as against 2,749 lb. for Douglas fir. a matter that affects its price considerably when ship-

## Currente Calamo.

The interesting summary of the provisions of past Defence Acts given by Mr. J. H. Hanson in his presidential address at the opening meeting of the Surveyors' Institution on Monday night is a timely contribution to the information needed by all whose province it is to act for real property owners, whose obligations to the State have been so considerably revived by the war. They are, as the President said, undoubtedly drastic and far-reaching, and when it is remembered that compensation for all interference is a matter of grace and not of right, to wall be understood that the services of surveyors will be in demand in ascertaining the amount likely to be paid and in obtaining it. Survevors, therefore, are busier than architects and likely to be so for some time to come. though probably to nothing like the extent of their ordinary work. That, however, has not hindered their prompt response to the primal duty of all to-day-active war service. That nearly 1,400 members have as promptly responded to the call as those of our own calling and our brethren of the civil engineers is something all may be mutually proud of, and we are sure that no member of either profession will hesitate to follow the noble example set.

The President of the Institution of Civil Engineers, in his address at the opening meeting yesterday week, dealt at some length with the necessity for the better utilisation of our national resources, if the present generation is to sustain the huge burdens war is piling on to our backs when peace comes, leaving posterity as usual to pay off the phenomenal load of debt we are saddling it with. He confined his remarks in the main to the Iron and Steel Industries, Timber. Floods and Land Drainage, and the Land. Under each head Mr. Ross had, of course, the old tale to tell. Government indifference -except when action offers opportunities for nepotism in the interests of family connections or political partisans—and the lavishing of our resources on other nations, blinded us to the fact that our boasted "commercial prosperity" was a delusion so far as the welfare of the great mass of the nation was concerned. On every hand, of course, we hear of effort and inquiry and organisation, which is to end all this-generally followed by very proper protests from those concerned, that the men selected on committees and the like are in many cases round pegs in square holes; and little will come of it all except the spending Every indication of more money vainly. points to the conclusion that unless we find out within the next decade how to feed ourselves, house ourselves, and defend ourselves. the coming crash in Europe of the civilisation of the last fifty years will find us amongst its earliest victims.

All who can should not miss the interesting exhibition of pictures which four members of the Artists' Rifles are holding this week at The Club, Loughton. Their names are Lance-Corporal Edward Handley-Read. R.B.A., Private Gerald Ackerman, R.I., Private Edgar L. Pattison, and Private James Thorpe-all well-known artists who have from time to time exhibited in the Royal Academy. Private Thorpe, the black and white artist is represented by a series of cartoons and black and white studies, many of which have their new noises on these terms of three already appeared in Punch, the Bystander, the Graphic, etc. Four of his car- In the recent case of "London and Northern the wender's expenses." black and white studies, many of which have

toons depict Major Sir Richard Rveroft, Captain Edge, Lieutenant T. H. Hughes (Artists Rifles), and Mr. Arthur Morrison, the wellknown writer, who appears as an "extra Special." Private Pattison's contributions include two etchings and several excellent watercolonis. Private Ackerman is an old R.A. student, who won the Creswick landscape prize when he was twenty-four. Two of his pictures were in the Academy this year. His sketches on view are a series of water-colours. mostly sketches of the country in the neighbourhood of the camp and the Sussex Downs. Lance Corporal Handley-Read's studies of the silver birch in the Forest are very good, and one entitled "Somewhere in France" was painted while the artist was at the officers' training camp at the front.

The individuality and distinctive characteristics of the subjects portrayed are admirably brought out in the fifty two portraits photographed by Mr. Furley Lewis, President of the Royal Photographic Society, and hung as a one-man show at the Camera Club, 17, John Street, Adelphi, W.C. The works are all by the platinum process, and exhibit considerable variety in pose, treatment, and lighting. All are successful pictures, even where the subject, as in No. 28, seems to have carelessly thrown himself back in an easy chair in an attitude that would be baffing to many experts with the camera. No. 5, a three-quarter length portrait of Mr. J. C. S. Minnmery, A.R.LB.A., one of the predecessors of Mr. Lewis in the presidential chair at 35, Russell Square, depicts that wellknown architect, pipe in hand, and in a contemplative and genial mood. Another past-President of the R.P.S., Lord Redesdale, who has just delighted us with his reminiscences, is happily shown in No. 36; the veteran diplomatist is seen in top hat and frock-coat. In No. 14 Professor Patrick Geddes is limited tull face, looking forward as if considering a fresh development in town-planning. Of the two portraits of Ignaz Jan Paderewski we mefer the full-face, No. 52, exhibited this summer at the Royal Photographic Society's display in the Suffolk Street Gallery, to that of the great violinist and Polish patriot seen in profile, No. 27, now shown, we believe, for the first time. No. 31, "The audience was small but sympathetic," is a back view of a player on the instrument; his sole auditor is a small boy carrying a toy horse. The familiar earnest expression, deep-set eyes, and short grey heard of Mr. John Burns are well portrayed in No. 32; and another fine character study is that of Prince Kropotkine No. 3)—the benevolent aspect of the lofty forehead and broad bald head, spectacled eyes, and flowing beard is as unlike that of the typical revolutionary Socialist of high hirth and social status as could be imagined. There are several ladies' portraits on the walls, the best and most charmingly posed, perhaps, being that of Mrs. Furley Lewis (No. 47), hung next to the busts of their little sins, Wentworth and Jack Lewis. The exhibition, which will well repay a prolonged visit, remains open until Saturday, the 27th

Although leases, which word in law includes the usual tenancy agreements for three years, given by or to alien enemies continue binding during the war, a very pretty point arises where, as the premises let are in a prohibited area, the lessee or tenant cannot remain in occupation. Builders who so frequently let their new houses on these terms of three

Estates v. Kish Schlesinger," a flat at Westcliff, which is part of Southend in Essex, and in a prohibited area under the Restriction Order, had been let by the plaintiffs to the defendant, who is an alien enemy, on an agreement for three years from March 25, 1914. There were the usual covenants as to the flat being used only as a private dwelling and against assigning or underletting it without the landlord's consent. In December last the defendant wished to terminate the tenancy, which the plaintiffs declined, but allowed him to try and let it, which he failed to do. The landlords had brought an action in the Mayor's Court, London, for a quarter's rent, due last Lady Day, and the judge there had held that the Restriction Order did not avoid the lease, as, although the defendant could not live in the house and the landlord could not let him remain, he could sublet it if he found a tenant. On appeal to the High Court this ruling has now been confirmed, the two judges holding that the State had not put an end to the lease or agreement, nor had the Restriction Order affected the term of years granted thereby and vested in the tenant. So the enemy alien remains liable for the rent of the flat until March, 1917, although he may not himself be allowed to live there. It is said there will be a further appeal, which will be watched with interest, because there are many other like cases awaiting decision in similar prohibited areas.

The invitation addressed by the Board of Inland Revenue to the officials of the Land Valuation Branch, permanent and temporary, to apply for appointments in the Income tax Service, has caused the gravest concern amongst the surveyors in the latter department. An interview with the Board has already taken place on the subject, and a special general meeting of the surveyors has been held to consider the situation. They hold that to appoint temporary valuation officials in another department over the heads of the existing staff, all of whom entered by competitive examination, would be to rectify one injustice by creating one of larger dimensions, and at the same time would create a most undesirable precedent. It is urged that these transferred from the Land Valuation Department should, in justice, rank after the last assistant surveyor already on the Inland Revenue establishment. Mr. Montagu, Financial Secretary to the Treasury, has promised, in ansver to questions by Mr. O'Grady in the House of Commons, to investigate the whole subject. ---

The urban district council of Haslemere have adopted a scheme for improvements at the swage works estimated to cost £840. The alterations provide for a separation of the storm water from the sewage proper, and the existing bacteria beds will be utilised in the improve-ments, which include the installation of new analg galante

Mr. H. G. Crothall, F.R.I.B.A., county architect of Middlesex, has voluntarily offered to his county council that, during the suspension of the works in connection with the prosion of the works in connection with the proposed new sanacorium and the new lunatic asylum, his salary should be paid at the rate of £1,000 instead of £1,200 per amum, as authorised by the council in May last. The council have accepted the offer.

At the last meeting of Droitwich Rural District Council, a letter was read from the Local Government Board declining to sanction Local Government Board declining to sanction a loan for the purchase of land for housing schemes at Umbersley. Snead's Green, and Cutnal Green. The council had decided not to build in the near future, but desired to pur-chase the sites in order to be prepared with the necessary land should cottages be required after the war. It was decided to already a few

## Gur Illustrations.

### THE NEW CATHEDRAL, COLOMBO, CEYLON

men and address bareh will over I can Occar, the site being pro-sitiated on the "Galle Face," it scasnor, and, being centrally , hapester, it will be easily ac to a majorts of the city of Colombo, a salitearly been consecrated and s already been consecrated and just year as a cemetery, but the state is are securinged that due to reservation of the departed promals will be observed. Mr. It has wes Prynne, F.R. U.B. V. the less cathedral, before making his to each on, visited Ceylon and reflicit with the study beal requiremental valuable materials, as well as conditions. With regard to the binding, the architect has a self-less building upon a combina-- I has building upon a combina-The solution of the continuous of the same time. Where the same time Mr. Felyers has designed the church of the appropriate to its position, the form appropriate to its position, the form of the sum of the same time and the church of the appropriate to its position, the form of the same is unified in such a way i is a gruntes and to preserve an is istical propriety, so manifestly a C'ristian church overseas is contiguous to the main Gale Face "promenade, and see, in the petine, a few him contae scaffont, well exposed This am nence obviously had that pant, and for this pur-there is stracke glo of two sharing in a central position turets on either side, and servcountry unets on either side, and services the wide nave and north and set. This campan le will make a maximum, for many in les out on the their Country for many in les out on the their countries and purches so it the west front similar to name I along all those of the cathetic providing that all entrances are in the relations of the sun, and could be a served to be successful as proved a large sancer to the served a large sancer to the served a large sancer to the western tower. This is the western tower. This The western tower. This a groups well with its in present a further note as to the first incomparish the national statement of the first income the main of a constraint of the square. The nave d ad 67 ft.

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dow openings are filled with pierced stone tracery in such a way as to break up the datect rays of the sun. The roofs are constructed of ferro-concrete, and have top openstructed of ferro-concrete, and have top openings for extracting heated air. Asbestos covering the roots will moderate the heat and help to keep the building temperate. Mr. Fellowes Prynne relies largely upon the messics and tempera decorations, which are intended to form some of the chief features of the interior. The four cardinal big arches carrying the central capola will have the mural spaces above them painted with the great subjects of the "The Nativity," "The Transfiguration," "The Resurrection," and "The Ascension," The choir will be decorated in its roofs by "The Heavenly Choir" and "The Church Triumphant." The estimated cost of the building is cal-culated at about £72,000, and its completion w.ll put a befitting climax to the manly episcopate of B.shop Copleston, who has leng worked with much success to secure a worthy metropolitan church in this important centre of Eastern life belonging to the British Empire. The plan which accompanies the three perspective views shows how complete its arrangements are throughout. The west front view and interior of the cathedral were shown at the Royal Academy this year.

### OBITUARY.

Mr. Wilnam Galsworthy Davie, the wellknown architectural writer and draughtsman died or the 26th ult. at Furze Platt. Maidenhead, in his seventy-fifth year. Writing in the R.I.B.A. Journal, Mr. Leonard A. Shuffrey states that Mr. Davie began his architectural career in the office of Mr. Lauder, of Barnstaple, and whilst there, in response to an advertisement, he applied for and pro-Gured a situation as assistant to William Butterfield, in Adam Street, Adelphi, where he stayed for several years. In 1871 Davie competed for and won the Royal Academy Gold Medal, with a travelling studentship, for the best design for a college, and the year the Soane Medallion and travelling studentship for a design for Royal stables and residence for the Master of Horse. Francowas chosen for study, where some months were spent sketching and measuring mainly Early Gothic architecture. The result of this tour, made during the years 1874-5, was the publication by B. T. Batsford, in 1877, of "Architectural Studies in France, by W. Galsworthy Dayle," a large folio volume Galsworthy Davie," a large folio volume containing, besides many measured drawings of Early French Gothic details to a large of Early French Counce details to a large scale, a number of plates in colour of floor tiles, stained glass, decoration, and eccle-siastical metal-work, principally from Anyeire Cathedral. After leaving Butter field Davie commenced to practise. fountain, executed at Chippenham, was won in competition, and he erected some houses at Brighton, but his health failing, he retired into Buckinghamshire for some years.

Second Lieutenant Alexander Second Lieutenant Alexander Wingate, Le B.L.B.A. 5th Highbard Light Infantry, was killed in the recent fighting in France Lieut, Wingate was educated at Kelvinside Academy. He was articled to the late Mr. Weles S. Golson, and was afterwards in the offices successively of Sir John Burnet in Gla row and Professor Beresford Pite in Lordon. He travelled for a year in Italy, Spain, and Portugal, exhibiting the feuits of his tour in a series of water-colour sketches at the Gossow Institute of Fine Arts. In at the Gasgow Institute of Fine Arts. at the Gassow institute of Fine Aris. In 1991 he was awarded a medal in the Adwanced Class of Design at the Architectural Association. He started in practice alone in 1995, and atterwards entered into partner-ship with Mr. J. Campbell Reid, F.R.F.B.A. He was a member of the Architectural Asso-ciation. London, and an Associate Member of the Clasgew Institute of Architects.

The death of Mr. A. B. M. Donald, the Evangelist, Queen's Road, at 11.30 a.m., and the city or gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place on the city of gineer of Glasgow, took place of gineer of gineer of gineer of gineer of gineer of gineer of gineer of gineer of gineer of gineer of gineer of gineer of gineer of gineer of gineer of gineer of gin

as far back as 1870, and rose to be chief city engineer, a position which he occupied for twenty-five years, retiring in May of this year. During that period he was responsible for many important schemes, notably the main drainage system, which is the second largest scheme of the kind in the world. Apart from Glasgow Corporation work, his advice was sought by many municipalities, and he was a frequent witness at Parliamentary and other inquiries. Mr. M Donald is survived by his widow and a son and daughter. The son recently received a commission in the Glasgow Highlanders, in which he had served as a private.

The death has occurred of Mr. T. H. B. Heslop, M Inst.C.E., county surveyor of Norfolk, at the age of sixty five. He had been a sufferer from heart trouble, and in August last he went to Harrogate for a period of rest and recuperation. He benefited from the change, and was engaged in his official duties up to Saturday, October 30, when he attended a meeting of the Road Tarring Committee. The end came suddenly two days later at his residence. Edgewood, Eaton, near Norwich. Mr. Heslop was appointed county surveyor of Norfolk in 1885, in succession to the late of Morior in 1000, in succession to the late Mr. R. M. Phipson, and Mr. R. M. Brere-ton, who had held what was practically a joint position. During his tenure of office of thirty years he was engaged in many important undertakings, and at the time of the great flood in 1912 rendered valuable service in meeting the difficulties then presented and afterwards in repairing the damage done, In the work of road construction he took a high position. Mr. Heslop had been the president and was until his death the hon. secretary and treasurer of the County Surveyors Society. He leaves a widow, two sons, and one daughter.

The Irish Builder, in its current number, The Irish Builder, in its current number, reproduces from the Dublin daily papers last week the following notice:—"Jones—September 9, 1915, at his residence, The Gables,' 285, Barkly Street, St. Kilda, Melbourne, Alfred Gresham Jones, architect, late of Dublin, aged 93 years." It recalls, says our contemporary, the personality, and passenge at this advanced age, of a pace year, wellany contemporary, the presenting at this advanced age, of a once very well-known Dublin architect, Mr. Alfred Gresham Jones, who before he emigrated had a fairly extensive practice in Ireland. His chief work extensive practice in Ireland. was the old International Exhibition Buildings in Earlsfort Terrace, built by the late Mr. W. Beardwool, the main structure of which was designed to afford a permanent centre in Dublin for exhibitions, flower shows and concerts, and was very substantially built of permanent materials. Attached to it found of permanent materials. Attached to the were very pleasant and well laid out pleasure-grounds, now Lord Iveagh's gardens. The buildings included a fine concert-hall, the closing of which is a great loss to Dublin.

After fulfilling these purposes for a number of years, the buildings were in 1880 acquired by Government, who had just established the Royal University of Ireland, and set up the Intermediate Education system, and as such was utilised until the passing of the recent Irish University Act, when the buildings were handed over to University College, Dublin, who are now er eting new blocks and demolishing some of the old fabric. It had a fine frontage with a portio, though carried out in cement. Mr. Jores, who was the architect of Trinity Church, Rathmines, and other buildings, left Dublin to start practice in Australia, where, it is understood, he was very successful.

We regret to note the death on Monday last at Valencia House, Queen's Road, Fins-bury Park, N., of Mr. John Millett Newton, at the age of 63, the governing director of the well known and old established business of John W. Newton and Sons, Limited, glass merchants, of 21, 22, and 23, Hatton Garden, E.C. The funeral service will be held to morrow at the Church of St. John the Evangelist, Queen's Read, at 11.30 a.m., and the interment will follow at the Great Northern Cemetery, New Southgate, N.

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### ARCHITECTS' WAR SERVICE FORM.

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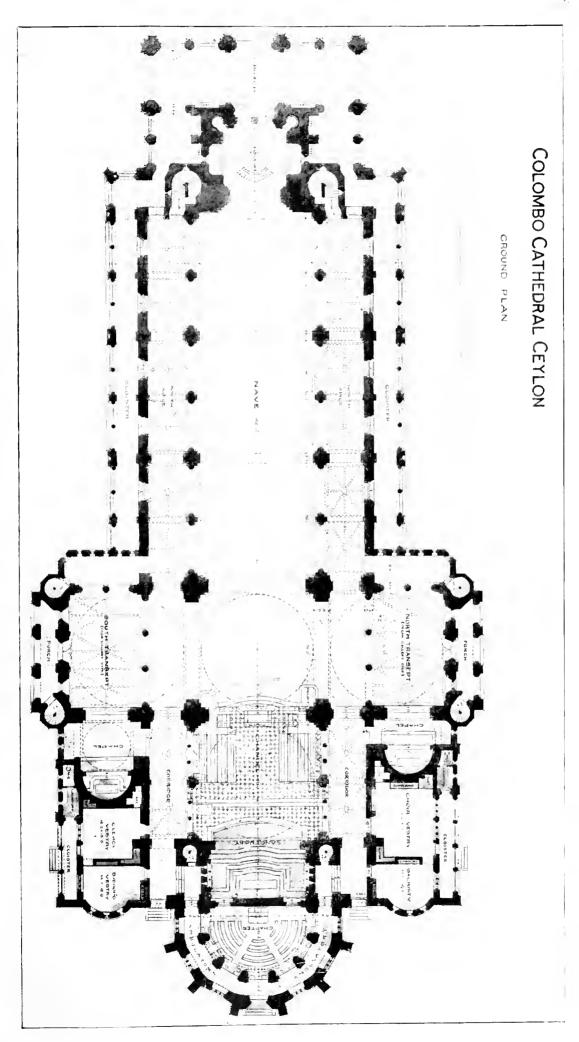
Signed

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Dated



NEW CATHEDRAL, COLOMBO, CEYLON: VIEW FROM THE SOUTH EAST TOWARDS THE SEA. Mr. G. H. Fellowes Prynne, F.RI.B.A., Architect.



GROUND PLAN, COLOMBO CATHEDRAL, CEYLON.—Mr. G. H. Fellowes Prynne, F.R.I.B.A., Architect.

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## DETAILS OF PROFESSIONAL EXPERIENCE.

Put a cross in the spaces under headings in which you have had most experience, and a circle to those in which you possess less, but some proficiency, As Clerk of Works or As Draughtsman. As Principal. Outdoor Supervisor. General Practice Business Premises Factories and Workshops Hospitals ..... Schools ..... Temporary Buildings.... Bridge Work.... Sanitary Work.... Municipal Engineering Civil Engineering ..... Dilapidations ..... Valuations ..... Structural Steel Work Road Making .... Land Surveying Other Work, not included above, namely ..... Put a cross in red ink in the space or spaces below applying to any service you would preferably undertake, and a circle in red ink in spaces for any second preference, your application being for junior commissioned rank or position as supervisor. Put a cross in black ink and a circle in black ink to indicate your first and second preferences respectively for any service in which you would enlist as a private or workman. PRESENT OR FUTURE SERVICE YOU WOULD UNDERTAKE. At the Date offered At Short Notice At Short Notice At Short Notice after Nov. 30, 1915, after Feb. 28, 1916, after May 31, 1916. Engineers, Naval Division..... Royal Naval Reserve R.N. Air and Anti-aircraft.... Royal Engineers :-Fortress (Territorial) Mining Battalions .... Navvy Battalions.... Royal Artillery Machine Gun Corps.... Infantry ..... Pioneer Battalions ..... Equipment Section Flying Corps.... Army Service Corps..... Mechanical Transport.... Army Ordnance Corps.... Ordnance Department..... Royal Army Medical Corps..... Army Pay Corps ..... Sanitary Companies ..... Military (not necessarily in uniform) :-Inspector of Works..... Surveyors (Billets, Dilapidations, Valuations) ..... CIVIL EMPLOYMENT FOR MEN INELIGIBLE FOR MILITARY SERVICE. Practical Draughtsman ..... Hutting and Sanitary Work ..... Inspector of Stores, Works and Factories Munition Supervisor or Workman

Inspector of Stores, Works and Factories .....

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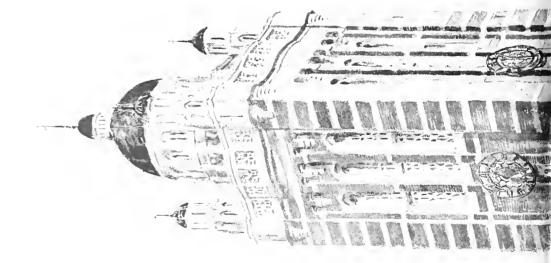
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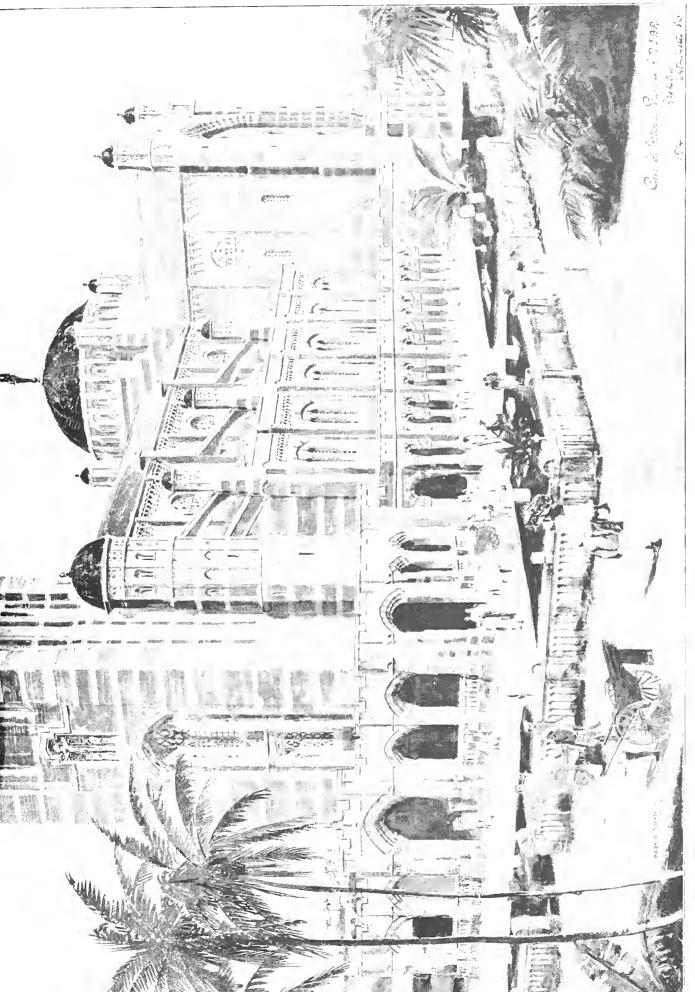
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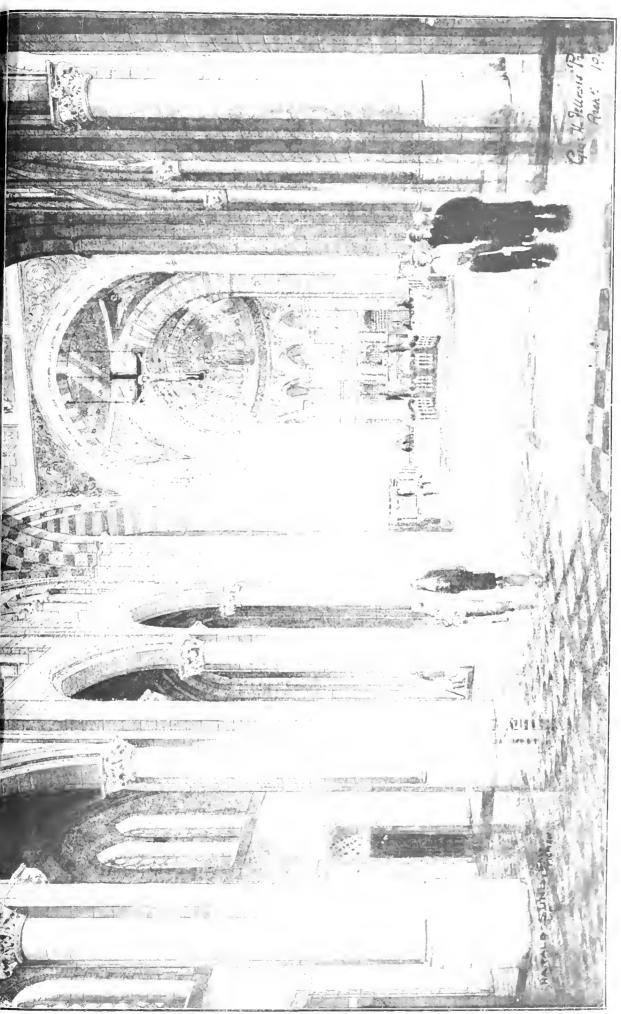




S.M. VIEW, NEW CATHEDRAL COLOMBO, CEYLON, M. G. H. FULIOW



THE BUILDING NEWS, NOVEMBER 10, 1915



NEW CATHEDRAL, COLOMBO, CEYLON, Mr. C. H. Fill INTERIOR, LOONING EAST,

#### PROFESSIONAL AND TRADE SOCIETIES

ARCHITECTURE AFTER THE WAR The desirability of doing everything possible to advance architecture in the Midlands was the chief subject dealt with by Mr. G. Salway Nicol, A.R.I.B.A., in his presidential address to members of the Birmingham Architectural Society on Friday night. The disturbance of war, he pointed out, could never be more than a temporary matter compared with the perpetual claims of architecture, and the success of our army and navy would once again leave us free to devote our energies to the development of the arts When that opportunity occurred, of peace. as most assuredly it would, it was of the ntmost importance they should have a more definite idea of the course to be pursued than they had had in the past. Continual changing from one phase of design to another would Recommending the younger lead nowhere, members of the profession to support the Municipal School of Architecture, the President said it was from such a source as this that the founding of a traditional style of building might be expected. The finest buildings of the past were invariably the result of working for generations in the evolution of art on similar lines, and in spite of extended knowledge of the various styles it was quite possible by the foundation of definite schools of design to re-establish this principle. It was only by means of such a traditional style and the co-operation of the complementary arts of sculpture and painting that the finest results could be attained.

CIVIC SURVEYS AND TOWN PLANNING IN YORKSHIRE.—Representatives of various West Yorkshire towns attended a conference held at the Town Hall, Leeds, on Thursday afternoon, for the purpose of inaugurating a civil survey scheme similar to those which are in existence in London and in Lancashire. The object of the scheme is to collect in regard to different districts data which may be of use in the preparation of town-planning schemes, and incidentally it is to provide work for architects who are suffering as a result of the war. The schemes are supported by Government allowances from the Prince of Wales's Fund. It was decided to form a consultative committee, the members including the Lord Mayors of Leeds and Bradford; Ald, Jessop, of Huddersfield: Mr. Charles Lupton, of Leeds: Miss Unwin, of Shipley; Mr. M. E. Sadler, Vice-Chancellor of Leeds University; and the Medical Officers and Engineers of Leeds, Bradford, Wakefield. Dewsbury, Batley, and Spenborough.

EXCAVATIONS IN THE CRYPT OF ST. MARY LE BOW CHURCH.—In a paper read before the British Archeological Association at their rooms in Russell Square on Thursday evening, Mr. F. Lambert described "The Excavation carried out by the Association in the Crypt of the Church of St. Mary-le-Bow, Cheapside. When Sir Christopher Wren rebuilt the tower of the church he found a Roman causeway, on which the foundations of the tower were laid. In the recent excavations a trench was dug along the east side of the crypt, along the line of Bow Lane. The first three or four feet down consisted of made earth; the next seven feet was a black peaty swamp, and at the hottem of this mass were two oak piles with planks which had been used to embank a stream running almost north and south across Cheap-The question was whether that stream could be followed in any other part of London? He thought it could. The old idea that Moorfields was a primitive swamp had long been abandoned in favour of the more reason able explanation that the swamp was caused by the Walbrook, which used to flow through London Wall by means of culverts, one or two of which had been found. In late Roman times, or after the Roman excavation, these culverts were neglected, and became blocked up. The river, therefore, spread a considerup. The river, therefore, spread a considerable distance, and the swamp began to form, and found an outlet by passing underneath the foundations of the walls all the way along from Cripplegate to Bishopsgate, and so into the Thames. It was already known that a swamp existed under the east end of St.

Lawrence's Church, under the Council Chamber of the Guildhall, and under the Public Health Office of the Corporation in Basinghall Street, and he suggested that these were caused by a stream parallel to the Walbrook, which, flowing south, had in turn caused the Church. By connecting these four places they got the line of flow. The presence of the swamp crossing the middle of Cheapside caused the Normans who built Bow Church to lay exceedingly massive and deep founda-tions. Mr. W. A. Cater, F.S.A., afterwards read a paper describing the mediaval church and crypt of Bow.

ROCHDALE MASTER BUILDERS' AS-SOCIATION.—A half yearly meeting of this association was held in the Masonic Hall, Oldham Road, on Wednesday evening. The president, Mr. T. S. Wilkinson was in the chair. After the disposal of the business of the meeting. Mr. Fred Greenwood's concert party provided an enjoyable entertainment. During the evening the five special given by the association, and awarded by the education authorities to the successful Building Course students at the Technical School, were presented to the students by the president, who, after congratulating them on their success, advised them to continue to take full advantage of the educational facilities granted, and also to remember that whatever was worth doing at all was worth doing well Mr. T. Howarth also delivered a short address in which he pointed out the necessity for and the value of strict attention to detail and thoroughness in every undertaking. The thoroughness in every undertaking. The prizewinners were:—John L. Shepherd, 112. prizewinners were :—John L. Shepnerd, 112. Church Street, Littleborough: Herbert V. Townend, 14, Moss Street, Rochdale; Fred Crossley, 20, Newall Street, Littleborough; Fred Kershaw, 3, Penine Villas, Littleborough; and Harry Wild, 36, Rose Terrace, Shore Road, Littleborough.

ULSTER SOCIETY OF ARCHITECTS. The October annual meeting of the members, associates, and students of this society at the society's rooms, 9, Howard was field at the society's rooms, 9, Howard Street, Belfast, on Friday, the 29th ult. The chair was occupied by the president, Mr. N. Fitzsimons, F.R.I.B.A., and amongst those present were Messrs, R. E. Buchanan, W. J. Gilliland, F.R.I.B.A., H. Seaver, B.E., F. H. Tulloch, F.R.I.B.A., W. C. Maxwell, A.R.I.B.A., Captain Ferguson, R.E., and T. W. Henry, M.S.A. hon, secretary. The W. Henry, M.S.A., hon, secretary, The report of the council regarding the alliance with the R.I.B.A., and its correspondence were submitted to the meeting and discussed, and the council was instructed to follow the matter up to a definite conclusion. The President reported on negotiations he had had with reference to a proposed memorial to the late W. H. Lynn, R.H.A. The proposal was discussed at some length, and referred back to the council for further development. The work of the Architects' War Committee was reported on and discussed by some of the members, and some suggestions were made as to its working with reference to War Office works. The scheme of the Central War Committee with relation to enrolment for national service was read from the correspondence of the War Com-mittee of the Royal Institute of British Architects, and the members unanimously decided to support the scheme. Mr. Robert 1. Calwell, of Donegall Square South, Belfast was elected a member of the society by ballot Messrs. H. Seaver and Captain Ferguson acting as scrutineers.

Mr. T. M. Williams, who has been docks marine manager at Southampton since 1902, has been appointed a justice of the peace for the borough.

Exterior additions are being made to the post office at Ballsbridge, Dublin, from plans by Mr. Andrew Robinson, of H.M. Office of Works, Dublin. The builder is Mr. F. B. McKee, of Belfast, and the outlay will be about

## Trade Delvs.

WAGES MOVEMENTS.

MANCHESTER AND SALFORD.—The Northern Building Trades Conciliation Board has conferred in Manchester to consider an has conferred in Manchester to consider an application for an advance in wages made by the bricklayers, the joiners, the sconemasons, the wood-cutting machinists, and the builders' labourers. The board decided to grant the labourers an advance of a penny an hour and the skilled men an advance of a half men a plane party and board the labourers. penny an hour, making the labourers' wages 7½d, and 8d. (instead of 6½d, and 7d.) and the skilled men's wages 11d. (instead of 10½d.). This is an advance in the rate of wages—not a war bonus—and it applies to Manchester and Salford and the ourkirts.

TRADE NOTES.

Boyle's latest patent "Air-Pump" ventilators have been applied to the Presbyterian Church, Limerick.

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The storage benefit of a basement is often ninimised through damoness. We learn that two such basements in Birmingham have now two such baselinens in Drinningham have how been successfully treated with a blue brick lining, the bricks being bedded with Padlord

liming, the pricks being between and centent mortar.

A fire recently occurred at Win. Morris and Co.'s, of Ruskin House, Rochoster Row, Westminster, and was reported so extensively that e. 1. and transport withholding Co. s. of Kuskin House, Rochoster Row, West-minster, and was reported so extensively that the firm finds architects are withholding orders on the supposition that they cannot be carried out. The damage, however, was con-fined to the top story, which was being used as a drill hall. The "Ruskin House" works are proceeding uninterruptedly, and all in-convenience to output has been entirely over-come. Messus, W. Morris and Co., whilst grateful to those friends who have so kindly sent their good wishes, hope that they may continue to receive orders, the execution of which will be absolutely unhampered. Messus, E. B. Shorland and Brother send us their new catalogue, No. 31, of their most recent warming and ventilating specialities. It contains illustrations and sections of their latest warm-air ventilating Manchester grate with patent hot-water boiler with intersecting flue, various designs of their well-known warm air ventilating patent Manchester grates, some having low fires, whilst others are shown fitted with vertical front bars, ventilating speciali-ties, electric fans, and louvre r of ventilatiors

with vertical front bars, ventilating specialities, electric fans, and louvre roof ventilations to work in conjunction with same, patent hygienic inlet ventilators, sections of their warmair ventilating patent Manchester stoves, which are in general use in hespitals, in firmaries, etc., and a list of a few hospitals where their patent Manchester stoves, etc., lead a lower lower love in the land love love love love love love. have been installed.

PARLIAMENTARY NOTES.
SAFETY OF NATIONAL GALLERY TREASURES.—Mr. Asquith, replying to Mr. Butcher, said: The question of the protection of the National Gallery has received the elementation with experts. Many pictures have been removed from exhibition, and in eight attention of the Trustees and Director in consultation with experts. Many pictures have been removed from exhibition, and, in view of the special precautions adopted, the Trustees, after full consideration, have felt that they would not be justified in closing the Gallery. Mr. Butcher: Is it not the fact that there are many irreplaceable pictures still on the walls? Mr. Asquith: I have not been there lately. been there lately.

A meeting of the suburban committee of the Midlothian County Council was held or Wednesday in the County Rooms, Edinburgh when it was reported that, in contravention of the bailding bye-laws, the building of an addition of ten bedrooms it (1)2-lockhart Hydropathic was commenced with out plans being submitted, and that co-plans being submitted, and that co-plans being subsequently soft in they were found not to conform in many respects with the requirements of the byce-laws. It was resolved to insist on the build-ing being taken down and removed.

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ling being taken down and removed.

Lance-Corporal G. Ramsay Thomson, 12th Battalion Royal Fusiliers, son of Mrs. Thomson, West Grove, St. Cuthbert's Avenue, Maxwelltown, has been posted as wounded and missing since September 28. Mr. Thomson is a partner in the firm of Messrs. Crombie and Thomson, architects, Irish Street, Dumfries, and he enlisted into the Army immediately after the outbreak of war. The other partner in the firm, Captain W. F. Crombie, L.R.I.B.A., served in the Dardanelles with the 15th King's Own Scottish Borderers, and he was invalided home wounded some time ago.

## Correspondence,

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## SURVINE FOR ARCHITECTS

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# LEGAL INTELLIGENCE.

THE SPITALFIELDS MARKET ARBITRATION.—The prolonged inquiry into the amount payable to Mr. Robert Horner by the City Corporation for his leasehold interests in Spitalfields Market, which has been hold he fore Mr. Charles A. Russell, K.C., at the Surveyors' Institute, Great George Street, has been brought to a close. Evidence on behalf of Mr. Honner was given by Mr. Daniel Watney, Mr. J. Scagram Richards in, Mr. W. P. Ryan, Mr. P. A. Meiner, Mr. Howard Martin, and Mr. W. H. Payne, and other sarveyors, and by S. Alexander R. Steining Mr. F. W. Pixley, Mr. Lostic R. Vigers, Mr. Howard Charfeild Clarke, Mr. Sydney Perks, F.S.A. City Sansyover, M. W. S. Walker, in a chief of the Corporation of the first of the Corporation of the market for £32,000. The arbitration of £32,000 and the first form of the market for £32,000 and the first form of the market for £32,000 and the first form of the market for £32,000 and the first form of the market for £32,000 and the first form of the market for £32,000 and £32,000 and £32,000 and £32,000 and £32,000 and £32,000 and £32,000 and £32,000 and £32,000 and £32,000 and £32,000 and £32,000 and £3

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# Building Intelligence.

EDINBURGH .- The hearding is being removed from around the front section of the Royal Dick Vetermary College buildings, in Summerfull Hope Park, of which the toundation stone was laid by the Marquis of Linhthgow, July, 1914, and this portion will he occupied after the Christmas holidays. The nain buildings, which are Classic in character, form three sides of a courtyard, and in them are grouped separate departments for anatomy, chemistry, physiology, pathology, biology, materia medica, and obstetrics. Connected with the various departments there are seventeen laboratories and tive lecture theatres, with adicining and five lecture theatres, with adjoining preparation rooms, and a dissecting hall with accommodation for over saxty students. On the east side of the courtyard is a separate clinical department, where the practical work of the College will be carried on. In this department there are, in addition to loose boxes, stables, cow-byre, and sheep pens, five isolation and general words for dogs and isolation and general wards for dogs and cats. The clinical block also contains two operating theatres for large and small animals respectively, "X"-ray apartment, and room for pharmacy and surgical demonstrations. The college is being erected from plans by Mr. David M'Arthy, L.R.I.B.A., of Frederick Street, Edinburgh, Unfortunately, a financial crisis has arisen owing to the war, and an urgent appeal is being made for the £12,000 necessary for the completion of the building on a curtailed scale. About £50,000 has already been expended on the buildings.

WEST THURBOCK HOUSING SCHEME

WEST THURROCK HOUSING SCHEME. -The Rural District Council of Orsett has recently built on two and a-half acres of land recently built on two and a-half acres of land at West Thurrock fourteen cottages for the working classes, being half of a complete scheme of twenty-eight cottages, the building of the remaining half being postponed until the conclusion of the war. The accommodation in each case is as follows:—On the ground floor: Entrance lobby, out of which the stairs lead, living room, scullery, larder, coal store, and cupboard under stairs; on the first floor: Three bedrooms, with a cupcoal store, and cupboard under stairs; on the first floor: Three bedrooms, with a cupboard over stairs. The cottages are semidetached, each standing on a plot of land having a frontage of 26 ft, and a depth of 116 ft. The cost per cottage works out at about £173, including road, drains, and fences, but not land. After allowance for repayment of loan, insurance, repairs, empties, etc., in accordance with the Local Government Board's schedule, the cottages are self-supporting at a rental of 5s, 6d, per week each, including rates. Mr. F. J. Winter, M.S.A., of 2. Heygate Avenue, Southendon-Sea, was the architect, and Mr. F. C. Stark, of Morris Avenue, Manor Park, the builder. the builder.

#### -STATUES AND MEMORIALS.

MEDALLIONS IN WESTMINSTER ABBEY—In Westminster Abbey medallions have been uncovered to perpetuate the memory ABBEY—In Westminster Abbey medallions have been uncovered to perpetuate the memory of three famous scientists—Sir Joseph Hooker, Lord Lister, and Dr. Alfred Russel Wallace. The new memorials have been placed on the wall of the north aisle of the choir, beneath the organ, and the medallions which were already there have been rearranged. The bronze medallion of Charles Darwin is now at the end nearest to his last resting-place, and the fresh memorial to Dr. Russel Wallace, whose name is associated with that of Darwin in scientific work, has been placed next to it. The Wallace medallion is the work of Mr. A. Bruce Joy. Lord Lister's memorial, which is placed next to that of Dr. Wallace was executed by Sir Thomas Brock. Other than the name, it bears no inscription. The tublet to Sir Joseph Hooker is lower on the wall, near the tomb of Lord John Thyme, below the tablet to Sir George Gabriel Stokes. The inscription is:

—"Josephus Daitor, Hooker, 1317-1911. Herbarium Scientia Praestantissimas" This monument is the work of Mr. Frank Bowcher.

Mr. Dolan, assistant surveyor to the Ros-common Rural District Council, has resigned after fifty years' service.

## Om Office Cable,

An important loan exhibition of drawings, principally by artists of the British school, and almost entirely gathered from Yorkshire collections, is open at the present time in the Corporation Art Gallery, Bradford. Among the older British school, such men as Rowlandson, Romney, Gainsborough, Lawrence, Blake, Cotman, and Constable are represented. There is an even larger and more varied collection of modern work, which includes examples by Messix, John, Rothenstein, Bone, Cameron, Strang, Clausen, and many others. Drawings by such Victorians as Ruskin, Madox Brown, and Alfred Stevens, and a few studies by important French artists like Puvis de Chavannes and Danmier are also shown.

The urban district council of Frome received at their last meeting a suggestive report by Mr. F. W. Jones, their surveyor, on the question of true economy in road maintenance, which deserves a wider circulation than the governing body of that flourishing little Somersetshire town. Mr. Jones remarked that it was only fair to everyone concerned to realise that a wrong inter pretation might be put on the word economy Some people might think that a rigid cutting down of the stone allowance was economy, because, for the time, the stone bill was Such a policy, if carried too far, reduced. would only end in the ratepayers having to face a quadrupled expenditure. For if surface crusts were to be allowed to be worn through, the expense of renewing the substructure of the road must be enormously greater than the mere maintenance of the And it was not to be torgotten that for transit purposes the roads to-day were being increasingly used to relieve the con-gested state of the railways, and it was important that the main arteries, at least chould be kept up to bear this increased traffic.

The damage done to the Church of Santa Nazaret (commonly called the in "Church of the Scalzi"), in Venice, during the recent Austrian air raid appears to be irreparable. The architecture is of the Late Renaissance period. The chief artistic value of the church lay in the vault fresco by Tiepolo, which has been almost completely destroyed. The fresco was of the same period as the famous picture of the Carmine (1743-44). It represented the Virgin expelling the heresies from her house. about the Madonna, both above and below. were groups of angels. The fresco covered the entire vault of the nave. The bomb fell the entire vault of the nave. The bomb fell on the apex of the nave, bringing down almost the whole vault. Only fragments of the fresco remain on the parts of the vaulting which springs from the pillars. lies in fragments on the floor of the church. Experts who have visited the church say that there can be no question of restoring the fresco.

We heartily endorse the Bishop of Worcester's sensible remarks as to the extravagant size of many memorials in our churches, in the current number of the Worcester Diocesan Magazine. The Bishop thinks that, in view of the sad fact that the war is likely to add greatly to the number of our tributes to the dead, it would be well that the clergy should make an effort to get the size of tablets and brasses reduced. "A small memorial in a church," says the Bishop, "has in it a beautiful i-lea, but large and pretentious monuments, which tend to occupy wall space and exclude poorer neighbours, are not suitable for the House of God. If this were pointed out to the relatives of the dead I am sure they would see the force of it, but, failing that, it might be possible that faculties should insist upon tablets of smaller dimensions."

The number of dwelling-houses certified as fit for human habitation in Manchester for the year ending October 31 is 415. This compared with 748 last year, 997 in 1913. Statistically 1,283 in 1912, 1,578 in 1911, 2,254 in 1910, and 2,344 in 1909. Divided into districts out.

the returns for this year show that 214 houses have been built in the Withington district, fifty-nine in Moston, forty-five in Rusholme, twenty two in Levenshulme, twenty in Openshaw, sixteen in Crampsall, thirteen in Clayton, eight in Cheetham, six in Newton Heath, five in Blackley, and one each in Moss Side and Ancoats. For many years Withington has headed the list. During the last seven years no fewer than 3,360 houses have been built in that district, Rusholme, Moston, Blackley, Cheetham, and Openshaw, generally in the order named, come next, but all the c districts show a great falling off in the last two or three years.

Second Lieutenant Charles Emerson Clouting, A.R.I.B.A. (of Sevenoaks), 1st Bat. Buffs (East Kent Regiment) has been awarded (of Sevenoaks), 1st Bat. the Military Cross for conspicuous gallantry on the night of September 21, 1915, near Forward Cottage, when on patrol duty with Captain Colville, 1st Shropshire L.L. Capt. Colville was shot within fifteen yards of the German sap which they were reconnoitring. and, although Second Lieutenant Clouting en deayoured to drag him back, he was unable to do so. It was uncertain whether Captain Colville was still alive, and, after the return of the patrol, a rescue party was led back by Second Lieutenant Clouting. He found Captain Calville dead, and, recognising that numbers would be a source of danger, he sent all his party back except Sergeant These two crawled back under heavy fire, dragging the body with them. was bright moonlight at the time.

The general report of the Survey of India for the year comprised between October 1, 1913, and September 30, 1914, has just been published. For topographical work a programme had been drawn up in 1905, compris ing 1,821,600 square miles; of this, 366,244 square miles have been completed in the ten years, and 1.455,356 square miles remain to be completed. During the year under report 54,359 square miles have been completed at a cost of Rupees 14,48,508, being it an average rate of Rupees 26.6 per square mile. The work was done in three circles, designated respectively the Northern, Southern, and Eastern, and their rate costs, respectively, were Rupees 18'2. Rupees 27'2, and Rupees 59'5. Rate cost for the Eastern circle was naturally high as it included much inaccessible and otherwise difficult country in Assam and Burma. All the forest surveys were also carried out by topographical parties, the majority on a scale of two inches to the mile, some on the one inch scale, and forest boundaries on the scale of four inches to the mile. Captains Bailey and Morshend of the Survey of India, after a six months' exploration of the Upper Brahma six months exploration of the Upper brahma-putta, returned in November, 1913, confirm ing the belief that the Tsin-po and Brahma-putra are the same river. They have cor-rectly located the great southerly bend in the course of the river, placing it about sixty miles further east than it was supposed to be and also definitely establishing the fact suggested by Sir S. Burrard that the great Namcha Barwa Peak, 25,445 ft. high, lies in this bend. These two officers have succeeded in making a reconnaissance of 16,000 square miles of hitherto unknown country

The Wallpaper Manufacturers Company paid 8 per cent, per annum on its ordinary shares for the nine years to 1906-7, but after that the dividend dropped to 4 per cent. Then for five years it stood at 5 per cent, but for 1913-14 it fell to 2 per cent, which was an interim distribution. Now the ordinary dividend ceases for the time being, and the preference dividend can only be paid by reducing the balance forward. The company has a deferred share capital of £1,095,621, but as this only takes the residue when the ordinary shares have had 10 per cent, paid on them, apparently it has yielded nothing in all the years named.

The rural district council of Crowland are about to construct a new road across Crowland Common to connect the north end of Remow's Drive with the road to Littleworth Station. The necessary land has been given by the owners, and the route is now staked

#### CHIPS.

Mr. John E. Drower, M.R.S.A., has been elected Master of the Govers' Company.

Mr. D. Roberts, borough surveyor, has reported to the Lewes Town Council that the repair of the sewage culvert at Winterbourne has been completed at a total cost of £1,650.

Mr. A. P. Horsley, horough engineer of Hartlepool, has been appointed surveyor and architect to the Education Authority, and has had his salary increased by £50 per annum.

The Corporation of Leeds have received die sanction of the Loral Government Roral to prepare a town-planning scheme for the suburb of Gledhow over an area of 852 acres.

The new mission church at Charleigh, dissigned by Mr. John Begg, F.R.L.B.A., emsilting architect to the Government of India, was dedicated by the Bishop of Lucknew on O tober 15.

At Cardiff, on Monday, a Local Government Board inquiry was held by Mr. W. O. E. Meade King into an application of the council for leave to horrow £5,500 for the purposes of the fire brigade.

A new Wesleyan Church, on the Leek Road, Bortombous Staffs, was opened ast week. The architect was Mr. R. T. Lengdon, of Leek, and the builders Messrs. J. Fielding and Sons, Alton.

Mr. Robert Wylie, architect and surveyor, Lord Street, Liverpool, died last work, at the age of eighty-one. He was for man years the Deputy Provincial Grand Masser of Freemasons in South-West Lancashure.

It is proposed to build on the site of the rink in Westgate Street, Cardiff, a public hall seated for 4,000 persons. The architects to the syndicate are Messes, Willmott and Smith, of St. Mary Street, Cardiff.

A new Primitive Methodist church and schools are about to be built at Schsbary from plans by Messrs, George Bames and Son, of Clements Inn. Strand, W.C. The contract his been taken at £3.017 by M. J. Nichol.

Mr. W. C. Persey has been appointed borough engineer and surveyor of Burrow-in-Furness for a period of twelve months in succession to Mr. Arthur Race, who has secured the borough surveyorship of Blackburn.

The late Mr. Thomas John Thomps u. of Peterborough, senior member of the firm of John Thompson and Co., church build us and restorers, and son of the late Mr. John Thompson, J.P., left net personality £3,743 gross £10,697.

The eighteenth list of Members, Licentiates and Students of the Royal Institute of British Architects who have joined the Army or Navy for the peri d of the war gives a total to date of 45 Fellows, 345 Associates, 150 Licentiates, and 223 Students.

The death has occurred at Eastgete Sea ford, of Mr. W. H. Maxey, builder and contractor, in his eighty-first year, Heledeen and Mr. Maxey, who was a widower, leaves two sons and three daughters.

A new decorative fresco, the gift of 8.r Frederick Green, has been placed in one of the vacant punels at the Royal Exchange. The subject is "The Charter of Philip the Good of Burgundy," and the artist is M. B. A. Cox, formerly in the studio of M. Frank Brangwyn, R.A.

Licutemant William Brian Mortimer, 2nd Durham Light Infantry, of The Debdaie, Finedon, Wellingborough, availed at State manufacturier, who was killed in Flanchers on June 13, aged 39, second son of the late William B. Mortimer, of Hay Carr. Laneaster, left personalty amounting to £24,500.

The Roman Camolic Church of the Wessel Sacrament and St. James in Copenhagen Street. West Islington, of which the foundation state was land last week by Cardinal Bourne, is been a bailt from plans by Mr. Robert L. Chrois. The building is in simple Romanes are style, and comprises a parish half in the half lessement, with the clurch immediately over inviding accommodation for about 250. The planning allows for a future extension. The church plan is a nave without aisles. The main façade is of purple bricks, with red-brick arches and dressings, and the roof is of red tibes. Artificial lighting will be by electricity, and the henting by radiators. The buildings are being erected by Messrs, E. Lawrence and

being built at Bunclody, It is of stone, % it by 25 ft, Mr. Patrick Armstrong, of

1 S. Prio , M.A., F.R.I.B.A., of Fine Art at Cambridge, storagy (Tuesday afternoon the second Hermione loctures on "The encycliphe Flemish Arts," at Alex Year of the Dublin.

e. Ducks Committee have author-M K alie, their engineer, to carry the tally the renewal of the founda-k was he see, cast side. Avoimouth and to provide an additional fire the see wharf, Portishend Dock.

Provincial Bank, Royal Avenue,

Provincial Bank, Royal Avenue,

Fractions, Wellington Place, and

Control is being carried out by Messrs,

Let a bell and Son, Ravenhill Road, also

Belling.

G. E. Matthews, surveyor, of Spalding, and part of the South Holland Drainage to the force Crowland and Cowbit I is a last configurated and Cowbit I is a last configurate a captrincy in a D that. Companies of the Royal soften described from June district have joined the com. I available sent early to France to early to his configuration.

Case, and Co., of Capeningst, the force new workhouse infigurary on We incoday handed over to the term of Ration Board of Guardians to the Weight of the board of the hoard of the Rations, Mold, and Mr. Parry, of the works

the works,

a disposal works for the inbanner, of Bingley, near Bradford,
econstructed from plans by Mr. Htime councils surveyer. They contients to the existing sewage works
Gap. The centractors were Messrs,
to Teley, of Bradford, and the outlay
19 22, making a total expenditure on
2 and sewage disposal by the urban
emed of £37,556. 1).

Start cincil of £57,555.

At Deefe where Dean of Guild Court plans on a consequence lay the School Board of Darker of presented by the School Board of Darker of for the erection at Rosyth of a control of the erection at Rosyth of a control of account dating 1,000 pupils, which materials of account dating 1,000 pupils, which materials of account dating 1,000 pupils, which is the first the building plans were unit and day a drainage plan, and a letter cather than the Scottish National Housing Life edgecting meantains to the school of the edgecting meantains to the school of the part of was adjourned in order that the lesses of drainage might be settled.

Amena the woonded in action in the latest see. The at Lacence A Direks (son of the carry of the RTBA, 9, Conduit Strict), the Tth London Regiment, who is indefine the second time severely; he is very testial in England, and progressing the second to the England, and progressing the second to RTBA of the 4th Royal Second To the Arnold Silverk, ARTBA to the 2td Second Stational Silverk Regiment and formerly in the Artists' Rifles after second formerly in the Artists' Rifles after second to the stational shire Regiment and formerly in the Artists' Rifles after second second progress.

e a numer date of the Improvements

Commutee, the City Corporation

The school offer from the Queen

Social of Company, Limited, to

to the cond buildings of 51, 53,

13, and 64, Leadenhall

the conductor of a felt years at a rental per angle of the Court also accept from the Curv of London Real from the Curv of London Real from the Curv of London Real from the Curv of London Real from the from the from the from the Curv of the Curv for £18,500.

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#### TO CORRESPONDENTS.

We do not hold ourselves responsible for the opinions of our correspondents. All communications should be drawn up as briefly as possible, as there are many claimants upon the space allotted to correspondents

correspondents

It is particularly requested that all drawings and all communications respecting illustrations or interary matter, books for review, etc., should be addressed to the Editor of the Building News, Ellingham Honse, I, Arnndel Street, Strand, W.C., and not to members of the staff by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributors' risks, and the Editor will not undertake to pay for, or be hable for unsought contributions.

the Editor will not undertake to pay for, or be hable tor, unsought contributions.

\*\*brawings of selected competition designs, important public and private buildings, details of old and new work, and good sketches are always welcome, and for such no charge is made for insertion of more commonplace subjects, small churches, chapels, houses, etc.—we have usually far more sent than we can insert, but are glad to do so when space permits, on mutually advantageous terms, which may be ascertained on application.

When favouring us with drawings or photographs, architects are asked kindly to state how long the building has been erected. It does neither them nor us much good to illustrate buildings which have been some time executed, except under special circum trances.

nees. Telephone: Gerrard 1291. Telegrams: "Timeserver, Estrand, London."

#### NOTICE.

NOTICE.

Bound copies of Vol. CVIII. are now ready, and should be ordered early (price 12s. each, by post 12s. 9d.), as only a limited number are done up A few bound volumes of Vols. XXXIX., XLI., XLVI., XLYI., XLYI., LXIV., LXY., LXVI., LXVI., LXVI., LXVI., LXVI., LXVII., LXVII., LXVII., LXXVI., LXXVII., LXXVII., LXXVII., LXXXII., LXXXII., LXXXII., LXXXII., LXXXII., LXXXII., LXXXII., LXXXVII., Handsome Cloth Cases for binding the Britining NEWS, price 2s., post free 2s. 4d., can be obtained from any Newsagent, or from the Publisher, Effingham Honse, 1, Arundel-street, Strand, W.C.

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One Pound per annum (post free) to any part of the United Kingdom; for the United States, £1 6s. 0d (or 6dols. 30c. gold). To France or Belginm, £1 6s. 0d (or 33f. 30c.). To India, £1 6s. 0d. To any of the Australian Colonies or New Zealand, to the Cape, the West Indies, or Natal, £1 6s. 0d.

\*\*Our Direct Sub-cription Agents for Australia are Messrs. E. T. Kibblewhite and Co., Printers and Publishers, 19, York Chambers, 105, Liverpool Street Sydney, New Sonth Wales; for Japan, The Maruzen Co., Ltd., 11-16, Nionbashi Tori Sanchome, Tokyo, vho will receive Subscriptions at £1 6s, 0d. per annum on our account. Copies of the paper will be sent by us direct to the subscribers' address.

\*\*The special rate to Canada is £1 3s. 10d =5dots. 80c. for 12 months, and 11s. 11d.=2dots. 90c six months. Our Direct Subscription Agents for Canada are Messrs. Sells, Etd., 302. Shaughnessy Buildings, McGill Street, Montreal, who will receive Subscriptions. £1 3s. 10d. per annum, on our account.

Cheques and Post-office Orders to be made payable to The Strand Newspaper Company, Limited, and crossed London County and Westminster Bank.

#### ADVERTISEMENT CHARGES.

The charge for Competition and Contract Advertisements, Public Companies, and all official advertisements is 1s. per line of Eight Words, the first line counting as two, the minimum charge being 5s

line counting as two, the minimum charge being of for four lines.

The charge for Auctions, Land Sales, and Mis-cellaneous and Trade Advertisements (except Situa-tion Advertisements) is 6d. per line of Eight Words (the first line counting as two), the minimum charge being 4s. 6d. for 50 words. Special terms for series of six insertions or more can be ascertained on appli-mation to the Publisher. cation to the Publisher.

#### SITUATIONS VACANT AND PARTNERSHIPS

The charge for advertisements for "Situations Vacant" and "Partnerships" is One Shilling for Ewenty four Words, and Sixpence for every Eight Words after. All Situation Advertisements must be prepaid.

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#### REPLIES TO ADVERTISEMENTS.

Replies to advertisements can be received at the Other, Effingham House, I. Arundel Street, Strand, W.C., free of charge. If to be forwarded under sover to advertiser, an extra charge of Suspence is nade. (See Notice at head of "Situations.")

Advertisements for the current week must reach the office not later than 3 p.m. on Tuesday. Front-

page advertisements and alterations or stop orders for serial advertisements must reach the office by first post on Monday to secure attention.

C. Co.—G. R. and Son.—T. S.—G. and Son.—W. C. Co., Ltd.—V. de T. Co., Ltd.—T. and R. B., Ltd.—E. F. B. and Co.—E. and R., Ltd.—C. C. D. and Co.—D. and Co.—B. Bros.—P.C. Co., Ltd.—R. C. and C. and Co.—Ltd.—R. J. and Co.—W. and Co.—W. and Son.—B. P.C. Co., Ltd.—R. C. and C. and Co., Ltd.—R. J. and Son.—B. P. C. Co. Ltd.—R. B. and Son.—W. O. and Son.—J. M. and Son.—D. and Co.

YERBA.—Yes.

J. L. A .- Please send.

G .- We know nothing of them. STUDENT .- See our notice last week on p. 496.

TO ARMS!

### 4th Battalian ("Architects") Central London Regiment Volunteers.

Recriits are urgently needed for the Regulars, Territorials, and Volunteers. Intending recriits should apply to Battalion Headquarters, where they will be advised as to the branch of the service for which they are best suited.

ORDERS FOR THE WEEK BY LIEUT.-COL. A. W.

WARDEN.
GENERAL PARADES.
There will be no General Parade on Saturday,

13th mst. Saturday, 29th inst., Uniform Parade at Chester House, 3 p.m.

Saturday, 20th inst., Uniform Parade at Chester House, 3 p.m.

NEW HEADQUARTERS.—OPENING MEETING, 24th inst., 7 p.m. All members are particularly requested to attend.

Working parties are still required every evening up till 7 o'clock and on Saturday.

ENTRENCHING PARADE.

Sunday next. 14th inst., at Victoria Station, L.B. and S.C., Railway Indicator Poord, 8.55 a.m. sharp. Uniform, haversacks, and water-bottles. Mid-day rations to be carried. Return to town about 6.40. Railway vouchers will be provided and special trains will be run by the railway company.

DRILLS AND PARADES.

"A" Company, Tuesdays, mimature range, Gas light and Coke Co.'s premises, Monck Street, Westminster, 5 to 8.30 p.m.

Wednesdays, Company Parades for drill and technical instruction, 5.15 to 7.15 and 6.15 to 8.15, at Cluster House.

Timrsdays, Signalling at Chester House, 6 p.m.
"B" Company, miniature range and company Parades as for "A" Company. See orders at local headquarters,
"C" Comman. See orders local headquarters,

headquarters,
"C" Company. See orders local headquarters,
Pavilion A.A., Athlebic Ground, Boreham Wood,
"D" Company. Platoon and Section Drill at
Chester House, Tucsdays and Thursdays, 6.45 p.m.,
Company. Parades, for drill and technical instruction, Wednesdays, as for "A" Company.

SCHOOL OF ARMS.

Deill Headquarters, Chester House,—Instruction in
bayonet fighting, Gymnastics, physical drill, boxing,
and single sticks on Tuesdays from 6 to 8 p.m.

EXCEPTIC DRILLS.

Bayong ingle sticks on Thesdays from 6 to 8 p.m.

RECRIT DRILLS.

"A" and "B" Companies.—Chester House, 6-15 to 7-15 and 7-15 to 8-15 Mondays and Fridays.

"C" Compan.—Boreham Wood and Elstree District Headquarters, A.A. Athletic Ground, Boreham Wood. For full particulars apply to Alan Potter, Grey Gables, Boreham Wood. Herts.

"D" Company.—Chester House, Tuesdays and Thursdays, 6-15 n.m.

Note.—For the present the School of Arms and Recrint Drills will be held jointly with the Engineering Institutions Y.T.C.

By Order,

L. R. GUTHRIE, Adjutant.

BATTULION BEADQUARTERS,

18. TUFTON STREET, WESTMINSTER, S.W.—

### MEETINGS FOR THE ENSUING WEEK.

MEETINGS FOR THE ENSUING WEEK.
WEDNESDAY.—Chadwick Lecture. "Emergency Military Hospital Construction," by A. Saxon Snell, F.R.I.B.A. Royal Scripty of Medicine, I. Wimpole Street, W. 5.15 p.m.
Manchester Society of Architects.
"Athens and Some of the Isles of Greece," by J. B. Gass, F.R.I.B.A. 6.30 p.m.

6.30 p.m.

6.30 p.m.

Therefore, Christmas Fair, Architects' Committee, 9, Conduit Street, W. 4.30 p.m., Society of Architects, Members' Meeting for election of new members, 28, Redford Square, 6 p.m., Anctioneers and Estate Agents' Institute, "War Risks to Property," by Sydney 4, Smith, F.A.L. 34, Russell Square, W.C. 5 p.m.

1118DAY (Nov. 16). Institution of Civil Engineers, "The Puniab Triple Canal System," by Sir John Benton, K.C.L.E., W.I.C.L., 5.30 p.m.

WEDNESDAY (Nov. 17). Chadwick Lecture, "Some Conclusions on Housing Our

WEDNESDAY (Nov. 17) Chadwick Lecture, "Some Conclusions on Housing Our Workers," by W. E. Riley, F.R.I.B.A. Royal Samtary Institutie, S.15 p.m. 8), Paul's Ecclesiological Society, "Anchorite Cells," by Arthur D. Sharp. 81, Paul's Chapter House, E.C. 8 p.m.

E.C. S. P.M.
SHURDLY (Nov. 191.—Glasgow Architectural Craftsmen's Society, "Wind Bracing for
High Office Buildings," by George
Matthy, S. p.m.

### LATEST PRICES.

N.B.-All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

#### TIMBER

Owing to stoppage of supplies all prices have advanced considerably.

mave advanced considerably.
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Steel Strip
Square       24 0 0 , -         Do., Staffordshire Crown       14 0 0 , 14 10 0         Boiler Plates, Iron
South Staffs
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No. 18 to 20. No. 22 to 24.
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" Country *35 10 0 — [Over 4½in, £1 per ton extra.]
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Do., Bars
Genuine White Lead 38 0 0 0 —  Refined Red Lead 38 0 0 —  Sheet Zinc 110 0 0 0 —
Cut nails (per cwt. basis, ordinary
* For 5 cwt. lots and upwards.

## BUY SCRAP META

#### ARTHUR P. COLLINS, Snow Hill, BIRMINGHAM.

Phone: Central 1921. Telegrams: "Menlise, Birmingham Bankers: The National Provincial Bank of England, Ltd., Bennett's Hill, Birmingham.

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Rounded Internal Angles—

4d. each 5d. each 5d. each 4d. each

MOULDED BRICKS.

Stretchers and Headers—
8d. each 8d. each 8d. each
Internal and External Angles—
1/2 each 1/2 each 1/2 each 1/2 each
Sill Bullnose, Stretchers, and Headers—
5d. each 4d. each 6d each 6d. each
Majolica or Soft Glazed Stretchers and Headers—
Compass bricks, circular and arch bricks of single radius £6 per 1,000 over above list for their respective kinds and colours—
Camber arch bricks, any kind or colour, 1s, 2d. each 1,000 extra.
These prices are carriage paid in full truck loads to London Stations—
S. d.
Thames Sand—
7 6 per yard, delivered.
Pit Sand—
7 6 per yard, delivered.
Greund Blue Lias Lime—
21 0 per ton, delivered.
Grey Stone Lime—
13 6 to 14 0 delivered.
Grey Stone Lime—
13 6 to 14 0 delivered.

STONE.			
STORE.	co	2	4
Red Mansfield, in blocks per loot cube	20	=	6
Darley Dale, ditto	V	2	
Red Corsehill, ditto	U	4	6
Closeburn Red Freestone, ditto	0		
Ancaster, ditto	0		11
Greenshill, ditto		2	Q
	0	1	71
			-
Chilmark, ditto (in truck at	Λ	1	10%
Nine Eluis)	ň		0
Hard York, ditto	0	4	•
Do. do. 6 in. sawn both sides,	_	^	0
landings, random sizes per foot sup.	0	2	0
Do, do. 3 m. slab sawn two			
pides random sizes	0	1	3
*All F.O.R. Londo			

Bath Stone-Delivered in rail- way trucks at Westbourne	£	8.	d.
Park, Paddington (G.W.R.), or South Lambeth (G.W.R.) per foot cube	0	1	73
Delivered in railway trucks at Nine Elms (L. & S.W.R.)	0	1	81
Delivered on road waggens at Nine Elms Depot, Portland Stone-Brown Whit-	0	1	91
bed in random blocks of 20 It. average, delivered in railway			
trucks at Westhourne Park (G.W.R.), South Lambeth			
(G.W.R.), or Nine Elms (L, & S,W.R.)	0	2	5
Delivered on road waggons at Pimhco Wharf or Nine Elms	^	•	6
White Basebed—2d, per foot cube extra.	U	2	0

		8.	d.		Olvrd.at
	Plain red roofing tiles	42	0 per	1,000	ry. sn.
	Hip and Valley tiles	3	7 per		.,
		50	0 per	1,000	.,
	Ornamental tiles		6	,,	
	Hip and Valley tiles	4	0 per	doz.	11
	Ruabon red, brown, or hrindled				
	ditto (Edwards)	57	6 per	1,000	
	Ornamental ditto	60	0	**	11
	Hip tiles	4	0 per	doz.	
	Valley tiles	3	0 _	11	11
	Selected "Perfecta" roofing				
	tiles: Plain tiles (Peake'a)	46	0 per	1,000	- 11
	Ornamental ditto	48	6	97	19
	Hip tiles	3	10%per	dez.	11
	Valley tiles	- 3	4 ½	11	11
	"Rosemary" brand plain tiles .	48	0 per	1,000	11
	Ornamental tiles	50	0		11
	Hip tiles	- 4	0 per	dez.	11
	Valley tiles	3	8	11	11
۱	Staffordshire (Hanley) Reds or				
	hrindled tiles	42	6 per	1,000	11
	Hand-made sand-faced	45	0	_11	**
	H.p tiles	4		doz.	11
	Valley tiles	3	6	11	1.9
ł	"Hartshill" brand plain tiles,	_			
	sand-faced	45		1,000	11
	Pressed	42	6	2.2	9.0
	Ornamental ditto	47	6	-21	11
	Hip tiles	- 4		· doz.	**
	Valley tiles	3	6	11	11
	OILS.				

	ons.						
Rapeseed, English pale,	per tun .	£28	15	0 to	£29	5	0
Ditto, brown	* **	26	15	0 ,,	27	5	0
Cottonseed, refined	11	29	0	0 ,,	30	0	0
Olive, Spanish	**	39	10	0 ,,	40	0	0
Seal, pale	71	21	0	0 ,,	21	10	0
Cocoanut, Cochin	11	46	0	0	46	10	0
Ditto, Ceylon	11	42	10	0 ,,	43	0	0
Ditto, Mauritius	**	42	10	0 ,,	43	0	0
Palm, Lagos	11	32	5	0 ,,	33	5	0
Ditto, Nut Kernel	"	35	0	0 ,,	35	10	0
Oleine	**	17	5	0 ,,	19	5	0
Sperm		30	ō	0 ,,	31	0	0
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## GLASS (IN CRATES).

ı	English Sheet Glasa: 15 oz. 21 oz Fourths 43d. 54d. Thirds 54d. 6d. Fluted Sheet 54d. 6&d.	5¾d 6½d	. 7d. 8d.
	Hartley's English Rolled 1 in. Plate 31d.	5 <u>z</u> u, .	. 474
		Vhite. 5	
	Figured Rolled	4 <u>5</u> d	5 <u>1</u> d.
	Reponssine	4d	_

VARNISHES, Etc.	Per g	amo	n.
Fine Pale Oak Varnish	£0	8	6
Pale Copal Oak	0	10	0
Omnilac Copal Oak		10	0
Superfine Pa'e Elastic Oak		12	0
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for scata	οľ		
churches	0	14	6
Fine Elastic Carriage		12	0
Superfine Pale Elastic Carriage		16	6
Fine Pale Maple	0		0
Finest Pale Unrable Copal		18	6
Extra Fine French Oil		1	9
Eggshell Flatting Varnish		18	0
White Copal Enamel	1		0
Extra Pale Paper		12	0
Best Japan Gold Size		10	0
Best Black Japan	0		9
Oak and Mahogany Stain			9
Brunswick Black		. 8	0
Berlin Black			0
Knotting	0	10	-
French and Brush Polish	0	10	0

As a result of the fire at the town-hall of As a result of the fire at the cown-half of Truro last year the clock tower and conneil chamber were destroyed. They have now been rebuilt from plans by Mr. F. A. Barnes, the city surveyor, at a cost of £1,900.

A Sunday school training college, three stories in height, has been built at Wesley Hill, near Selly Oak, Mr. W. A. Harvey, L.R.I.B.A., of Bennett's Hill, Birmingham, was the architect, and the builders were Messrs, J. Barnsley and Sons, also of Birmingham.

## OGILVIE & CO. TW. WILL

Mildmay Avenue, ISLINGTON, N. EXPERTS in HIGH-CLASS JOINERY. ALTERATIONS & DECORATIONS.

### Olivers' Seasoned

### Hardwoods.

WM. OLIVER & SONS, Ind., 120. Bunhill Row, London, E.C.

#### TENDERS.

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mossNess S.E. For electro fittings and wiring new hear and cottage, for the London County

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Fishertene For a Crations to No. 5, Jovington arters. Mr. C. Cristord, are noted.

Harding, J., Letbourne or cepted.

Estimation: For alterations to promises in Old Vis. Lethor Mrs. Harms. Mr. Stephen Box, 18 (1) at 14.

on et Baliberoize and Son, Lastrourne (acceptob)

ust ISINGTON. For providing a ray bioler-room lanstraine a new steam held rait the Forster oal East Islangton, for the Landon County Coun-

Street
Brightside Foundry and Engineering Co., Ltd., 28, Victoria Street
'A' epted.

I mixman.—For supply of 400 tens of cast-or p.p.s. for the Edinburgh and Distret Water Trust Westarlane, Strang and Co., Ltd., Chargow. (Accepted.)

FUHAM, S.W.—For expension of operating-room at monther Kooper and St. Dunstan's Road. Pullian Philos. Road. W. For the guardies. Mr. A. Savon shell. It R.P.A. 9. Bontinek Street. Manchester space W. aschet the small and Sons 155. S. Johns Street. Consenuell accepted 6440 to 6. Kryddy—For widening the old bridge at Koadby, in the county council of Lindery. Roberts, C. E. Epw. 110. 1417-142 by Roberts, C. E. Epw. 110. 1417-142 by Roberts, C. E. Epw. 110. 1417-142 by Roberts, C. E. Epw. 110. 1417-143 by Roberts, C. E. Epw. 110. 1417-143 by Roberts, C. E. Epw. 110. 1417-143 by Roberts, C. E. Epw. 110. 1417-143 by Roberts, C. E. Epw. 110. 1417-143 by Roberts, C. E. Epw. 110. 1417-143 by Roberts, C. E. Epw. 110. 1417-143 by Roberts and Constitution of Constitution. Security of the Supply of clothed sundress to

LoxDox —For the supply of electrical sundress to a sylling during five months, for the London County Council

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Muthors, Fssex.—For providing and laying 245 linear yards of 6-in, east from water-main in Station Road, for the town connect. Mr. 1 R. Swales. Mil.C.E.L., borough enganer:—

Livy. H., Ltd., 39. Voltoria Street, S.W., ..., ..., £269 1 0 spalding. Sons and Co., Crescent Road, Reybridge ..., ..., £15 0 0 Jackson, W., Forest Gate, E. ..., £10 0 0 Emery and Co., Holte Road, Astron. Birmangham (accepted) ..., £14 2 9

PARK PREWEIT, NEW RASINGSTORE.—For electrical installation at the Park Prewett asylum, for the Hamp hire fount Asylums Visiting Committee;—Alger, R. and Sons, Newport, 122,50 5 3

Mon.
Rashfeeth, Phipps and Co., Lengton, W. 192,78 to 0
Gallerts, H. J., Brighton 122,011 19 5
Cooper, C., and Co., London 8, W. 197, 57 to 0
8, W. 197, 57 to 0 W.C. . Edmundson's Electricity Corporation, Ltd., Westminster, S.W. . Day's L., and Co., Ltd., South-N. Daves L., and Co., Ltd., Source ampton 17,5°S 0 or Coates, W., and Sours, Belfast 17,445 14 7 Hancock and Rivon, London, W. 17,124 10 0 Cosy-Wakers, Ltd., Darlington 16,400 16 of Cash, H. J., and Co., Ltd., Westminst r. S.W. 15,115 11 0 National Elettic Construction Co., Ltd., London, E.C. 15,834 14 0 Hill, Upton and Co., 22, G-orge Street, Oxford (corepted) 15,489 8 7 17 360 0 0

SHADWELL E — For an extension of Mosrs, Crompton and Tempson's factory, Denmark Street, Shadwell, Mr. W. Gilbert, 25, Broad Street Avenue, I. C., architect —

Gibbs, J., Cable Street, E. . . . £680 0 0

\*HIDWELL, E.—For creating offices and workshops in Denmark Street, Shadwell, Mr. W. Gilbert, \$5, Broad Street Avenue, E.C., architect — Gibbs, J. Cable Street, F. . . . 41,800 0 0 (Accepted.)

SHOREDICH, E.C.—For renewing and repairing zince flues at the town hall, for the borough council;—
Thomerson, C., 203-267, A. B. C.
Thomerson, C., 203-267, A. B. C.
Hackney Road, N.E., 475-479-487, 0
Ciark, J. A., and Son, 17,
Goldsmith's Row, N.E., 66-79-79-15
Hatley, E., and Son, 523,
Gld Street, E.C., 61-65-74-0\*
Resonmended for acceptance,
A=15-gauge zinc; B.—14-gauge zinc; C.—
16-gauge zinc.

Winnsworth, S.W.—For repairs to the dust destructor change, for the borough council:— Beresford, E., and Co. take (pted) ... £76 % 0

oaker, James, and Co., Ltd., Afreston States, Value, Co.

ton Stycley Coal and Iron Co., Ltd., Chesterfield ... Stanton Fronworks Co., Ltd., Net-tinglam Vecepted. €4 1 7

West How For supply of furnace tubes for boiler it Abbey Mals principle station, for the London Court County County.

Ruston, Practor and Co., Ltd.,
Queen Victoria Street, E.C., £147-0-0
Taiser, Shouton and Co., Ltd.,
Hyde ..., 120-0-0
Clayten, Sen and Co., Ltd., 120-0-0
Takers, Ltd., Hyde cace sted 120-0-0
Te enter of Takers, Ltd., to supply turnace tubes for another boder at Abb y Mills pumping station for £120 was also accepted.)

---The Surveyors' Institution Roll of Ponour

the Surveyes Institution Kin of Factor records the death, while on active service, of Libert, R. J. Poynton, 2nd London Divisional Engineers, Royal Engineers, Mr. Poynton was a Professional Associate of the Institution.

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

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#### OUR ILLUSTRATIONS.

The Edith Cavell Home for Nurses, London Hospital, View and plan, Messrs Rowland Plumbe, F.R.I.B.A., and Partners, Architects,

#### Strand, W.C.

Strand, W.C.

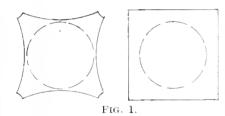
Lo Hons. at Carsbeharst, on Narrow Sites. Plans, elevations, and views. Mr. Edward J. May, F.R.I.B.A., Architect.

"Emergency Mintary Hospital Construction." Typical plans illustrating the "Chadwick" Lecture by Mr. A. Savon Shell, F.R.I.B.A. The War Office model plan Hospital, Beachborough Park, shornelite, Mr. W. Henry White, F.R.I.B.A., Architect, Leiesster Hospital; Messrs. Everard, Son, and Pick, Architects, Welsh Hospital, Netley; Messrs, Edwin T. Hall and Son, Architects. Norfolk and Norwich Hospital, Messrs, E. Boardman and Son, Architects, Imperial House (in the occupation of the War Office, Westminster, View and plan, entrance vestibule, and detail of main entrance. Messrs. Henry Meterif and Thomas R. Greig, Architects.

### ARCHITECTURE BY SYNTHESIS.

By the analytical method, we break down to elements; by synthesis, we build up from the same elemental parts. If architectural design is to be based on synthetic lines we must reconstruct from primordial atoms—of architecture. If we seek to evolve true grace and beauty we must break up the old, and from its ultimate, unchangeable parts produce anew by recombination. To attain success in design on these lines we need to establish a working hypothesis.

Ordinarily, we do not proceed on synthetic lines in design. The truth seems to be that fitness, while an obvious essential, assists us not one whit in evolving beauty or in adding novelty and interest to architectural composition. The problem is to discover, in architectural design, how this attribute of fitness for duty helps to produce elegant variety. What, then, are the true elemental parts? On superficial consideration we might consider them to be such entities as columns, string-courses, fluted pilasters, pillared doors, and arched windows. Are



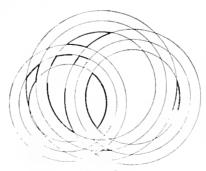
not such rather comparable to elementary molecules? A column is a composition of head, body, and base; a cornice is the massing of many unit parts into one feature. If we break up whole columns we find cylinders, or truncated cones, cubes, rectangular solids, and curvilinear and angular bodies. Now the square is an unchangeable; the cube was, is, and an unchangeaute; the cube was, is, and will remain a cube to all time. In designing a "rusticated" column, fitness, if a guide, is all against us. If we fall back on precedent we cease to operate as this large and prove the cube was, is, and will remain a cube was to be a superior to the cube was, is, and will remain a cube was, is, and will remain a cube was, is, and will remain a cube was, is, and will remain a cube was, is, and will remain a cube was, is, and will remain a cube was, is, and will remain a cube to all time. In designing a "rusticated" column, fitness, and will remain a cube to all time. In designing a "rusticated" column, fitness, and will remain a cube to all time. In designing a "rusticated" column, fitness, if a guide, is all against us. thinkers, and must open our formal copy-books for examples. We need sound theory respecting the elemental, which in architecture is plain rectangular, angular, or curvilinear form. We must cast all styles into the fining pot, taking therefrom the indestructible and unalterable components of building mass. These, common to all true styles, may be termed the atoms of architecture. It is evident that the cylinder and the truncated cone are such. The circle and part-circle are found profiling marble and stone in every country. Of all obvious facts the rectangle and rectangular mass are super-

basic in every mode of beautiful building. Equally, the juxtaposition of circle and rectangle is prime, elemental, and paramount in all refined and universallyesteemed architecture.

These considerations may suggest that the ultimate components of architectural



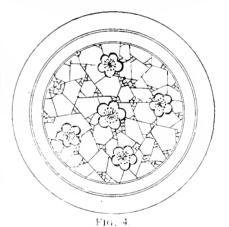
mass and form can be but few. Substantially, they are prime figures of solid geometry. Of such we must construct architecture by synthesis. These elemental, solid mass-forms should have the same significance for the architect that the square, circle, rectangle, angle and straight line have for the designer in the flat. Whereas, however, it really often seems to us that, in the view of the architect, perspective is something unnatural. Admitting that the reflection may seem strange, we yet record it, soberly.  $\Lambda$  Grecian Doric capital, on elevation, and the real feature as revealed in sun and shadow are two different affairs. Nevertheless, on plan, a certain parallel may



be instituted between the flat presentment and the actual effect in the solid;

Equally, in the plan of the Doric capital, the square abacus is revealed as contrasting pleasingly with the circular, or circleing preasingly with the circular, or circle-embraced, horizontal profile of the fluted column. So far as the plan goes, the correlation of elemental square to elemental circle presents, in a certain measure, a parallel to the true, perspective effect; but whereas in the case of the three carried at the true. the Doric capital all that we see is a pleasing pattern of a square enclosing a circle, in actual presentation we get the soft rotundity of the columns opposed harmoniously to the rectangular abacus; and since every rectangular mass presents to the eye one of its solid angles as acute, or virtually so, such correlation of rotundity and acuteness affords, according to universal judgment of the refined in all ages, a pleasing object to

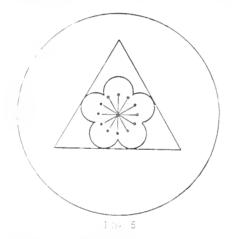
We have instanced simple forms that may be viewed as true, atomic parts of



architecture. Plainly, the Doric abacus is an elementary form-rectangular mass rendered the more nearly primordial because founded, in plan, upon the square, an obvicus, unchanging and unchangeable, fundamental and ultimate. No doubt we might be reasonably justified in viewing every rectangular mass, of whatever proportion, as atomic and elemental, or but little removed from such. The in cidence of its variability, so far as respects proportion, need not be considered an obstacle. Whatever its relative dimension, it is a plain rectangular figure; and if we desire to gain some insight into the effect of disposing, grouping and co-ordinating rectangular solids we must study such, under nutural aspect, in

by a revery rainy day in every process of the very circle is in hards at the very either circle. The circle is that the circle is the small, and every circle is the small, and every variety of the circle is the small circle is the circle is the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in the circle in

first 1 by choular intersection. 2 we have such a series of In I . reas as approximates to those formed Ly ranspash, or by a handful of pebbles cast in the point. At first glance we are present a with a consistently harmonious series of circles so bytonisly that the view may seem insipid and to lack foil but the ler inspection demonstrates that this is by no means the case. The very name given by geometers, "caustic signifies a mething sharply opposed to the Wherever suave nature of the circle. circle cars circle is formed a figure with r less sharp cutting edge, a verit The 15 able diagrammatic exposition of the philosophy if egg and torque-the smooth opposed to the spiny all produced from true circles solely. This is of practical interest to designers where a number of circular columns are grouped, as in a Goth e v.o.i. for, seen in perspective, at every tom where sincle sinkes circle a calistic is formed, more or less acute, according to the distance apart of the



In the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the principle of the to the Course that it is an most of the translated age, and stribute besign, that its J. IN In high a contry taught as In high 3 control or unconducted to make second or or or an extension

11. the may make new groups in at the attraction of the attraction of the attraction and such is at all assert the easily to the acting the attraction of the action of the approximation o C . 111 the appear and method of design, the associated in a imposition as of a remitting the easy adoption of the weakless for a grady enough. It is well as our atoll with some the control of solution to the factors are formatted in the time device. f - me guidin J. the foundati na! sten i straight 2 K and Hal that ere made that have petalled the fact of spring.

a last mist show the less device, sketched in Fig. 4, represents such floral form on a backing of cracked to generate the right of the such floral form on a backing of cracked to generate the lamental life we study such an ornamental device, If we study such an ornamental device, and reduce the principle to an elementary diagram, as in Fig. 5, we shall see that it involves the enhancement of curve by straight line and angle. Our drawing is a matter of superficies; but, while regarding it, we may think of solid form, for we may equally employ the diagram to illustrate the perspective effect of the rectangular mass and the rotund in architecture, and see, in the upper, sharp angle, square building mass projected against spherical dome. The basis of ultimate eye-effect in the flat ornament and in the perspective of solids, is substantially identical. It is essentially the block, or rustication, projected against column drum. The rusticated column is a useful illustration, for it is obviously composed by alternating, ultimate, atomic parts of architecture—cylinder and cubic or quasi-cubic mass. If there be any true harmony in such rusticated columns, it is derived from the pleasing interplay of square and round; and whatever we may think of such column treatment, there is an undoubted eye-pleasing effect and certainly no obvious discord. The whole conception is too elemental in basic form to create positive offence, and above these considerations is the fact that anything tending to add emphasis to constructionalism, as the chief and most typical expression in architecture adds to interest, if not always to positive beauty

The synthetic method of design in architecture may not be attractive, but study on these lines would tend to ameliorate it to prevalent (vil the decorative treat ment of basically ungraceful mass. We are ensured of a correct base or foundation, of pure outline and simple mass formation, if our main lines of composition are arranged in accordance with some principle. If we can trace back such principle to nature, even by such humble means as rain-splash and brian thorn, we can feel confident that our work, if not super-excellent, can yet never offend

#### ---EMERGEN: Y MILITARY CONSTRUCTION HOSPITAL

WITH HALLSTRATIONS

A Chadwork public lecture on "Emergency Mulitary Hospital Construction" was delivered at the Royal Society of Medicare's premises Wimpole Street, W., on Wednesday after-noon, by Mr. Alfred Saxon Snell, F.R.I.B.A. The hall was crowded, the audience including Fig. 13. As a crowded, the address mending triny architects and medical men, and not a tex non-ses. Mr. John Slater, B.A., F.R.I.B.A., one of the Chadwick trustees, occupied the chair. The lecture was illustrated in the control of the chair. of the description of the locale was finely and the component hospital plans, elevations, and times, some of which are reproduced to is in this issue, and also by photographs of wards and grounds.

of wards and grounds. No cree could study the question of hospital design and construct on, observed the lecturer without resulting the far-sighted genus of Sir Edwin Chadwick, the idealism of Sir Benjamin Ward Richardson, and the proceed teaching and noble work of Florence Nightingale. In normal times they ad in England, in addition to the purely of an end indicator, exhibition to the purely core and mulitary establishments, a very tentumber of voluntary and public hospi-ater infirmaries. In view of the great imvenent in the zeneral health of the country country that the seneral health of the country caste years, those buildings had not been vive in full use. They might fairly, there may be expected to deal with the casualties re, he expected to dear went to successful it's tearrise at the first onset of an ordinary man it was obvious. that errors described in the first class war it was obvious, it is expected that errors described a consideration and thought of springs trained at an end of the end of springs trained at a sum obtained by rect of springs, trained at ways been contemplated by very favour terrors War Offices of all nations—even our own

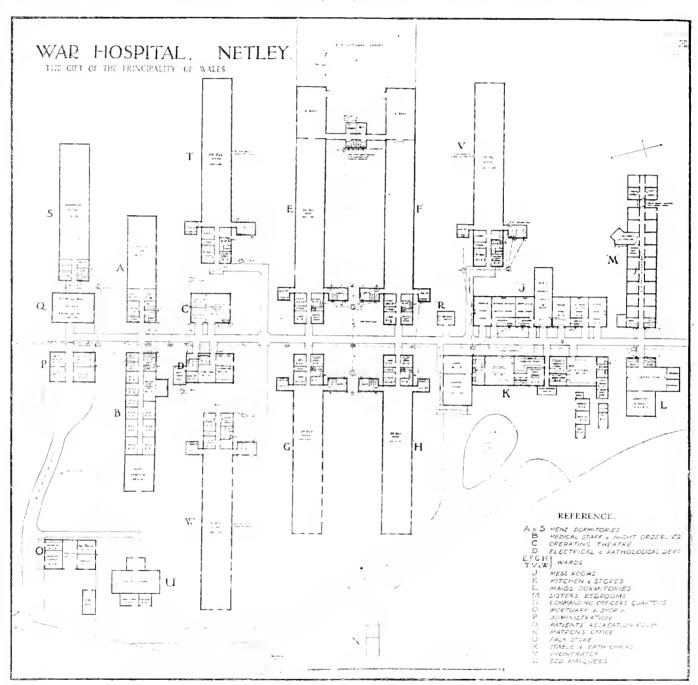
To meet such an emergency, all kinds of large buildings would be requisitioned for conversion as temporary hospitals. Indeed. in this country, a number of buildings had been scheduled for this purpose long before been scheduled for this purpose long before the present war broke out. Whether all the bindings thus scheduled were the best possible for the purpose was a matter of opinion; certainly there were grave objec-tion to the employment of schools as hospitals, and a church or mission-hall was at the best ill-adapted for its new purpose. In this, the greatest war with which the world had ever been cursed, private individuals had come forward, with unexampled generosity, offering their fine houses and resources for the benefit of the wounded. The conversion of part of Woburn Abbey for this purpose by the Duchess of Bedford was but one instance out of many he might cite. The Germans, with immense thoroughness, specially provided for the eventual occupation of all school buildings as emergency hospitals. had never gone so far, since we, unlike the Germans, regarded war as an occasional and disagreeable necessity. Our habit of facing mevitable difficulties with imperturbable good humour, trusting to get through somehow, really amounted in its resourcefulness to positive genius. Some weeks ago the lecturer inspected a small thirty-bed hospital at Willesden, improvised out of St. Matthew's Church Institute, where the main hall was utilised as a general ward, with three rows of heds, the platform, as an orderlies' retiring and general utility room, the committee room as an operating theatre, and other small apartments as kitchens, storerooms, and nurses quarters. In every part of the building all hospital rules were jubilantly ing all hospital rules were jubilantlignored, but goodwill and humour prevaile among workers and patients alike. In addi-tion to the conversion of existing buildings, War Office had also contemplated the erection of temporary emergency hospitals, and its stiff had long since prepared detailed plans for temporary buildings, which would be erected at short notice, quickly and at compara-tively small expense. The scale of the present war was, however, so vast that many civil architects had been called in to assist the War Office by preparing schemes both for the erection of temporary hospitals and for the conversion of existing buildings for that purpose. It was inevitable that many of plans so provided should been and plans so provided should have exhibited considerable variation from the War Office scale, both as regarded planning and construction, and these modifications were both instructive and interesting. The model plan issued by the War Office (shown at the foot of our double-page illustration in the centre of this issue) was, however, remarked Mr. Saxon Snell, very helpful; it provided a guide to the size, general arrangement, and relative p s tions of the various buildings required for a general hospital, and such information was obviously invaluable to an architect for a commencement of his work. Indeed, an architect might make the model plans the end as well as the beginning of his design, and it was conceivable that hard-worked officials at the War Office, to whom such plans had to be submitted, would welcome the civil architect's lack of imagination as relieving them from the necessity to criticise and analyse in a time of stress and hurry. But architects had not by any means confined themselves to adopting the model plans, but in most cases had introduced improvements and special modifications in their designs. The plans and designs he was exhibiting that evening showed quite a variety of solutions of the problem, all of which would repay close inspection and study. He was sure that these designs would influence those of all future hospitals, both temporary and permanent. One of the first of these hospitals, planned by an outside architect, was the \*First Eastern Military Hospital at Cambridge—one in which the promoters did not hesitate to act on their convictions, not counting the cost. This hospital represented an act of faith and counting on the part of these who constructed it, among whom he must mention Colonel

Described in detail in a lecture delivered by Dr. A. F. Shipley, Master of Christ's Hospital, Cambridge, before the London Architectural Association and fully reported in our last issue, p. 524.

and Professor G. Sims Woodhead, and its architect, Mr. Charles F. Skipper, of Cambridge, both of whom knew that their principles were sound. It ought to be borne in mind that open-air wards, for use both in winter and in summer, were by no means novelties in this country. For instance, Dr. Philip Boobbyer, medical officer of health for Nottingham, had had several in his extensive district for a number of years, and in these every kind of disease, not excluding pneumonia, had been treated under every variation of temperature and climate with the greatest success. The value, from a health

under these conditions they preferred it to any other. Reverting to temporary hospital planning and construction, the lecturer planning pointed out that the nucleus in most cases was an existing hospital or large house utilised as administrative offices and staff quarters. The temporary ward blocks were erected in adjoining fields or gardens. The War Office adjoining fields or gardens. The War Office model plans provided for a framing of timber,

out that we should not be critical as to the finishing, nor expect to find any meticulous care displayed in the provision of rounded internal angles, nor even in the avoidance of dust ledges. Aseptic surfaces were not to be expected; sinks and layatories were often supported on rough wooden frames, and fittings were not always fixed clear of the walls. They must not think lightly of architects ined on the inside with boarding or plaster, and on the outside with corrugated iron. The locause such commonplace rules of hygienic roofs were also finished with corrugated iron. Such buildings were no doubt quickly erected, but aesthetically they left much to be with refinement in detail. Ore matter he



WELSH WAR HOSPITAL, NETLEY.-Messrs. E. T. HALL and SON, Architects. Illustrating Mr. A. Saxon Snell's lecture on "Emergency Military Hospital Construction."

sheds, which were practically open-air wards, of rain. Timber framing, lined inside and out had been advocated by Miss Florence with asbestos sheets, was another method of Nightingale, Dr. Brocklesby, Sir John Pringle, construction, and such edifices had the merit and indeed as far back as 1759 by Dr. Guy. The main principles which formed the lines of all good hospital work were the impor-

of being much more sightly and no less lire-resisting. Ruberoid was employed on the roofs, and frequently the flooring was of tongued boards and wooden joists. Steam

view-point, or roughly improvised buildings or desired, and necessarily were noisy in case personally regarded as essential was the provisheds, which were practically open-air wards, of rain. Timber framing, lined inside and out sion of a concrete bed under the ground floor. and he should adversely criticise its omission from any temporary buildings, and, further, aseptic principles and absolute cleanliness and The main principles which formed the lines of all good hospital work were the importance of fresh air in abundance of sunlight. The cost of temporative from and of clearliness in everything, from bedding and declardiness in everything, from bedding to food utensils. Open-air wards had some disadvantages and inconveniences, the most serious being the way in which the staff were affected; but Dr. Boobbyer had testified that when once nurses had been induced to work. smoothness of surface must be imperative in

М hol 3 11 VI

wars, and ruberoid s st ting for wars, and ruberoid in the anxies blands on the open south that the anxieted of ten wards facing sets and adjoining was the mansion known as Reas Hall, which formed the administrative to and reases quarters. The temporary had a see eitered in two months, accommodated 500 patients, and cost £45 per bed on viete. The hospital at Woburn Abbey was improved by and at the cost of the lives of Bedford; it was based on the was improved by and at the cost of the Draices of Bedford; it was based on the per air plan obe, without bands to the exercial verail desprise for gleyond the Riding Sarahard Avarry of the marsion, the existing windows being taken out. At Nottinghams were seven yours ago Dr. Philip Booldyer obded to the general hospital openair wards under veraindale and in open sheds. Two years ago at Brislane, Queensland, Messis, Hall and Dodds, of that city, built a hespital on apen air principles; I linds were adjusted to take the prevalent winds, so as to directly the great missance of drifting sand heng blown into the wards. The Duches of Commaghits Red Cross Hespital, designed by Mr. Charles Supper, occupied a delightby Mr. Charles Supper, coupled a delightful hillade situation at Taplow, overlooking the Thames. The plan was peculiar, the procloss being arranged in what is known a Canada at the butterfly form, i.e., each leaf ward feed north and south, but with nong ward received north and solution and with measurements are the solution of the effect being that of roughly a trex parallel lines of buildings open to the south. He did not understand the special the south. The did not independent the special ments of this in de of planning over straight parallel wards, open to the south. In the Taplex hospital there were windows, generally heat open, and experiments were being made to substitute for the glass very being made to substitute for the glass very being made to substitute for the glass very are gaize, which was expected to exclude dist and draughts. The wards were provided with a small number of radiators heated only for a couple of hours while ration's were going to bed. The cost partial had had been ±43, exclusive of staff and course growing the exclusive of staff and Xir and Red Crass Hospital at Glasgow was also design of by Mr. Charles Skipper. The surface word for the wards, after the usual hospital trae. The wids were less open than those the end of the words, after the usual hospital time. The words were less open than those of Carbo days. The operating room was except the well in shed. The cost for the 700 movests beds, including staff and nursing counters, had been £54 per bed. The Cetal of Motory Hospital at Orpington S.L., this yet at their of M., Charles Supper is buildings in the last restance, staff and making charters, and accommodation was and making quarters, and accommodation was now delf for 1.500 patients. At the Third Lodg, General Hospital at Wandsworth the ed a General Hospital at Wandsworth the intert. Mr. John Pain Clark, A.R.J.B.A., I a very difficult problem in the adaptation of the experience of the adaptation of the experience of temporary. The site was cramped, and the painting of the first undertaken the Wan Office. The ward blocks necessity. varied in plan, owing to the exigence at in pair, owing a few and construction of one day always self-up a being of half-sen along the strength of the Konne's or ground with the Konne's or ground with the Konne's or ground with the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of Lost flows were as an Arted.

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hage block of buildings +H.M. Statemery Office.

See description and allocations in our number , the enterf, 1912.

from designs by Mr. R. J. Allison, A.R.I.B.A. by Messis. Perry and Co., of Bow: it covers an area of about 525 ft. by 190 it., with a floor area on eight stories of 48 1960 sq. ft., and had been adapted for use as a hospital from plans by Mr. Edwin T. Hall, F.R.I.B.A., carried out by Mr. H. B. Measures, M.V.O., F.R.I.B.A., the Director of Barrack Construction. Theoretically, it was a most unsuitable building, as most of the wards were lighted only from small enclosed areas: but the exceptional position, close to Waterloo Terminus, rendered it of special value for the reception of wounded military men. The whole building was well finished and fitted. The wards were divided off by hight concrete partitions, and everything had been done to secure whatever ventilation was possible. It provided beds for 1,700 men. The lecturer exhibited a general plan for an isolation hospital, designed by Mr. Charles Skipper, and estimated to cost about £80 per bed; Mr. J. H. Fry's slation of the problem as to how to adapt St. Matthew's Church Institute, Willesden, for use as a hospital; and the plans of the Moabit War Hospital at Berlin, erected forty years ago during the Franco-Prussian campaign, and still in occupation, although in parts consisting of temporary buildings, some of which were now being reconstructed.

Col. Hodgetts, of the Canadian Duchess of Connaught's Hospital at Taplow, in opening a discussion on the lecture, said the special advantage of the batterfly plan of hospital construction was to secure the utmost amount of sunlight on every ward. They believed that the wind screens would provide abundance of air without draughts or dirt. At the Eastern Hospital at Cambridge he found that, in spite of the closely-drawn blinds, over the open south fronts the rain blew into the wards, and even on to the patients' beds in the south row in each ward. At Taplow, half the patients slept out of doors on the verificals in summer time, at which season they were able practically to double their sleeping accommodation. Other buildings were yet to be added to the hospital, in which they hoped to avail themselves of the latest improvements. The question of cost had not been a vital matter at Taplow, but it was southt to secure the utmost comfort that could be provided for the patients.

Dr. W. Scott Tebb, as a medical officer, could not agree with the last speaker. Economy of construction and alministration was a very important point, and ought to be closely studied in planning and maintaining military hospitals. He endorsed all that Al. Saxon Snell had said as to the enduring value of fresh air in treating disease or wounds. Fresh air and sunlight were more efficacions than any doctor or nurse. He would enter a plea for the beneficial effect, too, of aesthetic considerations. Pleasant surroundings and flowers in the wards contributed much to the cheerfulness and recuperative powers of patients.

8 r Henry C. Burdett said the site selected for a hospital building was of first importance. The temporary wards at St. Thomas's furnished a peteworthy instance where a naturally poor site became of the utmost value, because the structures so quickly built upon it were administered from a well-organised hospital. The aim of those premoting a temporary hospital should be not to employ an architect hospital should be not to employ an architect hospital should be not to employ an architect hospital should be an architect hospital should be able to the skilled expert who had already devoted much study and attention to the subject, and who knew the latest views upon the question, and was able to improve upon what had already been done. The attempt to idapt schools and mission-halls as hospitals was boand to be a failure, and to inflict neclasses risks and inconveniences on staffs and patients abile. The provision of ample air and see light and of wide spaces around the wards had its reward in the economy of time strent in hospital by patients, and in diviating the necessity to send them on to convalescent homes. It was clear that the expenditure per bed on temporary hospitals would tend to fall.

Mr. Moon remarked that a century ago the freedom from hospital fever of those who were treated on the field of battle was recognised by Crevy and other leading masters.

Miss Richardson held that the time had by for great metropolitan hospitals in led districts. The aim would be to scenre crowded districts. sites in rural districts affording plentiful fresh air and sunlight.

The Chairman remarked that much had been done, at very short notice, to provide temporary hospital accommodation for our wounded soldiers and sailors. It would be wise in future years to look ahead and provide temporary buildings in open spaces rather than to hastily adapt inappropriate buildings

in the heart of London.

Mr. Saxon Snell, in acknowledging the vote of thanks, which was carried by acclama-tion, said he had not been convinced by Col. Hodgetts as to the merits of the butterfly

form of ward planning.

(Tesen)

## "SPRAOLITE" AND THE MASCON HEALTH SPRAYER.

The necessity for the constant use of a powerful antiseptic to destroy the many germs which are always surrounding us is universally admitted, as it is well known that they

become particularly harmful in a vitiated atmosphere. We have therefore much pleasure in drawing attention to "Spraolite," ing attention to "Spraolite,' which is non-poisonous and leaves no stains and which clears the air of all harmful germs and smells, leaving a retreshing scent behind. This preparation, which is far more active than carbolic acid when tested against the typhoid germ, is made in eleven odours, pink may, pink carnation, jonquils, lavender, blush rose, pine violet, eau de cologne rose, pine violet, eau de cologne, magnolia, sweet pea, spinol, and sweet briar, all having antiseptic value of a high order. It can also be supplied odourless if desired. The best means of using "Spraolite" is by means of the Mascon Health Sprayer, which is illustrated herewith. This is illustrated and neutable and light, strong, and portable, and gives a continuous, mist-like spray, consisting of air and liquid, readily floating through the atmosphere absorbing the dust, killing germs, and rendering the air pure and health-giving. "Spraolite" and

the Mascon Health Sprayer are used in a very large number of the principal colleges, schools Government offices, hospitals, sanatoriums, drill halls, sick rooms, factories, theatres country mansions, banks, high-class cinemas. clubs, dance halls, infirmaries. In fact, in any place where the air is likely to get vitiated "Spraolite" will give instant relief. "Spraolite" will give instant relief. It clears away all smoke and unpleasant odonrs, and leaves the air pure and invigorating. A well-known bacteriologist revigorating. A well-known bacteriologist reports: "I have tested 'Spraolite' for its germicidal efficiency in aqueous solution by the Rideal-Walker or drop method. I find that it has a carbolic acid co-efficient of 4-5 which indicates that under the conditions of the test 'Spraolite' has a germicidal efficiency four and a half times that of carbolic acid." 'Spraolite' which ' certificate of the Institute of Hygiene, is on the market by Messrs, B. Maslin Bros., Sgray House, 34. Clerkenwell Road, London, E.C., and should be in use in all institutions where the air is likely to become polluted from crowds or other causes

Mr. William James Harding, a local sanitary engineer and builder, has been elected Mayor of Banbury. A sewage-disposal scheme the borough, costing £40,000, is at present being carried out.

Mrs. Solomon D. Sassoon laid the foundation store on Sunday afternoon of the new London Jewish Hospital, which is being erected on Stepney Green at a cost of £33,000. It will be the second Jewish hospital in England, there being one at Manchester.

Mr. John Evans, for the past twenty-seyears sanitary inspector under the Stafford Corporation, and previously for eight years a member of that body, died on Wednesday las in his seventy-fifth year. He took a prominent part in the work of the Sanitary Inspectors' part in the Association.

THE OLD CHURCHES OF YORK "The Old Churches of York" theme of a lantern lecture delivered by Mr Berson before the members of the York Philosophical Society in the Tempest Anderson Hail on Monday evening in last week. Alderman Sir Joseph Sykes Rymer presided The first church built in York, according to reliable data was, said the lecturer, tounded in 627, when King Edwin, having embraced Christianity, erected a church in the street adjoining his palace, within the old Roman willed-in camp, which was the beginning of York Minster. Some five years later the King decided to carry out Gregory's project of an Archbishopric at York, and began to build a stone church—the earlier one being of wood-suitable for the needs of the province Before the stone church was completed King Edwin fell in battle, and York was occupied by the pagan Cadwallon, who was eventually defeated by Oswald. King Oswald founded t new see on the isle of Lindisfarme, but he completed, however, at York the stone Minster which was now subject to Lindis-faine. It was not until 735 that York was faine. made an Archbishopric, and the stone Minster became the mother-church of the province. About half a century later a new cathedral was built, the concrete foundation of which was laid bare during the last century. The second Church of York was probably built by the Archbishop in his own shire, the edifice now known as St. Mary's, Bishophill Junior. A portion of the west wall still existed and A portion of the west wall still existed and its thickness, materials, and workmanship proved its great antiquity. Three or four other churches apparently arose in York during the Anglian period. Some were probably built of timber and covered with thatch, and in the churchyards were stone sculptured slubs and crosses. York fell to heathen Danes in 867, but Christianity revived under the glorious King Athelstan, revived unit.

Another revival took place under Edward the Confessor, when a tower was added to the Church of St. Mary Bishophill Junior, which the blackest tower in York. In the Thurch of St. Mary rosnopana was the oldest tower in York. In the Anglo-Danish period there were built to Mary Castlegate; St. Mary, Bishopshill Senior: Christ or Holy Trinity, Micklegate: and St. Gregory; and on the other side of the river Holy Cross During the interval of seventeen years between the great fire of 1069 and the Domes day Survey, the churches of St. Crux and St. Mary's, Castlegate, had been rebuilt, and new churches were crected to St. Andrew. St. Michael (Spurriergate)—where the curfew bell is still rung every night at eight-and to St. Andrew, St. Saviour, St. Martin to St. Andrew, St. Saviour, St. Martin (Coney Street), All Saints', Pavement, and St. Cuthbert, St. Olave's Church was unin-jured by the fire. Other churches built by he Normans were St. Helen, Stonegate: All the Aormans were St. Helen, Stonegate: All Saints', Fishergate: St. Andrew's, Fisher-gate: St. Stephen, Walmgate: St. Michael (le-Belirey), St. Denis and St. Nicholas, whilst St. Clement's Church agose on the Archbishop's land across the Guse. Mr. Ben-son gave un interesting survey of the archi-tectival in the street of the region of the property tectural features of the various old churches, Norman, Transitional, Early English, Per-pendicular, and Georgian, as well as refer ring to the churches which were destroyed during the 14th, 15th, and 16th centuries. The two edifices of St. Andrew and Christ Church were now disused as churches. nave of the former had been used as a school-furniture warehouse, and was now a mission room, while the chancel was now a a dwelling-house. St Helen's, the only surviving church in York of the four dedicated to the mother of Constantine the Great was occasionally used for service. The churches of St. Maurice and St. Lawrence, except the tower, had been removed and new ones built, and that of St. Crux was a mission room. There were twenty-two ancient churches York. They had a character peculiarly their own, being mostly small and of no great height, but each was worthy of careful study. The most conspicuous tower was that of All

were renowned for their painted Mediaval Many of the York churches had been mutilated for so-called street improvements. Churchyards had been added to the streets, and the adjoining church walls shorn of their buttresses, whilst chancels had been shortened or swept away. This damage to the ancient works of art in our streets was to be deplored, since the street improvement could have been as easily achieved by the setting back of inferior buildings on the opposite side of the road. The churches stood for lofty ideals, and as we passed them in our busy streets they silently reminded us of our duty to one another, and thus made their preservation the more desirable.

#### WAR RISKS TO PROPERTY

On Thursday Mr. Sydney A. Smith (Messrs, Weatherall and Green; read a paper at the Auctioneers' and Estate Agents. Institute on

war risks to property. The lecturer remarked that he had not yet met with any ante-war insurance lease which provided in express terms for the contingency of war damage, although in the case of a property in the City of London which was let to a German firm in 1912 for a term of 21 years a request was made by the lessee during the negotiations that the leases should be determinable at three months' notice in the event of war with his country, which at the time was regarded as so absurd a suggestion that it was not given serious consideration. After refering to the terms of insurance offered by underwriters and by the Government, Mr. Smith went on to say that all difficulties which the fire offices experienced were referred to the War Risk Insurance Committee, and he be-heved that about 150 rulings had been given. In the settlement of claims the practice adopted under fire policies had been followed. No new principles of valuation of loss had arisen for consideration. If the loss could not be agreed with the loss surveyor or the Government, it was uncertain what remedy the insured would possess. The term in the policy his Majesty's tovernment was a vague description, and a lawyer would be in doubt whom to sue. Possibly some plat of the Atorney-General or petition of right from the King might be needed. The author discussed the responsibility as between landlord and tenant for the reinstatement of aircraft or other war damage. Express covenants to repair and to maintain the property and so de-liver it up would, it was thought, include this responsibility. Many lessees would resist the liability very strongly on the ground that the risk was never forescen when the lease was made, but the action of the King's enemics would not override that which was a matter of positive contract. If the lessee wer terms excused from "inevitable accident was perhaps likely that a bomb risk would fall within the exception, and such claus, operate to excuse him. Tenants who are not under covenants for the maintenance of the property still found the position unsatisfactory, as it was generally assumed that any tenant would in law be liable to continue to pay rent, even though the premises were rendered uninhabitable by enemy damage. The cost of insuring rent would be so small that it should never be neglected by tenants. There was an old law case dating back to 1647. Jardine v. Jane, in which it was held that a tenant was not excused from paying rent by the fact that he had been empelled from occupation by Prince Rupert's army. Under Mark v. Cooper (1727) a tenant was liable to pay the rent although the prearmy. Under Mark v. Cooper (1727) a tenant was liable to pay the rent although the pire mises had been burned. Where mortgages were in existence before the war many mort was a liable to be a likely mortgagers with regagees had served their mortgagers with requests to effect insurance. Where a lease was near its end, particularly 99 years' lease, it seemed unfair that tenants s'ould have to insure, the effect of which might be to present to the freeholders a new house at the end of the term. It would be very satisfactory if a record were to be kept of the damage which occurred from aircraft, with a view of presenting a bill to Gormany at the end of the war. ---

Saints', Pavement, which had been copied from the tower of St. Dunstan's, in Fleet Street, London. The finest of the York churches was that of St. Mary's, Castlegate, with its lofty spire. Many of the churches, estimated cost of the buildings is \$400,000.

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the common terms of lumber, and at user for the same purposes as a fire it is suitable for inside joists, and it is suitable for inside joists, and it is suitable for inside joists, and it is suitable for inside joists, and it is suitable for inside joists. to especially adapted for uses which re-iteresses for thing, a handsome finish or these, to total with a large degree of stock. Such uses are the manufacture the maintheture vs. are the maintheture vs. are s. s.sh and door stock, fixtures, the total latesty wants to aid panels, s. as a satisfactor paper making, and the same so are row using large

for moth proof clothes chests, cupboards, flooring-where such qualities as ease of

drawers, etc.
Where durability, lightness of weight, or case of working are essential, western red edar is unsurpassed by any other wood. It is the great shingle wood of North America. It is used for exterior siding, flume construction, framing, drains, posts, poles, camoes, row-boats, trellis work, hot-house frames and sash, and other purposes in which the material used is exposed to the weather or in contact with damp soil. Cabinetmakers use it for many purposes the backs and sides of drawers, shelves, boxes, and partitions. Its excellent working qualities make it an ideal wood for all kinds of mouldings, trim and interior finish. It is from this tree the Indians of the Pacific Coast hollowed out there great war canoes the largest in the world, spat the planks for their lodges, and world, spat the planks for their lodges, and world, spat the planks for their lodges, and carved the celebrated totem poles which decorate their villages. From the fibres of the more back they made ropes, blankets, and that he for their cabins.

working and painting, or light weight and ability to take and hold nails, are demanded. Northern, close-grained sitka spruce, such as grows in British Columbia, is also unequalled for carstock. Its long straight grain and fibre, fine texture, the large clear sizes obtainable and its resonant quality when cut in thin boards, especially fit it for use in manufacture of piano sounding boards and stringed instruments. In aeroplane construction it it has proved itself superior to any other wood-in fact, it is the only satisfactory timber for that purpose- and larze quanti-ties are now being used to maintain the air service of the Allies in the present war

#### SIGNIFICANCE OF TESTS.

In the accompanying table are compared carven the coefficient particle and takes a high corate their villages. From the fibres of the united States Government tests, of some of the carry is set in the carry much and trim that he for their cabins.

A to get the carry fibration than that of the eastern are the carry beinlock is the carry fibration to the previous cut the carry country in the Northern Hemisphere. They yield excellent lumber, western larch, tamarac (or eastern larch), average strength values, as obtained by the

( No solive Strength Values of Some of the Principal Structural Timbers of North America AGERAGE OF LESIS USING GREEN STRUCTURAL TIMBER WITH ORDINARY DEFECTS.

(From U.S. Forest Service Bulletin 122.)

	Weigh eubic					Bending.				ression P to Grain		Com- pression perpen- dicular to grain.	(2).
₹, écie-	Air dry.	Oven dry.	Rings per inch	Number of tests.		Modu- lus of rupture.	Modu- lus of elas- ticity.	Horizontal shear	hensive strength	Censhing strength at maxi- mum load.		Comprehensive streng'h at elastic limit.	Shear-
Dongla Fir Western Henlock Longleaf Pine Shortleaf Pine Western Larch Lobbilly Pine Tamara 1 Norway Pine	L.b. 33 32 41 35 34 36 35 29	Lb. 28 27 35 30 25 31 30 25	11.0 15.6 13.8 12.1 24.3 5.9 14.0 13.7	191 39 17 48 62 111 30 49	Pounds per sq. in. 3,968 3,516 3,734 3,237 3,325 3,040 2,813 2,492	Pounds per sq. in. 5,983 5,295 6,140 5,548 4,918 5,084 4,556 3,864	1,000lb. per sq. in. 1,517 1,445 1,463 1,473 1,300 1,357 1,220 1,133	Pounds per sq. in. 166 288 353 332 288 335 261 242	Pounds per sq. in. 2,770 2,910 3,480 2,460 2,674 2,050 2,400 2,065	Pounds per sq. in. 3,495 3,400 4,800 3,435 3,509 2,940 3,230 2,555	1,000lb. per sq. in. 1,414 1,619 — 1,548 1,575 548 1,373 1,002	Pounds per sq. in. 570 465 568 351 456 500	Pounds per sg. in. 765 630 973 704 700 630 668 589

I couly those pieces which failed first by horizontal shear are included in this column.

2) Small preces without defects used in this test

### WISIFEN LFD TOAR

\* so an Amer Loss of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the co

steen of the eighteen species grow in North America, sitka spruce, also called giant spruce, at the carries that A and America, sitka spruce, also called giant spruce, at the carries that A and Alaski spruce, the giant of the genus both in size and quality, grows only on the Pacific Coast. Matine trees average 150 ft. in height and 4 ft. in diameter, while some trees grow to over 200 ft. in height and 10 course at a tractice in the boles, with their moderate taper, furnish boles, with their moderate taper, furnish saw timber of the best quality and in arzest dimensions, musually clear and free from defects.

The wood varies in colour from white to a white tinged with very light brown, a soft and light, but tough and very strong is self and light, but tough and very strong for its weight. It is even-grained, long-mixed, castly worked, non-resinous, odonness, tisteless, flexible, and resonant. It does not warp or split, and therefore makes excellent the stock for veneeted articles, drawer bottoms and punel. Its strength, lightness and lack of faste and odon make it part charly valuable for box and purge manufacture, especially where netage maintaine, especially where to the control of suka spine a constraint the maintainer fairge doors to receive the business, and dook limbs

When the triber is suitable for heavy par I with Douglas fir.
The species meladed in the table may be adopted for many uses in building, such as grouped into three classes, according to their tribers. The helving, she ithing, and sub-breaking strength, as follows:—

Seven of the eighteen species grow in North

America, sitka sprince, also called giant

Alaski sprince, tideland sprince,

Western red celar

Western red celar

Data Partie Coast Matine transparence 150 ft

Partie Coast forests, and are unsurpassed tor pulp manutacture, and Norway pine, all grow in Canada is well as the United States), the first three in British Columbia, the latter two in Eastern Canada. The Douglas fir and western hemlock specimens used in the test came from the Partie Coast forests, and are identical with Partie Coast forests, and are identical with Partie Coast forests. The longleaf. British Columbia timbers. The longleaf, shortleaf, and loblolly pines, which are mixed and sold together in the market under various names, such as longleaf, southern, yellow or pitch pine, are confined to the south-eastern part of the United States.

Examination of the table shows that Douglas fir and western hemlock, each com-laming the qualities of light weight and great strength, are among the world's best struc-tural timbers. In two of the most important tural timbers. In two of the most important directions of strength—namely, resistance to cross-bending and resistance to crushing—Douglas fir heads the list, while western hemlock in all cases ranks high. For its weight, Douglas fir is the strongest of all the woods, with western Lemlock second.

In the tests quoted here the longlest pine timbers tested were partially seas red, and consequently the strength values given greater than would be found in the roughly green wood. The test material from all other species was thereaghly green. This explains in part the apparently greater strength of long-bad pure in one or two directions as com-

I. Strongest .- Douglas fir, longleaf pine. Size for size, these two average about equal in strength; weight for weight. Douglas fir is considerably stronger, because it is about 20 per cent lighter than longleaf pine.

Intermediate.-Western hemlock, western larch, loblolly pine, shortleaf pine,

#### 3. Weakest.—Norway pine, tamarac. DIMENSION TIMBER AND BOARDS.

Owing to its great strength, durability, lightness, cheapness, and the fact that it can be obtained in any size, Douglas fir is pre-eminently suited for all dimension material. beams, joists, scantling planks and boards needed for any purpose in any kind of build-

ing, whether exposed or not to the weather.
Western hemlock, because of its strength, lightness, and ease of working, is also excel lent for dimension stuff and boards, though less durable than Douglas fir when exposed to the weather. Spruce hoards are very suitable for inside uses where great great strength is not required, being light, soft, and easy to handle. Western red cedar is not so generally used for common dimension material and boards, because Douglas fir and material and boards, because boughs in and western hemlock are harder, stronger and cheaper. Cedar is, however, very useful in construction work wherever durability or light weight is the main consideration, as, for example, where wood is to be used in contact with the soil.

#### SHINGLES.

The western red cedar shingle is unexcelled as a roofing material. Nothing else compares with it for durability, cheapness, comfort and beauty.

Many instances are found in which the red cedar shakes (shingles split by hand), with which the early buildings in this province were covered, are in an excellent state of preservation after having been in service since the early "forties" and vice since the early "
"fifties." In other instance In other instances shingles have remained in use after thirty to thirty-five years' service. Sawn cedar shingles, with-out paint or treatment, last from twenty to thirty years, according to the situation in which they are used, the general reason for repairs being the rusting-out of wire nails used in roofing. The use of zanc. copper, galvanised, or cut iron nails overcomes this difficulty and greatly lengthens the life of the roof. Zmc or zinc-clad nails are perhaps the best, price and durability considered.

Shingles sawn edge (or "vertical") grain will lie flat, and will not warp or twist even after years of exposure to the elements. British Columbia edge-grain shingles are the highest quality of slungle sold, and practically the entire output of the province is

edge-grain material.

Dry light wood is almost a non-conductor of heat or cold. Western red cedar is one of the best natural non-conductors known. or commercially available, because it is unusually light, is by nature a dry wood containing no pitch, and is impervious to rain or wind. A western red cedar roof is cool in summer and warm in winter.

Very attractive architectural effects can be secured by the use of red cedar shingles. This is particularly to be noticed on the Pacific Coast, where the shingle is not only the predominating roofing material, but is used with charming effect as an outside

wall covering.

The remarkable durability of red cedar makes preservative treatment of the shingles unnecessary, but if desired, they can be aumecessary, but if desired, they can be easily stained or painted in any shade or calour, and beautiful colour schemes may be obtained in this way. Stains or paints can be applied with a brush to dry shingles after laying, by which means a superficial covering of the exposed part of the shingle may be obtained. Shingles can be more thoroughly treated by immersing in crossote at about the temperature of boiling water. Dry shingles should remain in this for about thirty minutes, but in the case of green material the time should be extended to an hour or more Any of the common colours, ground in all, can be mixed with the creosote.

British Columbia red cedar, in the form of bevelled siding, shingles, and trim, is an wood is well adapted to panelling.

exceptionally good interior finish for walls of buildings. Besides its natural durability, cedar bevel siding holds its form, is well manufactured, and takes paints and stains very satisfactorily. It nails easily without splitting, and is free from pitch. For the foregoing reasons, and because it is easy to work, has a straight and even grain, and is particularly suitable for turning, western red cedar is superior to any other wood of North-Western America for columns, balusters, and turned novelties.

Sitka spruce makes excellent siding, being sift, light, easily worked, free from pitch, with attractive grain, and taking stain and paint readily.

Douglas fir and western hemlock are also both suitable for siding, and the former wood is very widely used for this purpose.

#### WINDOW SASHES AND DOORS.

Douglas fir is used to a greater extent than any other wood by the sash and door manufacturers of British Columbia. In fact, most doors used on the Pacific Coast of America are made from Douglas fir. It is easily worked, presents a hard surface, is strong and durable. Even the clear and No. I grades, which are used in this work, are inexpensive, and there need be little or no waste in cutting out material. Edgegrain stock, which is easily obtainable, is used for the frames.

#### FLOORING.

All Douglas fir flooring is sawn edge-grain, and the hardness, wear, resisting qualities and ease of working of the wood. combined with its beauty of grain and ability to take a high polish, have led to its extensive use. It is very popular as a house floor on account of its beauty and cleanliness; it is especially attractive in the form of a parquetry floor. It is equally popular and in general use for factories, warehouse. and other places where it is subject to hard usage, because of its great strength, resistance to wear, and cleanliness. Western hemlock, when out edge-grain, also makes an excellent flooring material. It finishes smoothly on account of the uniform texture of the wood, and it also wears evenly. It is not suitable for use in damp places on account of its tendency to warp under such conditions.

#### PANELLING FOR WALLS AND CEILING.

No form of interior finish compares with wood panelling for beauty, comfort, cleanliness and cherpness combined. It is gen-Northerally used all through the Pacific west, and is huding great tayour wherever introduced elsewhere. The old-fashioned painted door is being replaced by doors with panels of slash-grained Douglas fir or hemlock, finished in the natural wood so as to bring out the full effect of the beautiful forming out the run enect of the beauth of figuring. Plaster and paper-covered walls, partitions and ceilings are likewise giving way to wood panelling. The all-wood room gives the utmost in beauty and comfort. Unlike many other woods used for panelling. British Columbia woods, especially Douglas fir and western hemlock, can be finished in a great variety of ways. Many different coloured stains can be applied and dull or bright surface secured. Douglas fir is the favourite panel wood on account of its beautiful grain and figuring when slash-cut or veneer-cut, and because it takes stain so well.

Western hemlock makes a desirable interior finish, as it is easy to work, readily turned, and its straight, even grain makes it free from brashness and tendency to chip or splinter. It is one of the most orna-mental woods for office or home interiors, takes strin readily, and is not easily dented. Western red cedar makes a very desirable interior finish because of its ability to hold its shape and retain a smooth surface. In natural colour the wood somewhat sembles mahogany, although, of course, it is much softer and lighter. It has a distinc-tive silky finish and takes stain well. Slashcut sitka spruce has an attractive grain or figuring, and the soft, silvery, easily worked OTHER INTERIOR FINISH.

This includes all the minor kinds of interior finish, such as wainscotung, shelving, moulding, casing, baseboards, etc.

Douglas fir is in most general use because of its attractive grain, abundance, and cheap-ness. Western hemlock, sitka spruce, and western red cedar are all used, however, for different purposes in accordance with their respective qualities.

#### BRIDGE, TRUSS, AND TRESTLE TIMBERS.

Douglas fir is the standard timber for the construction of wooden bridges, trestles, etc., owing to its great strength and stiffness, bility, comparative lightness, the large dimenin which it can be obtained, and its abundance and cheapness.

Western hemlock is also very suitable for purposes where the maximum of strength is not required. It is not quite as strong as fir, but is lighter, and, therefore, easier to handle. It is obtainable in large dimensions.

Western red cedar, because of its remarkable durability, is sometimes used in positions where ordinary wood quickly rots, such as sills or foundation beams in contact with the soil. Fir, hemlock, and spruce treated with creosote or other preservative are also used under such conditions. Where a heavy load borne, Douglas fir and western hemlock are, of course, especially suitable because of their greater strength and resistance to compression.

#### PILING AND CRIBBING.

Douglas fir is most widely used for piling and cribbing. Its valuable qualities for these purposes are its very long, straight, slightly tapering trunk, its strength, resilience, and comparative durability. The wood is hard enough to penetrate most soils, and stands the hammering of the piledriver well. Only where hard subsoils are to be penetrated is it necessary to band the tops to prevent brooming and splitting.

Western hemlock, sitka spruce, and western red cedar also make good piling and cribbing. Hemlock is strong, and is durable if given preservative treatment. Sitka spruce is suitable for use where great strength s not required, and, like hemlock, is durable if treated. Western red cedur is naturally very durable, and is valued also for its light weight and excellent form, but its greater cost and lesser strength as compared with Douglas fir and hemtock restrict its use.

Teredos and other marine borers are the worst enemies of piling, and will attack nearly every wood that is not creosoted. Untreated piling lasts from three to six years. Cresosoted Douglas fir piling has remained sound for twenty to thirty years in salt water on both the Atlantic and Pacific coasts of North America. Piling intended for permanent work should always be treated with a preservative or protected in some other way against marine borers. Creosoted piling and cribbing of all kinds can be obtained in British Columbia.

POLES FOR TELEPHONE, TELEGRAPH, AND POWER TRANSMISSION LINES.

Western red cedar is more widely used, suitable, and popular for poles than any other wood used without preservative treat ment. This is because it best meets the requirements of great durability in contact with the soil, lightness, and suitable taper. Because of the great size to which the tree grows, poles can be obtained from it of greater length than in any other species of

equal durability.
Douglas fir, western hemlock, and sitka sprace, though naturally less durable in contact with the soil than red cedar, meet every other requirement for poles. Durability and long life can be ensured in these species by treating the butt ends of the poles with some preservative, as creosote. Douglas fir is especially suited for positions where great size or strength are required. The largest and best wooden flag-poles are obtained from the fir forests of the Pacific slope. will probably be the tallest pole in the world is the one to be presented by the lumber-men and Government of British Columbia to Kew Gardens. This flag-pole, which is now awaiting a ship capable of carrying it, is long, 33 in. in diameter at the butt, and 12 in. at the top.

## Our Illustrations.

N. 48ES LONDON HOSPITAL, WHITECHAPEL.

I sale daily, which provides additional as a quarters, is in course of erection in st. Maint Street, Whitechapel, Considerdiscrest it regard to it arises from the that her Mojesty Queen Alexandra, the s tent of the hospital, has desired Lord asford, the chairman of the hospital, to K Astord, the chairman of the hospital, to account the Edith Cavell Home "instead of dos guaring it the "Alexandra Home," as originally intended. The building has a frontage of about 130 ft. to East Mount Strict, with a return frontage of 47 ft. to Oxford Street, facing the Luckes Aursing II we. It consists of eight floors, including the bisement, and has accommodation in separate rooms for 110 murses, twelve sisters, i twelve servants. The basement, surrounded by wide areas, is well lighted, and evitains the heating chamber, the accumulate room, the coal cellars, servants' rooms, t cother with a servants' sitting room, sculbry, linen store, larders, bathrooms, and bryatory block detached. The ground floor entains, in addition to the sisters and curses rooms, a large nurses sitting-room and library, visitors' room, three bathrooms, and tearoom. The upper floors consist entirely of sisters' and nurses' bedrooms. Each i these rooms is provided with a litted ward robe, similar to the other nurses rooms in the hospital. Each floor is provided with a bar washing room fitted with a special electhe blower for the use of nurses in quickly bansing and drying the hair, as fitted up the older parts of the hospital. Each ase and large electric lift, also with a boot from, three bathrooms, and a detached lava-try block. There are also additional escape staircises provided at each end of the build Staticties provided at each end of the number 2. The attic floor is used as a box room but it also contains separate iron lockers for the use of each nurse. The premises 200 erally are constructed of non-combustible materials, the floors being composed of concrete carried by steel joists. The inside storeases are constructed of ferro-concrete covered with terrazzo mosaic, thus avoiding the use of hearthstone, which is found object coable in practice. Hot-water radiators are provided throughout, with coal stoves in the set no rooms, and the building is lighted by bestranty. The room floors are covered with colemn on a prepared cement surface; the the property of the whole of the main hospital built-the whole of the main hospital by means of a covered bridge across East Mount Street, so that the whole of the main hospital builtare approached without exposure to the resulter. Architecturally the design of the building is very simple, being somewhat Georgian in character. The ground floor willing is faced with red bricks, and above with 12 is laced with red bricks, and above that with mingled be else. A small quantity of artificial state is used for the dressings, and the roof is covered with green slates. To architects are Messis, Rowland Plumbe and Partners, and the work is being carried out by Messis, Perry and Co., the constitution or by

### TWO HOUSES AT CHISLEHURST, ON NARROW SITES

NARROW SITES

These two leases were do grad for long particles to the soft and which had been left to the soft and leasted as they are in the gradient of the solution of the first test and to be to throw the first test and to be to throw the first test to the sitting the country that share for the first test and wise the first test and we first test a few on the houses.

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with whate-painted 18th-Century panelling from Catharine Court, Tower Hill, lately pulled down. The paved path to the front door is some 70 ft, long, and the first part of the garden behind is land out with stone-paved paths and forms a small rose garden. The builders were Messrs. T. Rader and Son, of Southwark and Cluslehurst, and the drawings were hing in this year's Royal Academy. Mr. E. J. May, F.R.L.B.A., was the architect.

### MILITARY EMERGENCY HOSPITAL.

These plans, grouped on one of our double-page illustration sheets to day, together with the plan printed with our report of Mr. Alfred Saxon Snell's Chadwick slecture on "Military Emergency Hospital Construction," page 552 et seq., were chosen from the series of examples exhibited last Wednesday in Wimpole Street, W., at the Royal Society of Medicine on the occasion of this lecture. Mr. Snell alluded to all these hospitals, so there is nothing to add save to record their titles and architects names:—The Queen's Canadian Military Hospital, Beechborough Park, near Shorn-cliffe, Kent; Mr. W. Henry White, architect—plan, block plan, and section. The 5th Northern General Hospital, Leicester, openair wards; Messrs. Everard, Son, and Pick, architects—plan of one ward, block plan, and detailed section. The Military Emergency Hospital Ward Office model plan—block plan, plan of ward, a general section showing spacing and detail section. Norfolk and Norwich Hospital Military Emergency huts—plan of ward, block plan, and sections. War Hospital for Wales, Netley—general plan; Mr. Edwin T. Hall (Messrs, E. T. Hall and Son), hon, architect.

# IMPERIAL HOUSE, IN THE OCCUPATION OF THE WAR OFFICE, TOTHILL STREET, WESTMINSTER.

These premises have been recently completed, and are now occupied by the War Department The building was designed as a block of professional offices and for com-mercial business, but is devoted to a different purpose, and one for which the accommodation is well adapted. The work is of steel frame construction, the main elevation to Tothill Street being faced with stone. The Dartmouth Street front is 170 ft. long. design of the main front carries on the lines and general character of the adjoining build and general character of the adjoining building. Caxton House. A prominent feature is made of the entrance portico, with its very successful sculptured figures, by Mr. L. F. Roselieb, R.B.A. This portal is shown by a larger photograph, The architects are Messrs. Metculf and Greig, Kingsway Chambers, and the general contractors were Messrs. Lorden and Son, of Tooting, S.W. The lifts are by Messrs. Waygood-Otis, Limited. A photograph is given of the vesti-A photograph is given of the vesti bule. Below the general view of the building in Tothill Street we reproduce two plans showing the extent of the premises, which give an office area of 8,009 sq. ft. on the ground floor alone. The total area of the whole block, exclusive of corridors, is set down at 54,993 ft. super.

In view of present circumstances, the committee of the Surveyors' Institution have reluct antly decided that it will not be practicable to hold the usual Junior Meetings this session.

The alterations to the Grand Pump Room at Bath, which was re-opened on Monday in last week, have been carried out from plans by and under the direction of Mr. Alfred J. Taylor, M.S.A., of Bath, architect to the Baths Committee.

to be to throw thus leaving the to the sitting and the sir Alfred L. Jones has been inserted on the sitting and the south side of the choir of Liverpool Cathedral a good view of the horse of the horse of the horse of the horse of the horse of the horse of the horse of the horse of the down of the south side of the Tree of Life runs through them all, replacing any canopy work above or support window there is canopy work, but it frames only the group of figures and is itself set in the today of uniqued glass, showing off the troops. The prevailing colour in the window is blue, and the scrolls in the two lights, referring to the window, are held by angels, as on, the Lent and Advent frontal belonging to

#### OBITUARY.

Mr. George Morgan, 24, King Street, Carmarthen, died on the 5th mst., within a few hours of completing his eighty-first year. Mr. Morgan was one of the oblest architects in South Wales, and during the last fifty years designed a great many buildings in nearly every county in Wales, including Monmouthshire. He acted as architect to over twenty-eight school boards, and designed no fewer than eighty schools, both secondary and elementary, in Carmarthenshire and the adjoining counties. He was responsible for the planning of numerous Nonconformist chapels, one of the largest being at Newtown, Montgomeryshire. During the last thirty years he was associated with his eldest son, Mr. J. Howard Morgan, F.R.I.B A., who continues the practice, and during that time many important commissions were undertaken, among them being Bush House, the Pembrokeshire seat of Colonel Sir Thomas Meyrick, C.B.; Penrallt, Cardiganshire, for the late Mr. W. G. Reddie; Rhosygilwen for the late Mr. J. V. Colby; Cilwendeg for the late Mrs. Sannders-Davies; and other country residences. Bank premises were erected in various towns for the London and Provincial, Lloyds, and the London, City and Midland hanking companies. Mr. Morgan is survived by three sons and four daughters.

The sanction of the Local Government Board has been given to loans to the Corporation of Derby of £1,927 for distributing mains and £2,043 for electric motors.

Sir H. A. Farrington will succeed Mr. C. E. Muriel as Conservator of Forests, Bengal, from January 3 next, when the latter proceeds on long leave preparatory to retirement.

The Kantuck Rural District Council have received the sanction of the Local Government Board for Ireland to the borrowing of £1,490 for the erection of labourers' cottages.

Mr. S. C. Brittingham, A.R.I.B.A., of Melbourne, has been promoted to the office of Acting Government Architect in the Public Works Department of Victoria. "Mr. Brittingham has been in the service of the State for many years, and his work has been characterised by marked ability," remarks the Journal of the Royal Victorian Institute of Architects in recording his promotion.

Architects in recording his promotion.

All points regarding the purchase by the Morpeth Town Council from the Countess of Carlisle of the town hall and other properties have been settled except the condition that no intoxicating liquor should be sold, distributed, or consumed on the premises. The council will take a plebiscite of the ratepayers on this point. The purchase money has been agreed at £4,500.

Mr. John Howard, of Brighton, has decided, as a memorial to Miss Cavell, the heroic murse, to build at Brighton and endow twenty-four cottages, at a cost of £30,000, for the free use of trained hospital nurses who are unable to follow their calling. The cottages are to be built on land adjoining the convalescent home built and endowed by Mr. Howard at a cost of £40,000, and now used as a military hospital.

At Matlock on Wednesday, Mr. H. S. Bidwell held an inquiry on behalf of the Local Government Board with regard to the request of the urban district council for further powers to raise loans to continue and complete the scherage scheme. By order of the Treasury the power to borrow a further £12,000 to go on with the scheme had been deferred pending a visit of an engineer to the works. It was explained that £45,000 was granted for the work, and £32,000 had been expended. A sum of £24,000 had been asked for, and the Local Government Board granted £12,000. If the scheme were stopped now it would mean losses all round.

The work of restoring Chiehele College, Higham Ferrers, is now finished, the benefactors being the late Dr. John Crew and his brother Mr. Josiah Crew. The style of the architecture as well as the badge of Henry IV., which appears in the cornice on the south side, give the approximate date of its erection (1390-1400). Its original purpose was that of a Chantry Chapel—probably it is the Jesus Chapel mentioned in the old records in connection with the church. It certainly was never a refectory. Portions of the piscina and of the rood staircase remain in the south wall. The college was founded by Archdeacon Chichele, who was a native of Higham Ferrers.



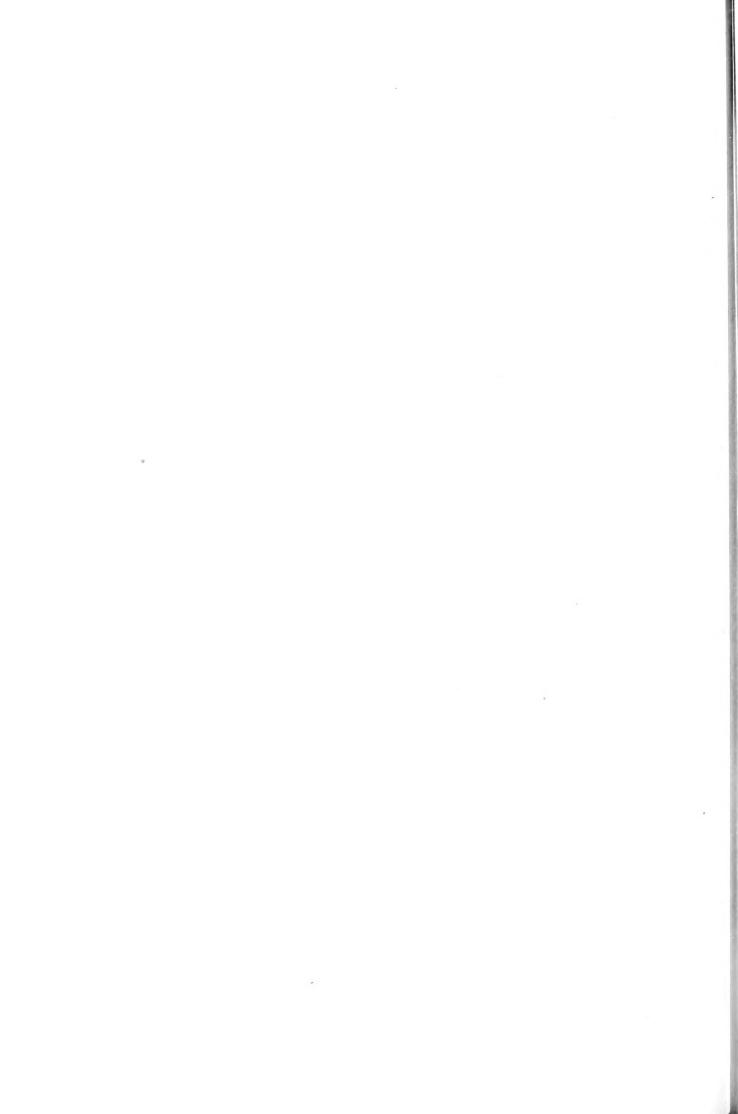
Tella Camera Co. Ploto | ENTRANCE VESTIBULE AND MAIN DOORWAY, IMPERIAL HOUSE, WESTMINSTER (OCCUPIED BY THE WAR DEPARTMENT).

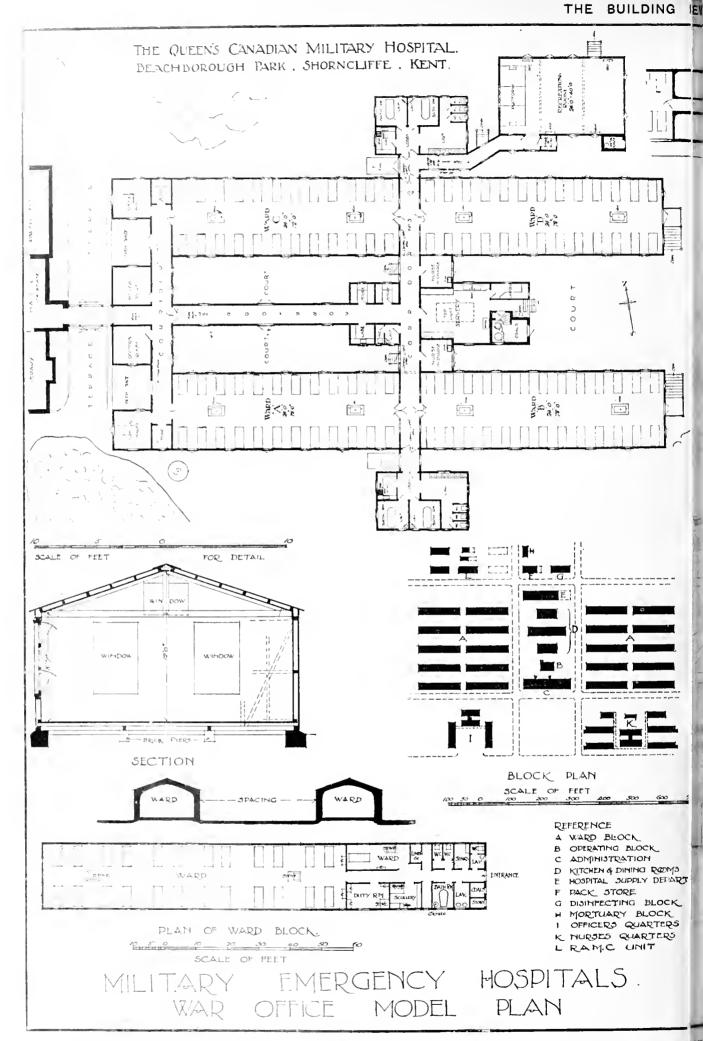


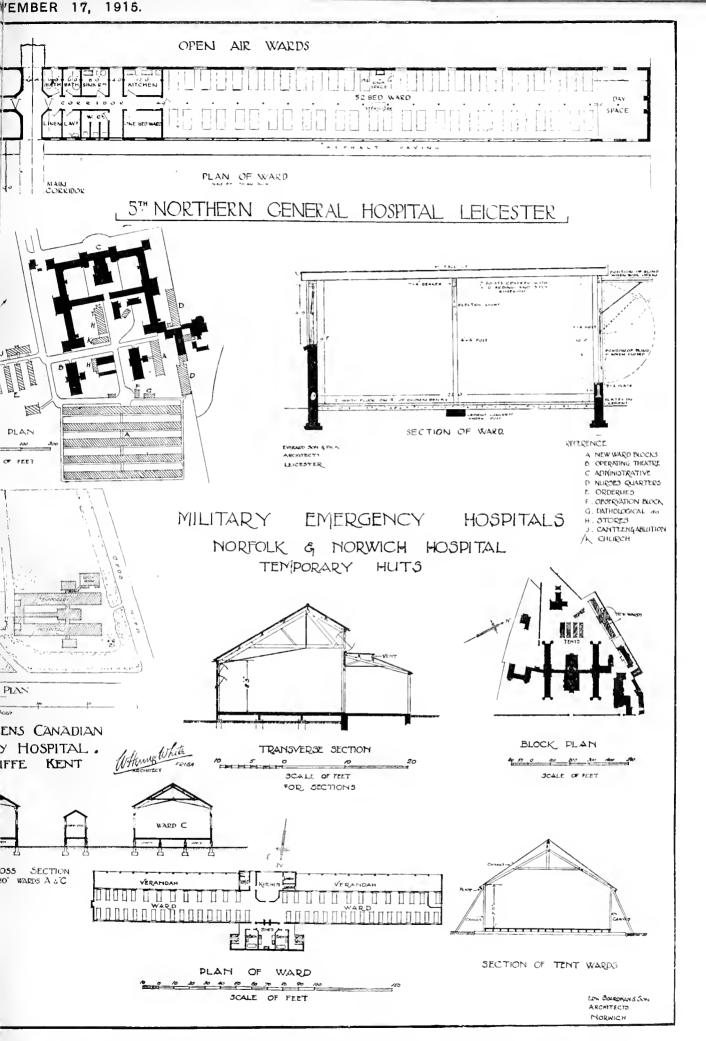
Tella Camera Co. Photo.

IMPERIAL HOUSE, WESTMINSTER (OCCUPIED BY THE WAR DEPARTMENT).

Messrs. Henry Metcall and Thomas R. Greig, Architects.







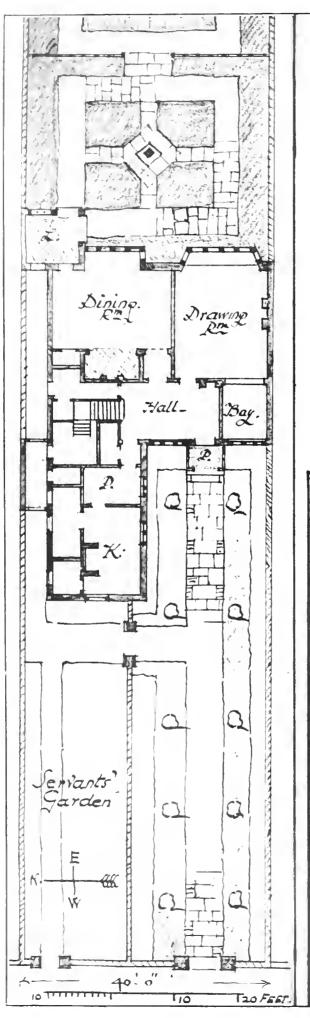
D NORWICH: TYPICAL PLANS ILLUSTRATING THE CHADWICK LECTURE by cy Military Hospital Construction."

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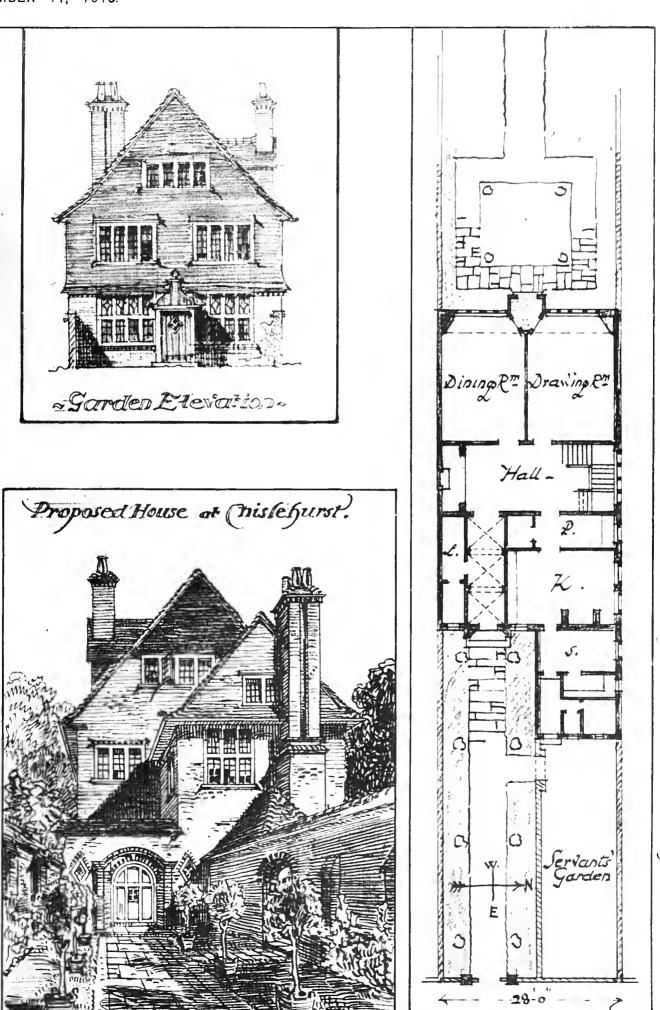
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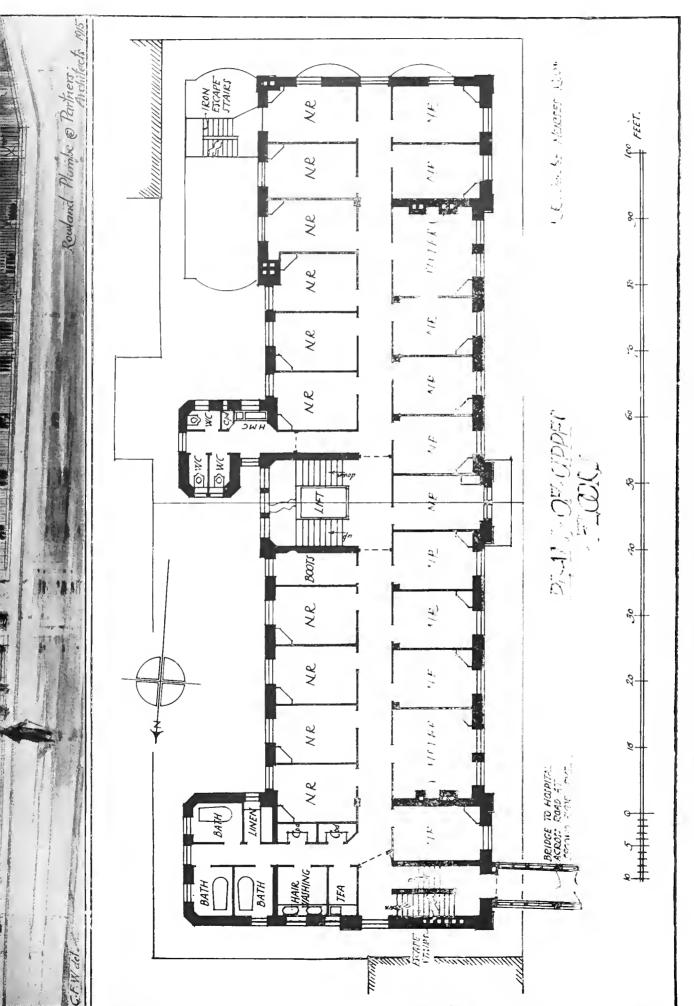




SITES.—Mr. Edward J. May, F.R.I.B.A., Architect.



O.NTO



THE EDITH CAVELL HOME FOR NURSES, LONDON HOSPITAL, WHITECHAPEL, Messes. Rowland Plunde, F.R.I.B.A., and Partners, Architects.

# Currente Calamo.

His own well deserved reputation, and that of his able father, doubtless sufficed to attract the crowded audience last Thursday at the rooms of the Royal Society of Medicine to profit by Mr. Alfred Saxon Snell's able Chadwick Lecture on Emergency Military Hospital Construction, which we are glad to be able to illustrate as fully as our space will permit. As in regard to other Departments of the Government, most of us, the War Office possibly excepted, have certainly been struck by the wide differences in cost of some of the hospitals built. We have come across no cases yet in which, as has been alleged with some of the huts, generous contributions to battalion funds are said to have been made by contractors, so that cannot account for it. Some of us also have wondered, perhaps, at the absence from the lists of architects employed of names of some who have been regarded as hospital specialists. Probably the War Office is unfamiliar with their existence. The whole subject is of the highest importance, and we incline to regret that the R.I.B.A., instead of closing down its meetings, did not secure temporary accommodation elsewhere, as the Chadwick Trustees had to, and fill the bill throughout the first half of the session with a series of papers thereon, in which fuller details still might have been rendered by the architects of the buildings concerned. They would have been appreciated. There were as many architects among Mr. Saxon Snell's hearers at Wimpole Street last Thursday as gathered to listen to their President at the R.I.B.A, meeting on Monday fortnight.

We have received from the Commonwealth of Australia a report by Mr. Walter Burnley Griffin, the selected architect and now "Federal Director of Design and Construction" of the proposed new capital, Canberra, accompanied by a preliminary plan. These were prepared two years ago, and readers are familiar therewith. We have also received a bulky budget of correspondence during the past two years between Mr. Griffin and the various officials of the Federal Government. from "Home Minister" downwards, from which it is evident that, as here at home, the traditions of the Circumlocution Office still prevail whenever an unfortunate architect is fair game for Jacks-in-office. Some of the letters are very funny, but Mr. Griffin seems to be holding his own so far as may be gathered from the following, dated June 18, 1915 :--

The Honourable the Minister for Home Affairs, Melbourne.

Sir,—I have had an opportunity of partially inspecting the file of correspondence laid upon the table of the House, and find that it largely comprises adverse representations and recommendations by dearthmental, officers, when his works with prises adverse representations and recommendations by departmental officers upon my work, with minutes by you, in relation to the whole of which I have had absolutely no previous knowledge. I am surprised that these should have been placed upon record without giving me the privilege of perusal, since you were entitled to know that there is an entirely different version.

Further, the file is incomplete. I could find none of the documents relating to the withdrawal of my chief assistant nor reference thereto.—Yours truly,

W. B. GRIFFIN.
Federal Capital Director of Design and Construction.
"Incomplete or not, the present batch of letters fills 133 pages, and has cost the Commonwealth £75 to print. By the time Canberra is built it strikes us as probable that some weary chronicler will wind up the record with some such words as conclude John xxi.

Up to June 30 of this year the expenditure which will pay them the rent owing, while that there was no evidence to show fer what on the building of Canberra amounted to Maple's have got their hired furniture back purpose Fergusson took the veronal. Up to June 30 of this year the expenditure

£691,201. This does not include the purchase of land. The heaviest outlay has been in connection with water supply, which has cost £196,000; on the power plant the expenditure has been £66,000; on buildings, £73,000; on roads and bridges, £91,000; and on the railway from Queanheyan to Canberra, £35,000. In all. 383,660 acres of land have been compulsorily acquired, the gross revenue derived from the land amounting to £16,458. Work in the permanent nursery is now in full swing, and re-afforestation is also in progress. The sewerage works are reported to be making excellent progress, and the Staffordshire kiln brickworks are approaching completion. A proclamation will shortly be issued, taking over sovereign rights over about 18,000 acres at Jervis Bay.

The committee of the Builders' Benevolent Institution has again decided to pass the annual dinner, which, in ordinary times, would have been held this month. sponsibility of providing the means to continue the payment of pensions devolves upon the treasurer, the president, Mr. George R. Holland (of Messrs. Holland and Hannen and Cubitts, Limited), being still away on his military duties. An earnest appeal to readers, therefore, is made to send a special donation to take the place of the amount they would have given at the annual dinner. The only reliable income of the institution amounts to £700 from investments, and an average of £300 from annual subscriptions. The yearly payments to pensioners are over £1.900. To make up this deficiency of £900, special effort is necessary, and donations should be sent at once to Mr. Frank May, the treasurer, at Messrs. Holland and Hannen and Cubitts, Limited, Hyde Street, Bloomsbury, W.C.

Builders often let, if they cannot sell, their new houses to newly married couples, who buy new furniture upon a hire-purchase agreement. Then there is the rent to be paid and the furniture instalments. When trouble comes the question is usually whether the landlord or the hire-purchase people shall first get the furnitme. The recent case of Bence and Johnson v. Maple and Co., Limited, though not an example of this newness all round, shows what may happen in this race for the furniture. The plaintiffs, as landlords of a house at Hampstead, sued the defendants. who had sold some furniture on hire-purchase to the tenants, for trespass. It was clearly quite a near thing during the run. plaintiffs, as landlords, had applied for leave to distrain, as is now necessary during the war, which the county court judge refused. Then they got a key, took possession of the house, and ended the tenancy, their smart agent carefully locking up the place, but leaving the furniture there and the front door on the latch. Thereupon Maple's people took their turn, got another key from the tenant by persuasion, went in, and cleared out all their hired furniture. There were some neat and knotty points of law in the case, one being as to whether the landlords could distrain after having put an end to the tenancy, as this would affect their damages. After a two days' hearing, with full arguments and summing-up, the jury found there had been a trespass, and gave £50 as damages. There were other findings, but the landlord's right to distrain was found too shadowy for argument, even by the lawyers. So the curtain fell on this comedy of errors. leaving the plaintiffs, as landlords, in possession of the house, with a judgment for £50, which will pay them the rent owing, while

to sell again, and such instalments as were paid before the crisis. Still, as the landlords have judgment, with the costs of the action. they seem to have come off best in this legal scriffle. The tenant, indeed, remains, a sad vague figure of failure, in the background. but she can always tell and re-tell her dramatic little story of "The Two Latchkeys," and what happened to the landlords and the lawvers!

The Public Authorities Protection Act. 1893, was plainly and primarily intended to protect those authorities in doing their public duties. But corporations, councils, and the rest are always seeking to extend the scope of that statute for purposes of what may be called their private protection. It is satisfactory to find that, in the recent case of "Bradford Corporation v. Myers." this attempt has entirely failed. The judgment of the House of Lords, laving down first principles, will become a leading precedent, and so is of much interest to all contractors. builders, and others who have to do business with these public authorities. The corporation made their own gas, and so they had to sell their own coke. The case began in October, 1912, when the servant of the corporation, while delivering a ton of coke through the plaintiff's coal-hole in the pavement, broke his shop window. Plaintiff sued in the county court for damages, but did not do so until more than six months later. Then the corporation set up the technical plea that, as the action had not been brought within six months, they were exempted from liability under the Public Authorities Act. They succeeded in the county court; a Divisional Court of two judges was divided in opinion; then the Court of Appeal held that the Act did not apply; and now five Law Lords have confirmed this decision in favour of the original plaintiff and his claim for £17 2s. against the corporation. It is all very well to protect public authorities in the execution of their public duties under statute or otherwise; but when they take to making gas and selling coke on their own account this is a carrying on of business and not the performance of a public duty. So they were held liable to this action for damages in the same way as would be any other trader whose servants were guilty of negligence. ->----

A new church hall at Bolsover, buil at the junction of the Mansfield and Creswell main roads at a cost of over £1,000, has beet formally opened. The architects were Messrs Rollinson and Sons, of Chesterfield.

Mr. P. M. Crosthwaite, an inspector under the Local Government Board, held an inquiry at Battle yesterday (Tuesday) into an applica-tion from the urban district council for sanc-tion to borrow £950 for works of sewage dis-

Mr. Cuthbert Rodham Morris, of North Curry, near Taunton, agent to the Duchy of Cornwall Estates and head of Morris, Soys, and Peard, surveyors and auctioneers, who died on July 6, aged eighty-three, left estate of the val e of £170,885.

The death was reported to the Metropolitan Water Board on Friday of Mr. W. Morris, for over fifty years engineer for the K at district under the Kent Waterworks Co. and the Board. is retirement in January, has been receiving a £1,215 8s. per annum.

An open verdict was returned at the resumed An open verdict was returned at the resumed inquest at St. Paneras on Saturday respecting the death of Norman Sunart Fergusson, agod twenty years, a cadet in the Inns of Court Officers. Training Corps, and formerly an architect's pupil residing at Cathedral R ad. Cardiff. Dr. Frederick Womack, toxicologist, of St. Bartholomew's Hospital, stated that the cause of death was vertical poisoning. The jury returned a verdict accordingly, but added

PROFESSIONAL AND TRADE SOCIETIES.

HALL (HANIRY CHAPEL) of the order of the Historic Levels to be flower held at I state to Liverpool a paper Liverpool a paper The Recent Excavations at Contry Chapel was read by Contry Chapel was read by Newdigate S.J., in callabora F. H. Chechan. The runed short St. John the Baptist, at Story ast, was built only in a tory ast, was built only in a tory by \$1. Robert de and the end well as a chantry, the story of temp. Edward VI., this like away with notwithment united the commissions of the area and in 1555 the area. trary, and vi 1555 the pro-tice Strebuins, in which Ten and antil the eighteenth centhe apply theasures 55 ft. by 17 ft., as of the north and east walls are 1) The east window was, how or of the Stoneyhurst in the eight chard it Stoneymarst in the eigh-chary where it was reflected, and down soffice Lights. The excava-tion in revealed at the cast end a light measure\_7 it, b in, by having a barrel vault approached socialize two versteps, whilst in addieneli sever a spect us were discovered during executers, which a terments were no termests. Retermation date.

HISTOL WEIGHING MACHINES -The Bristol University of the Bristol University of the Bristol University of the Society Mr. H. held on the state Weighing · 'are confirer to remark-There were three many medians 2 equal arm " is the wn 1 Steengard f and other to term t made up  $M \oplus$ 

vention in the field of automatic weighing and ecorning of variable loads, and also in reducing the size of the load registering device

HOME COUNTIES ARCHEOLOGICAL SOCIETY.—On Saturday attenuon the Home Canties Archaeological Society, under the guidance of Mr. Charles Welch, F.S.A., visited Cutlers' Hall, where they were welcomed by Mr. William Beaumont. The hall itself is modern, but Mr. Beaumont stated that next year will bring the 500th anniverv of the incorporation of the company. Welch said that the Old Hall was opened on May Day, 1664, but a few days later than the birth of Shakespeare, and that its destruction in the Great Fire of 1666 involved the company in a debt that took a century to dis-charge. The company existed for centuries before its incorporation, while the earliest known Cutler, appropriately named Adam, lived in the time of Richard I.

1NSTITUTION OF WATER ENGINEERS

-The twentieth annual winter meeting of the Institution of Water Engineers will be the Institution of Water Engineers was no held at the Geological Society's apartments, Burlington House, W., on Friday, December 10, commencing at 2.30 p.m., when a discussion will be opened on the necessity for defining the terms "domestic purposes" in the december 1 water Acts. The elecgeneral and private water Acts. The election of the president and council for the year 1916-17 will also take place.

THE ARCHITECTURAL ASSOCIATION THE ARCHITECTURAL ASSOCIATION OF IRELAND—At the opening meeting of the mneteenth session of the Architectural Association of Ireland, held at 15, South Frederick Lang, Mr. H. G. Leask, the newly elected President, delivered his inauguraal address. Mr. Leask referred to the fact that a constant of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the cont axth of the members were now serving their King and country, a very creditable number out of such a small roll of membership, which he understood reached 119. Dealing with the subject of "Architecture After the War," from a professional standpoint, the President said after the war stringent economy and heavy tryation were bound to have their effect heavy tryanon were made to the progress ungit halt it must not stop. They would probably see less in practice and in would probably see less in practice and in the building papers of elaborate costly coun try and town mansions, and more schemes for the provision of modest homes, and the production of labour-saying appliances contrived with the object of economising energy and expense. The aspect of social progress which most nearly appealed to architects was that of the housing of the masses. When the waste, regular and daily, not spasmodic, of child life the cities and towns was thought of, due as was to conditions of lite, not the least of which was housing, it was unthinkable that progress in social anichoration should be allowed to stop whatever the cost of continuance.

LEGAL INTELLIGENCE.

CLAIM FOR COMPLETION OF PUR CHASE OF ESTATE—KECK v. FABER—In this action, heard by Mr. Muir Mackenzie at the Reyal Coarts of Justice, the decision of the Official Referee, in the form of a report to Mr. Justice Nextle, was field on Widnes developed at the Reyal Coarts of Justice, the decision of the Official Referee, in the form of a report to Mr. Justice Nextle, was field on Widnes developed as we stated a fortunalit ago tp. 510). Mr. T. C. I. Pewys Keck, of Palliser Road, Bavon's Coart, W., saed Colonel Walter V. Faber, M.P. for Andover, on a contract dated March, 1913, to purchase the estate of Stoughton Grange, in Leicestershire. The price was £251,760. The allegation was that as the defendant had not exceeded over three weeks, and judgment was reserved. The Official Referee now found to at the sum of £26,522 13s. 2d was due to the plantiff as damages on the breach of content that am including £22,657 for actual disease. The Mr. Mr. Appleads of damage which had been agreed between the parties.

The parties of OPARRY COMPANY'S ARREARS OF The WAGES At Festimez, on Thursday, the Teacher of the Festimez Grante Opacies of the Festimez Grante Opacies of the Genjany for wages in the Wages of the White Philips, for the Wages of the Wages of the Apacies of the Special Opacies of the Wages of the Apacies of the Wages of the Apacies of the Wages of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of the Apacies of t

# Building Intelligence.

BRISTOL.—The annual report of the Couneil of Bristol University states that tenders having been invited for the lower and main buildings, it was found possible to make a contract for their erection, Mr. George Wills and Mr. Henry Wills guaranteeing £40,000 beyond their previously promised benefactions, to meet the increased cost of the extions, to meet the increased cost of the ex-tended buildings. A contract was entered into in May last with Messrs. Henry Willcocks and Co., of Wolverhampton, for the sum of £187,000, subject to certain omissions and of £187,000, subject to certain omissions and alterations, which are expected to reduce this amount by about £100,000. The work of demolition of the old Blind Asylum was accordingly commenced, and the foundations of the new building are already proceeding. Messrs. Paul and James, of Bristol, are the problems. architects

KNEBWORTH, HERTS.—The completed portion of the new church of St. Martin's, Knebworth, the foundation-stone of which was laid in 1914 by the Countess of Lytton, on a site given by the Earl of Lytton, was conon a site given by the Eari of Lytion, was consecrated last week by the Bishop of St. Albans. The church is being erected from designs by Mr. Edwin Lutyens, A.R.A., brother-in-law to Lord Lytton. It is in the Renaissance style, in red brick and stone. The portion which has been completed consists of chancel, c'ergy, and choir vestries, north and south transepts, and a portion of the nave, and has cost £4,000.

TILBURY.—In view of the great pressure of work in Tilbury, and of the increasing demand for houses for the housing of transport workers and others, the urban district council have decided to adopt an extended to account the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of the property of th and continuous housing policy. At a special meeting on the 8th inst, the council appointed Messis. Pepler and Alleu, F.S.L., F.R.L.B.A. of Howard Honse, Arundel Street, Strand, as of Howard House, Arundel Street, Strand, as consulting architects, and Messrs, F. J. Winter, M.S.A., of 2, Heygate Avenue, Southend on Sea, and W. J. Wadman, of 71, Jerningham Road, New Cross, S.E., as acting architects, to act in conjunction with Mr. S. A. Hill-Willis, Assoc.M. hist, C.E.L., engineer and surveyor to the council, in preparing a scheme for the value pressure of the council, in preparing a scheme for the council of the council. ing a scheme for the erection of further houses up to the number of 500, in addition to the 150 now in course of erection, and arrangements are being made for the town planning of the whole district with a view to its deve-lopment on healthy and progressive lines. The houses being mainly required for transport workers, whose services are essential in connection with the war, it is probable that a Government grant will be applied for towards the cost of construction, such as has been granted in other districts where a large number of war workers are employed. We illustrated Messrs. Pepler and Allen's plans and elevations of some of the honses to be erected under the scheme in our issue of the 9th April last.

# Correspondence.

ARCHITECTS' WAR SERVICE. To the Editor of The Building News.

Sin.—It would no doubt add to the success of the R.I.B.A. War Committee's appeal if it was assured to all rejected candidates that some badge was awarded for their patriotic offer. Although physically fit many of us may be debarred by an age limit, and some recompense for our disappointment would be found in an armlet or a badge.—I am, etc.,

John Leeming. Westminster and Bromley, Kent, November 13, 1915. ---

The death of Mr Edwin Joseph Simpson took place at North Walsham on Saturday after a long illness, following an operation. The deceased held the positions of surveyor and inspector to the North Walsham Urban District Council for thirty one years, from which position he retired in 1912, and rate collector to the same hody for thirty-seven years, and assistant overseer and collector thirty-nine years.

# Trade Aelus.

## WAGES MOVEMENTS.

LEEDS JOINERS' BONUS.—Sir George Askwith has presided over an important con-ference, held at the Board of Trade Offices, between seven representatives of the Leeds Joint Committee of the Carpenters and Joiners' Society and six representatives of the Leeds Master Builders' Association. The subject under discussion was the claim for a war ject under discussion was the ciaim for a war bonus made by the Leeds joiners, who number approximately 900. They have not yet been conceded any war bonus, and they have agitated for one during the last six months. Mr. Tom Heale, the senior Leeds society's delegate to the conference, stated in an interminant that the during of the conference. delegate to the conference, stated in an interview that the decision of the conference was for a bonus of 2s. 6d. weekly, payable at the end of the first week after the close of the conference. This is the sum paid as a bonus for some months past to carpenters in the shop-fitting trade, and the men's representatives accepted the decision at once. The employers' representatives stated they would be compelled to submit the agreement to their association for approval association for approval.

#### TRADE NOTES.

Under the direction of Messrs. A. F. Scott and Son, architects, Norwich. Boyle's latest patent "Air-Pump" ventilator has been applied to the new Primitive Methodist church. Carcroft, near Doneaster.

In the construction

sideration is directed by the authorities towards the vital question of the health of the future inmates. Many old houses are condemned because the walls are saturated with water. We learn that a house wall situated next a river at Bingley (Yorks) has been made absolutely water-tight with a Pudlocd cement rendering

water-tight with a Pudlocd cement rendering Messrs. D. Anderson and Son. Ltd., the makers of Rok and other roofing, whose announcement appears on page svii., have a unique record in manufacturing and supplying roofing felts. They supplied roofing to the British War Office during the Crimean War, and from August, 1914, to the present time have supplied many thousands of rolls of different kinds of their roofing to the Government for use on huts, hangars, hospitals, muintion factories, etc. Messrs. Anderson have had over sixty years' experience in the manufacture of Messrs. Anderson have had over sixty years' experience in the manufacture of roofing, and when it is considered that the enormalist their works reaches the figure mous output of their works reaches the figure of 60,000 rolls a month, the reader will have some idea of the immense demand for their goods. Their new booklet is excellently illusgoods. Their new booklet is excellently illustrated with photographs of buildings erected throughout the British Empire, all of which are roofed with their famous Rok roofing. A copy will be sent to readers who apply by postcard to Messrs. Anderson and Son, Ltd., Lagan Felt Works, Belfast.

#### PARLIAMENTARY NOTES.

ROAD IMPROVEMENT GRANTS. ing the discussion in the Commons on Clause 41 of the Finance Act, which provides that the charge on the Consolidated Fund for road improvement grants shall cease. Mr. Molteno moved that instead of the grant being abolished it should be reduced to £300.000 per annum. Hitherto, he said, the payment had been from £1,500.000 to £1,750.000 per annum. been from £1,300,000 to £1,700,000 per annum. The money, which came from the petrol and motor-car taxes, was necessary for road maintenance, especially as heavy road motor traffe had so increased owing to military requirements and to the fact that the railways were overburdened with traffic. He paid high tribute to the work of the Board, without which the main thoroughfares of the country would not have stood the strain of the next. would not have stood the strain of the past twelve months. Owing to the congested state twelve months. Owing to the congested state of the railways it was absolutely necessary to maintain the roads in a good state of repair, otherwise the ordinary life of the country would be paralysed.—The Chancellor of the Excheque and that the Road Board's funds amounted at present to over £3,000,000. The average expenditure in grants was about £400,000 a year, so that the existing funds would at that rate suffice for seven or eight years. Was it conceivable that the charge on the Consolidated Fund should be continued at present when the money would not be used?

Sir R. Adkins pointed out that owing to the increased wear of roads the Road Board grants had grown to £800,000 per annum.— The amendment was negatived, and the clause was duly added to the Bill.

# Our Office Table.

A special company for training candidates for commissions in the Royal Engineers and other special branches of the Service has been formed by Colonel W. Shirley, of the 28th Battalion, The London Regiment ((Artists Rifles), O.T.C. All applicants filling in the forms we published last week and willing to receive preliminary training in this corps should mark their forms "Will undergo train ing course." During training pay will be at Army rates for privates, with separation allowances on the usual scale.

The Governors of the Glasgow School of Arts propose to hold an exhibition of ancient and modern needlework, chiefly British, at the School of  $\Lambda$ rt early next year.  $\Lambda$  committee of the Governors has been formed. and to this certain artists and connoisseurs have been co-opted. The scheme for the exhibition includes three divisions:-(1) Civil articles of domestic use; the decoration of the house and personal adornment; (2) militaryarms and accontrements; flags and banners; heraldry; and (3) ecclesiastical. The committee desire that as far as possible the exhibition be confined to British productions, and ask owners of interesting examples to forward particulars of such to Mr. John M. Ground water, the secretary, School of Art, 167, Ren frew Street, Glasgow.

The Brown Book of the Architectural Asse ciation of Ireland contains a portrait of the president, Mr. II. G. Leask, who delivered his opening address at the meeting of the association, held at 15, South Frederick Lane, Dublin, on the 4th inst. From the accompanying biographical note in the Brown Book we learn that the new president is three-and-thirty this month. He served his apprenticeship to his father, Mr. R. H. Leask, He served his M.I.C.E.I., after which a practical experience in Kearl's, a firm of Dublin iron founders, and a short period in the Waterford drawing office was followed by two years with a past-president of the association, Mr. G. P. Sheridan, A.R.I.B.A. Mr. Leask then joined his father in partnership, but afterwards obtained a position on permanent staff of the Office of Public Works, first as assistant surveyor and latterly as chief draughtsman. He was hon, secretary of the A.A.I. in 1905-6 and 1909-10, and their president in 1911-12. Mr. Leask is an expert photographer as well as a facile draughtsman.

The Streets and Buildings Committee of the Corporation of York have received a letter from Messrs. De Burgh Bros., enclosing plans of a five-roomed cottage proposed to be built in Carrington Avenue, Poppleton Road, which complied with the building by-laws except as to height of window lights in bedrooms which, in this case, they asked should be allowed to be 6 ft. 6 ins., as against 7 ft. 6 in. required by the by-laws. They stated that if the concession were granted, their client proposed to build fifty cottages in the street. The committee decided that application be made to the Local Government Board for an amended by-law whereby the minimum height required for at least one of the windows in a habitable room shall be 6 ft. 6 in., instead of 7 ft, 6 in., as at present, where the width of the street from building line to building line is not less than 50 ft.

At the installation meeting of the "Canter bury 'Lodge of Freemasons, No. 1635, held at the Monico Restaurant on November 9, Mr. F. J. Lennox Robertson, who is well known Claridge's Asphalte Co., Limited, was inducted in the master's chair by Mr. George Frederick Ridley, the outgoing master. He ifterwards invested his officers as follows afterwards invested in someers as ionicers. The Rev. Arthur George Lennox Roberts in. P. D.G., Chaplain, Argentine Republic, S.W.; Messis, David Louis Strelett, J.W.; the Rev. John Farrington Downes, P.A.G.C., Chaplain: Fredk, Coukling van Duzer, P.C.D. lain; Fredk. Coukling van Duzer, P.G.D. Treasurer; Illtyd Moline Prichard. Treasurer: Illtyd Moline Prichard, P.A.G.D.C., Secretary: Harcourt Wno. Han rott, S.D.; George Herbert Lemox Robertson, J.D.; Frederick T. Galsworthy P.G.D., D.C.; Alfred McGregor Hughes, L.R., Orc.; doorway in the west flank wall instead of Ernest Decimus Ponsford, I.G.; Arthur Edvikrough the area as originally planned.

ward Hall and Edward William Mitchell. Stewards: and J. H. McNaughton, Tyler Amongst those present to witness the cere mony were Messrs, F. E. Bristowe, Grand Junior Deacon of England, F. W. Rogers, Chas, E. B. Kibblewhite, and L. E. Ellison. the last-mentioned being amongst the latest recruits to the British Army. A penticularly pleasing teature of the evening was the fact that in the Senior Warden and the Junior Deacon of the Lodge the Master was invest ing his father and brother respectively

The Covernment of India have decided to establish a permanent commercial museum in India. The museum will be located in Calcutta, and will be attached to and form part of the Department of Commercial Intelligence. The development of the museum must neces sarily be gradual. It is intended that the museum should contain samples of the principle. cipal manufactures imported into India tron all foreign countries with which there is existing or prospective Indian competition, and also representative samples of the corre sponding Indian manufactures. It will also contain samples of goods marketed in foreign countries which India might be in a position to supply. The samples exhibited will be supplemented by catalogues and price lists. which will be kept continuously up to date by printed statistics wherever possible

"Valves and Valve Gears, Vol. 11." by Prof. Franklin De Ronde Firman, M.E. (London: Chapman and Hall, Ltd., 3s. 6d., deals with gasoline, gas, and oil engines on similar lines to those of Vol. 1., in which steam-engines and steam turbines were treated.

"Mathematics for Machinists," by R. W. Burnham, M.A. (London: Chapman and Hall. Ltd., 3s.), is a simple and practical Beginning with fractions, it gives in elementary form an explanation of the calculations most frequently occurring in the machine shop, discouraging as far as no sible the pracice of using a formula mechanically, with no thought for its meaning. It will be of service to the majority of mechanics who have for-gotten most of what they learned of mat's matics at school or in a technical class

A new church is to be built at Wallasey from olans by Messrs, Langford and McGovern, of North John Street, Liverpool,

The new municipal buildings at Maester have been formally opened. Mr W Gaylard, of Bridgend, was the contractor. The cost was £4,350.

A hall is about to be built in connection with the purish church of Scoue, near Porth as a memorial to the late Captain Machaff, of the 1st Camerons, Mr. Mackenzie, of Inverness, is preparing the plans.

The estimate of Messrs, W. F. Spencer The estimate of Messrs, W. F. Spencer, Cress Bank Works, Oldham, amounting to \$42° has been accepted for the heating and hot wave-supply in the new offices of the Bayer Ce Ltd., now being erected from the plan and under the sinervision of Messrs, Maxwell and Take, architects, 25, Brazennose Street, Man-chester

Bedford County Conacil have unanimously romoted the deputy county surveyor. ? X. Smart, to succeed the late Mr. W. H. as country surveyor. Mr Smart will receive a commencing salary of £400, rising by annual increments of £20 to £500 a year, with an allowance of £150 in respect of traveling experience within a penses within the county

At the meeting on Friday of the Metr poli-tan Water Board it was reported that the arbitrator's award in the proceedings between with Board and the Corporation of Hertford with reference to the Hertford sewage works amounted to £25,000. Incidentally, it provides for the conveyance by the Board of twelve acres for the conveyance by the Board of twelve acres of land at a price of £4,300. It was or anged by the Board to defer payment until six near the after peace is declared. Meanwhile, 2 preent, interest will be paid. On the recent mendation of Mr. II. Austen H. 'I, the acchinect for the new head offices in Resolution Avenue, it was acreed to expend an estimated additional sum of £850 in continuation of the filter heal retaining wall adjoining the sale of the offices, so as to allow access to be obtained

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#### TO CORRESPONDENTS.

We do not hold ourselves responsible for the opinious of our correspondents. All communications should be drawn up as briefly as possible, as there are many calimates upon the space allotted to arrespondents. The space allotted to arrespondents in the space allotted to arrespondents.

It is particlearly requested that all drawings and allotted to the lighter of the Bulldow Niws. Effingham House, I. Arondo store textually the small be addressed to the lighter of the Bulldow Niws. Effingham House, I. Arondo store textually well and not to members of the staff by manner being is not infrequently of termine cause. All drawings and other communications are sent at contributors' risks, and the Editor with not underlaw to pay for, or be liable for, unsought contributions.

The physical Gerard 12d.

Telegrams: "Inneserver, Estrand, London."

NOTICE.

Bound orgons of Vol. (VIII) are now ready, and should be ordered early optoc 12s, each, by post 15s 15 15 50 cm. a for the done up. A few bound volumes of Vols, XXMX, XII. XLVI, XIIX, 1111, 1A1 LATE, LAW, LAW LAYI, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYII, LAYIII, LAYII, LAYII, LAYIII, ACUII, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI, ACUI

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#### TO ARMS!

#### 4th Battalion ("Architects") Central London Regiment Volunteers.

Recrints at intentity needed for the Regulars, Territorials, and Volunteers, Intending recruits should apply to Battais in Headquarters, where they wall be advised as to the branch of the service for which they are best suited.

which they are best suited.

ORDERS FOR THE WEEK BY LIEUT, COL. A. W. WARDLN.

(LEMERAL PARADES.

Saturday, 20th its., the er Hense, 3 p.m. Units in a rade. Combined rante march and drill with the LATVIC.

There was be no general parade on Saturday, 7th inst.

There's Tili mst.

EXPRINCHING PARADE.

Sunday next, 21st ans., at Victoria Station,
1 B. and S.C. Railway, indicator board, 8.55 a.m.

deep Uniform naviva ws. and water bottles. Midday nations to be carried. Return to town about

a to p.m. Railway vouchers will be provided, and
special trains will be rail by the railway company.

A short course of lectures on Pioneer Work and Field Engineering generally will be commenced on Workinsday next, 17th inst., at 7 pm., in the Sergeants Mess, The opening lecture will be by the

geants Mess, The opening lecture will be by the valurant.

NEW HEADQUARTERS.
The opening meeting originally arranged for the 24th inst. has been postpoined to December 1, at 7 p.m. All members are particularly requested to attend.

DELUS AND PURALES.

attend.

DRILLS AND PARADES,
All drills and parades w., be as isual.

SCHOOL OF ARMS.

Dell Hendquarters, Chester House. Instruction in bayonet ughting, gynnasties, physical drill, boxing, and singlesticks, Tuesdays, 6 to 5 p.m.

and singlesticks, Theshays, 6 to 8 p.m.

RECRUIT DRILLS.

"A" and "B" Companies, Chester House, 6.15 to 7.15 p.m. and 7.15 to 8.15 p.m. Mondays and Fridays.

"C" Company, Boreliam Wood and Elstree District, Headquarters, A.A. Athletic Ground, Boreliam Wood. For ima particulars apply to Alan Potter, treey Gatoles, Boreliam Wood, Herts.

"D" Company, Chester House, Tucsdays and Figuredays, C.45 p.m.

Note: For the present the School of Arms and Roberts Drills will be held jointly with the Engineering Institutions V.T.6

By Order.

By Order, L. R. GUTHRIE, Adjutant. -

#### MEETINGS FOR THE ENSUING WEEK.

7.45 p.m.

SATURDAY.—G'aszow Ar dintectural Craftsmen's Society Visit to the Glaszow Municipal Buildings Extension (Watson and Salmend, FF.R.I.B.A., architects), 2,45 p.m.

Westery, Survives' Instantion, "Case Laws under the Unance Acts," by E. M. Kinstam, Barrister-at-Law, 8 p.m.

Kenstam, Barrister at-Law, 8 p.m.

Firshay Humidating Engineering Society. Discussion on Report of Departmental Committee on Lighting in Factories and Workshops, to be opened by Leon Gaston, 1s, John Street, Adelphi, W.C. 8 p.m.

Sensesday (Nov. 2D. Royal Society of Arts. (Constantinople: Ancient and Modern," by Sir Edward Pears. 4.30 p.m.

-Architectural Association of 17.—Architectural Association of 17. land. "Some Towns of Northern France Affected by the War." by L. E. Stelle, W.A., MR.I.A. 15, South Frederick Lane, Dublin, S.p.m.

with Frederick Lane, Dublin, 8 p.m., 27. It startion of Municipal Engineers, Amena Meeting and Presentation of Report, 12 noon, Presidential address; discussion on the following papers. The Manufacture of things of the Horace Boot, past-Production The Bounts berived by at 1 to in best a Adopting a Town plant as Adopting a Town plant as a supersident of the Association Row, W.C. 230 p.m.

It is a strate. Produce Brokers Co., Ltd., Ovingen Orl, and Cake Co., Etd., Lords clinical Atkinson, Parker, Sunner, and whose decided on Monday that arbitrators, spinor out. one of a to settle depote arising out onne and contracts, are entitled to take another ton the existence of trade custo as affecting obligations under the con-

## LATEST PRICES.

N.B.—All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

#### TIMBER.

Owing to stoppage of supplies all prices

have advanced considerable		-
IRON.	Per ton.	Per ton.
Rolled Steel Joists, English Compound Girders, Ordma Sections	£14 0 0 to £ iry 16 10 0 ,,	215 0 0 17 10 0
IRON. Rolled Steel Joists, English Compound Girders, Ordma Sections Wrought-Iron Girder Plates Steel Girder Plates Steel Steets (Single or Double) Steel Strip Basic Bars Bar Iron, good Staffs	13 10 0 ,,	13 12 6 13 17 6
Steel Sheets (Single or Double) Steel Strip Basic Bars	11 10 0 ;; 10 15 0 ;; 11 15 0 ;;	_
Bar Iron, good Staffs Do., Lowmoor, Flat, Round, o Square Do., Staffordshire Crown	13 10 0 ,,	13 15 0
		14 10 0
South Staffs Best Snedshill	8 0 0 ,,	8 15 0 9 10 0
South Staffs  South Staffs  Best Snedshill  Angles, 10s, Tees 20s.  Builders' Hoop Iron, for bondi  Ditto galvanised,  Galvanised Carvacatal Short In	per ton extra. ing, £13 5s. to £20 to £20 10s	£13 15s.
No.	. 18 to 20. No.	22 to 24.
6ft. to 8ft. long, inclusive gauge Best ditto	Per ton. £20 0 0£	I'erton. 20 10 0 21 0 0
		D +
Cast-Iron Columns Cast-Iron Stanchions Rolled-Iron Fencing Wire Rolled-Steel Fencing Wire Galvanise Cast-Iron Sash Weights	7 7 6 ,, 8 15 0 ,,	9 0 0 9 5 0
Cast Iron Sash Weights	7 7 6 8 15 0 7 15 0 ed 6 5 0 6 5 0	6 15 0 6 15 0
Cast-Iron Sash Weights Cut Floor Brads Corrugated Iron, 24 gauge. Calvanised Wire Strand, 7 pl 14 B.W.G	15 0 0 ,,	15 5 0
14 B.W.G B.B. Drawn Telegraph Wire, Go	14 5 0 ., alvanised —	<b>←</b>
£10 10s. £10 15s. £11 0s. £1 Cast-Iron Socket Pipes—	1 5s. £11 15s.	per ton.
3 in. di uneter	£7 5 0 to 7 0 0 ,,	£7 12 6 7 2 6
3 in. divmeter	s. Od. per ton ton extra.]	extra.
Tron— Cold Blast, Lillieshall Hot B ast, ditto Wrought Iron Tuhes and Fittin	Per ton. 137s. 6d. to 1	142s. 6d.
Gas-Tubes Water-Tubes Steam-Tubes		61½ pc. 57½ ., 53¾ .,
Galvanised Gas-Tubes		50 ,, 47½ ,,
OTHER MET		40 ,,
Lead Water Pipe, Town	Per t∋n. F £*32 10 0 to	er ton.
Lead Barrel Pipe, Town	. *33 10 0 ,, . *33 10 0 ,,	
Lead Water Pipe, Town  Lead Barrel Pipe, Town  Country  Country  Country  Lead Pipe, tinned inside, Town  Lead Pipe, tinned inside and ontside  Town  """, Country  Composition Gas-Pipe, Town  Country  Lead Soil-pipe (up to 48in.) Town	. *3: 10 0 ,, 1 *3: 10 0 ,, y *35 10 0 ,,	=
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Lead, Common Brands	. 17 17 6 ,,	18 12 6
Lead Shot, in 281b. bags Copper sheets, sheathing & rods Copper, British Cake and Ingot	103 0 0 ,, 1	04 0 0 89 0 0 57 0 0
Tia, English Ingots Do., Bars Pig Lead, in lcwt. Pigs, Town Sheet Lead, Town	156 10 0 ,, 1 157 10 0 ,, 1 23 12 6 ,,	58 10 0 24 12 6
Genuine White Lead	. *38 10 0 .,	_
Refined Red Lead	. 38 0 0 ,,	=
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brand)	. 016 0,, lupwards.	

# BUY SCRAP MET

### ARTHUR P. COLLINS, Snow Hill, BIRMINGHAM.

Phone: Central 1929. Telegrams Metalise, Bir ningham. Bankers: The National Provincial Bank of England. Ltd., Bennett's Hill, Birmingham.

		ATES					
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Blue Portmadoc	20 ×	10	11	2	6	1,200	at r. stn.
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First quality	16 .,	10	10	12	6		
Blue Bangor	20 ,,	10	11	5	0	11	11
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#### BRICKS.

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Ruabon Facing	5	0	0	1.5	11	11	
Best Blue Pressed	_		_				
Staffordshire		15		11	11	* * *	
Ditto Bullnose	4	0	0	11	11	- 11	
Best Stour bridge Fire-							
bricks	4	0	0	12	11	12	
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23in. Best Red Accornington Plastic	. 1	10	6	11.5	full tru	ck load	ds
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3%" Accrington Best Re-	d I	las	tic	Facing	Bricks	£2 10	0
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Ditto Plastic Engu	100	rin	o I	Bricks .		1 17	6
Present Busine Edigit	100	LILL	5 1	ALIC 422 .		+ +1	U

Sewer Arch Brick, not more than 32 in			
thickest part	2	0	0
Ja" Chimney Bricks fit for outside work	2	6	0
3g ditto ditto through and through	2	0	0
32" Beaded, Ovolo and Bevel Jambs; Octa-			
gons; 21 and 1 radius Bullnoses; Stock			
	3	7	6
Accrington Air Bricks, 9" x 2 course deep, each	0	0	6
Ditto ditto 9" × 1 course			3
Accrington Camber Arches:-			
3 course deep 48" soffit, per foot opening	0	1	3
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## GLAZED BRICKS.

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	MOUL	DED BRICE	is.	
Stretchers at				
8d. each	8d. each	8d. each	8d. each	8d. each
Internal and	External.	Angles—		
1/2 each				1/2 each
Sill Bullnose	, Stretcher	s, and Head	lers—	
5d. each	4d. each	6d each	6d. each	5d. each
Majolica or	Soft Glaz	ed Stretch	ers and	Per 1,000
Headers				£22 17 6
	Onoir	se and Rull:	naca	27 17 6

, Quoins and Burnose	21 11 4
Compass bricks, circular and arch bricks of	1 Not
single radius £6 per 1,000 over above list	exceed-
for their respective kinds and colours	ing 9 in.
Camber arch bricks, any kind or colour,	by 4% ia.
ls, 2d, each	/ by 2½ in.
Stretchers cut for Closers and Nicker	l Double
Headers, £1 per 1,000 extra,	
These prices are carriage paid in full tru	ick loads

These prices are carriage	2				
o London Stations.	S.	d.			
Thames Sand	7	6 per	r ya	rđ,	delivered
Pit Sand	7	0	17		11
Thames Ballast	6	0	22		17
	s.	d.	8.	d.	Per ton
Best Portland Cement	36	0 to	41	0	delivered

Best Portland Cement ..... 36 0 to 40 0 delivered. Ground Blue Lias Lime ... 21 0 per ton, delivered. Exclusive of charge for sacks.

s. d. s. d. Per yard, Grey Stone Lime ...... 13 6 to 14 0 delivered. Stourbridge Fireclay in sacks 27s. 0d. per ton at railway station.

STONE.*			
Red Mansfield, in blocks per foot cube	£0	2	4
Darley Dale, ditto	0	2	6
Red Corsehill, ditto	0	2	_6
Closeburn Red Freestone, ditto ,,		2	
Ancaster, ditto ,,		1	11
Greenshill, ditto	0	2	0
Beer, ditto	0	1	7
Chilmark, ditto (in truck at			201
Nine Elms)	Ü		103
Hard York, ditto	0	2	ų į
Do. do. 6 in. sawn both sides,	^		
landings, random sizes per foot sup.	0	2	8
Do. do. 3 in. slab sawa two	^	,	,
sides. random sizes	U	1	3 1
* All F.O.R. London.			

Bath Stone—Delivered in rail-	£	5.	d.
way tucks at Westhourne			
Park, Paddington (G.W.R.),	٥	1	71
or South Lambeth (G.W.R.) per foot cube	U	1	43
Delivered in railway trucks at Nine Elms (L. & S.W.R.).	٥	1	83
Delivered on road waggons	٠	1	04
at Nine Elms Depot	0	1	91
Portland Stone -Brewn Whit-	-	-	-
bed in random blocks of 20 ft.			
average, delivered in railway			
trucks at Westbourne Park			
(G.W.R.), South Lambeth			
(G.W.R.), or Nine Elms		_	
(L. & S.W.R.)	0	2	5
Delivered on road waggons at			
Pimlico Wharf or Nine Elms	^		C 1
Depot	U	2	6}
White Basehed-2d, per foot cube extra.			
TILES.			
	Dl	vrd	.at
Plain red roofing tiles 42 0 per 1.00	)0 r	٧.	sn.

OILS:				
Valley tiles		6	11	11
Hip tiles		0 per	loz.	11
Ornamental ditto		6	11	11
Pressed		6	11	**
aand-faced		0 per 1	,000	31
"Hartshill" brand plain tiles,				
Valley tiles	3	6	11	11
Hip tiles	4	0 per	ioz.	11
Hand-made sand-faced	45	0	.79	19
brindled tiles	42	6 per l	,000	19
Staffordshire (Hauley) Reds or				
Valley tiles	3	8	11	- 11
Hip tiles	-4	0 per	doz.	11
Ornamental tiles		0	. **	13
"Rosemary" brand plain tiles .		0 per 1	,000	11
Vailey tiles	3		9	11
Hip tiles	3	105per	doz.	11
Ornamental ditto	48	6	11	11
tiles: Plain tiles (Peake's)	46	0 per 1	,000	11
Selected "Perfecta" roofing				
Valley tiles	3	0	11	11
llip t les	4	0 per	doz.	23
Ornamental ditto			11	11
ditto (Edwards)	57	6 per 1	.000	
Ruahon red, brown, or brindled		- 1.01		- 11
Hip and Valley tiles	4			11
Ornamental tiles		· .	11	"
Broseley tiles	50	0 per 1		"
Hip and Valley tiles				11
Plain red roofing tiles	42	0 per	1.000	ry. sn.

napeseed, English pale, "	per tun 3	t, 40	10	0 60		J	V
Ditto, brown		26		0 ,,	27	5	0
Cottonseed, refined	13	29	0	0 ,,	30	0	0
Olive, Spanish	11	39	10	0 ,,	40	0	0
Seal pale	11	21	0	0 ,,	21 10	0	0
Cocoanut, Cochin	,,	46	ō	0 ,,	46 1	0	0
Ditto, Ceylon	11	42		ō ;;		0	0
Ditto, Mauritius	11		10	ŏ ;,		ō	ō
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Baltic Oil	11		3	5 ,,	_	_	
Turpentine	11	0	2	9 ,,	_	-	
Putty (Genuice Linseed		^	0	_			
Conp b	er cwt.	0	9	6,,		-	
Pure Linseed Oil		^	_	^			
"Stority" Brand	91	Q	9	ο,,	_	-	

#### GLASS (IN CRATES).

English Sheet Glass:	15 oz.	21 oz.	26 oz.	32 oz.
Fourths	444	51d	53d	7d.
Thirds				
Fluted Sheet	5∄d	6åd	<u> </u>	_
Hartley's English R				
Plate	3	5 <u>1</u> d	3≰d	41d.
Figured Rolled		4	'.d	6d.
Repoussine		4	id	5 <del>1</del> d.
Rolled Sheet		4	d	_

VARNISHES, Etc.	Per g	allo	n.
Fine Pale Oak Varnish	£0	8	6
Pale Copal Oak	0	10	0
Omnilac Copal Oak	0	10	0
Superfine Pa'e Elastic Oak	0		0
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats			
churches		14	6
Fine Elastic Carriage	0	12	0
Superfine Pale Elastic Carriage	0		6
Fine Pale Maple	0		0
Finest Pale Durable Copal	O		6
Extra Fine French Oil	1	1	9
Eggshell Flatting Varnish	0		0
White Copal Enamel	1	. 1	0
Extra Pale Paper	0		0
Best Japan Gold Size	0		0
Best Black Japan	0		9
Oak and Mahogany Stain	0	-	9
Brunswick Black	0		0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

Mr. David James Phillips, who was killed in the Gallipoli Peninsula on September 22 last, was a member of the staff of the county surveyor for West Suffelk, and left to join the Hawke Battalion. 1st Naval Brigade, Royal Naval Division, in December, 1914. Mr. Phillips was twenty-seven years of age, He was one of five members of the West Suffelk county surveyor's staff who joined the forces last year, the other four being Messrs, T. L. Burnside, A. J. Hayward, H. E. Morris, and G. Thomas

#### ROL Olivers'

## Seasoned Hardwoods.

WM. OLIVER & SONS, Ltd.,

120 Bunhill Row, London, E.C.

#### TENDERS.

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PONTEFACT. For supply of a pump and electric roter, for the rural district council. Pulsometer Engineering Co. (accepted).

ROWSEY. For converting a partished into a store i the town council. t wir council: -Goulding, G., and Son (accepted).

SPRING For the construction of foundations is turboalternator at Neepschil power station, for

w. W., and Sons, Ital. ... £2,199 0 0 (Accepted)

STRITTORD For supply of cable, for the urban dis

trict condess Garage, W. I., and Co. (accepted) 4502 (0.0)

WarmINSTER: For election of a public convenience East Street, for the urban district council: Clavers and Son (accepted) ... C56 10 0

Chivets and Son (accepted) ... C6 10 0
West Browner For the supply of generating plant, for the Floethedy Committee. Recommended for acceptance:

Boiler and accessories - Babcock and Wilcox, Ltd.,
London.
Steel chumney - Hompson, J.
Economiser - Green, E., and Son, Wakefield
Foodpumpt - Hall, J. P., and Sons, Peterborough,
Coal bonker - New Conveyor Co., Smethwick,
Coal clevator: Proctor, J., Ltd., Burnley,
Evira high tension switchgear:
British Westinghouse and Electric Manufacturing
Co., Ltd., Main bester.
Weymeth For electra light installation at the

WEYNO II. For electro light installation at the municipal dwellings, for the town council:— Brocking and Co. Geoepted).

---Mr. Lloyd George as Minister of Munitions has appointed Mr. Henry Holloway, the managing director of the well-known building lirm of Messis, Holloway Brothers, to be Director of Honsing Construction, with special reference to the provision of temporary accommodation for munition workers. It is amounted that Mr. Holloway has placed his services at the disposal of the Ministry in a voluntary capacity.

Mr. John Henrier, J.P. E.S.L. for any contraction of the management of the services at the disposal of the Ministry in a voluntary capacity.

Mr. John Hepper, J.P., F.S.I., for sixty-one vears the principal of the firm of Hepper and Sons, auctioneers, of East Parade, Leeds, died from pheamonia on Sanday at his residence, Millbrook, Ilkley, in his eighty-first year. The business was founded by his father in 1830, and is being carried on by his son.

T. H. Hepper.

Messis, Willeox and Raikes, of Birmingham, Messis, Willow and Raikes, of Briningham, have been instructed by the Urban District Council of Bishop Anckland to prepare plans and estimates for the intercepting sewer from Raby Cross to Wear Chare with a view to obtaining sanction to proceed with that portion of the scheme between Raby Cross and Cradock Street. Application will be made to the Local Government Board to sanction a learn of \$10.000. loan of £10,000.

loan of £10,000.

In an address given before the Delphian Coterie at the Cannon Street Hotel on Monday right, Mr. E. G. Culpin dion, secretary, Begram Town Planning Committeer said that the reconstruction of Belgiam after the war must be carried out by Belgiams for Belgians. The Begian Minister of Agriculture and Pahas Works had approved the suggestion for it town should be built or reconstructed so ely by international funds, to stand as a memorial to the respect of the nations for the part play I by Belgiam in the war.

The death occurred at Aslaver, Derbyshire

The death occurred at Aslover, Derhysime at Monday, at the advanced age of 95, of Mr. John Surrees, at one time a well-known lardscape artist. For over twenty years Mr. 8 aboves had been blind, but prior to that he could do the Road Academy and elsewich and held exhibitions of his own at Cartes. Mr. Surrees' work is well represented in natively county collection, his associates and held exhibitions of his own at Cartes. Mr. Surrees' work is well represented in natively county collection, his associates at 2 with Newtonian and Edward Road and Edward Mr. Surrees' where the county of Mr. Surrees' with the county of Mr. Surrees' with the county of Mr. Surrees' with the county of Mr. Surrees' as a few of £2.7% of the whigh the county of £2.7% of the whigh the county of £2.7% of the whigh the county of £2.7% of the whigh the county of £2.7% of the whigh the county of £2.7% of the whigh the county of £2.7% of the whigh the county of £2.7% of the county of £2.7% of the county of £2.7% of the county of £2.7% of the county of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7% of £2.7%

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### LIST OF COMPETITIONS OPEN.

Nov. 30.—Housing and Town-Planning, York, for the Corporation Town-Planning Committee.— Assessor; £100, £50, and £25.—F. W. Spurr, City Engineer, Guildhall, York.

Nov. 30.—Bridge in Reinforced Concrete, over River Barrow, and for Kilkenny and Wexford County Councils.—A. M. Burden, County Sur-River Barrow, an County Councils, veyor, Kilkenny.

March 1, 1916.—Dutch East Indian Rubber Factory.—Premiums, 1,500 florins and 500 florins. —International Association for the Culture of Rubber in the Netherlands East Ind.cs, 13. Kneuterdyk, The Hague.

## LIST OF TENDERS OPEN.

#### BUILDINGS.

Nov. 17. -Engine House, Cropper's Hill Power Station, St. Helens, Lanes, For the Electricity Committee, E. M. Hollingsworth, Borough Electrical Engineer, Town Hall, St. Holens,

Nov. 17.—Two Hundred and Sixty-one Cottages, High Wincobank, Shehleld.—For the Corporation Estates Committee.—F. E. P. Edwards, City Architect, Town Hall, Sheffield.

v. 19.—Three Hundred Houses, in Dudley.—For the Town Council.—J. G: Borough Surveyor, Town Hall, Dudley. Gammage,

Nov. 20.—Motor Garage at Mineral Water Fac-tory, Sheerness, For the Sheerness and Dis-trict Licensed Victualiers' Mineral Water Co., Ltd.—W. Golder, Secretary and Manager, Rail-way Road, Sheerness.

Nov. 20.—Renovating old Liwynbrwydrau Schoo Llansamlet.—Rhys Llewelyn, Architect, Lonlas.

Nov. 25.—One Hundred and Fifty Workmen's Itwellings, Mossend, Hamilton.—For the County of Lanark Middle Ward District Committee.— W. Ross Young, Town-Planning Engineer, Dis-trict Othees, Hamilton.

Nov. 29.—Wagon Repair Shops at Adelaide Station, near Belfast.—For the Great Northern (Ireland) Railway Co.—T. Morrison, Secretary, Amiens Street Terminus, Dublin.

Nov. 29.—Repairs and Materials (One Year), Lowlands Engineer District of Scottish Com-mand.—For the War Department.—The Royal Engineer Offices, 5, Drumshengh Gardens, Edin-burgh.

Dec. 8.—Public Market, Artigas, Urnguay.—For the Municipal Authorities.—Intendencia Muni-cipal, Artigas.

Dec. 14.—Pavilion, County Sligo Sanatorium, Cloonamahon House, Collooney.—For the Sligo County Council.—M. Keane, Secretary, Court House, Sligo.

No date.—Steel and Corrugated Sheeted Buildings, in South of England.—Geo, Sands and Son, Ltd., Engineers, Colwick, Nottingham.

No date.—Two Chunney Shafts, Eastern Counties. Columba, "Brinding News Other, Effingham House, Arundel Street, Strand, W.C.

#### ELECTRICAL.

Nov. 17.—Turbo-Alternator Plant, Marchester.— For the Electricity Committee, S. L. Pearce, Unef Electrical Linguister, Dickinson Street, Manchester.

Nov. 17.—Switchboard Parts, Telegraph Instruments, and fromwork, Brisbane.—For the Deputy Postmaster-General.—The High Commissioner for the An-trahan Commonwealth, 72, Victoria Streef, S.W.

Nov. 22,-C the Testing Outlit, Sydney, N.S.W.-for the Municipal Council.—The City Electrical Engineer, Town Hall, Sydney, N.S.W.

Nov. 30. Power Station Plant and Equipment, Commonwealth Naval Dockgard, Cockatoo Is-and, Sydney, N.S.W. For the Australian Com-monwealth Department of Defence, The Direc-tor of Navy Contracts, Navy Office, Melbourne.

1.—Telegraph and Telephone Measuring Instruments, Brisbane For the Deputy-Post-master-General, The High Commissioner for the Australian Commonwealth, 72, Victoria Street, S.W.

Dec. 6. Three phase Transformers (33,000 volt) and Switchgear, Sidney, N.S.W.-For the Maniespal Council The City Electrical Engineer, Sydney, N.S.W.

Dec. 7. Battery Material, Melhourre, For the Postmaster-General, The High Commissioner for the Australian Commonwealth, 72, Victoria Street, S.W.

Dec. 8. Volumilators 024 of 15 ampere-hour exporty, Perth. Western Australia.—For the Postumister-to-horal —The High Commissioner for the Australian Commissioner for Street, S.W.

Dec. 14. Trank Line switchboard, McDourne.— For the Deputy Postmaster General.—The High Comm.sconer for the Australian Commonwealth, 72. Victoria Street, s.W.

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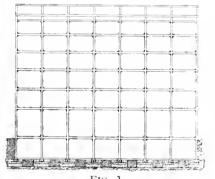
Cathedral Church of All Sants, Khartonin, Sudan. West front with Campanile, perspective view, and plan. Mr. Robert S. Weir, Architect.

#### Strand, W.C.

meet of the General Medical Council, Hallam Street, W. View and plan, Mr. Eustace C. Frers, A.R.I.B.A., Architect.

Freez, A.R.I.B.A., Architect.
Soane Medullion and Travelling Studentship Drawings in Italy. Clinrich of La Madouna der Miracoli, Bresca, and the Cortile, Palazza Fava, Bologia. Sketched by Mr. Alick. G. Hotsnell, Medallist and Tite Prizeman.
Entrance Lodge, "Burdocks," Fairford, tilonoster, Elevitions and sections. Mr. E. tory Dawber, F.R.I.B.A., Architect.
An Architect's House, Church End, Finchley. Exterior View, interior of back sitting-room, and two planes. Mr. H. S. Fast, V.B.I.B.A., Architect.

Modern building operations constantly involve a concentration of heavy loads at points, especially in steel-framed construction; and inasmuch as it can be shown that the stability of such resides, primarily, in the security of its foundations, every care is needed to secure unyielding support for stanchions. In such a steel-framed building as is indicated in Fig. 1 any failure at any one point necessarily entails the setting up of injurious stresses in the whole framing; for secondary only to sure foundation, in steel building, is the matter of tie-joint connections-throughout the construction. If every post and beam is securely riveted and bolted, the whole work becomes homogeneons. Under these circumstances it is not possible to lower the level of any given point in any one vertical member without throwing abnormal stress upon the jointing. These considerations do not



apply to ordinary mixed building con struction, the stability of which depends largely on strong brick walls and cross walls. Settlements will cause unsightly cracks; but where such are slight they do not indicate serious danger, which, as a rule, only subvenes in cases of really untrustworthy foundations. Moreover, since the strength of steel framing, given secure foundations, is a matter of wellmade connections, it results that economy of material succeeds upon good design and workmanship, for where this condition is observed lighter sections of steel can be employed and the total weight of the construction reduced. We cannot do this unless the points of support are rigid. and unyielding.

It is important, therefore, to secure the stanchion base, in the sense that it may remain immovable in its designed position. In steel construction all the weight is concentrated and brought down to

FOUNDATIONS FOR CONCENTRATED this is so in spite of heavy walling, which LOADS. this is merely screen-work. True steel framing is a structure complete in itself, and although stanchions well enclosed in strong brick walls receive undoubtedly a measure of support from such walls, all such extraneous support is discounted in calculations. Our ordinary method of building with a self-contained, self-sup porting steel skeleton is certainly not noteworthy for economy, where brickwork and masonry of quite sufficient strength to support all the free ends of girders and joists is arranged. Such construction has superfluous strength; but where we require the benefits of fireproof building, together with massive, ornate. and deeply-cut architecture, we have no recourse under present by-laws than to make practically a dual construction.

It follows that every fireproof floor, in construction such as Fig. 1, represents a surface that should by a perfect plane, normal in every direction to stanchion axis. The accuracy and constancy of such plane depends on unvarying conditions in the substructure. This we have shown to be a matter attendant upon foundation and tie, first upon the one, secondly upon the other. It is well recognised that that construction which is accurately aligned and riveted and securely holted can be put up at less cost than one of apparently greater strength, having deeper girders and heavier structions. In an extensive building, of a great number of stories, the amount of steel that can be saved by intelligent design and the best connections is considerable. Thus security and economy attend upon sure foundation, for it is this, and this alone, that enables the lighter section of steel to be employed in post and beam.

In the earlier days of steel joistingthe cast-iron column era-we depended upon solid concrete, brick base, and stone template, much as shown in Fig 2; but the increase in loads, the finer concentration of weight on points, and tall build ings with floors and superimposed loads bearing only here and there, has caused this type of foundation to be, to a great extent, discarded, and introduced a kind of reinforced concrete foundation, in substance if not in design. It is plainly an advantage, and in many soils a vital neces sity, not to carry foundations too low. We cannot, economically, greatly broaden concrete bases; that is to say, the method of spreading out for distributed load over a wider area is not consistent with the type of construction. The use of steel, in the form of H section, permits a great load to be spread over an area sufficiently large to come within the safe margin for

London district is not large. If we have to arrange to distribute 250 tons on soil bearing only 1 ton per foot, according to the views of authorities and enforced by law, we need an area of 250 super, fect. If we decide to make the foundation of simple concrete, we cannot put down a mass of 15 ft. by 15 ft. only a yard deep, but we can do something similar by embut we can do something similar by employing the grillage system. This is the true apology for grill-type foundation. Let us take Fig. 2, and assume 300 tons upon the column base. To design a snitable depth of concrete is a more or less ephemeral, rule-of-thumb, practised-eye-satisfying matter. Take what data we may, the point is one demanding experience and judgment, as it has ever been with architects and engineers in dealing with foundation problems. But we have to take account of certain conditions and

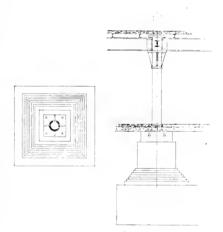
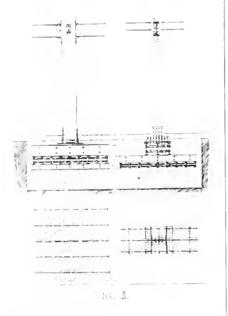


FIG. 2.

circumstances. First, the less the depth the less the cost, and the less the brickwork base of such a foundation mass, as indicated in Fig. 2. It may be that we could just comfortably arrange for legal loading of foundations by putting a broad footing immediately beneath the basement floor indicated. As drawn, we run down to a better bottom, assumed, but this not being always the result of deeper digging, indeed often leading from bad to worse, we may gain by maintaining a higher foundation level, both economy and safety, and be within the by-low at the same time. We might assume 3 tons per foot super, as a possible safe load for the level of foundation as drawn, requiring 100 super, feet of concrete and ten feet square for the mass shown. Assuming so much, let us further suppose that at the level of the top of the is concentrated and brought down to soils. It must be remembered that the brick base the soil will bear one ton: we foundation by isolated stanchions, and maximum loads on soil permitted in the require 300 super, feet, or, say, 18 it.

ssi in the emistral specialist interest in the ..... The the fatt it is shown Keep weight upon o that depth where suppose in the VEW greatening way by they are and start of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the l the equipmentage a large assistent and rivered to som hom practically linei, rather than een r marrings a variety of the note strictly it is the series by concrete. in a sets, by contribet to when permanently set.

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are time cantilevers. Where the foundation is spread out and relatively shallow in depth, the practice seems more reasonable. The data required for the design of gir lage foundation are the weight on stanchion, the area of base-plate, and the I of bearing power of soil. At least two rows of R > J 's are required to properly carry out the principles of design, be cause, plainly, to have only one row limits the over-all area of such joisting to on one direction, that of the width of the stanchion base-plate. A grillage foundation should, then, consist of at least two tiers of steel joists. Examining, generally, these conditions, we can see that the uppermest tier requires to be fairly deep, because the stanchion load, bearing directly in the centre, the number of steel joists is limited by the practical necessity of baying sufficient space between them for the engly samming the concretehence it is not generally possible to get more than three or four joists on the uppermost tier, excepting in the case of very tall buildings with very wide and heavy base-plates. The beneficial result of multiplying the tiers of joists can be easily understood. In one style of design the appearant tier of joists is shortened leading to a more generally pyramidal mass of steel. The load is, as it were. stepped off or taken up in grades, and the weight more gradually brought down upon the final substratum of concrete, which forms the connection between artificial and natural foundation.

# SOME CONCLUSIONS ON HOUSING OUR WORKERS!

#### B. W. E. RILEY, FRIBA, MICE. B.B.A

My first duty in addressing you this even ing is to acknowledge my appreciation of the privilege of participating in the work of the Chadwick Trust in London. For this distinction the sixteen years which I have devoted with the London County Council to housing and town planning problems, and the designing of accommodation for nearly 51,000 persons of the working-class workers, is probubly responsible. I hope to give some conclusions which have resulted from this ex-perience and which may be of benefit to my

It will be necessary to indicate shortly the principles which govern such operations in argo towns. First, there are statutory obligations on local authorities to re-house when st and the larger foundation, any area is condemned as inhealthy or whom so with 1.2.7 the excavation is any area is condemned as inhealthy or whom any area is condemned as inhealthy or whom each place of the procedure of reagultude involving displacements as curried out. In the second place, there is the larger phase of the questions are consistent as which I is been classified as more or less to the placements.

The dynamic of the street of the street of the topographical position which must be provided for. These reserves the street has been the great majority of cases of the street has been the great majority of cases of the street has been the great majority of cases of the street has been the great majority of cases of the street has been the great majority of cases of the street has been the great majority of cases of the street has been the great majority of cases of the street has been the great majority of cases of the street has dead on the great majority of cases of the street has dead on the great majority of cases of the street has dead of the great majority of cases of the great majority of cases of the great majority of the great has been dead of the great majority of the great has been dead of the great and the great majority of the great has been dead of the great and the great majority of the great has been dead of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of cases of the great majority of c to Ped by restrictions as to the topo\_raphical

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costerm augers, porcers, waterside labourers, lightermen, etc., who are forced by the nature of their occupation to live in the immediate proximity of their employment, but statistics show that the percentage ranges only from 21 to 40.

#### NOTHING TO LEARN FROM GERMANY.

The war has, however, produced a new set of circumstances. To meet the national emergency, it became necessary immediately to augment the staffs of some works and to create others. From their nature these must be situate in more or less sparsely populated he strate in more or less sparsely populated districts, and the question of housing thousands of workers, for whom it is a vital necessity that they should live close to their employment, is of paramount importance. This could be accomplished by the erection either of blocks of dwellings or of cottages, and it is satisfactory to find that the German method of building huge, airless, sunless blocks of tenement dwellings has not been followed by the Government. Town-planners in this country have for some time bidden us lift our eyes to Germany as the source of knowledge, but it may be confidently asserted that in the planning of homes for the worker this country has nothing to learn from the Tenton. As showing the effect of the blockdwelling system in Germany, where it is most rue, interesting figures have been recently published by a well-known authority on housing, Mr. T. C. Horsfall. In London the average number of inhabitants per house is about eight, and in Manchester a little over five. In Berlin the average number per house was, in 1740, seventeen; in 1840, forty-three; and now seventy-seven. There are houses which contain 250 families each. Berlin has 32.000 inhabitants to the square kilometre, while London has only 15.000. In German towns, including Berlin, the price of land is eight or ten times as high as that of land in corresponding positions in English towns, and as a consequence, in 1900, 45 per cent, of all Berlin households occupied dwellings of only one room, and 70 per cent, of the honseholds had dwellings of not more than two rooms, yet rent absorbed one-fifth to one-fourth of the income of working people. In 197,394 dwellings, each of which had only one room and a kitchen, there were 726,725 inhabitants, and in addition 42,599 lodgers. In 1910, 45 per cent, of all Berlin dwellings were back dwel-The result of this overcrowding and of the darkness and bad ventilation of dwellings is that in Berlin the percentage of deaths from tuberculosis is half as great again as in London, and London has about 30 per cent. less deaths of persons of from 15 to 25 years of age than has Berlin. The effect of crowded dwellings on sexual morality is necessarily extremely bad.

#### BOURNVILLE AND PORT SUNLIGHT.

Near provincial centres in England important efforts were made between fifteen and twenty years ago to give a large-hearted trend to this great social question of housing the workers. Port Sunlight, near Liverpool, and Bourneville, near Birmingham, are notable instances. The removal of large manufacturing concerns from busy and highly expensive centres much required for retail distribution was, I submit a root cause of these and other similar establishments: the problem of housing those required to do the manual labour in the works needed a solution on which the practicability of the main idea depended.

Taking Bournville first, Mr. Cadbury had moved his great cocoa works from Birming ham, and wanted a nucleus of labour at Dournville. He obtained the best of advice and laid out 570 acres adjoining the factory in a renerous way, and in a similar spirit built houses rented at 4s. 6d. and 5s. 6d. per week. The idea was to provide each cottage with about 600 square yards of land, supple The idea was to provide each cottage mented by all timents, and to give a staff of guideners to advise and encourage profitable gardeners to advise and encourage profitable cultivation. The planning of the houses aimed at a practical solution of the workman wants, and a hying room of over 250 tt. supe was the central feature. The outlay in the early stages amounted to £171,000. The freedom allowed under the original scheme. by which tenants could purchase their house

on easy terms led to abuses, and as artisans not employed at the Cadbury works were eligible as tenants, Mr. Cadbury founded a trust to take the concern over and use the income for further development, making the enterprise a question of supply and demand. The trust was enjoined to suppress all political and sectarian bias, and to allow intoxicants to be sold only where their suppression might create greater evils. When I was there the efforts were concentrated on getting some thing cheap and good enough to fulfil the terms of the trust, and the remarkable variety in the appearance of the early buildings was endangered, as the drift was then towards a rather dull exterior. The scheme at Cress-well mining village, Thornton Hough, and that at Port Sunlight were founded on the same idea of housing the worker in more cheerful and elevating conditions where the work in a central factory provided a fairly secure employment. The 140 acres of land, which were exclusive of the Sunlight soap factory, were purchased at about £240 an acre, and laid out with great skill. No road is less than 40 ft. wide, the main avenues have a width of 60 ft., and the natural formation is utilised in an artistic and effective manner. There were 25 acres which were overflowed each tide. These areas were dammed off, two bridges constructed to carry through important roads and avenues, and an excellent town-planning scheme designed and carried through. recreative needs as well as the housing accommodation proceeded simultaneously. Schools, church, village halls, inn. dininghalls, institutes, and gymnasium, swimming bath, open air theatre, etc., were put in hand as the want was felt. When I visited the area, there were about 570 houses built and in occupation, and the cost had then reached the gigantic sum of £370,000. It is wonderful evidence of broad-minded spirit that Messrs. Lever Brothers have never received or ever expected any direct return whatever from the sinking of this huge capital. The tenants were paying as rent the rates and taxes and the bare cost of maintenance of the houses. With triffing exceptions there are only two types of cottages:
(a) what would be classified in London as a 4-room cottage, and (b) a 6-room (or locally called, parlour) house. Class (a) has a living room on an average about 15 ft. by 14 ft in., and a scullery and bath on the ground floor, and 3 bedrooms on the first floor, the smallest being generally without a fire-place and between 60 and 70 sq. ft. in area. The (b) class has on the ground floor a par lour ranging from 13 ft. 6 in. square lour in, square by 14 ft. 6 in , a kitchen about to 18 ft. 13 ft. square, and a spacious scullery and bath. On the first floor are four bedrooms Class (a) were costing in 1902 I. and class (b) £550. It will of good size £330 to build, and class (b) £550. be seen that none but merchant princes could earry through great and generous enterprises such as these.

### WELL HALL.

Turning from private to public enterprise, the most recent large scheme is that of the Government at Well Hall. Approximately, the areas covered and to be built upon are 70 acres on the east and 30 on the west of Well Hall Road. The tramway to Woolwich bisects them, the southern corner being 300 yards from Well Hall station, which should be a valuable asset when the houses are no longer required for the Arsenal workers The areas are laid out with streets of 40 ft. and 30 ft. between the forecourt fences. The latter width is in contravention of the pro-visions of the Building Act, which prescribes a minimum width of 40 ft. It is curious that this somewhat retrograde step should have heer taken by a Government Department, thus traversing an Act of Parliament which has regulated every new building scheme within the county for the past twenty years The immense outlay which the ratepayers of London have met to improve the width of streets for the requirements of increased traffic and to open up closely-built areas would, it is thought, have given pause to such scheme, and the number of houses to the acre (approximately twelve) did not compel the resort to such a policy. It should be noted

that the plea of Defence of the Realm obviates any challenge, but the provision of legalised space about buildings ought not to have been aside by the creation of narrow streets hout convincing reasons. There are on the without convincing reasons. without convincing reasons.

Ance are on the cast side sixty-five houses of the first class, 249 of the second class, 411 of the third class, and 212 of the fourth clase; the latter are flats of the maisonette type. The first class living-room, paraccommodation consists of lour, spare bedroom or duning-room, with scullery on the ground floor, and three bed rooms on the first floor, with the usual offices, and bathroom with hot and cold water. Class II. houses contain living-room, parlour, scullery, three bedrooms, and the usual offices, with bathroom. Class III, houses contain living-room, scullery, three bedrooms, and the usual offices, with bath. Class IV, are flats arranged in two-story houses, each flat consist ing of living-room, scullery, two bedrooms and the usual offices, with bath. The eleva tions are treated with skill, and great variety has resulted. The frontages are generous, as also is the provision for gardens. The construction and the materials employed are of the first class, but here again it is to be regretted that Parliamentary enactments on the employment of building materials should not have been observed. The adoption of weather boarding in instances where it has been used as an external covering to a building will, I submit, be conceded as obsolcte. When timber of every kind was at a high price, it seems to require much weighty reason to have so employed this material, especially having regard to the heavy bill for maintenance which will be involved in the future. As a lesson to those who have to comply with trict financial equilibrium in all voluntary housing schemes, it is to be regretted that the financial phase of the problem cannot be made known and compared with the operations of other authorities, trusts, and companies.

#### COTTAGE HOUSING BEST.

Hitherto it has been contended that, except in the case of a minority before mentioned, the most rational method of housing where travelling facilities are available was to provide cottage accommodation. This to provide cottage accommodation. This should be far enough from the business centre to ensure that by reason of cheapness of site it would be possible without incurring financiai loss to afford a reasonable amount of open space and sufficiency of accommodation, with he privacy which is probably the greatest asset in a home. With adequate transit to convey the worker cheaply and quickly to his employment, there can be little doubt of the superiority of the cottage over the block dwelling. Fresh air, change of scene, and easy access to the country must brighten the lives of the occupants of the cottages, and the removal of many sordid influences in-separable from town life cannot fail to produce a good effect not only on the health, on the efficiency of the worker. The condi-tions under which accommodation has been recently required by the State are so exceptional as scarcely to constitute a fair test. The urgency of the need allows little time, and the state of the market for labour and materials almost eliminates consideration of cost. It is inevitable that cottages built in such circumstances should cost more, but one result of these conditions is that any doubt as to the relation of rent to capital cost might he disregarded. Such schemes in themselves are unconcerned with the problem which has troubled housing reformers for many years viz.. whether it is financially possible to house the worker on a rent which he can afford to pay, having regard to his income, and whether the State should subsidise those cases where. owing to lowness of wages, adequate accommodation cannot be provided on a sound financial basis. Where the Government provide the site and buildings and the worker also earns a wage considerably in excess of what he receives in peace time, these questions do not arise; but the reflection cannot be ignored as to what is to happen to such estates after the war, in the event of large numbers of men being no longer required for such work. The State may not need the estates, and it is to be doubted whether any purchaser at anything like the original price could make a sound investment of them. THE BOUNDARY STREET SCHEME.

Economic considerations must be dominant in all normal bousing operations. whether private or municipal, and the essence of the question is, how to build work ing class habitations which will pay their way, at a rent within the means of the occupant. My own experience is that the crux of the problem is the cost of the site, and thus the difficulty is most acute with housing in central districts. Cleared sites in such localities are seldom obtainable, and where sites have to be cleared to enable the population to be rehoused, the value of the has had to be considerably written down m estimating the financial result of such schemes. Previously to the passing of the Housing Act in 1890, the late Metropolitan Board of Works sold land carrying a housing obligation to companies or trusts, all of which received a subsidy in the form of a " writing down' to "housing" v from the commercial value value at which it was charged to purchasers. In the case of 30 such sites, the commercial value of which estimated at £727,535, no less than £397,613. or nearly 55 per cent., was written off. Part I, of the Housing Act placed on local authorities the duty of preparing and carry ing into effect schemes for the rearrangement and reconstruction of the streets and houses within unhealthy areas. The clearance of the notorious Boundary Street area, about 15 acres in extent, was the first scheme undertaken by the London County Council under these powers, and in this case the commercial value of the land was written down from £131.670 to £62,010. With a population of about 5,700, the death rate was over 40 per thousand in 1889, or nearly double that the whole of Bethnal Green. The widest street was barely 28 ft. wide: no house possessed a front door; no repairs were e carried out, and the neighbourhood was described as tenanted by heathens. Under the scheme formulated by the Council. area is now approached by an avenue 60 ft. wide, leading to a central open space with a band stand. Tree-planted streets, 50 ft, wide, radiate from this centre to the limits of the area, and these are connected with the streets bounding the area by branch streets 40 ft. wide. Five thousand five hundred and eighty-four persons were rehoused in 1,069 tenements, 23 blocks of tenement dwellings being erected, and a smaller number of cottage dwellings half a mile away.

The gross rental of the estate for the year ended March 31, 1915, was £23,486, and the accounts show that after paying all maintenance and debt charges, sinking fund, etc., there is a surplus balance on the year of £1,405. The buildings are well occupied, the emptics for the same period amounting to only £274, or 1.17 per cent, of the gross rental. The cost of the scheme and buildings was £337,535.

#### THE TABARD STREET SCHEME

The largest area of clearance ever undertaken under the Housing Act is that which is now proceeding at the Tabard Street, Grotto Place, and Crosby Row areas, Southwark and Bermondsey. The total extent is 17 acres, and the number of persons of the working class to be displaced is 4.552. It will be noticed that the number of persons is smaller than in the Boundary Street area, but the insanitary condition of most of the property rendered it impossible to effect any real improvement by dealing with in hyidial properties. The death-rate from 19048 was properties. The death-rate from 19048 was 36.8 per thousand, or more than twice that of Southwark (18.2), which again exceeded that for the whole of London—viz., 14.9. The number of vacant houses and tenements within a radius of one mile enabled provision to be made for supplying an urgent need for additional open space in the neighbourhood. eonfirmed by the Local confirmed by the Local March, 1912, accom-By the scheme Government Board in March. modation is arranged on the area for only 2,580 persons, and the central portion, about five acres in extent, will be laid out as an open space. Rehousing accommodation will be provided in five-story balcony block dwel-lings, overlooking the open space, and twenty-five cottages will be erected on a detached

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och the contal of this thust the ly agreet Gummess Trust) was provided, and to the fact that the surplus at the end of each year was added to the capital, the particulars furnished were not sufficient to etable us to compare its financial operations with those of other dividend paying com-

#### SELE CONTAINED DWELLINGS THE MOST Distribute.

It is not, however, on account of financial a salegations, alone, that every endeavour s' ald be made to draw the industrial popur lation from crowded centres to the spacious advant Prent or when centres to the spacinas and I cal'ther suburbs. A recent Departmental Committee has said that public option now recognises and demands that every working class family should be proside I with a self-contained dwelling of suffic.e.t size to prevent overcrowding, and which admits of the separation of the sexes. Vself-contained dwelling is defined as one which provides living accommodation with scullery and water closet accommodation for the sole and water closet accommodation for the site use of each family. Some of the difficulties which beset the provision of such accommoda-tion to central districts have been indicated. It addition, there is the growing importance which is given to abundance of light and air, and there are signs that demands will be made for more hydienic construction in our building. The effect of the sun's rays in distroying injerches is admitted, and it is c'a med that buildings should be so designed that the direct rays of the sun should pene-trate through every part of all living rooms. I am strongly of minion that an effort should ic made in every case in which block dwellings are erected to dispose the blocks on the site in such a way that the maximum of sunlight would reach the haldtable rooms This might operate disadvantageously on the a ommodation, but considering the limited such by operticularly in winter in this coun essential that as much as possible should find its way into the living rooms

#### French Unities of English " Model DWELLINGS.

At the Housing and City Development Congress held in Ghent in 1915, a French housing expert showed plans of dwellings which are described as model in various parts of England, and produced statistics to show that they are planned against many ele-mentary principles in hygiene. The criticisus were levelled at the practice of enclos ing common staircases and the exclusion of the very limited sunlight which this latitude affends in the darker portions of the year, but principally in connection with the want of cross ventilation in the tenements. There will much reason in these criticisms, as there are numerous dwellings in London where it is a possible to ge inrough ventilation between from and back rooms, the cross wall in many cases obstructing the passage of air. This matter is referred to in the London County Council's housing handbook in 1915, where it Estate Holo Is stated that, although the rection of Asy in Town Planning Act declares the erection of is stated that, although the Housing and look to back houses to be unlawful, it does not probably the erection or use of a tenement onse in which the tenements are placed back touse it which the tenements are placed back to back, if the medical officer for the district certifies that the tenements are so constructed and arranged as to se are effective ventilation of all habitable rooms in every tenement. The Housing Acts give no definition of back-to tack houses, but a reasonable definition would thear to be a house or letting having one one if side only, with ventilation open to the external air. It states that the Council 1991 I di before it plans of a group of is 1941 for before it plans of a group of a stable lines proposed to be erected by the tracter of a philaminopic fund. On the bases of a philaminopic fund. On the bases of the above definition a large number of the ten ments were back to back, and in any case the Correll felt that the general profision of through ventilation to the intermediate tenements was unsatisfactory. The mediate tenement in the district issued the ceruit that the extraction is the Act and the Conneil to the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the as regards, which the particular officer for the district issued the certification in the particular officer for the particular officer for the particular officer for the particular officer for the particular officer for the control of the certification of the particular officer for the control of the certification of the particular officer for the certification of the particular of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of the certification of t

sides back to front of the block, to afford efficient ventilation. Where balconies are employed they should in no case overshadow habitable rooms. I am bound to admit that in London there is always oppo-sition to leaving the staircases open, but I am convinced that it is a correct and hygrenic method of dealing with the ventila tion of these buildings.

### THE L.C.C. COTTAGE HOMES.

Financial and hygienic difficulties such as have been indicated do not arise in the construction of cottage homes, so many of which are being developed on the outskirts of our large towns. It may be interesting to com-pute the cost of a cottage at the County Counerl's White Hart Lane Estate, Tottenham, containing living-room, bedroom, scullery, and offices, with the same accommodation in block dwellings at the Bourne Estate, Holborn. White Hart Lane the cost of land was £11 16s, roads and sewers £24 4s., and buildings £180, or a total of £216. At the Bourne Estate, the cost of land was £337 and the buildings £286 10s., or a total of £673 10s It will thus be seen that a family could be housed at White Hart Lane for considerably ess than the cost of land alone at the Bourne Estate. The nunicipal development of cottage estates on the outskirts of London has been carried out under Part III, of the Housing Act, which has been regarded as voluntary The land charge is taken into account at purchase price, and the scheme must show financial equilibrium after bearing all capital charnes.

Time will not permit a lengthy description, but it may be of interest to refer briefly to the development of these estates. The cottages are two-story buildings arranged in they are almost invariably set back 5 to 15 ft, from the forecourt fence. The schemes for development have been largely influenced by the following considerations-

(I) Economy of land area and road con

struction in proportion to building.

2) The avoidance, as far as practicable, of deep external back projections in close juxtaposition, which tend to cause insanitary pockets and prevent the freer circulation of air currents along the backs of terraces of houses. The wholesale erection of insanitary projections in close proximity to each other in many suburban estates is a reproach to the law which permits it.

#### TOTTERDOWN FIELDS ESTATE, TOOTING.

The first large scheme undertaken in London was the development of the Totterdown Fields Estate, Tooting, about six miles from Charing Cross and about three-quarters of a mile within the county boundary, on the main tramway route between Tooting and the central area. The estate, which is about 38 acres in extent, was purchased in 1900 for £44 238, the price being £1.150 per acre, a comparatively high figure for land for working-class cottages. The development of estate has been completed, and in all 1,229 cottages and four shops have been built, with accommodation for 8,768 persons. The principal streets are 45 ft. wide, lined with plane trees, the other streets being 40 ft, wide.

#### THE NORBURY ESTATE.

The purchase of estates outside the county boundary is permissible under the Housing Acts, and the first to be acquired was Norbury Estate, situate about two miles from Croydon and about seven miles from Charing About 17 acres have been developed, Cross. providing accommodation for 3,638 persons in 498 cottages, and the scheme approved for development of the remaining II acres of the estate provides for the accommodation of 1.869 persons in 264 cottages and two shops. The strain of finance during the war has so fur prevented the completion of the last sec tion of this estate.

#### WHITE HART LANE ESTATE.

The largest estate purchased for housing purposes by the Council is situate in Totten han, Wood Green, and Edmonton. It is five miles north of the county boundary, about six and a half miles from Charing Cross, one mile from Wood Green station, and half a mile from Bruce Grove station. The estate

consists of two sections quarter of a mile apart. the northern section containing 49 acres and the southern 177 acres. The purchase price The purchase price for the property was £90,225, or at the rate of £400 per acre, the owner requiring that both sections should be taken. As the northern section would be difficult to develop for building purposes, the Local Government Board in 1911 consented to it being sold, but it has not yet been disposed of. Development of the estate has up to the present been con fined to a wide strip of the southern portion where roads and sewers have been constructed sufficient to enable about 48 acres to be covered, and on about 40 acres (including  $3_3^4$  acres laid out as a public garden), 963 cottages have been erected, providing accommodation for 7.524 persons. The Local Government Board has consented to the provision of fourteen shops on the estate, and five have been erected on the Lordship Lane frontage. Administrative buildings have also been erected. The roads have been so planned that the majority of the blocks of cottages run north and south, and each frontage of the buildings therefore receives direct sun light. At the junction of Awlfield and Risley Avenues the cottages have been arranged in angle blocks, with open spaces in front, and in other cases the arrangement is in shallow quadrangles, with open spaces bordering on the road. The estate garden is turfed for tennis and bowls and surrounded by raised terraces and flower gardens.

#### OLD OAK ESTATE, HAMMERSMITH.

The estate at Old Oak Common Lane, Hammersmith, is the most recent, and being per haps on that account more interesting, may merit a more detailed description. situate about five miles from Charing Cross, and is bounded on the north by Wormwood Scrubs, an open space of about 215 acres. As the ground rises towards the west, extensive views can be obtained. The estate origin ally contained about 54½ acres, the purchase price being £29.858 (about £550 per acre), but the Great Western Railway Company subsequently obtained running powers for a new railway to cross the estate diagonally, and ac for a new quired nearly eight acres for this purpose, paying the Council £10,500 in respect of the land and the damage sustained by the estate. Development of the section west of the rail-way is now completed, except for a site tem-porarily occupied by a school. This section is about fourteen acres in extent. Five shops and 319 cottages and cottage flats have been provided, accommodating 2.231 persons. Of the cottages, 65 contain five rooms, scullery and bath, let at 11s, 6d, to 13s, per week; 105 have four rooms, scullery and bath, let at 19s. to 11s. per week: 106 have three rooms and scullery, at 6s. 6d. to 9s. 6d. per week: 27 are two-room flats, let at 4s. 6d. and 5s. a week; and 16 are one-room flats, let at 4s. a week. The Old Oak estate may be regarded as embodying the most recent developments in cottage housing in London, and in framing the scheme the policy adopted was to endeavour to meet the demands for smaller cottages. which can be let at rents within the reach of those earning 25s, to 30s, a week. It was thought that only a small number of the larger type of cottage, for which a rent of Hs. 6d. to 13s, a week is charged, should be erected, and that about one-third of the total number should be three-roomed cottages, to be let at The rents are inclusive of rates, taxes, and water supply. The needs of smaller families water supply. The needs of smaller families of the poorer classes requiring only one or two rooms were also considered, and as an experiment a limited number of tenements of one, two, and three rooms, at low rents, are The smallest type of one-room cottage flat, with a separate scullery and water closet, is let at a rent of 4s. a week. It is not thought that these one-room tenements are adapted to the requirements of married couples with young children, and therefore their occupation is restricted to old married couples or to two persons of the same sex. One person living alone or an adult with one young child are, of course, eligible as tenants. The scheme for the section east of the railway provides for the erection of 721 cottages and two shops the local authority have failed to exercise (one designed for a baker and to be fitted with a modern hakehouse). This section will accommodate 5,330 persons. A school will be authority have so failed, the Board must take the rebuilding as two-storied cottages of

reserved for the erection of a church by the Ecclesiastical Commissioners. It may be stated that up to now the development of this estate has met with the greatest success, a list having to be kept of prospective tenants want ing for the erection of the cottages. Some of the cottag's have been allocated as the subject of an experiment for enabling the tenants to purchase leases of their houses.

The following table shows the result of the

provided on the estate, and a site has been into consideration the necessity for further accommodation for the housing of the working classes in the district, the probability that the required accommodation will not be otherwise provided, any other circumstances of the case, and whether, having regard to the liability which will be incurred, it is prudent for the authority to undertake the provision of such accommodation. If, after holding a public inquiry, the board are satisfied of failure on the part of the local authority, the board may working of these estates for the year ended make an order directing the authority to carry March 31, 1915:out works to remedy the default. That these

Estate.	Capital Ma	Expend	iture to	Result of Worki	ties, age on tentals.	
	Land.*	Build- ings.	Tetal.	Surplus.	Gross Rental.	Emp Percent Gross I
Totterdown Fields (completely developed) White Hart Lane (partly developed) Norbury (partly developed) Old Oak (partly developed)	55,086 35,338	£ 317,897 214,536 130,730 33,953	269,622 $166,068$	286 9 10	$\frac{7.14}{6.85}$	28 -73 -35 -30

\* Including char, es for reads and sewage. It cluding new cettages h n'ed over on completion.

#### MAXIMUM WIDTH FOR ALL STREETS.

In the development of these estates every endeavour has been made to combine conmer cial and architectural success, and variety in planning and in treatment of the tions has been consistently aimed at. I should wish to take this opportunity of emphasising one point in particular-that in no case has any street on the County Council's estate been constructed of less than the minimum width required by the local building act or by-laws, and in many cases the width has been voluntarily made considerably greater. One hears it persistently argued that by-laws are too arbitrary and extravagant, and that in streets which are not intended for heavy traffic, the minimum width required by the by-laws might be reduced. I am not of that opinion, as I! consider that narrow streets become alleys where the free circulation of air is, to say the least, impeded. I venture to submit that the same criticism might be applied to some designs for laying out estates, which have been influenced by a praiseworthy desire to escape from the old-fashioned rectangular gridiron plan of the speculative builder. To secure a more artistic grouping of buildings, however, streets are formed of snake-like curvature and with squares or enclosed places to which one outlet only is provided. The comparatively direct street can be treated without monotony and if a liberal width is assigned to it the avoidance of traffic difficulties which may hereafter arise is ensured. A plentiful supply of fresh air will probably prove more bene-ficial to the working man than a vista, and it should not be impossible to combine the two.

#### EVERY COTTAGE HAS ITS OWN GARDEN.

A feature of the County Council's estates is that each cottage has its own plot of ground at the rear. It may be a matter for argument whether the provision of an open space—of which examples may be found near Londonfor the common use of the tenants surrounding it is preferable to the backyard or warden. The latter may present problems in neatness and orderly appearance, and may not offer a view from the house windows equal to that of a well-kept open space, but the privacy of a back garden is undoubtedly regarded as a great asset by the tenants on the Council's estate.

#### NEGLECT OF LOCAL AUTHORITIES PROVIDED for by the Housing $\Lambda c\tau$ .

provision of accommodation under III. of the Housing Act, 1890, has usually been looked upon as entirely optional or voluntary on the part of the local authority. The Housing and Town Planning Act of 1909, however, provided for cases of default where four inhabitant householders of an area complained to the Local Government Board that

powers have been of considerable assistance in securing the provision and improvement of cottage homes throughout the country can be seen from the last report of the Local Govern-ment Board, who have also shown much activity in the collection of general information as to housing conditions in England and Wales. Three years ago, in many rural districts, notifications were posted of public inquiries into the sufficiency of housing in the district. I am not aware of the official result of such inquiries, but in the same part of the country which I recently visited, and where I had noted the announcement of official inquiries, I was invited to make an inspection of an estate which is being built by a local landowner. This not only embraced the provision of first-class houses, orchards, a suitable area of ground for cultivation, with piggeries and poultry accommodation of the most modern type to each cottage, but the whole project was laid out in a workmanlike manner, on sound principles of town-planning. The estate was being dealt with in a completely voluntary spirit and for the workers' benefit, and this exemplifies one of the useful effects of that Act.

#### THE INEVITABLE CONCLUSION.

What inevitably must the conclusion be? I am sanguine enough to think that when you compare the value given from either an educational, a social, or an independent aspect, the proper way to house the workers. wherever it is practicable, is at the out-skirts of the city or town, where con-venient transit should be made a part of the scheme. I am aware that many will talk of the loss of time and expense in travelling, etc. I am going to add my opinion that the public would be healthier and better if they walked more. Apart from the question of land value, on which the accommodation is built, there is on the fringe of the county the further marked economy of the building works. Having the environment in mind and the physical and moral advantage to the family, which method do you think the great sanitary reformer Chadwick would have chosen? I have long ago concluded in my own mind that the weight of opinion must go with the suburban cottage, and I think I would have had his endorsement.

Mr. C. T. Adshead, F.R.I.B.A., inquired whether all the estates of the London County Council, and in particular the Caledonian Estate, Liverpool Road, were self-supporting, Mr. Riley replied that they all paid a return

on the capital outlay, varying last year from 2.58 per cent. on the Norbury Estate, which was only partially developed, to 7.14 per cent, at Totterdown Fields, where the land was completely covered.

Mr. Adshead said this was highly satis-

as rot subsidised.
Lar result of the capita.
Sir William J. Collins. Chairman of the Chad does said to contrisms of the County Counts housing schemes double our mutually destructive it is discrete were must ally destructive so that the very powest and most important power dispossessed were not removed to at a more respectable class was a first rand, so endly, that the operation resolves youth and not self-superior resolves the first remight reply that the esting a fit the population were ex-ely to zeat my, at learnly remained in a cut for a year. When the County Coun-te dealog with rebuilding the Clare tower of its seemed essential that the its ploid to man in the immediate I have a diff seemed essential that the is of a tenach in the immediate is art \* different habitants of the distribution to the introduction of the distribution for the distribution of the marghbour it. Mr. Riley's outspoken remerks on martier in which the War Office in their Hall sole me deliberate's disregarded for years of the London Binding Act of the old transfer in the London Binding Act of the old transfer in the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the co 4 and the tea he is of sanitary science in this new and very narrow streets and in reviving tegether the berses, they were retry demanded attented. He had worked a the Council with Mr. Reley since his approximant as its or latest, and could testify to his litterest in samitary reforms and in easing matters, and to the skill he brought bear on the problems, and to his great, if a seen, influence in favour of improvement

In replying to the vote of thanks, which as a grided by a claimation, Mr. Riley d served that it was nearly seventeen years one- be became architect to the Council, and from the very first he had benefited by the ie'idul advice , and perhaps still more helpful er t.c.sm. of their chairman.

#### THE LONDON COUNTY COUNCIL.

At the meeting of the London County Council yesterday (Tuesday) afternoon the Fugues Committee recommended that sance tion be 2 ven to the Islington Borough Council for berr wing £5,455 for electricity mains and to the Woodwijh Borough Council for borrownd 24700 for linking up the undertakings of the borough council and the South Metrotan Electric Light and Power Company

The Education Committee reported that the contracts entered into with Messrs, Pat man and Fotheringham, Limited, for creek a.z. the Vernon Square School, Einsbury 3.2 the Vernon Square School, Finshary Central; with Messrs, Brand, Pettit, and C., for robalding the Woolmore Street Sci.-d. Poplaci and with Messrs. J. Chessian and Sais, Limited, for creating the Vallance Raai. Schools, Whitechapel, were meaning completion, and the contract as had applied for the release of other times new held by the Caucillane respect of the completed portions of the handling. School to the the C mod in respect of the completed portiets of the buildings. Subject to the Concell agree at 2 to suspend the operation of studing order No. 295, the committee proposal to release faths the size amount of 1 \$2.5%, £617 and £45 aspectively. It was agreed that to be be a sited from selected firms for the content of the foundations of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content of the content o ters for a three stars ters for a thou sing a true generated to be installed at the Gross of generating consistented at the Gross of Lemenating state in and that an appear of it. brink-ayers in the earth is set to it for a transfers department to an increase of adopter consistent at a few acceptance to the Electronic Consistence of the Board.

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Section 23 of L.C.C. General Powers Act, 1909, with regard to the construction of buildings wholly or partly of reinforced concrete and with respect to the use and composition of reinforced concrete in such construction have been allowed by the Local Government Board, and will come into operation on January 1 next. The committee added:—The question now arises as to the steps to be taken to comply with Section 23 (5) of the Act as to the publication of the \*regulations in the London Gazette after they are allowed. We are advised that the regulations must be published in full. publication will serve no useful purpose, and in view of the expense involved, which estimated at £180, we have asked the Local Government Board whether in its opinion it would not be sufficient to adver tise the fact that the regulations have been made and allowed, and that copies may be purchased at the Council's publishers. In reply, the Board states that it does not differ from the Council in regard to the utility of publication in extenso, but that, having re gard to the language of the Act, it is unable to escape from the conclusion that such publication is obligatory upon the Council and is a condition precedent to the coming into operation of the regulations upon such day as the Board may fix. We have also suggested to the publishers of the London Gazette that they should utilise the type which is at present standing, the Council paying to the publishers any profits which would have been made by them had the profits which regulations been published in the Gazette in the ordinary way, and in reply a letter has been received from H.M. Stationery Office regretting that the proposal cannot be enter tained. It appears, therefore, that the regu-lations must be published in the ordinary

There is a provision of £40 in the votes the current financial for the current financial year, and a supplemental estimate of £140 is therefore necessary. We recommend-

That the supplemental estimate (No. 154) of expenditure on maintenance account of £140 submitted by the Finance Committee in respect of publishing in the London Gazette the regulations made by the Council on July 6, 1915, under Section 23 of the London County Council (General Powers) Act. 1909, as to reinforced concrete, he approved as an estimate of cost, debt, or hability under Section 89 (3) of the Local Government Act, 1888.

The Finance Committee, having considered in its financial bearings the above-mentioned estimate, submit the same as chargeable to maintenance account. The total expenditure The total expenditure involved in the publication, in the London Gazette, of the Council's regulations as to reinferced concrete is £180. The type of the regulations is standing, and at quest of the Finance Committee the Building Acts Committee endeavoured, but without success, to make arrangements whereby this type could be used, the regulations being issued as a supplement to the Gazette. Finance Committee are strongly of opinion that the proposed expenditure, which both the Local Government Board and the Buildboth ing Acts Committee admit will serve no useful purpose, is most difficult, in present circumstances, to justify, but in view of the legal necessity for advertising the regulations, and the failure of the efforts made to reduce the expenditure thereon, there appears to be no alternative but to submit the

-at Robert Theodore Morrison Wyllie, 17 (a) Robert Theodore Morrison wyline, to 14th Battalion, London Scottish Registration in a cuttert's department LCC, has been as extent's department LCC, has been as to have been killed in action.
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istimate.

It is to have been killed in action.

Mr. W. C. Clifford Smith, M.Inst C.E., the etgence to the Asylums Committee of the Lordes County Council, recently suffered becavering in the loss of his son Dudley. We now learn that another son, Harold, who went to the front in June, has been wounded by a bount which best at his feet, shattering the left fort and smashing the big hones in the leg. His left acm was also injured. His leg has been amportated above the knee and, unfortunantly, later operations have been necessary.

The L.C.C. new negatiations as to reinforced compared a Bolding Acts. Committee reported reference construction were published in extense in our results of the smaller in July last under the construction were published in extense in our results and August 4 last, pp. 31, 61, 89, and 115, in present volume ante.

 $\begin{array}{cccc} {\rm CASE} & {\rm LAW} & {\rm UNDER} & {\rm THE} & {\rm FINANCE} \\ & {\rm ACT.}^* \end{array}$ 

By E. M. Konstam (Visitor), Barrister-at-Law.

Before attempting to summarise the cases decided under the Finance Act of 1910, it may be as well to enquire for a moment what principles our Courts apply in interpreting statutes. It is not too much to say that most statutes are obscure. But the Courts, unless absolutely driven to it, are loth to think that they are meaningless, that they are passed in ignorance of previously existing law, that they are intended to disregard the practical realities of life, or that they are enacted for the purpose of committing injustice. there is a rule that a statute must be construed according to what it says itself, and not by what was said about it in Parliament, Anybody who has ever had to wade through Hausard and read the Debates on a Bill, will at once appreciate the necessity for this rule. For all these reasons there has been invented an imaginary person called the "draftsman," who takes the blame of all the defects of the Act, but who is by courtesy supposed to know the facts concerning the subject in hand, to have just intentions, to be aware of the law as it stood before the Act was passed, and even (though this is a large assumption) to remember what was enacted in the last section but one, and in the definition clause.

When in the face of the language of the Act these flattering suppositions can no longer be made, when it becomes quite clear that the section is hopelessly unpractical or has been passed in order to work injustice, the "drafts man " is dropped out, and judge and counsel prefer to speak of "the Legislature in its wisdom"—a phrase which. I fear, is sometimes not meant to be taken literally. We shall find instances of all kinds in the cases decided under the Finance Act; some sections drawn with knowledge of practical realities, others in complete ignorance of facts, some drawn with a just intention, some clearly intended to be unjust, others "willing to wound and yet afraid to strike," in which the desire to commit injustice has not been expressed with precision.

Let us now examine the decided cases.

It will be convenient to take the principal cases decided under Part I, of the Act in the order of the Act itself; and in this way we may begin with the name of Lumsden, so inseparably connected with the increment value duty. I am quite ignorant of the motives which induced Mr. Lumsden to fight the case up to the highest Court in the country, but if his object was to show the inherent injustice of this duty, that object has certainly been attained, and radical alterations in its nature have been promised in consequence of the decision in this case. Perhaps if it had not been for the war, those promises might even have been fulfilled! But let us leave the region of speculation and come to facts. The case, which is reported (1913) 1 K. B., 346; 3 K. B., 809 (1914), A. C., 877, arose upon Section 2 (2) of the Act. Land with a building upon it was given in the provisional valuation an original site value, as on April 30, 1909, of £105. The property was sold in August, 1910, for £750, subject to a tithe of £33 capital value. It was found in the case stated by the Referee that if a fresh valuation of gross value was to be made as at the time of the sale that gross value would be £658 The full site value on the earlier date was £228,

The appellant contended that, for the purpose of calculating the deductions to be made from the consideration or purchase price, which is set up by Section 2 (2) (9) as the standard from which the site value on the occasion of sale is to be ascertained, the price realised plus the capital value of the tithe must be taken to be the gross value as at the time of the sale. The Revenue contended that for this purpose the true gross value must be ascertained by valuation. If Mr. Lunisden was right, there would be no increment value; if the Revenue were right, the duty was leviable on an increment value of

Taking all the Courts together, four of the judges were in favour of the Crown's contention and three in favour of Mr. Lumsden's The result was that increment value duty is leviable upon the increase in value of a composite property consisting of land and buildings instead of on the increase in the value of the site alone; and as it has been agreed that this is a bad result from the point of view of public policy, there is little now to be gained by a discussion of the judgments delivered. But if those of the dissentient judges are read, it is difficult to avoid the conclusion that they were actuated by a desire to believe that the Legislature had not intended to enact the injustice of taxing man on the increase in value of property due to his own exertions, and that its sole intention was to tax-justly, as some think-the unearned increment in the value of bare land The majority of the judges, on the other hand, thought—(1914) A. C., 895—"that Parliathought—(1914) A. C., 895 - that Parliament must, on the literal construction of its language, be taken to have contemplated the possible taxation of either something more or something less than site value, strictly

called."

The House of Lords, in "Inland Revenue to Walker" (1915) A. C., 509, followed their former decision, although the special case as stated by the Referee was, perhaps, rather more favourable to the appellant than that the control of the special case. The problem have were in Lunisden's case. The purchase here made by a sitting tenant, and their lordships held, further, that an additional sum of £180 included in the purchase-money could not be excepted in arriving at the consideration for the purposes of the calculation under Section 2 (2) (a). The Referee inferred that this extra sum had been paid by the pur-chaser to avoid being disturbed in his occups tion of the premises; and although it is true that the House thought there was not sufficient evidence to support this inference, only one of the Lords appears to have decided against the deduction of this sum of £180, on the ground that even if the reason of being paid had been established in fact, it was madmissible in law. Unless, therefore, this point is concluded by Clay's case, with which I shall lead later, it appears to be still open.

In the case of "Hayllar r. Inland Revenue" (1914), 1 K.B., 528, Parliament was held, in Section 2 (3), though it had purported to provide for a substituted site-value in the case of a decline in value after a mortgage, to have enacted what was "almost illusory as a benefit to the owner." "It seems to me irrational and absurd, but the language is too strong, said the Master of the Rolls, and proceeded to hold that the amount of the actual mortgage debt must be taken as the gross value for the purpose of calculating the site-value as at the time of the mortgage, and of substituting that site-value for the site-value ascertained as on April 30, 1909. The true gross value at the date of the mortgage was, as everybody with experience of the management of land knows, probably about half as much again as the amount advanced on mortgage; and if a sitevalue based on the true gross value could have been substituted, the owner of the land might derive some real benefit from the provisions of Section 2 (3), which are supposed to protect him from paying an excessive increment duty in addition to suffering a depreciation of his property. As it is, the benefit enacted "merely illusory." Did the "draftsman intend that, or had he so little experience of transactions in land as to imagine that "the amount secured by the mortgage" generally represents the full market value? Neither alternative is creditable to "the Legislature in its wisdom."

The next duty in the order of the Act is the Reversion Duty, and the leading case upon it is that of Inland Revenue v. Marquess Camden (1914) 1 K. B., 641; (1915) A. C., 241. In this case the Courts strained the presumption of good intention almost to breaking point in favour of the "draftsman." They held, in short, that Parliament, if it was ignorant of the practice in connection with leases of land, or, if knowing that practice, it desired to enact a grave injustice, had not reversion duty are as follows:—The "value expressed that ignorance or that intention in sufficiently clear words to be effective. Laid down in Section 13 (2) ("Ramsden v.

The material passage from Section 13 is as follows:-" The total value of the land at the time of the original grant of the lease, to be ascertained on the basis of the rent reserved and payments made in consideration of the lease (including, in cases where a nominal rent only has been reserved, the value of any covenant or undertaking to erect buildings or to expend any sums upon the property). Applying to these words a usual canon of interpretation, that the specific mention of one alternative implies the definite exclusion of the other, it might be thought that the value of such a covenant or undertaking was intended to be excluded in every ease where the rent reserved was more than nominal. And if anyone were to infer, say, from the curious drafting of Section ? (3), remarked upon by the Court of Appeal in Hayllar's case, that the hand that drafted Section 13 was the hand of one who was not perfectly familiar with the course of transactions in land, such a captious critic might suppose that the draftsman when he was penning this section had recalled some iscence of a thing sometimes paid by vague remmiscence thing called perpercorn. people who built buildings, and had proudly put his dangerous little piece of knowledge into a parenthesis.

But the Courts have fortunately taken a more serious, and no doubt a juster, view. They have held that the draftsman could not have been ignorant of the fact that in countless cases building agreements are entere into in the first instance, sums large or small are then expended on construction, and leases at rents by no means nominal are granted after the buildings have been erected; and they have held that the Legislature could not intentionally have committed such an ineptitude as to inflict a heavy penalty of additional reversion duty in such cases. Accordingly they have held that sums expended under a building agreement are "payments made in consideration of a lease" subsequently granted, even though the rent erved in that lease is not nominal. When it is remembered that a building agreement is usually an agreement for a lease, and that by the definition in Section 41 "lease" includes an agreement for a lease, this result

becomes somewhat remarkable.

Seven judges were unanimous in arriving at the conclusion just summarised; four out of the seven deemed it best to ignore altogether the existence of the parenthesis; while those who assigned a meaning to it at all said that it applies only where there is an agreement to spend money after the granting of the lease itself, and not where money has been spent beforehand. But this interpreta-tion itself still leaves the parenthesis un-disturbed where it does apply: thus where there is no building agreement, but only a lease with a covenant to erect buildings or incur expenditure in the future, that covenant will ant will not be taken into account except where the rent reserved is a nominal rent. Certain dicta of their Lordships, however, leave it open to be contended that almost any rent below a rack-rent is a "nominal rent"; and more may be heard of that point in times to come.

One practical result of this case will be that it will in future be to the interest of the lessor, where the lessee contemplates erecting buildings or incurring expenditure, to grant an agreement for a lease in the first instance; and this not only in the case of ordinary house-building operations, but in the case of companies or firms about to erect large works; in fact, in the case of all new or expanding undertakings which are not upon freehold sites. Where there is likely to be further expansion, or a subsequent renewal of the lease, this course will be to the lessee's interest also. Industry will thus be penalised by having (often quite unnecessarily except for the reversion duty) to have to go through the cumbrous and expensive process of nego-tiating an agreement with the landowners twice instead of once. But perhaps I ought not to complain, for the profit will be to the

Other points decided in connection with

fuland Revenue " (1913), 3 K.B., in ascertaining that value no deduction i to be made because the lease is surrendered "Inland Revenue v. Marquess of Anglesey (1913), 3 K.B., 62); nor because it was granted upon the surrender of a previous lease ("Inland Revenue v. St. John's College, Oxford ' ' (1915), 2 K.B., 621); the total value on the determination of a lease includes the licence value of a public-house ("Earl Fitzwilliam v. Inland Revenue" (1914), A.C., 753); a marriage settlement does not exempt from the payment of reversion duty under Section 14 (1) ("Inland Revenue v. Gribble" (1913), 1 K.B., 220).

The decision in "Inhand Revenue v. St. John's College, Oxford," just referred to, is important with regard to the assessment of reversion duty where the lease is one of those periodically granted, according to the practice of many corporate bodies, upon surrender and the payment of a fine. that case, when the previous lease was surrendered in 1896, it had twenty-six years unexpired. The lease surrendered in 1910 had been granted in 1896, at the rent reserved in the previous lease for a term of payment of a fine of £95 8s. forty years on What was in effect granted was an additional fourteen years' lease at the expiry of the original term. The fine had been calculated, putting the two guineas rent on one side, at wo years' purchase of the annual value of the property; and two years is practically (according to Willick's Tables) the present value of a lease for fourteen years deferred twenty-six years. The Crown contended that the sum of £95 8s, was to be taken as a premium for a forty years' lease (as it nominally was) and reduced to an annual sum as if the property had been in hand when the lease was granted, which was not the case. Mr. Justice Rowlatt held that that contention was wrong, and that the College was right in saying that the total value at the grant of the lease in 1896 was to be calculated on a basis of adding to the rent reserved of £2 2s, the additional anunal value of £47 14s. (half the fine which represented two years' purchase), these being in truth the payments made in consideration of the The learned judge said that be had to apply the words of the statute "perfectly strictly, but so as to make them operate in a sensible way by reading 'payment' with regard to that for which the payment was made, and not by taking the payment as being made for the same thing in the case of an immediate term granted, and in the case of a deferred term granted upon the surrender of an existing lease. No one who understands these matters will be inclined to differ from that conclusion.

The cases as yet decided by the Courts in regard to the undeveloped land duty have been comparatively few. Among these that of "Southend-on-Sea Estates Company, Limited" (1915), A.C., 429, is, I think, the most recent and probably the most far-reaching. Section 17 (5) prevents the duty from being levied where agricultural land is held under a tenancy originally created Lefore April 30, 1909; but if the landlord has power to determine, the duty becomes leviable as soon as he can exercise the power, whether he, in fact, does so or not. In numerous cases the Inland Revenue attempted to levy the duty where there was power to determine in case the land should be required for purposes of building, and so on, sought to say that it was immaterial whether the land was really required for those pur-poses; if the power exists, they said in effect, and the landlord is the sole person to decide whether he shall exercise it, then he can at any time determine the tenancy, and he is liable for the duty. The Court of Appeal and the House of Lords have rejected that contention, and have held, where the right reserved was "at any time to resume possession for building or other purposes" that "other purposes" meant purposes," that "other purposes" meant purposes of the same kind as building, and that if the landlord had no such purpose he had no power to determine, even he might have power to form the purpose. Technically, no doubt, this was merely a decision upon the particular form of words

I ase words were which but come aca resta. I de not a 15 venue have sought to it in other cases since would probably have

the condition numerals are inherit in the Act. It is stipline to say what are there is no definition to the action Appeal Court shank from the problem, ' minerals' means all cart! apart from the sur be worked, except those red; and does not <sup>\*</sup> exclude substances composing the orth which are of the nature the rock of the district." Asstrate a Haland Revenue." [1912], C. 1165. They held that felsite was a conditional fit the Inland Revenue Com-S. C., 1105 cors and no power to treat (as they surjected to do certum minerals, not round on the statute, as excepted from some of the momeral rights duty. These er as weladed Bath stone, Portland stone,

is defended in a court of law, not by the nancesherers but by the taxpayer. The miller of rights duty is assessed on the restal value, and where the right to work the minerals is let, the income tax under Solid A deducted by the lessee, is not to be included in the rental value; but the 5 be included in the rental value; but the sajer tay payable by the lessor is to be able to be a backer of Beaufort v. Inland Beteine: 1,415, 5 K.B., 48; Payment for waybeaves a meladed, even though those waybeaves are for minerals got from the land of third parties: "Shawe Storey v. Inland Beyone: 1915, 1 K.B., 87...

entlytoric, and freestone; and I am at a to suggest upon what grounds the Inland

the dispensing power. The remark-th dispensing power. The remark-to thing is that it should have been seri-

T} .. stement value duty charged moon " tora's is an annual duty under Section 22 is been held to be leviable whether there tas beet at "occusion" under Section 1 or est "The land Revenue V. Sheffield and Newt Yelshire Nevigation Company" 197, 1 K.B., 725. An appeal against this tension, is now pending, but it may be to sted out that in view of the way in on his Section 22 3 is framed, it is at least a most point whether it can be intended to con at of result without reference to Section 1. The effect of this decision, if it stands, redf without reference to Section ie to retailse minerals to the advantage land, for increment value duty will be arged by respect of all materials the workergel in respect of all manerals the work-ger which had commenced after April 30, hands one then; ro, or which have been leased since then; the transfer of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant of the constant o the statut my occusions applying to a or ters as which does not die. Probably the most important case yet de

Probably the most important case yet de-ied with regard to immerals as that of Forah. Attorney General. 1915. I 70% readed with deflect at Section 23 of the Art. That soft of provides the ends are to be treated at the general of the usel carginal value in easithe pro-ceeding his return to the Comof the the hat its of the momentals a recommendate of the fin neads of a upon trent. It does not trace that the figure or value of the proposition in the return and by the Infinial Revenue, in the party is value on them. or- results on them. The Irland Revenue had good the prothe the gression 1: the payment of

The Court refused the contention of the Crown, and held that Form 4 was not the return referred to in Section 23 (2) because it was not a proper or intelligible mode of requiring a return of particulars respecting the numerals, and certainly did not treat them. as the Commissioners were bound to do, as a separate parcel of land." Mr. Justice a separate parcel of land." Mr. Justice loyce, in delivering the judgment of the Court, referred to Form 6 as being possibly, with some slight modifications, the form applicable; so that if there is any case which a proprietor, having a return called from him in Form 6, has assigned no value to the minerals, it is possible that the conse-quences aimed at by the Inland Revenne may ensue, but such cases must be very rare. The Commissioners have certainly been un-fortunate in their drafting of Form 4, both in regard to that ill-starred question in which they asked for the owner occupier's estimate of the annual value of his land, and in regard to the question concerning numerals. It is difficult to resist the conclusion that they were trying to trap the taxpayer into uncensciously making admissions damaging to himself, or to sympathise with them now that they have been hoist with their own petard.

Reference to the case of Form 4 (Dyson v.

Attorney General [1941] 1 K. B., 410) brings us to the other cases decided with regard to the general valuation. That case itself is now, perhaps, ancient history, and need not be dwelt on. But there have been several cases of great importance decided upon the cases of great importance decided upon the portentous Section 25. Everybody in this room is no doubt familiar with that section—if it is not presumptious to use the word familiarity in relation to such a Frankenstein's monster—and I do not propose to add to the length of this Paper by reading it; but it is comforting that even so perspice as a lade of the contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract of the second contract forting that even so perspicuous a judge as forting that even so perspicuous a judge as Lord Moulton was puzzled to know, as he said in Inland Revenue v. Herbert (1913), A. C., 325, at page 358, " for what reason the draftsman chose to express the definition (of full site value) in so peculiar a fashion. It is not too much to say that Clause 14, as it was when originally drafted, was a monument of illiteracy; and the draftsman who was brought in on the Report stage, like the second collaborator who is sometimes called in in the theatre to "pull the play together, 'seems to have re-written the section with some desire to give it a logical appearance: but the effect of his doing so has been, as decided by the House of Lords in the Scottish case just referred to, that in certain cases the assessable site value ascertained under Section 25 may be a minus quantity.

It was strennously argued that the value of bare site could never be less than nothing; and that Parliament must have legislated in view of that obvious fact. The effect of the decision it that Section 25, in its main lines, has little to do with real life, and merely mescribes the solution of an academic pro-

The success of the Crown in this case thus a much greater condemnation of the Act than its failure would have been. doubt the object of its contending for minus site-values was to increase the amount leviable as increment value duty in the cases concerned. But it has gained that tactical concerned. But it has gained that tactic victory at the cost of a strategical defeat.

Incidentally, two of the learned lords (pp. 355, 362) expressed views which are, at first sight, somewhat surprising as to the meaning of site value in Section 3 (5), which provides for a 10 per cent reduction upon the collection of increment value duty. These views, which were not a part of the decision of the House, and are not in complete agreement with each other, have not, as I gather, been acted upon by the Iuland Revenue, and I have not heard that my taxpayer has claimed the benefit of that my taypayer has craimed the records of them; they were negatived in the Revenue Bill of 1914, which did not pass into law; but they show how difficult it is to inter-rect the Act so as to arrive at a practical

The basis of the calculation directed by otherwise Sective 25 is the value of land "sold in the the sale or open market by a willing seller," and has marked at been discussed in the cases of "Inland Re-dictive the part of Cax and Buchanan" (1914), 3 K.B. 365, and of "Glassir, Inland Revenue"

(1915). S.S.C., 449. In the English case Lord Justice Pickford said, at pp. 478-9: in the open market means sold in such a way that anyone wishing to purchase was able to do so,  $\epsilon, g$ . by auction or by putting the house into the hands of an agent to sell; and I think a willing seller means one who is prepared to sell, provided a fair price is obtained under all the circumstances of the case. I do not think it means only a seller who is prepared to sell at any price and on any terms, and who is actually at the time wishing to sell. In other words, I do not think it means an anxious seller. The gross value is not to be measured necessarily by the price given by a bayer who is peculiarly in need of the particular piece of property, but it seems to me clear that the of there being such a person in the market must have an influence on the value in the open market. Upon these principles, which must commend themselves to all who bring any experience of sales or valuations of land to bear upon the question, the Courts have held that where the trustees of a nursing home desired to extend the home by acquiring the house next door, and where a water board desired to acquire lands within their catchment area, the value to the trustees and the board was the market value of the house or land, and that it was not true to say that the market value was the value to outside purchasers with a mere pound or two added to represent the extra bid of the nursing home trustees or the water board.

Tenant-right, i.e., the value or unexhausted manure or tillages, is included in gross value and total value, and is not to be deducted as a matter personal to the occupier ("Inland Revenue v. Smyth" [1914], 3 K.B., 406); neither is the value of the land laid down in grass. The same decision, however, directed the value attributable to grass to be included in gross value, but to be deducted in "divesting for arriving at full site-value.
The meaning of structure in the divesting clause was considered, and the road in that case was held, from its construction, to be a "structure." Sea-walls and drainage dykes "structure." Sea-walls and drainage dykes are not "buildings" or structures connected with buildings ("Waite's Executors v. Inland Revenue" [1914], 3 K.B., 196); nor are the dry stone walls which so familiarly re-North of England ("Morrison c. Inland Revenue [1915], 1 K.B., 716). The value of agricultural land for agricultural purposes does ont include its value for sporting purposes ("Inland Revenue v. Hunter" [1914], 3 K.B., 423). The cases of Smyth, Hunter, and Morrison are still under appeal to the Court of Appeal, and the effect of the various decisions just summarised appears to have been to delay indefinitely the valuation of agricultural land

A very similar effect has been produced upon the valuation of land developed by buildings by the decision in Inland Revenue v. Whidborne's Executors (1915), 2 K.B., 350, where deductions were allowed in respect of the appropriation of land for roads, and of the construction of roads in an ordinary building estate: and the deductions took the form of a single sum applying to each building plot, being the percentage of its total value attributable on April 30, 1909, to the dedi-cation and construction of the roads. In face of the language of sub-section (4) it is difficult to see what legal contention the Crown could put forward against the allowance on principle of the deduction; and perusal of the reported arguments of the Law Officers did not solve the doubt. That they felt the difficulty themselves is shown by the fact that their chief attack was directed against the form of the deduction. They failed both on the question of principle and on the question of form.

From this, I fear, somewhat dreary review of the cases decided under the Finance Act of 1910 a few salient points emerge: the increment value duty is, by the victory of the Crown in the Lumsden case, shown to the convincing of most parties to work in-justice in the case of the building industry. and thus to impose an additional fetter on the housing movement: the reversion duty is, by the refusal of the House of Lords in Lord Camden's case to believe in the unjust

intention which the language of Section 13 goes far to substantiate, much reduced in its possibility of yield; the increment value dnty as regards minerals is in a state of flux; last and by no means least, the national valuation—the new Domesday Book—the inaugurator of the millennium remains suspended because the Courts have held that certain sub-sections of Section 25 are capable of a practical application to agri cultural land and to land covered with bouses. The valuation machinery cannot proceed, because it has been held that the valuation must, in part at any rate, be made in the light of actual fact.—But a political truce now prevails in the country, and their will be no peroration to this paper.

# Our Illustrations.

CATHEDRAL CHURCH OF ALL SAINTS, KHARTOUM, SUDAN.

Towards the end of the year 1913 an ap peal was issued for funds to enable the committee to proceed with the crection of the tower, which still remains to be done in order to complete the building. A considerable sum had been guaranteed provided the remainder was forthcoming by October 1, 1914, but unfortunately the war came on, the flow of donations ceased, and the whole matter has been shelved for the time being. All the working drawings had heen prepared by the architect, Mr. Robert Schultz Weir, in anticipation of the work being shortly proceeded with, and we illus-Royal Academy drawing from this year's exhibition. The tower will be detached from the main structure, but connected with it by a covered passage leading from the narthex to the lower stage of the tower, which is intended to form the baptistery. Above this would come the ringing chamber, approached by a staircase entered from the outside at the ground level and going up in one angle (as shown in the plan). Still higher comes the clock chamber, and above that again the lantern, open on the four sides. From this high position a the four sides. From this high position a good view would be obtained of the city, the junction of the White and Blue Niles just below, and Omdurman beyond. Owing to the treacherous nature of the subsoil special precautions are necessary, and reinforced concrete foundation raft has therefore been provided for. The baptistery will be constructed internally of dressed coursed ashlar, and will be vaulted in stone. It will have an apse on the eastern side. The font will be placed central with the connecting passage, so that it can be seen from the narthex of the church, and open bronze grilles will be placed at the tower end of the connecting passage. The external face of the tower will be of random rubble, like the wall of the church, with dressed coursed corners and windows. These latter will be filled in with pierced stone slabs, glazed in the case of the bap-tistery and open above. The lantern will all be constructed of dressed stone. Access will be obtained to the storys above the ringing chamber by means of iron ladders going up through the openings left in floors for getting up the bells. These ladders will be easily removable. It is only proposed to have one large deep toned bell, but the space provided is sufficient for a peal, should a generous donor come forward pay for one. A clock is provided for with dial on each of the four faces. These to pay for one. dials would be illuminated at night by electrie lights at the end of long bars sticking below, and arranged so as to reflect the lights directly on to the dials. On the small pinnacles at the four corners of the top of the tower will be cut the sacred ciphers: IC-XC: YC-OY: ΦC-ZC: NI-KA ("Jesus Christ: Son of God: Light of the World: Conqueror"). We gave a general view of Khartoum Cathedral on January 5, 1912, from the source or In an early showing the building from west, but without the tower. issue we have arranged to publish the working details of this interesting piece of work, lent us by the architect for illustration.

PREMISES FOR THE GENERAL MEDI CAL COUNCIL, HALLAM STREET, W.

The building is erected on a site formerly occupied by small dwelling-houses of no par ticular interest. The structure is of brick and steel with reinforced hollow tile floors The front is faced with Portland stone. ground floor contains the general offices, cloak-The first floor is approached by rooms, etc. separate staircases for the public and for members, and contains the council room and three rooms for committees or for consulta The mezzanine floor gives access to the galleries at each end of the council room and to two committee rooms. The second floor contains the dining room, service room, lavatory, smoking room, and one committee room. The kitchens and caretaker's rooms are in the attic; the basement contains the storage rooms for registers and the heating cellars. The elevation to Hallam Street is developed from the plan, and shows a central feature of a from segmental bow carried up ground to the top of the second floor. large windows of the council room are divided by pilasters supporting figures representing the attributes to the functions of the council concerning the education and registration of the medical profession in Great Britain and Treland The emblem of medicine is carved in low relief above the centre window. The sculptured ornament above the entrance is replaced in execution by a relief representing the cult of Asklepios. The sculpture gene-rally is the work of Mr. F. Lessore and his assistants: it is distinguished by great delicacy and refinement in execution. general contractors are Messrs. Chinchen and Co., who have employed as sub-contractors Messrs, D. G. Somerville and Co., Limited, 120, Victoria Street, S.W., for the floors and reinforced concrete; Messrs, James Boyd and Sons, 196, Great Portland Street, W., for the heating; Messrs, Burn Bros., 3, Blackfriars Road, S.E., for the sanitary engineering; Messrs. Gent and Hurley, 24, Belvoir Street, Leicester, for the electrical work; and Messrs. Waygood-Otis, Limited, 3, Falmouth Road, S.E., for the lifts and vacuum cleaner. The building is creeted from the designs and under the superintendence of Mr. E. C. Frere, A.R.I.B.A. The illustration is from a drawing by the architect exhibited in the Royal Academy.

## SOANE MEDALLION AND TRAVELLING STUDENTSHIPS DRAWINGS IN ITALY.

THE CORTILE, PALAZZO FAVA, BOLUGNA, This palace, situate opposite the church of La Madonna di Galliera at Bologna, was built by Giov. Batt Jarri in 1689, and still remains unfinished. The cortile is very handsome, and is adorned with the works of Carracci. The great hall is decorated with scenes from the history of Jason, the first work in fresco by Agostino and Annibale. In the adjoining chamber the Voyage of Eneas is portrayed by Lodovico. Other rooms are enriched by other subjects, including the Rape of Europa. The Story of Eneas, painted in opposition to a frieze by Cesi in apartment, was, it is said, the turning point in the lustory of Carracci. Details of the arcade on brackets in this cortile were published in our issue of November 11, 1898,

CHURCH OF LA MADONNA DEI MIRACOLI, BRESCIA.

The rich einque cento portico of this church Vittorio Emanuele, and it is is in the Corso the richest building of its kind in Brescia. The date of its erection is set down as 1480. and Lod. Beretta carried out the decorations of its façade, which was designed by Gian of its façade, which was designed by Gian Gasparo Pedoni, of Cremona. Those of the interior are quite Venetian in character. The church contains some excellent paintings by Moretto. His beautiful picture of St. Nicholas presenting two school-boys to the Virgin is fully described by Mrs. Jameson in her "Sacred Art": "This is an application of the religious character of this saint to nortraiture and character of this saint to portraiture and common life which is highly beautiful and poetical. St. Nicholas is presenting the Virgin two orphans, while she looks down upon them from her throne with a benign air, pointing them out to the notice of the Infant Saviour, who is seated in her lap. The two boys,

orphans of noble family of Roncaglia, are richly dressed; one holds the mitre of the good bishop; the other the three balls." These drawings now reproduced on our plate form the series of sketches made during his Travelling Studentship tour by Mr. Alick G. Horsnell, Soane Medallist and Tite Prizeman. We illustrated, from a photograph, the main façade of the church in The Bulling News for August 20, 1897.

#### ENTRANCE LODGE, "BU FAIRFORD, GLOS. "BURDOCKS,"

We give the working drawings of this pretty and commodious lodge, built some short time since, at the same time that the house was being erected. The work was carried ont in local stone for the general walling and dressings, the stone slates being obtained from the Eyford Quarries, Stow-on-the-Wold. details will explain themselves, and an endeavour was made to treat the building symmetrically on all sides, as it is in a conspicuous A view of the house itself, with dan, will be found illustrated in the BUILDING News for June 23, 1911, from the architect's drawing. The estate is about a mile from Fairford. The builders of the lodge and stables and shell of the house were Messrs. Sells Bros., of Fairford, and the architect was Mr. E. Guy Dawber, F.R.I.B.A., of London.

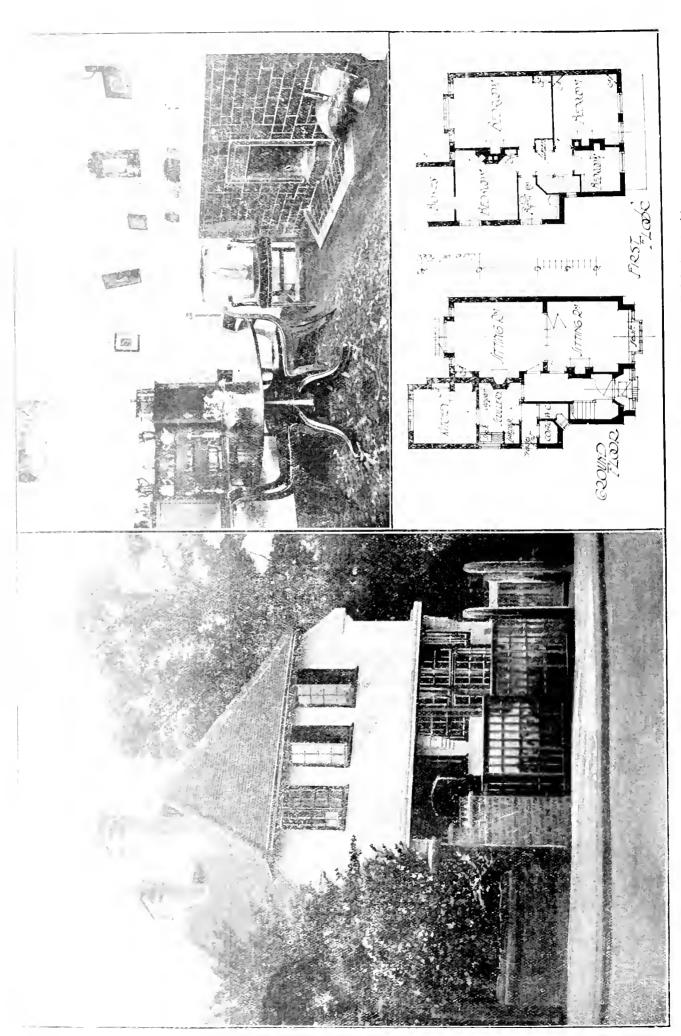
# AN ARCHITECT'S HOUSE, CHURCH END, FINCHLEY, N.

This cottage-like home has been built for the architect's own occupation at a cost of about £550 on rather a narrow plot of ground, and economy both as to planning and materials was a prime consideration. exterior walls are built of rough stones limewhitened, and the roof is covered with sandfaced tiles. The chinneys are of picked stock brickwork. The interior is very plainly treated, with no cornices, but a good effect is obtained by the use of heavy picture rails. The recessed fireplace in the parlour has a long expanse of vainable tiles and long shelves over for china, etc. Messrs, Maltock and Parsons, of Gray's 1nn Road, were the builders. All the chimney pieces, both wood and iron, were designed by the architect. Mr. II. S. East, A.R.I.B.A., of Gray's Inn. We give two photographs of the house and the pair of plans on one plate.

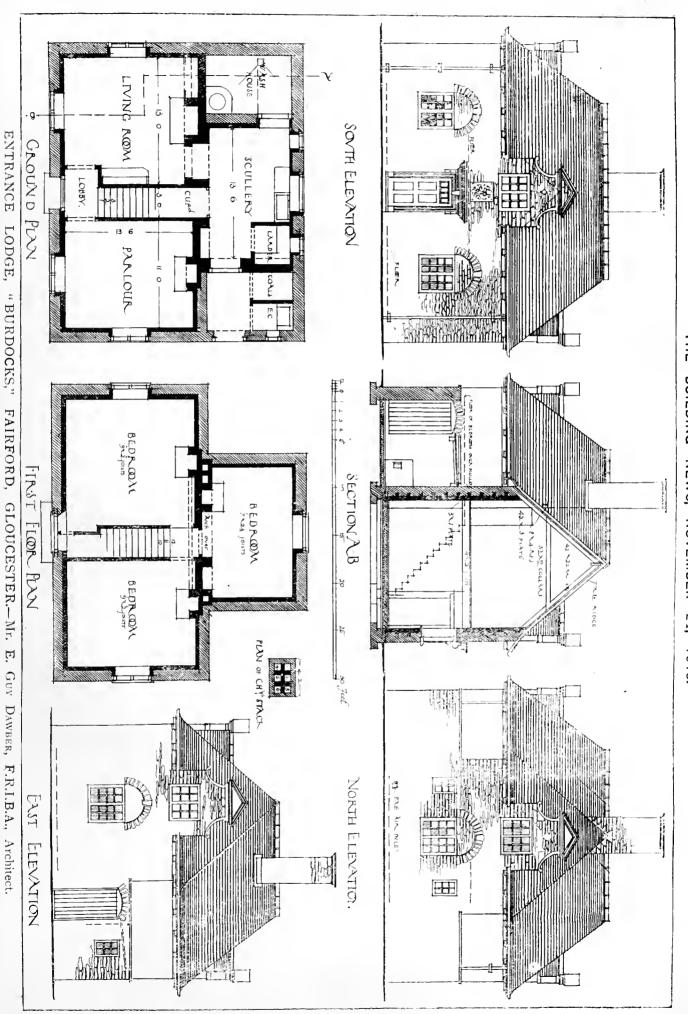
#### OBITUARY.

Sir James Stewart Davy, who was from 1905 to 1913 Assistant Secretary and Chief General Inspector of the Local Government Board, has died at his residence, Wintergreen Wood, Pyrford, in his sixty-eighth year. Sir James Davy was the son of Mr. John Davy, of Jamaica, and was educated at Uppingham School and at Balliol. In 1872, shortly after taking his degree, he entered the Poor Law service. In 1873 Mr. Davy was transferred to the Lancashire Poor Law district, and in 1876 he was appointed permanently as Assistant General Inspector. In 1878 he was appointed General Inspector for the East and West Riding of Yorkshire, and in 1886 was transferred to the Kent and Sussex district, where he remained until his appointment as Chief General Inspector in 1905. During these last nincteen years he was employed in many public inquiries. In 1905 he gave evidence before the Royal Commission on the Poor Laws, occupying six days, and though his suggestions were not all accepted, he was able to carry out many desirable reforms which they recommended. He was appointed a C.B. in 1902, and in 1911 he was created a. K.C.B.

Mr. Burkett J. Emery, a member of the Birmingham Architectural Association, and a licutenant in the Mid Birmingham Battalion. Warwicks, is reported " missing, believed killed." Reports from brother officers show that Lieut, Emery acquitted himself very gallantly, and, after being wounded, kept in charge of his section in the action. which occurred on or about October I2. Lieut. Emery's architectural works consisted of several factories and domestic buildings in the Midlands. He had been in practice at 109, Colmore Row. Birmingham, for about six or l seven years,



AN ARCHITECT'S HOUSE, CHURCH END, FINCHLEY.-Mr. H. S. East, A.R.I.B.A., Architect.



# Currente Calamo.

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any street been made of less than the legal minimum width. It is discreditable that the Government has ignored this essential, and has set at naught the law on the Well Hall scheme, where the areas are laid out with streets of 40 ft, and 30 ft, widths, thus travers ing an Act of Parliament which has regulated every new building scheme within the county for the last twenty years. One result of this will be that when the war is over and half the houses are empty they will remain so unwel come testimonies to the unwisdom of the Government, which, in addition, setting at naught Parliamentary enactments, has used weather boarding as an external covering. with timber at its present rumous price, and the mevitable heavy cost in the future of maintenance of so obsolete a material!

Our report of the London County Council meeting this week furnishes another instance of Government "economy"! As readers know, new regulations have lately been made for buildings constructed with reinforced concrete, and the Council suggested that the Local Government Board should now excuse the full publication of the regulations in the "London Gazette," which will cost £180. The Council pointed out that it would do as well merely to advertise the fact that new regulations were in force, so that the few who wanted them could buy them at the Council's offices, adding that full publication in the "Gazette" would serve no useful purpose. But though the Local Government Board agrees with the Council that no useful purpose would be served, it insisted on publication. The Council then suggested that a few pounds could be saved if the "London Gazette " utilised the type which the Council already has, but H.M. Stationery Office declines, and so the L.C.C. is obliged in these hard times to spend £180 on what Whitehall agrees is no useful purpose. The new regulations, we may remind readers, were published in extenso in our issues of July 14. 21. and 28. and August 4 last.

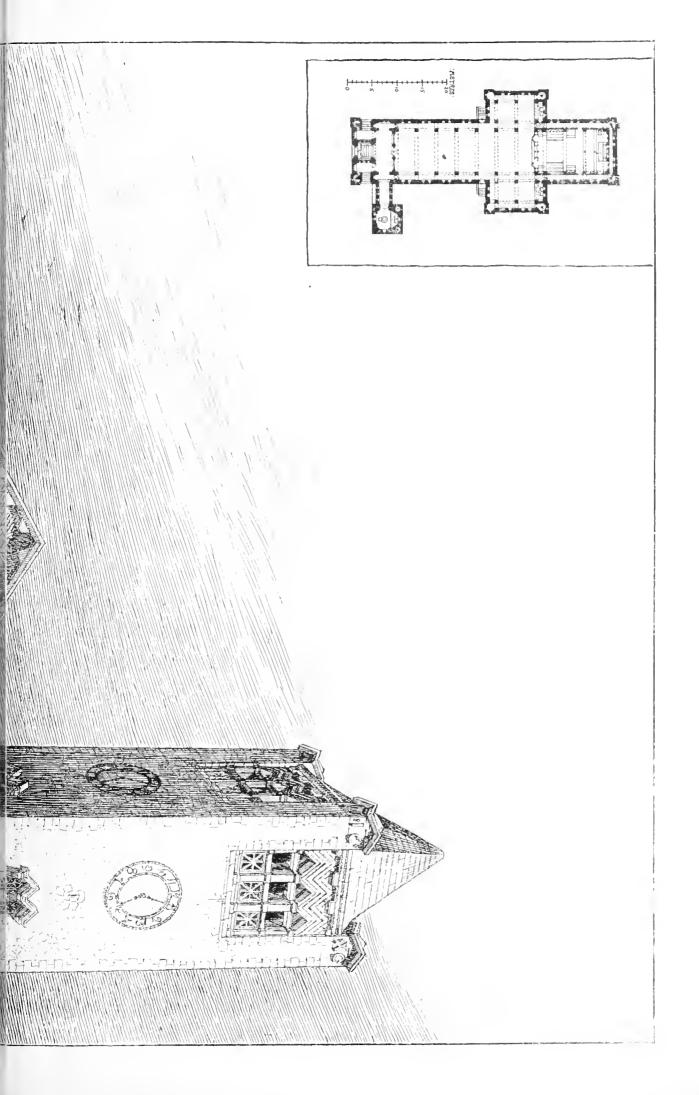
The valuable paper read by Mr. E. M. Konstam at the Surveyors' Institution on Monday is a melancholy testimony to the unwisdom of Mr. Lloyd George's finance and the disastrous consequences it is entailing on the nation. Second only to the burden of the war the economist beaeifter will rank the folly which crippled the second great group of industries in the realm and stopped the housing movement. For the present, as Mr. Konstam remarks, "a political truce prevails, and it seems impossible to get Munisters to open their eyes to the pernicious effects of the legislation for which they are responsible. We have so often deplored the disasters we are all feeling, directly or indirectly, that we can only once again record our regrets at the apparent hopelessness of the present situation and the blindness of tilese who have brought it about and have broken their subsequent pledges to retrace their steps.

The Committee on War Damage, which wish to serve will only accept as instituted only on the 28th ult., is making head to be the president, Dr. Gorder Minn. Lord Mayor of Norwich; the president of South Production; chairman of executive forces, but whose to small tee. Mr. Mark H. Judge, 7, Pall Mall. S. W.: heatorary secretary, Mr. W. H. Southon, 115 v. Chancery Lane, W.C. A memorial for presentation to the Prime Minister has been drawn up, from which we quote the following: "Although the Govern

ment scheme only came into force on July 19 last, immense loss and great hardships have been suffered in many districts, and it seems to your memorialists exceedingly unfair that these should not be borne by the nation; and notwithstanding the fact that the withdrawal of the scheme would now involve a considerable expense in the first instance, it is yet, for the reasons stated above, highly desirable that the Government should retrace their steps in the matter, repay the premiums already received, and, as trustees for the nation, proclaim their intention of giving fair compensation to the owners of property and goods that have already been, or may in future be, damaged or destroyed either by aircraft or bombardment. This, in the opinion of your memorialists, is the manifest duty of the Government, and one which they are bound by every consideration of justice, expediency, and public policy, to recognise and carry into effect." This memorial has already been approved by several corporate bodies, including the following, who have agreed to join in the presentation of the memorial :- The Municipal Corporations of Abingdon, Barrowin-Furness, Gateshead, Ilkeston, Kidderminster, King's Lynn, and Shrewsbury, and the Urban District Councils of Ashford (Kent), and Ilford (Essex).

The first meeting of the General Committee of the Engineering Institutions' Volunteer Engineer Corps, which took place last week, has attracted more attention in engineering circles than anything previously recorded as to the inception and progress of this corps. An executive committee was formed, consisting of Sir John Snell (retiring president of the Institution of Electrical Engineers) as chairman, Sir Maurice Fitzmaurice, C.M.G. (a vice-presi-Jent of the Institution of Civil Engineers), Colonel Le Rossignol, R.E., Lieut, Colonel C. B. Clay, Mr. L. B. Atkinson, hon. sceretary and treasurer; Mr. Fleming, and a representative of the Institution of Mechanical Engineers, to be nominated by the president. The report of the commandant as to the progress of the corps was most encouraging. this report he added that an arrangement had been made for sharing headquarters with the 4th Battalion City of London Regiment (Architects' Corps). The premises comprise a spacious drill hall, and above this are the necessary offices for providing for mess rooms, common room, orderly room, canteen, etc. Through the kindness of Mr. A. Campbell Swinton, F.R.S., the corps has received a present from Messrs. Crompton and Co. of a new Admiralty pattern searchlight, of which they are justifiably proud. This is being erected on the premises of the London Electrical Engineers (T.F.), where the necessary instruction will be given. Several men have already qualified in this branch, and parties are engaged each week-end on important work in connection with the defence of London. Under these auspicious circumstances, and with these comfortable and excellent premises for headquarters, the corps should prove attractive to all suitable men who wish to serve their country. The corps will only accept as new members those who are over military age, or disqualified by reasons of health, or who are engaged on war work, and who are not allowed by the Government on that account to enlist in the forces, but whose training in this corps would fit them to take part in the defence of the country in the event of a raid by the enemy, or any other emergency; and would also fit them to volunteer as trained men for service overseas if such a necessity arose at a later

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SOANL MEDALLION AND TRAVILLING STUDENTSHIP DRAWSC



THE CORTILE, PALAZZO FAVA, BOLOGNA, N ITALY.—By Mr. Alick G. Horsnell, Medallist and Tite Prizeman.

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C. PRERE, A.R.I.B.A. PREMISES OF THE GENERAL MEDICAL COUNCIL, HALLAM STREET,

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HOUSING PROBLEMS IN BRISTOL.

A section of the annual report of the Medical Officer of Health for Bristol, just ssued, deals with work done under the Housing Acts in 1914, and Dr. D. S. Davies appears to him to be one of the causes of the large number of houses in Bristol letting at rentals not exceeding \$226 a year which are unfit for habitation

at the present time.

During the decades 1880 to 1900, he states, enterprise more than supplied the memand for houses for the working classes. The price of houses during these years was somewhat inflated. From 1904 onwards a slump set in, and house property has depre-ciated far below its real value; consequently no inducement is offered to undertake the repairs which are required to be done from time to time to keep the houses in a tenant able condition; hence the houses become so neglected that it requires a considerable ex penditure to put them in a thorough state of repair. Under the circumstances, the landford's only interest is to obtain as much cent as he can get for a house rapidly be-coming uninhabitable, and when pressed to carry out adequate repairs, he allows the mortgagees to take possession. Mortgagees mortgagees to take possession. n possession are at present selling houses for sums varying from £5 to £30 per house. The new landlord objects to spending a sum far in excess of the purchase money in re-pairs, to comply with the requirements of the Housing and Town Planning Act, 1909.

The construction of the older type of house for the working classes without any-or with an inefficient-damp-proof course, with its front parapet walls, and zinc gutters between the "M" roofs, and the flat nitch roofs has the "M" roofs, and the flat pitch roofs, has made it a very expensive building to keep in repair. In the poorer houses, the slightest defect in the zinc gutters or a heavy storm spoils the appearance of the ceilings and walls, as well as making unfit the room, er rooms, so affected. Owing to the absence of an efficient damp-proof course, the internal walls become insanitary, and also constant expense is involved by the frequent re-papering in order to keep the rooms decent and a presentable condition. The fixed top sash of the windows is another characteristic of this type of houses, and apart from the insufficient ventilation, it prevents the house-wife from cleaning the first-floor windows. An important defect also is the absence of ventilated larder accommodation, and the position of the larder under the stairs.

If landlords would reserve a portion of their rents for depreciation each year, and repair property more frequently, fewer houses be condemned as unfit for human says Dr. habitation. Davies. are hundreds of houses in Bristol to-day that could be saved if the roofs were stripped, parapet walls and zinc gutters abolished, and the traight or stable roof, with ridge parallel to front and back walls, eaves and rain-water shuting and down-pipes provided: efficient damp-proof courses inserted; if back-to-back houses were converted into single houses with through ventilation; if houses without through ventilation had it provided; if external walls were properly cemented or rough-casted with brown lime mortar; if lighting areas were increased and sashes made to open; plastering of internal walls made good; floors and other woodwork renewed; sink, water tap, and ventilated pantry provided. With and ventilated pantry provided. With these requirements effected there would be no cause left to condemn or demolish a house so improved. A tenant cannot reasonably be expected to take an interest in a dilapidated house; there is an inclination to let everything and thus the nucleus of a sum is formed.

There are many areas in Bristol which are very congested. The dwellings in these areas are small, and the majority of them are quite worn out; it is hopeless attempting to repair them. The only thing that can be done is to close and demolish them, or to prune liberally, thus providing more air-space and room for alterations and repairs to those allowed to remain. A very gratifying feature is the number of owners who visit Dr. Davies' office for advice as to repairs and the insertion of damp proof source. Davies' office for advice as to repairs and the insertion of damp-proof courses, thus proving have appointed Mr. J. Blakley as town surthat the work done under the Housing Acts veyor in place of the late Mr. W. Wilson.

is primarily of an educational character. No houses to let at 5s, 6d, or under per week have been built in Bristol during the years 1911, 1912, 1913, and 1914. The congestion is becoming very acute. During the year 3,875 houses were inspected, or which 2,903 were found defective, 1,455 were made habitable, and 508 were represented as unfit. summary of the work done under the Housing Act, 1909, up to the end of 1914 shows that total number of houses inspected was 6,832, of which 5,180 were found defective, was necessary. Of the remaining 4.662, 271 were closed under order, 405 closed voluntarily, 3.046 were made habitable, and 940 were in hand.

## MATHEW BOULTON'S HOUSE AT SOHO.

In the course of an address to the Birmingham Architectural Association the other evening on " Architecture in Birmingham and the Neighbourhood in the Last Half of the Eighteenth Century," Mr. Arthur T. Bolton, F.R.I.B.A., of London, suggested that the house of Mathew Boulton at Soho should be preserved as a memorial to the man who was one of the makers of Birmingham. Whether the interesting house at Soho was built in 1764, simultaneously with the factory, and perhaps from a design by Robert Adam, was a point, said Mr. Bolton, which, up to the present, he had been unable to ascertain. Smiles, in his life of Boulton and Watt, referred to a letter of 1770 from Boulton to Adam, which he hoped yet to trace, in which Boulton gave an account of his factory and the number of men employed. Unfortunately, that letter could not be traced, and the source from which Smiles appeared to be quoting was not known. Looking at the early date alleged for the house, and its selfevident architectural character, it seemed at least highly probable that it might have been based upon an Adam design. Adam visited Baskerville in Birmingham and Shenstone at Leasowes, and saw the new Hagley house in May, 1758. There was no doubt the Soho house was enlarged later, as there was a letter from Boulton to Watt dated August 20, 1789: The foundations of the new drawing and with-drawing room are began to be laid this day, the earth being dug out." That might be taken to refer to the wing on the one side of the house. There had been some controversy in connection with the idea that about the year 1791 photography was invented and first used at Soho. To establish that it had been sought to show that the house as seen now was recast at this period, and a new story added. It was traditional that Sheraton stayed with Boulton, and made the fine mahogany sideboards fitted in behind the columns. It became a great question, therefore, whether the 1764 house had not been It was traditional that Sheraton recast. Looking at it all round, the apparent unity of the design, which at first sight appeared in favour of the first period of 1764, gave place to doubts arising from unex-plained features of the planning and con-struction. He was inclined to think the balance of evidence was in favour of the design being by Wyatt rather than by Adam, and what was seen now must be regarded as a reconstruction subsequent to 1770, and possibly contemporaneous with the design of the facade of the Birmingham Theatre which was given by Wyatt in 1780. In concluding his sketch of Boulton's career the lecturer said his life deserved to be honoured and commemorated. No city could afford to live merely in the present, ignoring the salutary influence of its own past. It was to be hoped that the house of Mathew Boulton might yet escape destruction, and, reverently repaired, serve as a museum or library forming a centre of enlightenment and research. and an entirely suitable memorial of a great personality.

Mr. Bolton showed a number of views of Hagley and Croome Court, as well as of Boulton's house at Soho.

THE BROCH DWELLINGS OF SCOT LAND.

A Munro lecture in anthropology and prehistoric archaeology was delivered on Thursday, in the History Class room of Edinburgh University, by Mr. George Macdonald, F.B.A., LL.D., upon "Scotland During the Roman Period." The lecturer death of the with particular death. The lecturer dealt first houses. The character of with native earth houses. these structures was explained and illustrated, the main facts as to their geographical situation indicated, and their possible pose discussed. A certain number of them had apparently been inhabited, at all events occasionally, but there were circumstances, notably their frequent occurrence in connec tion with but circles, which suggested that the majority had been storehouses. The objects found in them were few, but they included implements of iron, rotary querns, and fragments of Samian ware, which furnished clear evidence as to their date. were not peculiarly Scottish, for analogies could be cited, not only from elsewhere in Britain, but also from various parts of Europe and Asia.

The broch, on the other hand, was the most characteristic, as it was the most re-markable, monument of prehistoric Scotland. The total number of authentic examples recorded within the Scottish area was now not far short of five hundred, while not one was known outs de of it. Obviously this architectural type must have played a very important part in the civilisation which pro-Its true home was the region north duced it. of the Great Glen, including the various groups of outlying islands, although examples occurred sporadically as far south as Berwick shire and Selkirkshire, and three had recently been recognised in Galloway. Its Celtic been recognised in origin was indisputable, and every fresh excavation added to the cumulative testimony which assigned it to the Roman period. The contents of the broch of Torwoodlee, in Sel kirkshire, for instance, included Roman pot pointing to an occupation that could not be much later than 150 a.p. On the other hand, so southerly an example could hardly come very early in the series to which it is seeing that the type would require time to spread downwards from the north. This seemed to throw the oldest of the broch-back to a date well before the first Roman spread downwards advance into Caledonia.

Nor must it be assumed that the type sprang full-fledged from the brain of some prehistoric Scottish architect. Minor variations in design showed that, even after it had been definitely evolved, development continued to They might be certain that the broch itself was the outcome of a long process of evolution. When the Royal Commission on evolution. When the Royal Commission of Ancient Monuments had completed its survey, material for tracing that process would probably be available. Meanwhile, it seemed fairly certain that the galleried "duns" of Argyllshire and the islands represented the immediately preceding stage. The crannogs of Scotland, with the scientific investigation of which Dr. Munro had been so prominently identified were another phase of the civilisa identified, were another phase of tion represented by the brochs. That is, they belonged to the early Iron Age, and were occupied during the Roman period, as well as possibly earlier and certainly later. The remarkable results of the recent excavations on Traprain Law were also referred to.

A large new consumptive sanatorium is to be built at Ryo Hill. Galway, from the design of Professor W. A. Scott, A.R.H.A., of Dublin and tenders for its erection are invited.

Captain Bernard Henry Holloway. 9th Sussex Regiment, of Burna Wood Granze Upper Tooting, Surrey, who was killed in France on September 27, aged 27, left property of the value of £10,540, with net personalty £9.050. Probate of the will, dated August 29 last, is granted to Henry Holloway, builder and contractor, father, and Roland Eveleigh Holloway and Herbert John builder and contractor, father than the builders and Herbert John Holloway, builders and contractors, brothers. The testator gives his shares in Holloways Properties, Limited, to his father and investments he had made in the War Loan to Misself Develop Characle. Louisa Douglas Chample.

#### LEGAL INTELLIGENCE.

PNG APPEAL FROM EXMS Judgment J. K Comedian 1911 a ni ft sied for r tall satisfactors that he had Mr. Justice and the vase and an ye the £310 to a exe the £310 to the pointfluor made to the construction of the transfer of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the co now decided the Backmaster, in deto erest this wall Packer, and Sammer

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### COMPETITIONS.

DUBLIX The Cleansing Committee of the Dublin Corporation recently advertised tor competitive designs for the laying out of the reclaimed slobland at Fairview as a public park. With the approval of the Municipal Council, premiums were offered of £50, £10, and £5 respectively for the first. were offered of £50, £10, and £5 respectively for the first, second, and third designs selected. The designs have been placed as follows: First, Messrs, William Power and Co., landscape gardeners, King Street, Waterford; second, Mr. Horace T. O'Rourke, Lytlehome, Cabra Road, Dublin; and third, Miss Henrietta C. Take, 8, Upper Fitzwilliam Street, Dublin. The assessors were Sir Frederick Moore, curator of the Botanic Gardens at Dublin, and M. C. J. MucCarthy, the city architect, Yne competiters sent in designs, -

# PROFESSIONAL AND TRADE

SOCIETIES.
NORTHERN ARCHITECTURAL ASSO (IATION —This association held its opening meeting of the session on Wednesday night at 6. Higham Place. Newcastle-on Tyne. The president. Mr. R. Burns Dick, F.R.L.B.A.. presided over a very good attendance.—In his address, the president said that and other societies throughout the Empire mourued the death in battle of some of their most promis ing and talented members, whilst thousands of architects and students of their art had taken up arms. After urging the need for national service, he indicated what might be the effect upon the construction of cities by the greater development of aircraft. Among the possible changes, he thought, would be a gradual increase in the proportion of open spaces; the general introduction of underground or double-decked roadways; tiled and sloping roots entirely abandoned in favour of very strong flat roofs, specially adapted for anti-aircraft appliances; picture galleries with suspended wall linings, on which the pictures would be fixed, and which could be swiftly dropped to their safety vaults below; museums with their cases of treasure, statuary, etc., arranged on continuous lift platform capable of being lowered by the pressing of a button; and schools and similar buildings so modified as to make them numediately avail buildings so able for the accommodation of the citizen-inarms at the signal of alarm. He could also imagine a network of subways linking up important centres, and permanently contracted and well-equipped trenches protecting the great industrial centres, and great electric generating stations entirely underground.

THE SHROPSHIRE CRADLE OF THE ROYAL STUARTS. The Rev. Professor Conjer. D.D., delivered a feeture, under the ruspices of the Scottish Ecclesiological Society, in St. Cuthbert's Lower Hall, King's Stables Road, Edinburgh, on "The Shropshite Cradle of the Royal Strarts." Bishop to the Royal Strarts of the Royal Strarts of the Royal Strarts. Campbell, Glasgow, occupied the chair tor the first time as president of the society. Professor Cooper said that, whatever might have been the remoter origin of the Royal Stunts and, as a matter of fact, they came from Brittany, where they had held the postton of stewards to the Bishops of Dor—it was in Shropshire that they laid the foundation of their fortunes on the soil of Great Parts. They was in the soil of Great Parts. Butain. They came over, not with the Conqueror, but with the ablest of his sons; they took root in Shropshire on the fall of the Norman Earls of Montgomery. In Shrop Norman Earls of Montgomery, In Shrop-shire were born to Henry's follower, Alan Etz Fland, the two sons William and Walter, Place descendants were to rise to such high d stinction From William Fitz Alan sprang of shiretion—From William Fitz Alan spraing to F tz Alan Howards. Dukes of Norfolk; from Walter the Royal Smarts. Both Wi iam and Walter showed their gratifude to Henry I by adhering to the cause of his daughter Mand against the usurping Stephen; ind it was this loyalty to the legitimate the ress that recommended Walter—the conservation of David 1. Section and led him to accompany that monarch to the north, where he was speedily appointed to the office which gave his descenappointed to the omee which gave his descendants their historic surname; and, receiving bands in Rentrewshire, became the founder of Paisley Abbey. Walter, the Steward, left England in early life Letore he had much to

give to the Church, but his father, Alan, was a conspicuous benefactor to the Abbey of Shrewsbury; his brother William was the founder of that of Haughmond; and to his sister-in-kaw, the rich wife of William, the great Priory of Wenlock was deeply indebted. For this priory Walter had a deep veneration, and when he was about to found Paisley he stipulated that its first inmates should come from Weulock, and associated the patron saint of that house, St. Milburgh, with St. James, and the local St. Mirren, as patrons of the new monastery. Naturally, monks from Wenlock would try to build at Paisley on the lines of the home which they had left and he had found among the carved and moulded ston's collected in the old cloister-garth at Wenlock several bearing distinct witness to the former existence there of cloister-areade very similar to that which Mr. cloister-areade very similar to that which and P. MacGregor Chalmers, acting on the evi-dence supplied by capitals and bases dug up at Patsley, had just reproduced in his beautiful restoration of that abbey. The lecture was illustrated with a series of views of the Shropshire churches and abbeys referred to by the lecturer.

THE THREATENED DEMOLITION OF GLASGOW TOLBOOTH STEEPLE. The proposed removal of the Tolbooth Steeple of Glasgow to a new site was referred to at the annual meeting on Thursday night of the Glasgow Archaeological Society. Mr. J. T. T. Brown presided. The council, in J. T. T. Brown presided. their report, stated that they had renewed the protest the Society made two years ago, when it was then proposed by the Town Council to remove the steeple. The President remarked that, notwithstanding all the protests they had received, the Town Council had gone on as if nothing had happened, and had decided that the steeple should be removed. Mr. Edwards moved that the Society promote a memorial to the Ancient Monuments Board, asking that body to move for a preservation order under the Ancient Monuments Protection Acts for the retention of the steeple on its present site, and that other local bodies be invited to support the Professor Cooper seconded the motion. motion, which was adopted.

TOWN PLANNING AFTER THE WAR. — The first national conference of housing societies and societies of public utility was held on Friday in London, under the auspices of the Garden Cities and Town Planning Association with the abject of practility for housing tion, with the object of providing for housing on town planning lines after the war. Mr. Cecil Harmsworth, M.P., presided, and representatives of sixty-one societies from all parts of England, Scotland, and Wales were represented. The questions discussed included the relations of housing societies to public money combines in the building industry, the co-operation between municipal to the co-operation of the co-operation of the co-operation of the co-operation between municipal control of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-operation of the co-op palities and public utility societies in future. and the amendment of the law to allow local authorities to invest in such societies. Stress was laid on the high price of money and material, and eventually it was agreed that the best time for taking action would be "so soon as the end of the war could be seen approaching". approaching." A committee was formed representing the whole of the groups interested in the scheme.

TRADE NOTES.

Boyle's latest parent "Air-Pump" ventilators have been applied to the Baptist Schools, The

have been applied to the Baptist Schools, The Green, Twickenham.

Messrs F McNeill and Co., Limited, of Spencer House, 4, South Pluce, E.C., point out that they were the original patentees and manufacturers of asphalted roofing in the year 1833, and not only supplied practically the whole of the roofing felt required for the luts and hospitals of the British Army during the Crimean War, but supplied and applied the asphalte roofing felt on the whole of the military canns in this country at the time of the asphalte roofing felt on the whole of the military cannys in this country at the time of the Crimean War viz. Aldershot, Colchester, Shorneliffe, and Curragh, Co. Kildare, Some of these contracts were held for over fifty years, and during the present war McNeill's roofing felts have been simplied in very large quantities not only for the roofing of the luts in this country, but for export to the various bases alread abroad

# Om Office Table,

An inquiry has been held in the Merchants Hall, Glasgow, regarding an application by the District Committee of the Middle Ward of Lanarkshire for authority to prepare a town planning scheme for the Newton, Carmyle, and Baillieston area of the county. Mr. David Ronald, the commissioner appointed by the Local Government Board for Scotland, presided, Mr. W. E. Whyte, clerk of the committee, appeared for the applicants, while representatives were present on behalf of the representatives were present on behan of the Glasgow Town Council and landowners, who behad objections to the scheme. Mr. W. R. Young, the engineer, gave a detailed description of the area which it is proposed to deal with. He pointed out that a similar scheme was contemplated for the Cambuslang area, and that it was intended that the two schemes should be inter-related. Care would be taken to foster the proper development of the area and its mineral operations. It was in the interest of the local authority to see that the area was developed, and there was no disposition on their part to hamper the mineral industry. Dr. John F. Wilson, County Medical Officer, said that it was an area which had developed very considerably, and could be easily governed by a town-plaining scheme. The inquiry was concluded.

Under the title of "Expert Juggling," the Contract Record of Toronto publishes the following remarkable statement as to tendering tractices in Winnipeg:—"Investigation into the construction of the Law Courts and Cen-tral Power Station at Winnipeg reveals the fact that seven tenders for the were received on June 12, 1912. The three lowest were the National Construction Company at \$763,974. Thomas Kelly and Sons at pany at \$700,974. thomas Kerly and Company at \$887,500, and C. H. Simpson and Company at \$299,107. The National Construction Company, of which C. H. Simpson was president. were offered the contract, but they refused to sign, stating there had been an error in their tender. The Kelly firm were then offered the contract, but they replied that they had just received a large cut-stone job and could not undertake another contract in volving a large quantity of out stone. C. H. Simpson and Company then signed a contract with the Manitoba Government at \$890.107 On August 14 they sub-let the entire work by contract to the National Construction Com-pany at \$854,107. The National Construction Company later gave Thomas Kelly and Sons sub-contract for stone work in the building.

The annual report of the city engineer for Sheffield, Mr. Charles F. Wike, for the year ended March 25 last, has just been published, and states that on November 16, 1914, fifty years had been completed during which the by-laws relating to new buildings and streets had been in operation. During these fifty years, 57,904 houses were erected, being at the rate of 1,158 houses per twelve months: the greatest numbers were built in 1899 and 1990, 2,710 and 2.876 respectively, and the least number in 1913, when the total fell to 542 Last year the length of new streets formed, of sewers constructed, and of plans submitted showed in each case a marked falling off as compared with the preceding year and previous ones. During the latter half if 1914 great activity took place in the con-struction of huge works buildings for war munitions purposes, and this was greatly increased during the early part of the present year. Extensive additions or alterations have taken place, the number of plans approved being eighty-five in the last six months of 1914, and 142 in the first six months of 1915. The new buildings approved during the year included the Town Hall extension, eight picture palaces, additions to Jessop Hospital, and a new children's hospital. The schena approved by the Local Government Board in 1905 for the extension of the city sewage works, at a cost of £270,369, was completed during the year, and well within the estimate, the actual expenditure being £262,634. works consist of catchpits, continuous-flow beds, which can also be operated as contact beds, the whole being capable of dealing with 65,000,000 gallons per day. The reconstruc-

tion of High Bridge at Owlerton, at an estimated cost of £7,000, forme by the Sheffield Corporation and the West Riding County Council, has been allowed to proceed The bridge, which is on the Penistone main road and crosses the R ver Don, will in future he 50 ft. wide, and built of brick and concrete faced with stone. Several important work, estimated to cost in all £85,654, have been cancelled er suspended until after the war. Since January 1, 1915, the work an connection with the building department has been under the control of Mr. E. A. Green: the improve-ment, town-planning, parks and estates department under Mr. E. Partington; and the sewage disposal works under Mr. J. Haworth.

The ordinary general meeting or the British Fralite Company (1908). Ltd., was held at 85, Gresham Street, London, E.C., yesterday. During the year which end-d June 30, 1915. a profit has been made of £3.800 13s. 11d., which, together with the balance brought for ward from the previous year, amounting ward from the previous year, amounting 5. £181–88. So, gives a sum standing to the credit of profit and loss of £3,982–28. 7d. The directors were unable to recommend the arrangement of a field of the first the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the field of the fie payment of a dividend for the following reasons:—The items of buildings, patents. plant, machinery, and goodwll were taken over from the old company at an arbitrary figure, and from a valuation which the directors have had made, it would appear affectors have had made, it would appear that they stind in the company's balance-sheet at a price for in excess of their time value. The Board have, from time to time, approached some of the largest shareholders 'an arrangement with a view to coming to for a reduction of the capital in order to bring these assets down to their actual value, and pending a con prehensive scheme dealing with the matter, no depreciation has been written off the plant, buildings, etc., taken over from the old compary. The directors feel that before any dividend can be paid either a reduction of capital ico.t take place or the items in question written down out of profits. They have accordingly set aside the sum of £2.000 out of the profits of the past year, in depreciating the item of plant and machinery, and have placed to reserve account the sum of £1.500, carrying lorward the sum of £482 2s. 7d.

A second edition of "The Magnet of first published in October last. Commerce, first published in vectorer in a sissued by the Great Central Railway Com-It graphically describes the enormous capacity of the great Midland coalfield with which the Great Central Railway Company is principally identified, with its estimated contents of forty-nine thousand million tons contents of forty-mine thousand minion fons of coal, the cheaper and more efficient transport of which the Great Central has done so much to facilitate by its completion of the great docks at limmingham. The volume is lavishly illustrated, and the statistics and general informa tion given are of the highest every industry. It is obtainable at the Great Central Railway Publicity Department, 215, Marylebone Road, N.W. importance to

Lieut, Col. Charles Rosenthul, A.P.I B.A. of Pitt Street, Sylney, N.S.W., commanding the 3rd Field Artillery Brigade, Australian Imperial Force, has been mentioned in dis patches for distinguished services in the field during operations at the Dardauelles, and has been appointed a C.B. ((Military Division). Temporary Captain Matthew Houan, Ser vice Battalion, South Lancashire Regiment, has been specially mentioned in Sir Ian Hamilton's dispatch of September 22 for services during the Dardanelles operations.

The council of the Institution of Municipal and County Engineers have appointed Messrs, E. J. Elford, T. W. A. Hayward, and C. F. Wike to confer with three representatives of the Society of Engineers to consider the question of drawing up rules and scale of fees for salaried engineers.

The death has occurred at Walsall of Mr. C. W. Steoliens, who was eventy-seven years of age. He fought under Sir Bartle Frere with the old 44th Foot Regiment during the war in the Far East in 1860. On retiring from the Army he was appointed borough sanitary inspector at Walsall, a post which he held for over

# Building Intelligence.

BIRTLEY. MID DURHAM. - Plans for wooden houses for Belgian workers at Birtley have been presented to the Chester-le-Street Rural District Council, as follows: There will be 1,262 houses for two workers each: saxty hostels for fifteen workers each. seventy three houses for foremen, and a camp for 1,008 persons. Each class of house will be painted a different colour, and the total popul lation to be accommodated will be 8.500. which is practically the populat on of Birtle). at the present time, so that the population will be doubled at one stroke.

SWANSEA Parcwern Red Cross Hes pital. Swanson has now been deered and additions made in order to meet the requirements of a Red Cross Hospital 10 100 patients. The chief entrance is in the cast side, entered by a porch with a small porter's office. On the ground floor are wirds. with the large half to be used is a during room, the serving-room adjoining which is fitted up with hot plate, stoves, and carving table, also sinks and racks for washing up alt hina. Connected with these rooms are the kitchen, scullery, etc., all fitted out with gis stoves, steam boilers, ovens, sinks, etc. There is also on this floor the nurses' dining room. operating room, and dispensary, etc. On the first floor are nine wards, the matron and bath rooms and bedrooms, etc., also large linen rooms. A large kit room with 100 compartments is provided, and the stables have been converted into a recreation stables have been converted into a recreation and reading room. The general contractors were Messrs, J. and F. Weaver, Swansea. Mr. Davies has acted as clerk of works. The work has been carried out from the design and under the supervision of Mr. Glendmung Moxham, F.R.I.B.A., architect, 18, C.stle Street, Swansea.

WESTMINSTER CATHEDRAL - Work on the new chapel of St. Andrew and the Saints of Scotland in the Roman Catholic Cathedral at Westminster is now almost completed, and the chapel, which is the gitt of the Marquis of Bute, will be de heated on St. Andrew's Day, November 30. Italian crafts men have been engaged on the work, which was designed by Mr. R. Schultz Weir, for nearly three years. The chapel is entered by a bronze gilt gate, and has a mubble payement representing the sea, with inlaid tishes. reredos is of marble, with sculptured bands, and a cross inlaid with Egyptian porphyry and a cross main with egyptian parphyly bears a bronze ligure of Christ. On the other side of the reredos are sculptured representa-tions of St. Xinian, St. Andrew, St. Colomba, and St. Margaret. The arch of the east wall contains a jewelled cross in a flowered held. with a peacock and doves in flight.

# PARLIAMENTARY NOTES.

DISMISSALS FROM LAND VALUATION DEPARTMENT - Captain Amery asked the Minister of Munitions on Tuesday night whether, in view of dismissals from the Valua tion Department, he would be willing to employ in his department such dismissed officials who, being ineligible for military service, have who, being meligible for military service, investion, apacity for work of organisation, a Dr. Addson, Parliamentary Secretary for Minitions, replied that applications for employment made by exofficials of the Land Valuation Department who are included for military service will always receive careful consideration in the event of statable vacancies. consideration in the event of shraphe variances occurring. It must, however, be remembered that a large number of posts in the Ministry, other than those of a purely subardinate character, require some technical experience.

The Belgium Town Planning The Belgium Cown Framing Continues have arranged a new series of lectures for Belgian architects and engineers, taking place at University College, London, on Thursdays in each week. Among those who are giving their services are Colonel R. E. Crompton Continues and Colonel R. E. Crompton Continues are Colonel R. E. Crompton Continues and Colonel R. E. Crompton Continues are Colonel R. E. Crompton Continues and Colonel R. E. Crompton Continues are Colonel R. E. Crompton Continues and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colonel Research and Colo their services are comments, E. crompton con-sulting Engineer to the Road Board, Mr. G. Midgley Taylor, Mr. George L. Pepler, Mr. W. R. Davidge, Mr. Raymond Unwin Chief Town Planning Advicer to the Local Govern Town Planning Adviser to the Local Government Boardt, Mr. Aneurin Williams, M.P., Professor Patrick Abererombie, and Professor S. D. Adshead.

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Agestions are about to be made to the Apes a Faith Chrotch at Bournemouth, from plan Tarth Church at Bournemouth, from plans
Mr. W. O. II atchinson

Mr. Osward A. Bridges, engineer and sur-erver to the Bogner Urban District Council, is and his salary increased to £500 per

The death is announced of Mr. Roden Dixon. ough surveyor of Straiford on Avon for the

The corporation of Burningham have leased to the Dunlop Rubber Company about 80 acres of land on the Buches Green Estate, for the excension of their works and the erection of Dychouses for employees. a houses for employees.

During the past year the Essex County County under their county surveyor, Mr. P. J. Sochon, expended £64.0 in the tar dressing tissue of the main roads in the county, of anche there is a total of 1,474 mdes.

Mr. Ernest Chinnock, of Ware, has been appointed to act temporarily as borough on same r and surveyor of Hertford until a succesover fithe late Mr. J. A. Jevons (who lost his to during the late Zeppelin raid) is appointed.

Mr. Mired Harford, architect and surveyor, of Pack Street, Buston, and Brishington, has died, in his sixty eighth year. He was a member of and a regular exhibitor at the Fine X of Academy of Bristol, and was also a member of the Busiol Society of Architects.

The death is announced of Mr. W. L. Partle but lee. Mai-lennead, at the age of seventy-six. He succeeded to the business founded by his late father, Mr. James Partio, eighty years ago. Two of his sons are serving with the colonis

my 25 to 5 votes the town coancil of Edinburgh have 1, c de l'upon the acceptance of the tender i Messes. Charles Brand and Son, Glasgow, for smafts and tunnel for obtaining sea water at Postebol o power station, amounting to £24,515.

A curvet panel containing a bas relief in tak has been executed for the parish church of Clantock. Coinwall, depicting the latest delinquent setting in the village stocks in 1817. The sculpture were Messes, Davey and Bushell, of Bristô

Mr. A. W. Brightmore has held an inquery at Wattington on behalf of the Local Government Board into the application of the corporation for a provisional order to provide for the abolition of the standard of illuminating power of gas and the sansaturion of a calorifie stan-dard. The change of standard has been ren-dered desirable by the substitution of the in-candescent mantle for the flat burner.

At the last meeting of the Chesterfield Joint At the last meeting of the Chesterfield Joint Lea, Committee it was reported that the Lea, Government Board have sanctioned an extension at Penmore Hospital, at an estimate less of £5,000. This sum is appertioned a under:—£2,228 for the enlargement of the alministrative block, including muses' bedreons, and £672 for furnishment £2,390 for a new searlet fever ward, and £710 for fixtures.

The Local Government Board have approved the scheme of the corporation of Hartlepool, an ier the Housing of the Working Classes Act. 1903, dealing with the large mismitary work in the centre of the town, known as a Classes Street area. The total estimated are misming the control of the town of the centre of the town. lamp with 'set including the purchase of the land, the test year purchase at l demolition of the dilap dated the sunty property, the laying out of new streets and the building of 220 workmen's houses, is the later.

A White Paper has been issued showing the A White Paper has been issued showing the amount that is to be spent in this financial year for new Army works of a permanent character out of the Vote of Credit. The totals to £175,000 for fortilications and artillery tiges. £22,500 for Army Ordnance buildings, and £514,700 for barracks and tifle ranges. To amplete these works the further sums of £22,500, £19,200, and £310,050 will be required. Figs. "new Yimy works" had nearly all been to ted when the financial year began.

the ted when the financial year began.

It curenart Spencer E. Barrow, A.R.I.B.A., by Battanen King's Own (Royal Lancaster Regiment) who has died of wounds in St. Lonas - Hospita, London, enlisted in the window of est year, and gained rapid promotion. Agod forey three, he came of a well-king with family of the Society of Friends, and tractised to profession at Bank Chambers, Market Street Lancaster. He had been an Associate of the Royal Institute of British Architects for the past fifteen years, and was concern, y treasured of the Royal Lancaster Informacy.

# TO ARMS!

## 4th Battalion ("Architects") Central London Regiment Volunteers.

Recruits are urgently needed for the Regulars, Territorials, and Volunteets. Intending recruits should apply to Battahon Headquarters, where they will be advised as to the branch of the service los which they are best suited.

ORDERS FOR THE WEEK BY SUB-COMMANDANT C. S. PEACH.

GENERAL PARADES.

There will be no General Parade on Saturday next, 27th mist.

There will be no General Falass.

Next, 27th inst.
Wednesday, December 1. Opening meeting of new
Headquarters, Parade in uniform, 6.45 p.m. sharp,
Saturday, December 4.—Parade. Time and place
will be announced later.

ENTRENCHING PARADE.

Seat 28th inst., at Vectoria Station,
There board. Uniform,

ENTRENCHING PARADE.

Sunday hext, 2sth dist., at Vectoria Station,
L.B. and S.C. Radiway indicator board. Uniform,
haversacks, and water bottles. Midday rations to
be carried. Return to town about 6.40. Radiway
vouchers will be provided. The Radiway Company
has not yet been able to notify the time of departure of special trum, which will be announced on
the notice board at Headquarters and in Friday's
orders.

Tuesday next, 20th inst., 7 to 8 p.m., on "Field Engineering," by the Adjutant,

RECRUIT DRILLS.

A 2nd "B" Companies, Chester House, 6.15 to 7.15 and 7.15 to 8 f5, Mondays and Fridays,

"C Company, Boreham Wood and Elstree District, Headquarters A.A. Athletic Ground, Boreham Wood, For full particulars apply to Alan Potter, Grey Gables, Boreham Wood, Herts.

"D" Company, Caester House, Tuesdays and Thursdays, 6.45 p.m.

NOTL. - Lectures, School of Arms, and Recruit Drills will be held pantly with the Engineering Institutions V.T.C.

By Order,

By Order, L. R. GUTHRIE, Adjutant.

Battalion Headquarters, 18. Tuften Street, Westminster, S.W. -

# MEETINGS FOR THE ENSUING WEEK.

MEETINGS FOR THE ENSUING WEEK.
WEDNESDAY (to-day).—Royal Society of Arts. "Constantinople: Ancient and Modern,"
by Sir Edward Pears. 4.39 p.m.
THURSDAY to-morrow Architectural Association of
Ireland. "Some Towns of Northern
France Affected by the War," by
L. F. Steele, M.A., M.R.I.A. 15,
South Frederick Lane, Publin. s

Satteray.—Institution of Municipal Engineers.
Annual Meeting and Presentation of Report. 12 noon. Presidential address: discussion on the following papers.—"The Manufacture of Cement," by Horace Boot, past-President; "The Benefits Derived by an Urban District Adopting a Town-planning Scheme," by W. L. Cart.
4, Southampton Row, W.C. 2.30 p.m.
MONPAY—Royal Society of Arts. "Optical Glass."
Cantor Lecture No. 1, by W. Rosenham, P. Sc., F.R.S. 4-30 p.m.
THESDAY.—Royal Society of Arts. "Recent Developments of Jamaica: Internal and External," by Sir Sydney Obvier, late Governor. 4-30 p.m.
London and Moldiesey Architeological Society.
Conversazione at Bishopsgate Institute. "Recent Discoveries of Roman Remains in London," by Frank
Lambert, M. V.
Spiety for the Promotion of Roman Studies. "Funeral Lights in Roman Sepulchral Monuments," by G. MeX.
Rushforth, with lantern illustrations.
Apartments of the Royal Society.
Birlington House, Piccadilly, W.
Wednesday (Dec. 18.—Royal Society of Arts. "In-

Apartments of the Rayan Speciality, W. 4.30 p.m.

Wednesday (Dec. 1).—Royal Society of Arts. "Insects and War," by Dr. A. E. Shipley, F.R.S. Master of Christ's College, Cambridge 4.30 p.m.

Institute of Santary Engineers. "The Disposal of Sewage by Dilution," by Dr. W. E. Adeney. 8 p.m.

Frital (Dec. 3).—Glasgow Architectural Craftsmen's Society. "English Mediawal Architecture," by Charles Gourlay, B.Sc., A.R.I.B.A. 7.45 p.m.

Satteray (Dec. 4). Institution of Municipal and County Engineers. Eastern Sub-District Meeting at Bury St. Ediminds. "War Time Economy by Local Anthorities," by William H. Eley. 2 p.m. ---

The nineteenth list of members, licentiates, and students of the Royal Institute of British Architects who have joined the Army or Navy for the period of the war shows a total to date of 46 Fellows, 555 Associates, 186 Licentiates, and 230 traders.

tiates, and 230 students.

Dumbarton Town Council and the Western Dumbarton Town Council and the Western District Committee of the Dumbartonshire County Council have jointly agreed to postpone further procedure pending the close of the war of the joint application for authority to prepare town-planning schemes. A letter has been received from the Local Government Board approving of this decision.

# LATEST PRICES.

N.B.-All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

### TIMBER.

Owing	to	stoppage	of	supplies	all	prices
have adv	auce	d conside	rab	ly.		

Owing to stoppage of supplies all prices have advanced considerably.
1RON. Per ton. Per ton.
Rolled Steel Joists, English£14 0 0 to £15 0 0 Compound Girders, Ordinary Sections
Sections
Sections
Steel Strip
Do. Lowmoor, Fixt, Round, or
Do., Staffordshire Crown 14 0 0 ., 14 10 0
South Staffs 8 0 0 8 15 a
Best Snedshill 900, 910 0 Angles, 10s, Tees 20s, per ton extra.  Builders' Hoop Iron, for bonding, £13 5s. to £13 15s.  Ditto galvanised, £20 to £20 10s. per ton.
Galvanised Corrugated Sheet Iron—
6ft. to 8ft. long, inclusive Per ton. Per ton. gauge
Perton Perton
Cast-Iron Columns
Rolled-Iron Fencing Wire 8 15 0 ,, 9 5 0 Rolled-Steel Fencing Wire 7 15 0 ,, 8 0 0
Rolled-Iron Fencing Wire
Corrugated Ivon 24 annua 15 0 0 ; 15 5 0
Galvanised Wire Strand, 7 ply,  14 B, W.G
14 B.W.G
£10 10s. £10 15s. £11 0s. £11 5s. £11 15s. per ton.  Cast-Iron Socket Pipes —
3 in. diameter
7 in. to 24 in. (all sizes) 7 7 6 ,, 7 12 6
Turned and bored joints, as, per ton extra.
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Wronght-from Tubes and Fittings—Discount off Standard Lists f.o.h. (plus 2½ per cent.)— Gas-Tubes
Wronght-fron Tubes and Fittings—Discount off           Standard Lists f.o.b. (plus 2½ per cent.)—           Gas-Tubes         61½ pc.           Water-Tubes         57½ r.           Steam-Tubes         53½ r.
Wronght-fron Tubes and Fittings—Discount off         Standard Lists f.o.b. (plus 2½ per cent.)—         61½ pc.           Gaa-Tubes         57½           Water-Tubes         53½           Steam-Tubes         53½           Galvanised Gas-Tubes         50           Galvanised Water-Tubes         47½
Wronght-Iron Tubes and Fittings—Discount off           Standard Lists f.o.b. (plus 2½ per cent.)—           Gaa-Tubes         61½ pc.           Water-Tubes         57½ .           Steam-Tubes         53½ .           Galvanised Gas-Tubes         50 .           Galvanised Water-Tubes         47½           Galvanised Steam-Tubes         40
Wronght-Iron Tubes and Fittings—Discount off           Standard Lists f.o.b. (plus 2½ per cent.)—           Gaa-Tubes         61½ pc.           Water-Tubes         57½ .           Steam-Tubes         53½ .           Galvanised Gas-Tubes         50 .           Galvanised Water-Tubes         47½           Galvanised Steam-Tubes         40
Wronght-Iron Tubes and Fittings—Discount off           Standard Lists f.o.b. (plus 2½ per cent.)—           Gaa-Tubes         61½ pc.           Water-Tubes         57½ .           Steam-Tubes         53½ .           Galvanised Gas-Tubes         50 .           Galvanised Water-Tubes         47½           Galvanised Steam-Tubes         40
Wronght-Iron Tubes and Fittings—Discount off           Standard Lists f.o.b. (plus 2½ per cent.)—           Gaa-Tubes         61½ pc.           Water-Tubes         57½ .           Steam-Tubes         53½ .           Galvanised Gas-Tubes         50 .           Galvanised Water-Tubes         47½           Galvanised Steam-Tubes         40
Wronght-fron Tubes and Fittings—Discount off   Standard Lists f.o.b. (plus 2\frac{1}{2} per cent.) -
Wronght-fron Tubes and Fittings—Discount off   Standard Lists f.o.h. (plus 2\frac{1}{2} per cent.)
Wronght-fron Tubes and Fittings—Discount off   Standard Lists f.o.h. (plus 2\frac{1}{2} per cent.)
Wronght-fron Tubes and Fittings—Discount off Standard Lists f.o.h. (plus 2½ per cent.)—  Gaa-Tubes   61½ pc.
Wronght-fron Tubes and Fittings—Discount off Standard Lists f.o.h. (plus 2½ per cent.)—  Gaa-Tubes   61½ pc.
Wronght-fron Tubes and Fittings—Discount off Standard Lists f.o.h. (plus 2½ per cent.)—  Gaa-Tubes   61½ pc.
Wronght-fron Tubes and Fittings—Discount off Standard Lists f.o.b. (plus 2\frac{1}{2} per cent.)—  Gaa-Tubes
Wronght-fron Tubes and Fittings—Discount off Standard Lists f.o.h. (plus 2½ per cent.)—  Gaa-Tubes   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573
Wronght-fron Tubes and Fittings—Discount off Standard Lists f.o.h. (plus 2½ per cent.)—  Gaa-Tubes   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573 cm.   573
Wronght-fron Tubes and Fittings—Discount off Standard Lists f.o.h. (plus 2\frac{1}{2} per cent.)—  Gaa-Tubes   57\frac{1}{2} \]   Gaa-Tubes   57\frac{1}{2} \]   Water-Tubes   57\frac{1}{2} \]   Steam-Tubes   53\frac{1}{2} \]   Galvanised Gas-Tubes   47\frac{1}{2} \]   Galvanised Water-Tubes   47\frac{1}{2} \]   Galvanised Steam-Tubes   47\frac{1}{2} \]   Galvanised Steam-Tubes   47\frac{1}{2} \]   Calvanised Steam-Tubes   47\frac{1}{2} \]   Calvanised Steam-Tubes   47\frac{1}{2} \]   Calvanised Steam-Tubes   40\frac{1}{2} \]   Calvanised Steam-Tubes   40\frac{1}{2} \]   Calvanised Steam-Tubes   7\frac{1}{2} \]   Calva
Wronght-fron Tubes and Fittings—Discount off Standard Lists f.o.h. (plus 2½ per cent.)—  Gaa-Tubes   573   573   574   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575   575
Wronght-fron Tubes and Fittings—Discount off Standard Lists f.o.h. (plus 2½ per cent.)—  Gaa-Tubes   573 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513 cm.   513

# I BUY SCRAP METALS

brand) 0 to 0

\* For 5 cwt. lots and upwards.

# ARTHUR P. COLLINS, Snow Hill, BIRMINGHAM.

Phone: Central 1020. Telegrams: "Metalise, Birmingham. Bankers: The National Provincial Bank of England, Ltd., Bennett's Hill, Birmingham.

	SL	ATES	Š.				
	in.	n.	£	S.	d.	per	1,000 of
Blue Portmadec	20 ×	10	11	2	6	1,200	at r. atn
	16	8	5	10	0	- 19	21
First quality	16 ,,	10	10	12	6		
Blue Bangor	20	10	11	- 5	-0	11	,,
First quality	20 ,,	12	11	17	6	- 11	11
First quality	20 ,	10	11	0	0	11	11
1) ),	20 ,,	12	10	12	6	11	*11
11 11	16 ,,	8	5	10	0	••	*1

	m.		£	s.	d.	per l	.000 of
						1,200 a	tr. stn.
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						11	11
						11	11
						11	17
. 16 ,	, 8	٠.	6	12	6	11	
12.1	. res	r e					
	20 , 20 , 18 , 16 . 20 , 18 ,	20 ,, 10 20 ,, 12 18 ,, 10 16 ,, 3 20 ,, 19 18 ,, 10 16 ,, 8	20 ,, 10 20 ,, 12 18 ,, 10 16 ,, 3 20 19 18 ,, 10 16 ,, 8	5 20 ,, 10 15 20 ,, 12 18 . 18 ., 10 13 . 16 ., 3 10 . 20 ., 19 11 . 18 ., 10 9	20 ,, 10 15 17 20 ,, 12 18 7 . 20 ,, 12 18 7 . 18 ,, 10 13 5 . 16 3 10 5 . 20 19 11 12 . 18 10 9 12 . 16 ,, 8 6 12	20 ,, 10 15 17 6 . 20 ,, 12 18 7 6 . 20 ., 12 18 7 6 . 18 , 10 13 5 0 . 16 ., 3 . 10 5 0 . 20 19 11 12 6 . 18 ., 10 9 12 6 . 16 ., 8 6 12 6	20, 10 15 17 6

#### BRICKS.

(All prices net )										
First Hard Stocks	£2	0	0	per 1.00	00 alons	zside.	in			
Second Hard Stocks	-1	16	0		21					
Mild Stocks				11		11				
Picked Stocks for			-	11		ered a	1.1			
Facings	2	15	0	11		statio				
Flettons		16	Õ	11			,			
Pressed Wire Cuts		13	Ö		11	11				
Red Wire Cuts		14	ŏ	11	3.5					
Best Fareham Red		12	o o	11	11	11				
Best R d Pressed	J	14	¥	11	11	19				
	_	0	0							
Rnabon Facing	Э	U	0	11	- 11	- 11				
Best Blue Pressed	-		_							
Staffordshire		15		11	11	1.1				
Ditto Bullnose	4	0	0	11	11	9.1				
Best Stour bridge Fire-										
bricks		0	0	1.7	11	11				
22in. Best Red Ac- crington Plastic					et, dali					
crington Plastic	. 4	10	6	11.	full tru	ck loa	$^{\mathrm{ds}}$			
Facing Bricks)					in Len	den.				
						Per 1.0	100			
32" Accrington Best Re	d E	Plas	tic	Facing	Bricks	£2 10	0			
3%" ditto Second Best							6			
Ditto Ordinary Sec										
Ditto Plastic Engu							6			
Sewer Arch Brick, n							J			
Dewel Alen Drick, I	106	1.1	4010	, cilaii	og in	0 0	_			

tl	nickest part						2	0	0
31"	Chimney Br.	icks	fit for onts	ide v	ork		2	6	0
3 <u>1</u> "	ditto ditto th	irou	gh and thre	ngh			2	0	0
3±"	Beaded, Ove	ole	and Bevel	Jam	hs; Oc	ta-			-
	ons: $2\frac{1}{4}$ and								
	atterns						3	7	6
	rington Air I						0	0	6
	Ditto di	itto	9" × 1 ec	urse			0	0	3
Acc	rington Cam	ber	Arches:-						
3	course deep	771	soffit, per	foot	opening	7	0	1	3
4	,,	41	21	11			0	1	8
5	11	450		11	- 11		0	2	1
6	11	414	13		+1		0	2	6
6 3		9"	11				0	2	1
4	**	9"	1)	11			0		11
5	"	9"	11	11	- 11		0	3	6
6	11	9"					Q	4	6

# GLAZED BRICKS

GLAZED BRICKS.
HARO GLAZES (PER 1,000).

White, Ivory, and Best.
Salt Glazed. Buff, Cream, Other Best. Seconds. & Bronze. Colours.

Streto														
£12	7	6	£11	7	6	£13	17	6	£17	17	6	£12	17	€
Head	ers-	_												
										7	6	12	7	6
Quoin														
15	17	6	14	17	6	17	17	б	21	7	6	16	7	6
Doub!														
17	17	6	16	17	6	20	17	6	24	'7	6	18	7	6
Doub	le H	ead	ers-	-										
14	17	6	13	17	6	17	17	6	21	7	6	15	7	S
One s	ide i	and	two	en	ds.	SQ II 8	re-	_						
18	17	6	17	17	6	21	17	6	26	7	6	19	7	6
Twos	ides	s an	d on	ее	nd,	squa	ire	_						
												0.0		

One side and two ends, square—

18 17 6 17 17 6 21 17 6 26 7 6 19 7 6

Two sides and one end, square—

19 17 6 18 17 6 22 17 6 26 17 6 20 7 6

Splays and Squints—

17 7 6 16 7 6 21 17 6 24 17 6 17 17 6

Plinth and Hollow Bricks, Stretchers and Headers—

5d, each 4d, each 6d, each 6d, each 5d, each

Donble Bullnose, Round Enda, Bullnose Stops—

51, each 4d, each 6d, each 6d, each 5d, each

Rounded Internal Angles—

4d, each 3d, each 5d, each 5d, each

MOULED BRICKS.

Stretchers and Headers—

8d, each 8d, each 8d, each 8d, each

Internal and External Angles—

1/2 each 1/2 each 1/2 each

Sill Bullnose, Stretchers, and Headers—

5d, each 4d, each 6d, each 6d, each 5d, each

Majolica or Soft Glazed Stretchers and Headers—

5d, each 4d, each 6d each 6d, each 5d, each

Majolica or Soft Glazed Stretchers and Headers—

5d, each 4d, each 6d each 6d, each 5d, each

Majolica or Soft Glazed Stretchers and Headers—

5d, each 4d, each 6d each 6d, each 5d, each Majolica or Soft Glazed Stretchers and Headers—

5d, each 4d, each 6d each 6d, each 5d, each Majolica or Soft Glazed Stretchers and Fer 1,000

Headers, "Quoins and Bullnose... 22 17 6

Compass bricks, circular and arch bricks of single radius £6 per 1,000 over above list for their respective kinds and colours .... 22 17 6

Stretchers cut for Closers and Nicked Double Headers, £1 per 1,000 extra.

These prices are earnage paid in full truck loads to London Stations. S. d.

Thames Sand 7 6 per yard, delivered.

Thames Ballast 6 0 ... 9

Thames Ballast 6 0 ... 9

Thames Ballast 7 0 ... 9

Thames Ballast 8 0 0 0 41 0 delivered.

Ground Blue Lias Lime 21 0 per ton, delivered.

Groy Stone Lime 11 3 6 to 14 0 delivered.

Stonrbridge Fireclay in sacks 27s. 0d. per ton at railway station.

STONE.\*

Red Mansfield, in blocks ... per foot cube £0 2 4

Darley Dale, ditto ... 0 2 6

Red Mansfield, in blocks ..... per foot cube £0 2

Dariey Date, unto	11	-	-	0
Red Corsehill, ditto	11	٥	2	6
Closeburn Red Freestone, ditto	**			2
Ancaster, ditto	12	0		
Greenshill, ditto	12			0
Beer, ditto	11	0	1	71
Chilmark, ditto (in truck at				
Nine Elms)	11			103
Hard York, ditto	11	0	2	0
Do. do. 6 in. sawn both sides,				
landings, random sizes per fo	ot sup.	0	2	8
De. do. 3 in. slab sawn two				
sides, random sizes	**	0	1	3
* All F.O.R. London				

Bath Stone—Delivered in rail- way t.ucks at Westbourne	£	s.	d
Park, Paddington (G.W.R.), or South Lambeth (G.W.R.) per foot cube	0	1	7
Delivered in railway trucks at Nine Elms (L, & S.W.R.) Delivered on road waggons	0	1	8
at Nine Elms Depot	0	I	9
hed in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park (G.W.R.), South Lambeth (G.W.R.), or Nine Elms (L.A.S.W.R.), Delivered on road waggons at Pimlico Wharf or Nine Elms	0	2	5
Depot	0	2	6
TILES.	D.I.	vrd	
Plain red roofing tiles		y.  11  21  22  23  24  25  27  27  27  27  27  27  27  27  27	sn
Valley tiles		"	
OILS.			

Rapeseed, English pale, 1	per tun	£28	15	0 to	£29 5	
Ditto, brown	.,	26	15	0 ,,	27 5	
Cottonseed, refined	11	29	0	0 ,,	30 0	0
Olive, Spanish	11	39	10	0 ,,	40 0	0 (
Seal, pale	11	21	0	0 ,,	21 10	0
Cocoanut, Cochin	12	46	0	0 ,	46 10	0
Ditto, Ceylon	11	42	10	0 ,,	43 0	0
Ditto, Mauritius	11	42	10	0 .,	43 0	0
Palm, Lagos	71	32	5	0 ,,	33 5	0
Ditto, Nut Kernel	11	35	0	0 ,,	35 10	٥
Oleine	**	17	5	0 ,,	19 5	0
Sperm	**	30	0	0 ,	31 0	
Labricating, U.S r	er gal.	Õ	7	0 ,,	0 8	
Petrolenm, refined	,	ă	ò	63.	o o	
Tar, Stockholmpe	r barrel		6	0	1 10	
Ditto, Archangel			19	6 ,	1 0	
Linseed Oil p	ur gal	ŏ	3	3 ,,		
Baltic Oil		ő	3	7 ,,	_	
Turpentine	11	ŏ	3	91	_	
Putty (Gennine Linseed	3.9		J	27,1		
	or out	0	9	6	_	
Oil) p Pure Linseed Oil	er cwt.	0	9	0 11	_	
		0	9	0		
"Stority" Brand	9.1	U	9	0 ,,	_	

#### GLASS (IN CRATES). English Sheet Glass : 15 oz 26.02 21.02

Fourths	44d	5}d	6d	71d.
Thirds				
Fluted Sheet	53d	63d	<u> </u>	-
Hartley's English Re	olled 1	in.	& in.	1 in.
Plate		łd	33d	41d.
		Whit		
Figured Rolled				
Reponssine				
Rolled Sheet		40	ì	_

VARNISHES. Etc.	Per g	allo	n.
Fine Pale Oak Varnish	£0	8	6
Pale Copal Oak	0	10	0
Omnilac Copal Oak	0	10	0
Superfine Pale Elastic Oak	0	12	0
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats	of		
churches		14	6
Fine Elastic Carriage	0	12	0
Superfine Pale Elastic Carriage	0	16	6
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	n	18	6
Extra Fine French Oil	1	1	9
Eggshell Flatting Varnish	0	18	0
White Copal Enamel	1		0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	9
Oak and Mahogany Stain	0	9	9
Brunswick Black	0	8	0
Berlin Black	0	16	0
Keetting	0		0
French and Brush Polish	0	10	Q

The urban district council of Worksop have appointed the surveyor, Mr. G. Ranson, as waterworks engineer, and have increased his salary by £50 a year.

Mr. Henry Clay Carrel, a member of the firm of Messrs. Gillespie and Carrel, architects, New York, has died in Philadelphia in his forty-seventh year. He was born in Cincinnati, Ohio. He was a member of the New York Architectural League and a Fellow of the American Institute of Architects.

### TO CORRESPONDENTS.

in the dourseaves responsible for the opinions for a corresponding All communications should be crawn up as briefly as possible, as there are many commants upon the space allotted to crosp paints.

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When fas it me us with drawings or photographs with the is are asked kindly to state how long the filling has been creefed. It does nother them not us much a self to illustrate buildings which have been one time executed, evept under special circum.

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#### NOTICE

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Chekifwood, N.W., For three new classrooms and additional layatory accommodation at Lodene, Shoot up Hill, Cricklewood, N.W. Mr. F. R. Gould

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Dr. (v. 10. t), supply of a motor generator, for constant committee. Note Bross. Broby ... 12845 0.0. Resonant ded 1.1 acceptance.

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Sir Thomas G. Jackson, Bart., R.A., will present the prizes at Carpenters' Hall on Monday, December 13, to the students of the Trades Training Schools, Great Titchfield Street, W.

Mr. C. Harold Norton, F.S.A., will act as guide on Saturday next on the occasion of the visit to be paid by the Students' Association for North London to the pre-Reformation churches of the City of London.

Mr. John Henry Joyce, of the Burlington Hotel and the Radnor Club, Folkestone, barrister, who died on July 16, and whose estate is sworn at £51,098, bequeathed £12,000 for the marble decoration of Westmuster Cathelinal dral.

Ir has been decided by the parishioners It has been decided by the parishioners of Swardeston, near Norwich, Nurse Cavell's birthplace, to place a memorial tablet and a stained glass window in the parish church, in which her late father officiated as vicar for forty-six years

To meet the urgent need for housing accommodation, Greenock Corporation have decided to proceed with a building scheme in the East End of the town. Ground has been obtained from the superior on favourable terms, and it is proposed in the meantime to creek at least seventy-five dwellings of the A larger scheme is at present contage type, well advanced.

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

Effin	gham	House.

Emergency Canteens		
Pictures and Decorative Furniture at	the	Bur-
lington Fine Arts Club		
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New Apparatus for Determining Fit	nenes:	- 41
Cement		
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W stains (or Cathedral, St. Andrew's Chapel; the guit of the Marquess of Bute. East end, West end, and plan, Mr. Robert Schultz Weir, Archi-

### Strand, W.C.

4 Lord Dighy's School, Sherborne, Dorset, Bird'seye 4 view and plans. Mr. Edward C. H. Maidman, 55 L.R.I L.A., Architect.

Coburg Court Hotel, Kensington Gardens, W., View from the Park, and plans. Mr. Delissa Joseph, F.R.I.B.A., Architect.

Universal House, Oxford Street, and 14, Hanover Street, W. Mr. Delissa Joseph, F.R.f.B.A. *II* . Architect, W

Bridlington Pr'ory, Yorkshire. The North poich of the church, Elevation, sections and plans Measured and drawn by Mr. Gordon Hemin.

Old English Living-room Furniture. Drawn by Mr.

# EMERGENCY CANTEENS.

The provision for our soldiers of some of refreshment subsidiary to regulation rations, and accommodation for reading, writing, and recreation, is one of the problems of the war. The practical points needing solution are rapid organisation and building equipment. porary structure, wherein refreshments can be obtained and accommodation for recreative purpose, satisfies all demands. The several buildings heretofore crected for this purpose by charitably minded institutions are of the same temporary nature. For emergency hospitals wooden framing and galvanised iron coverings have chiefly been employed. The stractural details tural details are often of the simplest kind. We give in this article some examples of buildings erected by those institutions which have thrown them-

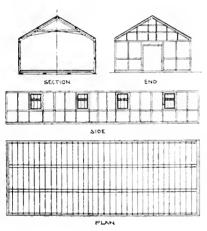


FIG. 1.

selves heartily into the work, and have erected many temporary hut-like buildings, with a large room as restaurant. another for recreative purposes, cards, games, etc., and occasionally special rooms for reading and writing. Of necessity such buildings, in planning, centre around a kitchen, or its virtual representative, where the meals, coffee. tea, etc., are prepared, a refreshment bar and room. For this, where possible, gas is employed; but naturally many regiments are quartered in outlying districts, and often in country towns and villages gas supply is not available. In the canteens built by the Salvation Army, under the immediate direction of Brigadier Rowe, good use is made of oil stoves, either of the blow-lamp or ordinary type. On the plans given the kitchens certainly bulk the fact that the dominant factor is the if, by good fortune, our present requirecooking apparatus. A stove and some-

thing in which to wash-up are the obvious ultimate elements in kitchen planning. The fundamental principle of cauteen

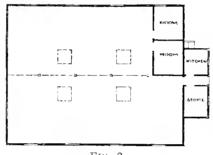


FIG. 2

arrangement is convenient service. The Salvation Army canteens are put in charge of a married couple, and so the rooms of a married couple, and so the reoms appearing in our sketch plans are for their accommodation. Necessarily, the refreshment takers wait upon themselves, so that the compact placing of the kitchen with respect to the bar and the best arrangement of bar across refreshmentroom are points to remember. And the plans, though so elementary, are useful just now when a wholesale provision of such buildings is wanted where munition and other war workers are engaged.

Where we are requested to plan some novel idea in architecture it is invaluable, however simple the requirements may be, to have before us the results of other brains. Handing to us the plans from which the accompanying sketches were made, Brigadier Rowe remarked that he "saw nothing in them"; but then every modest expert feels that his knowledge is more or less commonplace, and we know well that our soldiers have nothing but praise for what the Salvation Army has

As regards foundations, anything that, with economy of structure and expedition in erection, will satisfy the demands of reasonable stability is considered satisfac-

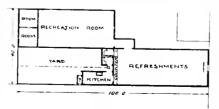
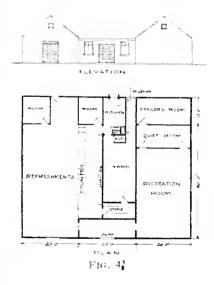


FIG. 3.

in sections, as 10 ft., and the idea is that if, by good fortune, our present requirements should cease, the huts would prove by side, as in Fig. 2. They are here ad-

useful for ordinary Salvation Army purposes. A general foundation consists of 9 m. by 3 in. plates, sanded and tarred, upon which as bed are constructed the temporary wooden posts and framing, quartering, etc. If necessary, short piers of brickwork are formed at suitable tances to hold up at a level the 9 in, by 3 in. bedplates, and also, if found necessary, concrete is put down under the brick piers. Quite the most elementary of the several emergency canteens are these buts. They are, we think, especially instructive on this account; for what we all, as architects, like to know under such circumstances is how far we can cut down and reduce recognised standard building practice.

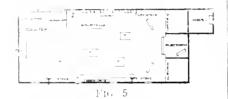
Fig. 1 shows the general arrangements made for construction, the three rows of



9 in. by 3 in. plates, so arranged as to take the place of the sleeper walls of ordinary building construction. The plan, therefore, is such that very light joisting is required. 4 in. by 2 in. being unnecessarily heavy in this case. The quarters are bedded on cills, which bear upon the 9 in, by 3 in, sole-plates, and, as the drawings indicate, are sectionalised in design. The quarters, 4 in. by 2 in. generally, are spaced conveniently for the receipt of galvanised iron enclosures, a head, as usual. being provided to the framing. A favourite arrangement is 6 in, by 2 in, for the rafters and collars shown. Light-framed windows are inserted, and the roofs covered by galvanised iron.

There is a refreshing, elemental sim-

Set it means more but the first (F.2.3) the site presents of the characters of the site presents of the control of the angle formed the control of the area arranged the kitchen of some and the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control



in additions. A useful yard is here each; as part if the site acquired. Entance is from the main road, at top of an There is all oby connecting the two idditions, and the counter at the junction of the two aid close to kitchen and store must be deemed a good and convenient disposition. The plan in Fig. 4 is on a rather ambitious scale, including a "quiet room, and efficers" room, and has a fine long counter, with good space and shelving at the back, the whole conjuctly grouped in one area of oo ft. by

Drainage is an evident problem. These hat canteens are connected up where possible to existing drains, as in Fig. 4, where an erdinary we is placed conveniently in the yard. Fig. 3 also includes we, and aramage as usual, but Fig. 2 is provided with earth closet, an arrangement that must often be necessary

.. cut pinz districts

In planning emergency einteens as in jaining other works, knewledge of retails gives a mastery in the conception of the winde. A study of hie with a canselon is nocessary to the architect engaged down new proposals. We give a sketch, Fig. 5, shewing roughly the airange thents inside a canteen. Among the verkers in this field is the Church Army. The sketch, shows a temp rary refreshmenter in for solders created in the Park, near the Murble Arch. The usists for shear the Murble Arch. The usists for shear the Murble Arch. The usists for shear the story of the early of the early with grantened as shown at the early On the left hand as the refreshment bar and canter, with gas oking stove. There being a draining to all to the wash upper angenesis are, for at a comentary hat recomments are, for at a comentary hat recomments are, for at a comentary hat recomments are, for at a comentary hat recomments are, for at a comentary hat recomments are the half and the cases and one gas stove. In the Archeology of the half and affect making the composition of the half and affect making at the architect for facilities for making at the architect for facilities for making at the early of the manuager of this Church Arm, of the for facilities for making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the formal making at the position of the formal making at the position of the formal making at the position of the formal making at the position of the formal making at the position of the formal making at the position of the formal making at the position of the formal making at the position of the formal making at the formal making at the position of the formal making at the position of the formal making at

Among the energetic workers in this field is the Y.M.C.A., which has built, and is building, many temporary canteens on a considerably more pretentious scale. Our rough diagram. Fig. 6, shows a temporary canteen erected by the society mear Waterloo Station. Beyond this building are sleeping accommodation. baths and lavatories. Some sixty or seventy beds, in two tiers, on the cabin model, are arranged in cubicles, and so successful has this dormitory accommoda tion proved that another 100 beds are immediately contemplated as an addition It must here be borne in mind that this particular building, at the London end of the South-Western Railway, is in a speci ally tayourable position for making sleep ing accommodation useful. The canteen arrangements comprise the large hall shown, entered by a porch. On the right is the refreshment bar, with counter and shelving. The Y.M.C.A. catering arrangements are on a considerably more extensive scale than in the case of other institutions whose buildings we have described. The kitchen in the Waterloo canteen comprises three powerful gas cooking stoves Naturally, the nature of the cooking apparatus greatly tells in the success of these buildings, and the several appliances need to be suited to the special duty. The hot and cold water arrangements are very complete. There is a cistern on an R.S.J. in in angle of the kitchen, and a hot-water cylinder in another angle. The sink and draining board are well planned, and a very necessary convenience-a large foodpreparation table—is included. The Y.M.C.A. provides substantial meals. Adjoining the kitchen is a small scullery. wherem vegetables may be prepared. Sanitary and lavatory accommodation is provided for those in attendance. In this case the working of the canteen is placed under the direction of a lady manager. who kindly explained to us the general arrangements. As the establishment is on a rather large scale, considerable



assistance is required, and this is a point met by voluntary lady helpers, who attend behind the bar.

We may mention, for the guidance of architects and others interested, that no makers of all constructional adjuncts are better able to co-operate in the building of canteens, huts, hospitals, and the like than Messrs, Haywards, Ltd., 187 to 201, Union Street, S.E., and certainly none have more generously offered to assist the authorities and others concerned to supidy at practically cost rates. In one or two instances within our knowledge we are surprised these offers have not been taken advantage of Messrs. Haywards, Ltd., have tendered for Admiralty and Army work, and they have carried out heating plants for Wellesley House, the Mobilisa tion Store, and the Soldiers' Institute at Allershot, with success and satisfaction,

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Internment Camp, Stratford Hutments, Cambridge, and many other important Government buildings.

Messrs. Benham and Sons, Limited, of 66. Wigmore Street, W., have also done much work of the first class for the Admiralty and other departments, and large factories. A particularly well-appointed gas and steam kitchen for a staff of 1,200 which they have erected in London can be seen by appointment. They also specialise in cabinet hot closets and cupboards and in every form of heating and cooking apparatus, either by steam, gas, or coal.

Several inquirers will find their requirements in the way of kitchen and cooking apparatus, urns, coffee extractors, etc., heated by gas, steam, and electricity, well met by Messrs. Sumerling and Co., Ltd., 63. Bunhill Row, E.C., whose advertisement appears in this issue, and who will supply estimates and drawings free.

# PICTURES AND DECORATIVE FURNITURE AT THE BURLINGTON FINE ARTS CLUB.

A small but good and characteristically restful exhibition of pictures and decorative furniture at the Burlington Fine Arts Club is a welcome relief from present distractions. It will close about the end of February.

"The Virgin and Child" (1), a panel,

lent by Sir Francis B. Palmer, is attributed to Roger van der Weyden, of the Brabant school, c. 1400-1464. It may possibly be his, but is more likely a reproduction of the well-known repetition of the prototype in the Boston Museum, a well-known replica of which exists in the Gallery at Munich. Lord Lytton sends two panels, one. The Penitent Magdalen' (4), brought from a Peruvian convent, whither it had been conveyed by a party of Spanish Jesuits in the seventeenth century. It is stated to be a work by Fernando Gallegos, of the school of Castile, c. 1440---1507, but is evidently of later date, and more probably by the Flemish painter Jan Massys. The other, A Love Feast (5), also Flemish, is somewhat similar to Pieter Pourbus's picture in the Wallace collection. A good portrait of Colonel Francis James Scott (8), lent by Mrs. M. Trevelyan Martin, by Sir Henry Raeburn, was seen at the Burlington House Old Masters Exhibition in 1906 . The Concert " (13) is evidently a 1906 "The Concert" (15) is evidently a genuine canvas by Jan De Bray, c. 1627—1697. It is lent by Major-General Sir Coleridge Grove, K.C.B., and was formerly in the collection of Mr. Fiennes Dickinson at Syston Court. An "Heroic Landscape" (14), lent by Sir Frederick Cook, seems to have borne various titles. is ascribed to Francois Millet, 1642-1679. It was exhibited at Leeds in 1868 as Landscape, with Flight of Ahab," but no flight of Ahab is suggested, nor does there seem to be any flight of that monarch recorded. It is suggested in the catalogue that a more appropriate title might he The Destruction of the Cities of the Plain." Sir Henry Howorth lends a Virgin and Child" (15), probably by Plain. Galeazzo Campi, of the Cremona school. 1477-1536, and so signed, or rather Galeacius Campo.' There is a good deal about it after the style of Perugino, whose well-known altar piece of 1494 in the church of S. Agostino at Cremona was pretty well plagiarised by the painters of that city. "The Daughter of Herodias" (17), a panel lent by Mr. T. Humphry Ward, is said to be by Guiolamo Romano. c. 1485 - 1566. The Virgin and Child.

think genuine. It is lent by Mr. F. E. Sidney. "The Crucifixion" (20), lent by Mr. Herbert Cook, is by Cosimo Tura, c. 1430-1495. "Apollo Flaying Marsyas (22) is one of the many copies made by Teniers of an Italian picture in the Archduke Leopold William's collection at Brussels, of which Teniers was keeper; at any rate it is so included in the collection of engravings at Blenheim issued in 1660. It went with the rest in 1886 when the Duke of Marlborough sold his pictures, and is now owned by the Marquess of Clanricarde.

Among the furniture are a couple of very good long-case clocks, both of the seventeenth century. One is by Gaudron, of Paris, and is in a buhl case inlaid with a design of scrolls, amongst which are a morini and other figures, in white metal, the dial being supported by a figure of Time in ormolu. The other is English, by Jasper Taylor, of Gray's Inn. The case is of walnut with a domed hood, the whole front elaborately inlaid with a light-coloured wood in a geometrical design and floral scroll. A Northern French Credence cupboard of early sixteenth century date is of oak, the door carved with the Annunciation. A curious bureau lacquered in the Chinese style, acquired in Venice, shows strong Dutch influence. A couple of good mahogany barometers on either side of the alcove, one of Scotch and the other of London make, inspire the wish that present makers of these useful instruments could see their way to render them decorative. A good English carved oak settle of the first half of the seventeenth century is inlaid with holly and bog oak. The back is divided into six upright panels, with three oblong panels above, having carved borders and inlaid centres. Ön the front are four inlaid panels. There is also a desirable oak sideboard, the lower part five-sided with a splayed front and straight sides. The front is composed of six panels, three above and three below: two of the upper form cupboards and the two under them are drawers. The three chief panels are carved in relief with Renaissance ornament, consisting of figures, vases, dolphins, and arabesque foliage, the smaller panels having masks and foliage with interlaced cords. sides are decorated with interlaced ornament. The upper part has a raised tier enclosed by two sliding panels carved with interlaced strapwork. The back is an openwork screen of four panels, the uprights terminating with carved finials; the two lower panels are of Gothic tracery, and the two upper form a cresting carved with dolphins and fleur-de-lys surmounted by a band of twisted ribbons with beading. A few good chairs are also exhibited.

A few other works of art are to be seen. There is a good pair of majolica jars, with panels of St. Francis and St. John the Evangelist in landscapes on a yellow background, probably of Italian seven-teenth century work. A French thirteenth century of the Virgin and Child in carved oak was formerly painted and gilded. The Virgin, who is seated on a throne supported by four beasts—two lions and two griffins—holds the Christ with her left hand, His right hand raised in benediction. Her head is covered with a veil, which falls in stiff but not ungraceful folds on her shoulders, and is surmounted by a tall Gothic crown. Her robe reaches to just above her feet, and is partially covered by an ample mantle, the bordure of which, as well as the crown, has sunk spaces formerly filled with jewels. A pair of statuettes of Adam and Eve is carved in pearwood. In his left hand Adam holds a branch of the Tree of

Knowledge, his right arm held free from the side; his hair, which is thick and curly, falling over his shoulders. Eve holds a branch in her right hand, and with her left clasps an apple; her hair, which is wayy, falls over her shoulders as far as the warst. Both figures stand on rocky bases and have pedestals carved with grape vines. A quaint tambourin de Provence in straight-grained wood, probably walnut, is delicately carved in low relief with alternate waved and twisted lines divided by straight ones. These instruments were used by the criers in France to call the attention of the people in the same manner as the criers in England used bells. A flute and striker and a framed engraving of a crier with tambourin are shown with the instrument.

# ROYAL INSTITUTE OF BRITISH ARCHITECTS.

A business meeting of members of the Royal Institute of British Architects was held on Monday afternoon at 9. Conduit Street, W., the President, Mr. Ernest Newton, A.R.A. occupying the chair.

The following Fellows and Associates were

duly elected :-

As Fellows (12). John Gordon Allen (Asso As Fellows (12). John Gordon Allen (Associate 1910), 4, Tavistock Square, W.C.; 15, Holmdale Road, West Hampstead, N.W.; James Westbrook Farmer (Associate 1908), Cangallo 564, Buenos Aires, Argentina; Edgar Quiggin (Associate 1905), 67, Lord Street, Liverpool; Philip Appleby Robson (Associate 1897), St. Stephen's House, Victoria Embankarent, Westminster, S.W.; Rede Place, East Grinstead, tarether with the following License Grinstead; together with the following Licen tiates, who have passed the Examination qualifying for cand dature as Fellows:—Alfred Bar-ham Black, Gilbert Place, Adelaide; Stanley Street, North Adelaide; James Edwin Forbes 16, Old Square, Lincoln's Inn, W.C.: The Sheiling, Chalfont St. Giles: Willford Arthur Gagnon, 1,002 New Birks Building, Montreal. Canada; George Donaldson MacNiven, Local Government Brard for Scotland, 125, George Street, Edinburgh; 13, Cluny Drive, Edin-burgh; Charles Bulman Pearson, 18, Dalton Square, Lancaster; John Duncan Tate, 16, Old Square, Lincoln's Inn. W.C.: Lexden, Oval Way, Gerrard's Cross; Charles Clayton Thompson, The Market Place, Derby: 32, St. John Street, Lichfield; George Wittet, J.P. Public Works Secretariat, Bombay; Byculla Club, Bombay.

As Associates (23).—Percy Joyce Adams, Fairmead, Woodside Road, Woodford, Essex; Harry Andrew, 56. Whitefriargate, Hull; co Messrs. Lowther and Rigby, 77. Lowgate, Messrs. Lowther and Righy, 77, Lowgate, Hull; Pherozshah Fardoonji Balsara, Solakoti Building, Grant Road, Bombay; James Bennett, co Messrs. John Burnet and Son, 259, St. Vincent Street, Glasgow; Hillview, Saline. St. Vincent Street, Glasgow; Hillview, Saline, Fife; Reginald Bruce, P.A.S.I., 21, Holdenburst Avenue, North Finchley, N.; Edgar Gooding Catchpole, 46, Christchurch Street, Ipswich; Town Hall, Ipswich; Alexander MacLauchlan Duncan, Raboy, Lenzie, Dumbartonshire; c.o. R. J. Walker, 108, Douglas Street, Classon, Frie Conversion Franci, 11 Street, Glasgow: Eric Carwardine Francis, 14, St. Andrew's Mansions, Dorset Street, W.; St. Tewdric, near Chepstow: John Henry Horniman, c.o Messrs, Stevens and Gregson, 32, Victoria Street, S.W.; 68, Bolingbroke Grove, Wandsworth Common, S.W.; Sidney Harold Loweth, 67, Downs Park Road, Hackney Downs, N.: Trafalgar House, Trafalgar Square, S.W.: Cyril Hawthorn Mitchell, Wel lington, N.Z.; 8. Mecklenburgh Street, W.C. Ernest Paul Brander Musman, B.A.Lond., Ernest Paul Brander Musman, B.A. Lond., 27, Upper Phillimore Place, Kensington, W.; H.M. Office of Works, Storey's Gate, Westminster, S.W.; Charles Edwin Nichols, Rectory Farm, Eckington, Sheffield; Chesterfield; Charles Lancashire Pace, 28, St. George's Street, Primrose Hill, N.W.; H.M. Office of Works, Storey's Gate, Westminster, S.W.; Thomas Reive, Glencairn, Errwood Road, Levenshulme, Manchester; co Messrs, Bradshaw, Gass and Hope, 19, Silverwell Street, Bolton; Manning Durdin Robertson, 50, Nor-Bolton; Manning Durdin Robertson, 50, Nortolk Square, W.; Alfred Douglas Robinson, 45, Bishopsgate, E.C.; The Abbey, Thorpe-le-Soken, Essex; Harvey Robert Sayer, 3, Havelock Road, West Marlands, Southampton; 45, Choumert Road, Peckham, S.E.; Albert Isaac Choumert Road, Peckham, S.E.; Albert Isaac Turner, 65, Wilmington Gardens, New Bark-ing Essex; Harold Frederick Walker, 13, New Street, Dorset Square, N.W.; 19, Queen Anne's Gate, Westminster, S.W.; Enoch Wil-liams, "Norton," 50, Canada Road, Cardiff; Glamorgan County Council, Cardiff; Reginald Sharman Wilshere, 10, Trinity Road, Chelmsford; Architects' Department, Essex County Council, Chelmsford; William Cecil Young, 19, King's Drive, Heaton Moor, near Stockport; co Mr. Isaac Taylor, 17, St. Ann's Square, Manchester.

The following motion in the agenda for the alteration of the Regulations for Architectural Competitions, as printed in the Kalendar, was not proceeded with, owing to the absence of the quorum of members required under

By-Law 67:-

1. The second paragraph to read: "Members of the Royal Institute of British Architects and of its allied societies are only permitted to take part in competitions in accordance with these regulations, which are intended to apply to all competitions other than private competitions instituted by private individuals or firms."

2. The footnote at the bottom of the first

page to be omitted.

### NEW APPARATUS FOR DETERMINING FINENESS OF CEMENT.

Three years' experiments, intended to produce a means of determining the exact fineness of cement, have resulted, at the United States Bureau of Standards, in the developing of an apparatus which is effective for this purpose. In the manufacture of Portland cement, clay or shale and limestone are ground together and "burned" in rotary kilns. The cement comes from the kilns in the form of hard, black, semivitreous lumps, or "clinker." When pulverised, this clinker becomes a greyish powder, which is the familiar article of commerce employed for a great variety of purposes in practically every type of building construction

It has long been known that the fineness to which the cement is ground is one of its most important characteristics, and consequently specifications require that 75 per cent. commercial coment shall i moie of through a No. 200 sieve, which has 40,000 openings per square inch. This is the practical limit of mechanical sieves in respect to fineness.

It is very important to have some means of measuring directly the entire state of subdivision of cement; in other words, to discover just what percentage of the material is made up of particles of certain definite sizes. If such a division can be made, it should be possible not only to compare the efficiency of different grinders, but also to determine what degree of fineness must be attained before the cement becomes "hydraulically active that is, capable of combining with water to form the binding material in mortar and con-

The apparatus devised by the Bureau of Standards consists of a vertical brass pipe about 3 in. in diameter and 5 ft. long, at lower end of which is attached a glass bulb, in which the cement to be tested is placed. Air at constant pressure is blown into the cement through a glass tube or nozzle in the side of the bulb, and as the air can escape only through the vertical stack, it carries with it the cement dust, which is caught in a flannel hood surmounting the stack. air-flow in the stack is very uniform, and in a short time all the dust will be removed from the cement, leaving a granular residue in the glass bulb. This residue is weighed, and the amount of dust is determined by subtracting the weight of the residue from that of the original sample of cement. Different grades are obtained by using different-sized nozzles, and thus a number of separations can be made in the very fine portion of the cement. With the aid of the microscope the cement. With the aid of the microscope the size of the largest particles in any given separation can be readily determined, and in this manner the apparatus is standardised without reference to the size of the nozzles and other parts of the apparatus or the airpressure used.

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# LING HOUSE REXTS

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the continuance of this Acr. and so or 2 as interest at the standard rate is paid and the covenants of the mortgagee are ob-served, to call in his mortgage or to exercise as yield to foreclosure, sale, or other means of inferengins security:

Provided that this provision shall not affect gery rower of sale exerciseable by a mortgagee who was at the date of the passing of this

(4) Where the mortgaged property includes both property to which this Act applies and other property, the mortgage 25.44 for all other property, the mortgage shall for the purposes of this Act be deemed to be divisible

purposes of this Act be deemed to be divisible at the amount of the loan to be apportioned between the property to which this Act appries and the other property in proportion to the respective ratefuld values thereof.

Standard rent "and "standard rate of interest "are defined as the amounts paid on August 5, 1914; in the case of subsequent letting the rent at which it was first let, and at later mortgages the original rate of interest. t later mortgages the original rate of interest. Rateable value "similarly is held to mean

Ratcable value similarly is held to mean that of August 3, 1914, or, in the case of a house assessed since that date, the value at which it was first assessed. The Bill does not apply to houses of a rateable value exceeding £40, but shall apply to any house or part of a house let as a separate dwelling where the rent does not exceed £50 in the Administrative County of London, and £21 elsewhere. There is a provision also that if any house be sub-let by the tenant the Bill shall continue to be operative.

# WAR WORKERS' AMENDMENTS.

The Workers' War Emergency Committee, at a conterence held at Cardiff on Saturday, unautmonsly adopted amendments drafted as to make the Bill applicable to the whole country, without the slow process of Orders in Council to particular centres.

TIVERPOOL PROPERTY OWNERS' SIX POINTS

The Liverpool and District Property Owners and Ratepayers Association have communicated with the local members of Parliament regarding the Rents and Mortgage Interest Bill, and have submitted the follow ing six points which, they state, should re ceive the attention of the House of Commons before the Bill becomes law:—(1) A definition of the £30 and £21 rentals is required. We suggest the gross assessment for income tax. Where, by Acts of Parliament, areas were absorbed in adjoining boroughs and the rates stereotyped for a period of years, which areas have recently fallen or are about to fall under the older and higher rates of the absorbing borough, powers should be given to property owners in such areas to raise rents accordingly. (3) What are pre-war rents? We suggest they should be the highest rent obtained within a period of ten years previous to August 4, 1914. (4) We consider that if there are to be pre-war rentals there ought to be pre war assessments, and poor law and district authorities should immediately reduce assessments accordingly. (5) The Act to apply equally to mortgages created before or after the Act. (6) We suggest that the promised restriction on toreclosure be sufficient protection against the memoring of costs which mortgagors always have to pay,

# THE ARCHITECTURE OF ANCIENT EGYPT.\*

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This volume, which reaches us rather late, we are told, an attempt to trace for the nicemation of unlearned or general readers the architectural tradition from its remote of 20 to the time when it generally became recognised as part of Roman civilisation. From k'y, we do not see that the excellent pur-pose which has inspired its author is much advanced, but as an effort to bring together not go to sted and historical form a certain amount of recent information, at present dispers d in other books and papers, it deserves and will doubtless obtain, recognition. The appending will be mainly interested; and others will welcome the translation given as at append to the paper by Lepsias, which was published in 1872, out of date as it is in view of the rescent discoveries. The illustrations are numerous but many are horrowed, and | tame ar to our coun readers.

The Architecture of Ancient Egypt. By Edward Br., M.A., F.S.A. London: G. Bell and Sons, Ltő,  $\mathfrak{g}_{(s)}$ 

PRELIMINARY TRAINING FOR

RECRUITS. Section "B." Arm Section "B." Army Reserve. The 4th Battalion Central London Volunteer Regiment (Architects' Corps) has offered through the Central Association of Volunteer Training Corps to train 500 recruits placed in the Army Reserve under Lord Derby's scheme. The offer has been approved by the War Office, and recruits can now commence their instruction at the Corps Headquarters, Chester House, Eccleston Place, close to Vic toria Stution.

A large drill hall, common room, canteen,

sergeants' mess, and lecture room are available, and instruction will be given by fully qualified N C.O.'s under the direction of the Corps officers, many of whom are old Terri-torial officers and N.C.O.'s of long experience, thoroughly equipped for the accomplishment of the task they have so patriotically under-

Recruits should present themselves at the Corps headquarters any evening between 6 and 9 p.m., when they will be formed into special squads for instruction under the conpany sergeant-major. Drill hours will be from 6.15 to 7.15 and 7.15 to 8.15 p.m., and on Drill Saturday afternoon. Instruction will be given in squad Irill, physical drill, musketry, bayonet fighting, signalling, and practical expersence can be gained in trench digging an:

Special squads can be formed composed or friends or one obers of firms joining together.

No entrance fee or subscription will b

charged, the only stipulation made is that recroits must regularly attend parades in order that training may be progressive and thorough.

This corps has already sent over 120 mem this coaps has already sent over 120 members to the Army, many with commissions in the Engineers and technical branches, and in conjunction with the Architects' War Service Bureau has recruited over 1,000 men direct into His Majesty's Forces.

THE GROWTH OF LONDON

An analysis of the census figures of 1911 relating to London has been made by the Clerk to the London County Council. The population of London reached its maximum in 1901 or 1905 and began to increase again between 1910 and 1911. There is still room for expansion in Wandsworth. Lowisham, Woodwich, and Hammersmith particularly, and in a less degree in Camberwell, Lambeth, Fulham, and Hampstead and Hackney. arrest in the growth of the population of London which has been disclosed by the 1911 census must not be confused with a condition of stagnation or sterility. The population of London is continually increasing, as is disclosed by the excess of births over deaths. The nominal decrease is merely the outcome of the growing inadequacy of the county boundary to represent the limits of what is popularly known as London. The City of London, Holborn, and Westminster actually showed a smaller population in 1911 than in 1801, 110 years before, the City being at its max mum a century and a decade and Holborn in 1851. Westminster ago, and Holborn in 1851. Westminster reached the maximum in 1861, with 260,000 and then its population fell as steadily as it rose until 1911, when it stood at exactly the same figure (160,000) as in 1801. Finsbury, same figure (160,000) as in 1801. Finsbury, Holborn, Maryleboae, and Shoreditch seem to be pursuing much the same course. The average density of population in London (60 per acre) is eight times as great as that in extra London (7.4). In Southwark (170), Shoreditch (169), Bethual Green (160), and Stepney (159, it is the highest, and the lowest in Woodwich (15). Hampstead and Wanderouth within 30 and 31 regions per lowest in Woolwich (15), Hampstead and Wandsworth giving 38 and 34 persons per acre. In extra London West Ham tops the table with 61.7, and Greenford figures at the bottom with .5. Some interesting figures are given with regard to the population occupying dwellings of various types. Of the total London population 75.5 per cent. was housed in ordinary dwelling-houses; 10.4 per cent. in fluts (including maisonettes); per cent. in flats (including maisonettes); 7.2 ner cent. in shops; and 5.8 per cent. in in-titutions; the percentages in other types of buildings being small. The 478.024 ordinary dwelling houses contained 305.967 separate occupiers, or an average of 1.69 per house.

# Our Illustrations.

STMINSTER R.C. CATHEDRAL: CHAPEL OF ST ANDREW AND WESTMINSTER THE SAINTS OF SCOTLAND.

The decoration of this chapel has now been completed, the curtains which have shut it off from the church for the last two years were yesterday removed, and solemn High Mass was celebrated in it vesterday Science Mass was celebrated in it yesterday—St. Andrew's Day. The Marquis of Bute, who had generously offered to bear the whole expense of the work, nominated as architect, with the consent of the cathedral authorities, Mr. Robert Schultz Weir, who, as is well known, has made a special study of Byzantine art. He has not only designed the whole

towards the aisle. The altar, which is constructed of Scottish granite, is raised on three steps, and is placed under a baldachino supported on pillars and pillasters of Verde Antico with bronze capitals and bases. The wall behind the altar has an inlaid cross of ancient Egyptian porphyry on which is placed a beaten copper figure of Our Lord. On either side are panels in low relief representing four of the principal Scottish saints; Ninian, Margaret, Bride and Columba. On the south side are two pairs of windows glazed with "crystal white" glass in leaded patterns, with the white cross of St. Andrew on a blue ground (azure, a saltire argent) in-Between the windows are two

faces of the east and west arches. The plain gold mosaic is executed in fan-shaped forms, which may be taken to signify golden clouds screening Paradise from earthly view. A row of seven inlaid chony stills fill in the recess of the west end of the chapel. The altar candlesticks and the reliquary, set into a niche at the base of the cross over the altar, are in bronze and enamel. Altar-cards have been specially engrossed and illuminated on vellum for the chapel. The marble work has been executed by the firm of Messrs. Farmer and Brindley, the metal screen by Mr. W. B. Reynolds, and the glazing by Messrs. Lowndes and Drury. Mr. Stirling Lee is responsible for the scalpture, Mr. Ernest detached pillars of Cippolino with carved detached supporting the arches over. In the tympana under these arches are low-relief figures of the archangels Gabriel and Michael. Ginson for the stalls, Mr. Harold Stabler for the reliquory and candlesticks, and Mr. Graily Hewitt for the altar-cards. The full-



LORD DIGBY'S SCHOOL, SHERBORNE, DORSET: FIRST AND GROUND FLOOR PLANS Mr. EDWARD C. H. MAIDMAN, Lie, R.I.B.A., Architect.

of the work, but has given his constant personal attention to the carrying out of his scheme, and in this he has been ably aided by the craftsmen whom he gathered round him to execute the various portions. The drawings which we illustrate show generally the designs for the east and west walls, but it is impossible to judge of the harmony of composition and colouring from a monotone reproduction. As the chapel is now accessible this can be best seen by a personal visit to the cathedral. Tall open-work screens of white metal separate the chapel from the south aisle. The pavement is of various coloured marbles and carries on the various coloured marbles and carries on the old tradition of a "pavement like the sea." The lower part of the walls is lined with marble; tall slabs of blue Hymettian below and panels of old Cippolino and Skyros above. Long, thin pilasters of porphyrycoloured Rosso Antico terminate the work

vaults of the roof are covered with mosaics, the designs of which deal with the subject of St. Andrew. On the west wall is a large-sized figure of the Saint in the attitude of prayer, apostrophising the cross on which he suffered martyrdom, and which is repre-sented on the opposite wall. On either side of the Saint are animals and trees, and on either side of the cross, representations of banners bearing in Latin and in English the text of the Saint's prayer or salutation to the cross. This comes in the "Office" for St. Andrew's Day in the Roman Breviary. The English translation is the one made by the late Marquis of Bute. On the lower parts of the vaults are views of cities connected with the story of the Saint, and this story is briefly told on the upper part of the west wall. Appropriate borders of a Celtic type frame the pictures and appear at the

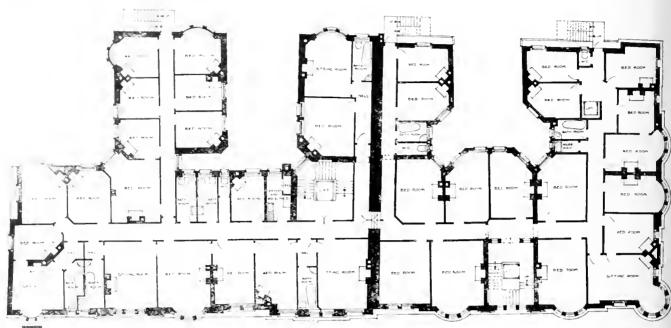
The upper part of the end walls and the by Mr. George Jack, and the mosaic work carried out by Mr. Debenham's group of mosaic workers, under the personal direction of Mr. Gaetano Meo, the friend and assistant of Rossetti, Burne-Jones, Richmond, and other artists. To his intimate knowledge of the selection and disposition of the material is due the most excellent effects of colour and texture which have been obtained in the work. With the exception of one Italian, who helped with the mosaics for a time, all the workmen employed were British. Round the upper part of the blue slabs forming the high dado have been incised the names Scottish saints arranged in chronological οĹ order according to centuries, thus emphasising the full dedication of the chapel, which is to "St. Andrew and the Saints of Scotland." The drawings now reproduced were shown at the Royal Academy this

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# COBURG COURT HOTEL, KENSINGTON bed and sitting rooms, besides

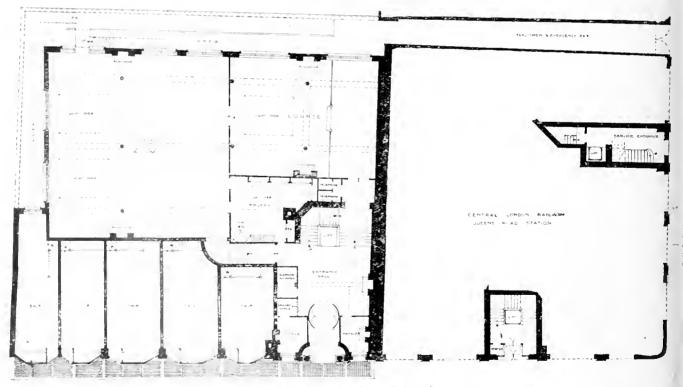
SHFRBORNE. DORSET.

It is yis a clustrations and plans tage dense strate the proposed secreticed by the Board of the years ago, forming the superstructure of the years ago, forming the superstructure of the provided in different parts of extension. The state of in different parts of extension. The plated, has been incorporated with the old parts of the provided in different parts of extension. The plated, has been incorporated with the old parts of the provided in different parts of extension. The plated, has been incorporated with the old the provided in different parts of extension. The plated, has been incorporated with the old the provided in different parts of extension. The plated, has been incorporated with the old the provided in different parts of each floor above quarters, the greater part of each floor above the ground floor being arranged in suites of rooms, each suite having its entrance hall, bottom, etc. The ground floor is occupied by shops on the frontage to Bayswater Road, the remainder of the space being used by the entrance hall, lounge, dining room, servery, etc., as will be seen from the plans given here with. The basement contains the kitchen and



BAYSWATER ROAD W

PLAN OF UPPER FLOORS



FLAN AT STREET LEVEL

COBURG COURT HOTEL KENSINGTON GARDENS.-Mr. Delissa Joseph, F.R.I.B.A., Architect.

the rearrance indicated by the being repeated, and a large tower with a dome is introduced as a central feature of the dining-room are panelled to the rearrance of the complete front to Bayswater Road. The front is faced with buff terracotta and red pressed bricks. The main entrance and staircase are located in the centre, and the several floors of the "Adam" Lounge is in fine-resisting doors of oak glazed with Luxfer glazing. The accommodation consists of 128 plaster, with coupled Ionic pilasters. glazing. The accommodation consists of 128

walls of the dining-room are panelled with Austrian oak, fumed and dull polished, the same material being used to case the steel columns as fluted Ionic columns. The decora-tion of the "Adam" Lounge is in fibrous plaster, with silk filling to the wall panels. The hall and staircase are paved with Sicilian marble, and the walls panelled in fibrous plaster, with coupled Ionic pilasters, dado,

etc. The building is heated by adopting an accelerated low pressure hot water scheme. A system of vacuum cleaning by hydraulic power is installed. Each room is provided with its own telephone. The general contractors for the work were Messrs, Perry and Co. (Bow), Ltd., and the building, steelwork, and decorations were carried out from the designs of Mr. Delissa Joseph, of 75, Basinghall Street, E.C., who was also the architect for the old portion. The heating and ventilation was carried out by Messrs. Burroughes and Sons, the constructional steelwork by Messrs. Redpath Brown and Co., the ornamental ironwork by Messrs, W. T. Allen and Co., the electric lifts and vacuum cleaning installation by Messrs. Waygood Otis, Ltd., the marble and mosaic and tile work by Messrs, Fenning, and the fibrons plaster by Mr. W. F. Robinson. The terracotta was supplied by Mr. J. C. Edwards, of Ruabon.

UNIVERSAL HOUSE, OXFORD ST., When the design of the front of this building

In the design of the front of this building the two main objects aimed at were the ad mission of the maximum amount of light, and generally a massive and dignified effect, which been obtained by the employment of simple Ionic columns on the second and third lloors, with a heavy cornice and entablature, and the Poric order on the fourth and fifth floors, and the deeply-recessed windows. two-storied iron window frames, with rather rich detail, form an important feature of the design. The basement and ground floors are occupied as shop premises, the first and upper floors being occupied by the Transatlantic Film Co., who have set the first floor apart as a private cinema for the exhibition of their a private cinema for the exhibition of their films. The building was carried out from the designs of Mr. Delissa Joseph; the general contractors were Messrs. Ford and Walton, Ltd., the electric lift by Messrs. Waygood-Otis, Ltd., the constructional steelwork by Messrs. Redpath Brown and Co., the iron by Messrs. window frames and casements by Messrs, W Allen and Co., the marble and nosaic by Messrs. Fenning, the carving by Mr. W. F. Robinson, and the heating by Messrs. Burroughes and Sons. The drawing here given was shown at the Royal Academy this year.

# BRIDLINGTON PRIORY CHURCH: THE NORTH PORCH.

The nave is the only portion of this church still standing, and this portion alone represents now the once-magnificent monastic church, which is a most imposing and beautiful example of English architecture. In its entirety the church consisted of nave, chancel, transepts, large square central tower and two western towers, though these were originally not completed. The most of the completed of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete of the complete o originally not completed. The western front is profusely decorated, and is an exquisite specimen of the florid Perpendicular English style of architecture. The lower part of the north-western tower, with the north and south sides of the church, belong to the semi-Norman and Early English periods. The north porch is a splendid specimen of the The foliage of the ornamental mould ings of the great western door is marvellously elegant, and rich with oak leaves and acorns. All the clerestory windows on the north and south sides are early specimens of Geometrical tracery, except the three most westerly on the south side, which are insertions of the Perpendicular style. Though only a fragment of the larger edifice, it is still remarkable for its great size, and is one of the finest of our parish churches. Mr. Gordon finest of our parish churches. Mr. Gordon Hemm has kindly placed his excellent measured drawings at our disposal, and we give to-day the smaller sheet of the beautiful north porch. Double pages of the nave elevations and sections will follow at an early date.

### OLD ENGLISH LIVING-RÖÖM FURNITURE.

Some of these pieces would look in place in almost any homely room, though they differ in many ways. Most historic furniture has essentially this adaptable quality, because it was for the greater part designed for use rather than mere display, and so possesses a human standard fit to to be lived with and used anywhere for everyday purposes. The individual choice decided on for preparing

this sheet of sketches was arrived at primarily, however, to justify the title em-The table, dresser, cabinet and chair, etc., are particularly suitable for a living-room where daily meals are taken. The word dining-room, or salle-a-manger, implies at least an occasional formal entertainment, and specially so abroad, in contradistinction to the ordinary routine en famille. In the more or less pretentions houses of the fairly wellto-do daily meals are relegated not incommonly to the so-called breakfast-room, answering, consequently, to the living-room, heretofore termed in some parts of the country the "keeping place." Though fashious change, and the fancy for old furniture is one just now in vogue, at least the vogue, when moderated by knowledge and governed by good taste, is in most respects admirably contributing to the amenities of life and the encouragement of an artistic sense of the fitness of things. Hence these examples are useful and timely. The Seventeenth Century oak table, lent by Miss E. P McGee to the Victoria and Albert Museum, is an exceptionally interesting and pretty example on the gate leg principle, with splat-shaped supports fitted with drawers. It cannot claim to be very convenient for meal use, and would be reserved more for occasional purposes. The oak dresser came from Fritwell Manor, Banbury, It is fitted with side cupboards, with panelled doors on either hand of the fixed shelves. There are two drawers below, and brass drop handles on turned front supports, and low stretcher rails 4 ft. 6 in, wide. The old walnut cabinet is beautifully veneered—It is 6 ft. high and 3 ft. Jin. wide, and fitted with drawers, the piece being Queen Anne in character. It was sketched at Croydon, like the Jacobean chest shown next to it. This is of about the chest shown next to it. This is of about the same width. The Early Eighteenth Century mirror is in walnut.

### XIV. HANOVER STREET, W

These premises were built for Messrs. Weeks and Co., music publishers, from the designs of Mr. Delissa Joseph, and have been united to No. 6. Pollen Street, the premises in the rear, also designed by the same architect. The basement and ground floors are eccupied by the shop and showrooms, some of the upper floors being used as practice portitions. In designing the front, advantage was taken of an existing area, giving the right to construct the large bay. The front is carried out in Portland stone. The general contractor was Mr. C. F. Kearley, the electric lift by Messrs, Waygood-Otis, Ltd

A block of buildings added to the Aberystwith County School, at a cost of ever £3,000, has been formally opened. The contract was carried out by Mr. E. Jenkins, of Aberystwith, from plans prepared by Mr. G. E. Dickens-Lewis, M.S.A., Pride Hill, Shtewsbury.

A church hall and institute at Willington, Co. Durham, built at a cost of £3.000, has been formally opened. The architect was Mr. W. A. Kellett, of the firm of Messrs, Kellett and Clayton, Bishop Auckland, and the contractors were Messrs, W. Hope and Son, Coundon,

were Messes, W. Hope and Son, Coundon,
The American Institute of Architects held
its annual convention on the Pacific Coast in
Getober, sessions being scheduled both at San
Francisco and Los Angeles. The members were
present in San Francisco during American
Builders' week, when an address was delivered
by Mr. R. Clipston Sturgis, president of the
institute, on the subject of "The American
Builder."

In the competition for the design of Carson College for Opphan Girls, to be built near Chestnut Hill, Pennsylvania, the design submitted by Mr. Albert Kelsey, of Philadelphia, has been selected. Under the terms of the will of Robert N. Carson, \$1,000,000 is now available for buildings. Should further buildings be required they are to be paid for from the income of \$5,000,000 left as an endowment.

With an injunction hanging over their heads, the Chertsey District Council have spent £3.694 on their sewage works out of the revenue, and now propose to further improve the works by loan, adding 50 per cent, to the efficiency of both the coarse and fine filter beds. The estimated cost is £8.030. The details were recently laid before Mr. P. M. Crosthwaite, M.Inst.C.E., of the Local Government Board, at a local inquire.

OBITUARY.

Mr. Wilm Knox, architect, of Cleveland, Ohio, who has died in that city, aged fifty-five years, after two years' illness, was born at Springburn, Scotland, January 20, 1858. He was educated at the University of Edinburgh and at various art schools in that city. He and a various air semons in that they. We had a successful architectural practice in Edinburgh, when in 1836 he suddenly made up his mind to see the world. He straightway took a ticket to Australia, via America, but on his way through Chicago he observed the opportunities for work in that city, and immediately entered the office of Messrs. Burnham and Root. It was there he met Mr. John H. Elliot. Later Messrs, Knox and Elliot formed a partnership and started business in Toronto, Canada, where they did some notable work, among which was the Confederation Life Building. In 1893 they opened an office in Cleveland, Ohio. The Rockefeller building, the Hippodrome building, the Brotherhood of Locomotive Engineers building, in Cleveland, the Hippodrome and Areade at Youngstown, O., the Mooseheart Industrial School and Administration buildings, in Illinois, are among their principal works. Mr. Knox was a many-sided man. He made a study of mushrooms and fungi of Ohio, and was one of the most important contributors to that science. He made a number of beautiful water-colour drawings illustrating his mycological studies, and started to issue an illustrated work on mushrooms, but had only completed three parts. During the last two years of his life, when his health was failing, he took up etching, and did some very fine work, largely in etching former water-colours or sketches of his own. He was well known as a lover of art and a collector of rare books and etchings.

The death occurred at Seraing, Belgium, on November 20, of Adolphe Greiner, directorgeneral of the John Cockerill Company and president of the Iron and Steel Institute. He was born in Brussels in 1843, the eldest son M. Gustave Greiner, private secretary to King Leopold, and educated at the University of Liege. In 1864 he joined, as engineer-chemist, the Société Anonyme John Cockerill, which had been the first company on the Contiment to adopt the Bessemer process in 1862. In 1859 Mr. Greiner was appointed manager of the steel works, and in 1887 he became director-general, and was responsible for the introduction into the Cockerill works of basic process for steel making, the utilisation of blast furnace and coke-oven gas, and the general employment of electric energy for the transmission of power to all parts of the works. He was elected President of the Iron and Steel Institute in May, 1914, having been, for many years, a member of the council and Vice-President. In 1915 he was awarded the Bessemer Gold Medal. At the Leeds the Bessemer Gold Medal. At the Leads meeting of the Institute in 1912 the University of Leeds conferred upon him the honorary degree of Doctor of Science.

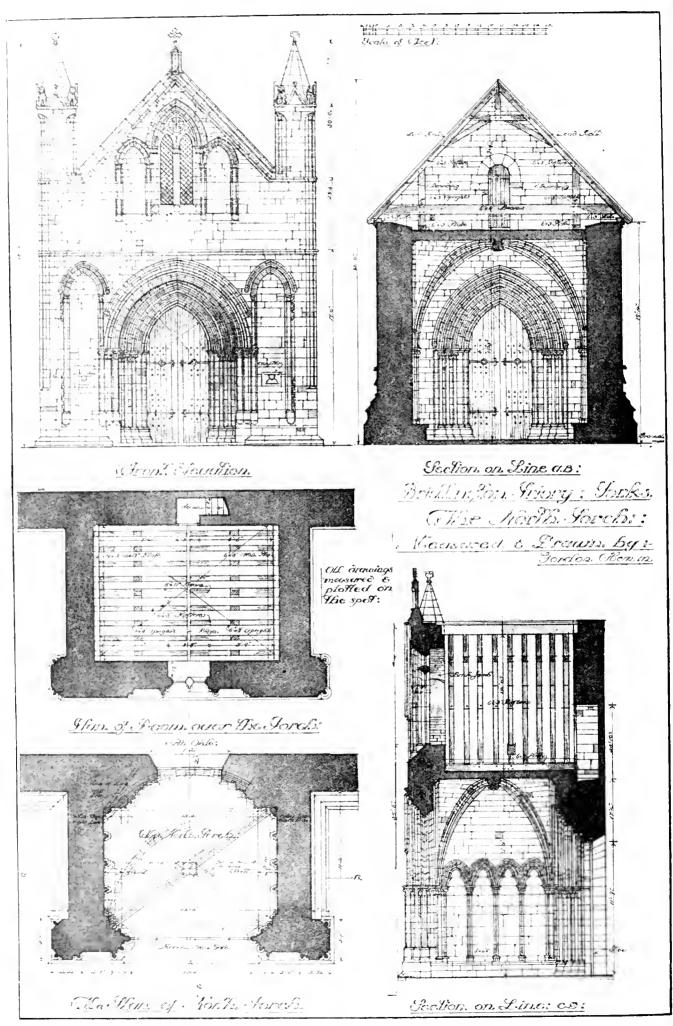
Mr. Ogilvie Dawson, builder Buckie, has been appointed burgh sarveyor and sanitary inspector at Findochty.

Mr. W. A. James, J.P., builder, of Cowbridge, an alderman and thrice Mayor of that borough, has died at his residence, Stafford House, Cowbridge, aged seventy-eight years.

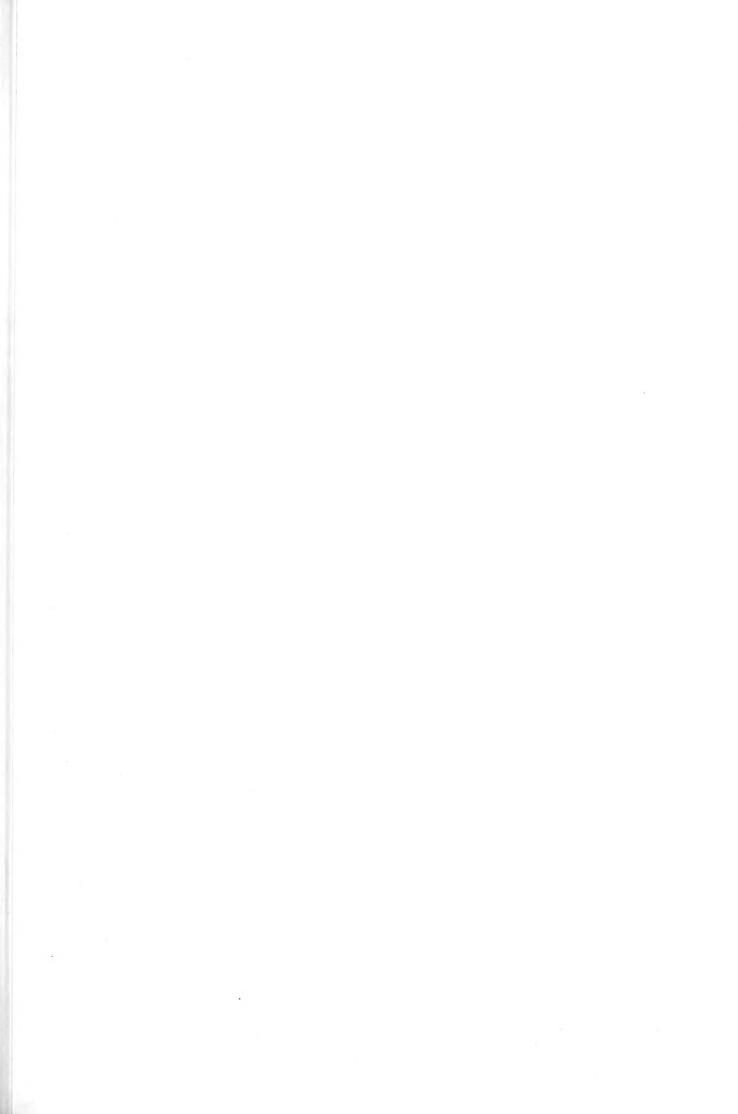
The Dartford Rural District Council have decided to purchase 4½ acres of land in order to house munition workers in the Erith district, and the sunweyor has been instructed to prepare plans and to obtain tenders for building seventy-two houses.

Frank Koester, consulting engineer, of New York, has been chosen by the City Planning Commission of Allentown, Pennsylvania, a city of 62,000 inhabitants, to develop an entire plan for the future development of the city along engineering, architectural, and landscaping lines.

The district committee of Upper Renfrewshire have agreed to apply to the Local Government Board for authority to prepare a town-planning scheme for the districts of Quarrelton, Elderslie, Inkerman, Porterfield, Potterhill, Crookston, Cardonald, Halfway House, Crokerhill, Nitshill, Hurlet, Arthurlie, and Gareside. All the areas mentioned are in course of development, or appear likely to be used for building purposes.

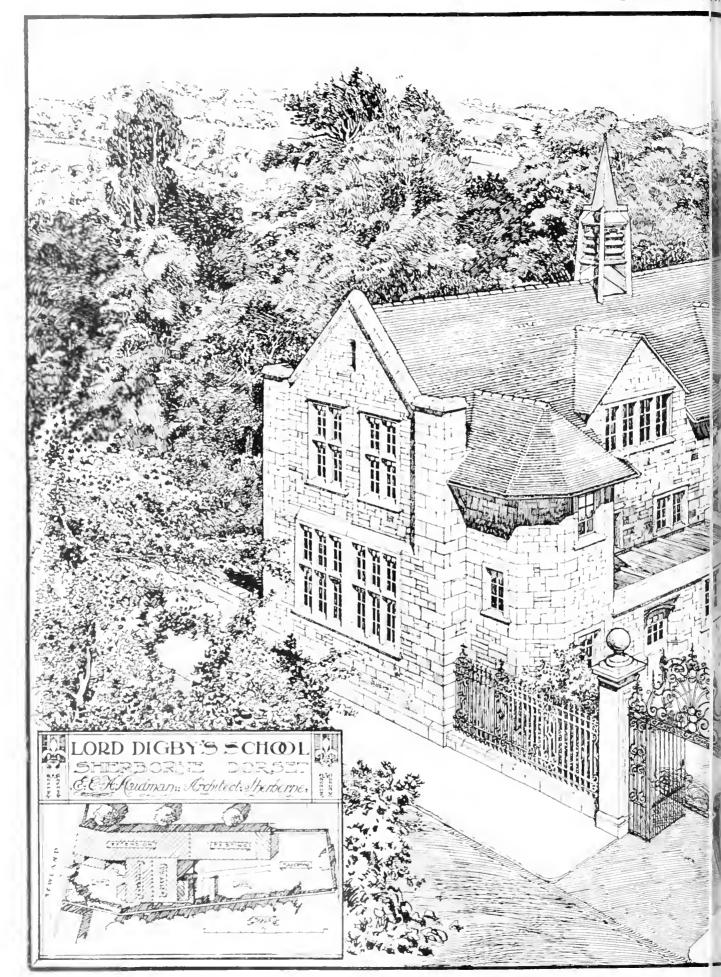


BRIDLINGSON FIORY FORKS THE NORTH PORCH. -Measured and Drawn by Mr. Gordon Hemm.

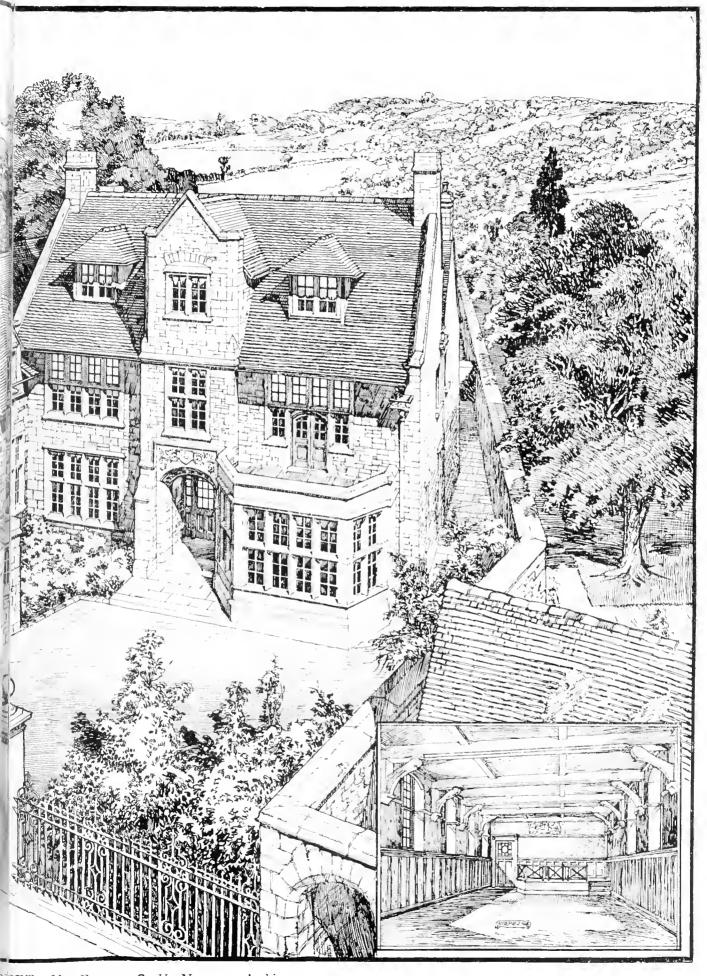


THE BUILDING NEWS, DECEMBER 1, 1915.





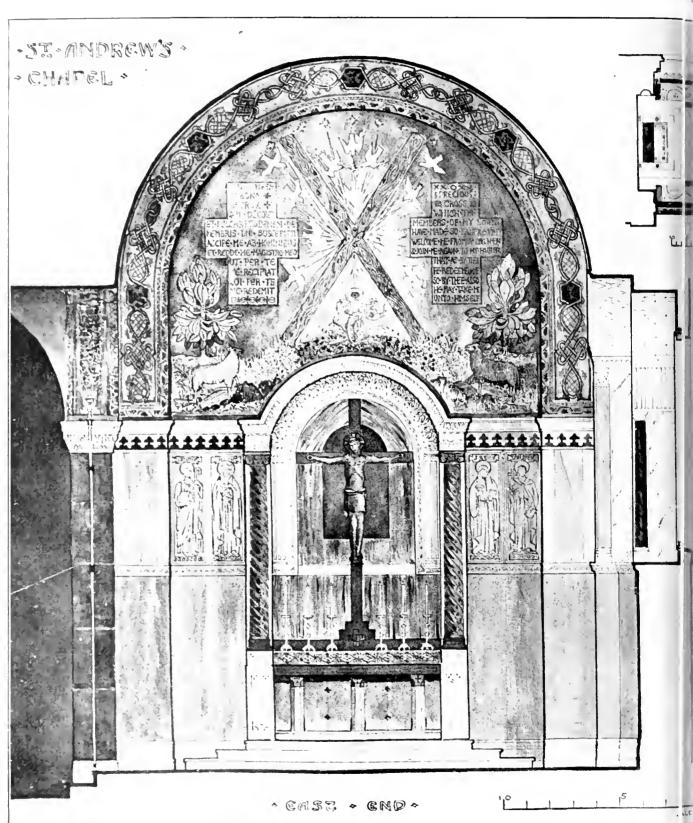
LORD DIGBY'S SCHOOL, SHERBORN,



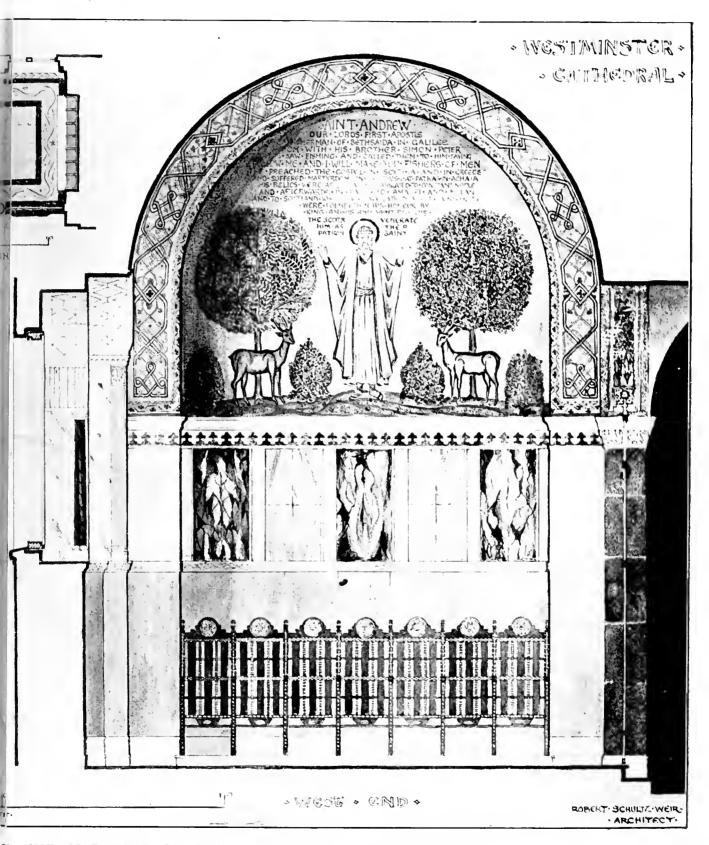
SET .-- Mr. EDWARD C. H. MAIDMAN, Architect.

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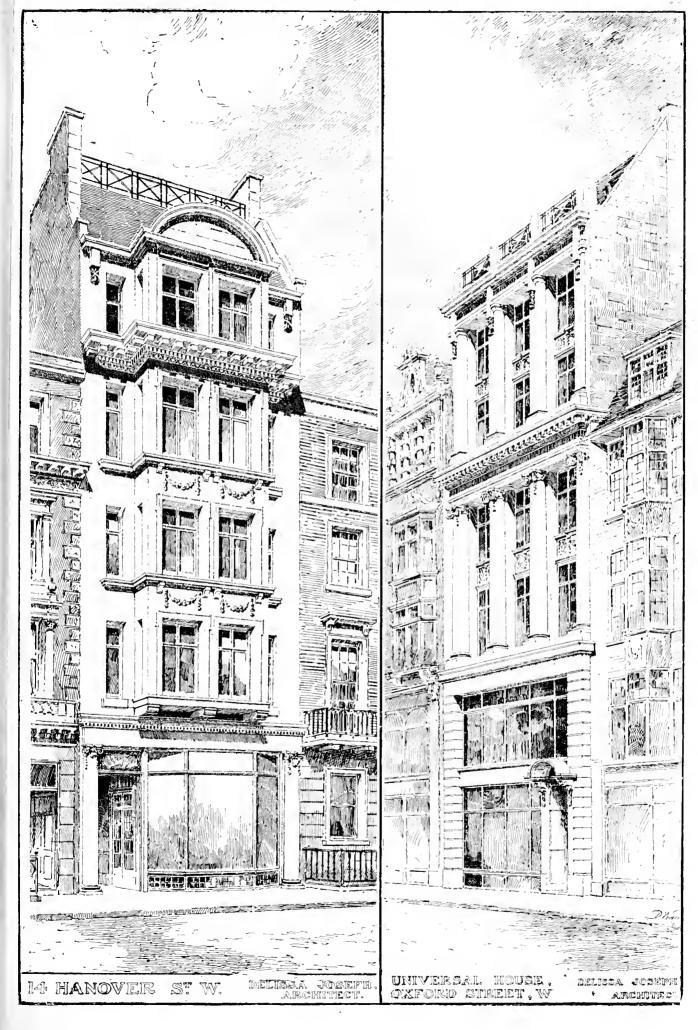




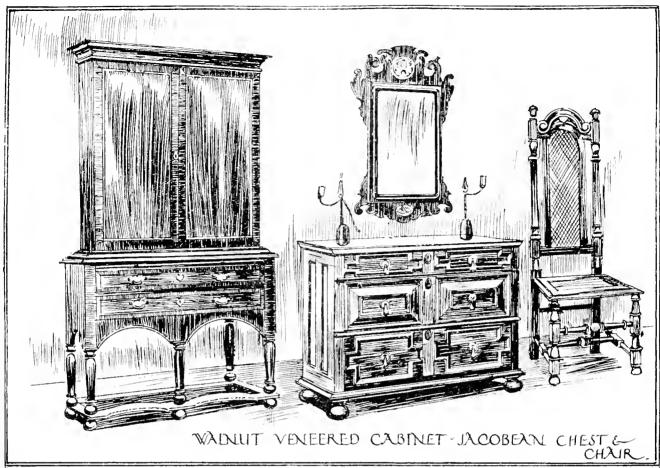
WESTMINSTER CATHEDRAL, ST. ANDREW'S CHAPEL: THE I

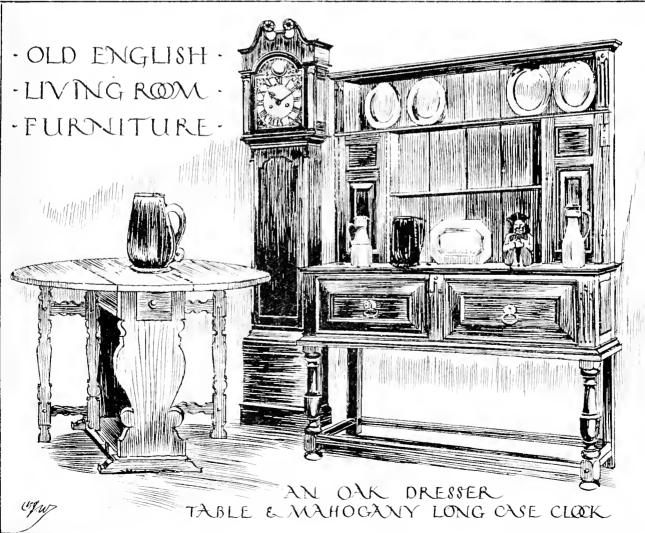


C THE MARQUESS OF BUTE.-Mr. Romert Schultz Weir. Architect.



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# Gurrente Calamo.

s adverd s li to orally and property the property of the property of the war. The Bill property to be the bedon, in regard to districts in England and et a of over 100,000, and dividing that on a vary to collection is consistent than the making thereof t ... ises let at £30 a year Larry of Letter of Exchange and the Scott of The Bull applies also to Scott of Industrial, with necessary variations. is a proposal to prevent the transport test and the operator St. or forcelesure. The Bill is to med full discussion. As is to the Time of Monday by an ver informed correspondent, the or a montging or gets all the odium. s beneat rely overbooked that the a dag repairs is much in excess and all prior to the war. This is due ere can wages paid by the Government to men employed on new munition the vales paid in Carl de district the vales paid in Carl de district the vales paid in the value of the war A to old per hour. These men get A process of Gretter Munition Limbbings 11d. to Is, but hear. The result is that builders the formula of the result is that inimiters take to pay their men wages pa ; rath to  $t^*$  so paid at the numerous Government at the Projection the United Kingdom. may be safely assumed that the present of rocas is 25 per cert, higher than cover the war, as not only have the wages and the least workmen advanced, but every I in threed in addition has greatly ad and Catages must be kept in habitable or r. of leas manifestly right that workgetting to increased vages shall pay the rent to cover increased cost of repairs. I seed bolls of cottage owners are trugal countries and such trubelment and the in agree sterest is a negligible factor the reservice to thereased rental.

The R TB A. Journal by the Institute Phase 2 from the directing of the process of the the argent of the infecting of the process of the the argent of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infection of the infec

of tree-planting; main avenues based on outloo', and viewpoints, including any old buildness or valuable trees on the site; the fixing of lines of freetings to avoid monotony in some roads and to give regularity to others; the determination of the depths of sites and the useful appropriation of back-land; and the planning of angles of intersection to avoid traffic dangers and ugliness or awkwardness in effect.

Other matters, such as the relaxation of local by laws and the management of competitions, also demand the attention and co operation of architects, and if this is not given early it is in no small degree their fault if such are ignored. Architects, as it is pointed out, will not, as a rule, find themselves alone in promoting a demand for due consideration of the artistic interests of their own towns. The unitiative is properly with them by virtue of their professional training and outlook, and to their foresight and public spirit is committed the guardianship of the architectural possibilities inherent in any proposed scheme. Such disinterested public action has especial value when brought to bear upon municipal bodies. The presence of architects is necessary upon corporations, especially upon committees charged with public improvements, works, and town-planning schemes, where their expert advice is a proper ingredient in the constitution of voluntary representative committees. The sacrifice of tine and labour involved must be incurred in the interest of the artistic amenity of our towns, too often sadly neglected. The formation of local voluntary committees or societies of persons specially interested in architecture and art to promote public improvements may lead to great results if the opportunities afforded by a town planning scheme are taken. The practical attention which municipal authorities devote to such subjects generally overlooks the larger aspects, which are ultimately artistic, and though the proposals of merely architectural or asthetic enthusiasts may be deemed by the careless to be unimportant, it may be urged with force that the orderliness, cleanliness, arrangement, expansion, and improvement of our towns cannot be neglected without material loss to the national life. These vital interests in municipal life are in the main neglected, or from absence of correlation become ineffective, from want of thought more than from lack of heart, and architects are urged to recognise that these principles may be collected by representative persons in a committee or body that shall in each locality feel itself to be charged with a vigilant watch over all proposals for town development, extension, or improvement.

Contractors doing work on a highway run risks of liability for accidents of which they are not always aware. Even when their work is being done under statutory authority, a chim for damages may be successfully supported, although there is little, if any, evidence of negligence or breach of a legal duty. In the recent case of "Crane r. South Suburban Gas Company " the High Court laid down a broad principle, which is of very wide application to contractors and others doing work on a highway. The facts showed a simple story of the street. The gas company were repairing a gaspipe in the road, as their Act gave them power to do. For the work they had a fire on land close to highway. over which was a ladle with molten lead. Children were playing about and around it. of course, though well warned to keep away. Watchman on duty, called off a few minutes to help mates in trench. While absent, a boy accidentally knocked the ladle over, in kingdom.

juring little girl passing in road. She sued for damages in county court, where judge found negligence, and so breach of duty, by defendants not guarding fire, and gave her judgment, with £25 damages. Gas company appealed, on ground that they had legal right to do these repairs, and have fire for this purpose, which passengers must avoid, Also said they had done their work in this way for forty years without accident, and argued there was no duty on them and no negligence by them. The High Court, by two judges, raised the case to a higher legal plane, and got away from questions as to duty and also about sufficient evidence of negligence; for they held that though the gas company had a right to repair and use fire reasonably, yet they had by putting this fire and ladle of lead on, or near, the road created a nuisance on the highway, and so were liable for the consequences. Thus the only effect of the appeal, lesides confirming the county court indgment, was to strengthen the legal view of the liability for such accidents of contractors and others on highways.

The war and its vicissitudes are bringing about some strange episodes-not all, we fear. with such happy endings as one just related to us. Not many days since a young Australian invalided home here, and now in one of the London hospitals, wrote to the London County Council asking if they could find his brother, who, so he stated, had been engaged on that body as an architect. Prompt search was made in the Superintending Architect's Department, but no such name could be found; but the always helpful secretary of the Superintending Architect was not satisfied to let matters rest there, and himself paid a visit to the invalided soldier in the hospital to elicit further particulars. These obtained, another search was made, and it was dis covered that the brother's connection with the L.C.C. was that, as an under-study, he had helped to make one of the designs for the competition for the County Hall. He was speedily communicated with, and the two brothers. who had not seen each other for some years. have joyfully met, and we trust, as all will. that the reunion may be speedily followed by the complete recovery of the sick soldier. Meanwhile we shall not be surprised if "Ask the County Council" displaces the popular "Ask a policeman" as the likeliest solution of the problem of finding missing relatives.

The sanction of the Local Government Board has been given to a loan to the Leck Rural District Council for £2,400 for works of severage at English

The Stoke-on-Trent Corporation at their meeting on Thursday adopted plans by the gas engineer for works of remodelling and repair at the Burslein gasworks, estimated to cost £3,750.

Plans for a Roman Catholic Cathedral of the Sacred Heart, to be built at Superior, Wisconsin, are being prepared by M. Emil Ulrich, of Euclid Avenue, Cleveland, Ohio. The cathedral will adjoin the Catholic Orphanage recently built from M. Ulrich's designs.

Mr. Robert Griggs, F.S.L., A.R.I.B.A., of 17, Gray's Inn Square, W.C., died on Wednesday last, aged seventy-one. He had been an Associate of the Royal Institute of British Architects since 1876, and a Fellow of the Surveyors Institution since November, 1891. The cremation took place at Golder's Green on Monday at noon.

While searching among the valuable old documents of Wimborne Minster, for a sixteenth century presentment, the vicar (Canon J. M. J. Flotther) was agreeably surprised to find that a large bundle labelled "Presentments" was in reality a series of churchwardens' accounts between the years 1403 and 1475. The accounts, which are in Latin, on parchiment, have hitherto apparently escaped notice. They are among the oldest in the kingdom.

# PROFESSIONAL AND TRADE SOCIETIES.

EDINBURGH ARCHITECTURAL ASSO-CIATION .- The opening meeting of the session of the Edinburgh Architectural Association was held at 5, Queen Street, on Friday evening, the president, Mr. T. Forbes Maclennan, A.R.I.B.A., in the chair. Referring to the distress in the profession caused by the cessation of building work, Mr. Maclennan pointed out that if private enterprise in building was entirely stopped, as seemed to be the desire of the Government, the National Exchequer was bound to suffer. They all Exchequer was bound to suffer. They all realised, however, that the one all-important thing for the nation was that the war must be fought out to a victorious conclusion. If we did not win, if German kultur were to be imposed on us, we were better dead; but if we did go on to complete victory If we did not win, if German kultur there was every reason to hope for a great advance in the development of their art in a more peaceful atmosphere than they had ever known. Professor Charles Gourlay, B.Sc., A.R.I.B.A., of the Royal Technical College, Glasgow, delivered a lecture, illustrated by lantern slides, on "Santa Sophia, Constantinople," He referred to the interesting fact that this church, the greatest monument of the Byzantine style of architecture, was erected within the area comprised in the site of the ancient town of Byzantium, whence the He then showed style derived its name. style derived its name. He then showed illustrations of plans and interiors of Greek. Roman, Early Christian, and previously-erected Byzantine buildings to allow of a true appreciation of the great advance made by the magnificently-conceived plan of Santa Sophia, with its beautiful interior, upon those of any other building then in existence. Because of its size, the church was known as "The Great Church." and it was creeted "The Great Church." and it was creeted for the Emperor Justinian by the architects Anthemius of Tralles and Isidorus of Miletus, between the years 532 and 537, when the Byzantine style was at its culmination: hence its composition and details were of the choicest The plan of the church design and execution. was fully studied, including its nave, aisles, narthexes, and gallery; then followed views of the exterior and interior, and also of details, which were all described.

EGYPT EXPLORATION FUND.-The annual meeting of the Egypt Exploration Fund was held on Friday in the Hall of the Royal Society, Burlington House. Mr. J. S. Cotton occupied the chair. The report of Cotton occupied the chair. The report of the Committee pointed out that the reorganisation of the Society, carried out in 1913, had had to be modified owing to the exigencies of the war. The number of members had decreased from 321 to 260, and the Society had lost a large number of foreign subscriptions. Expenses too, had naturally gone up. No work had been done in Egypt during the past winter by the Fund as a whole. The American Committee, however, being under no obligation to save, had gone on with its special work at Balabish, under Professor Whittemore and Mr. Wainwright. Their most important discovery was that of a pan-grare cemetery, which yielded interesting Egyptian objects of Middle Kingdom types. besides those of the pan-grave people them selves, among which was a pot of pure prodynastic type. An Eighteenth Dynasty cemetery was also explored, which yielded Mycenæan "Bügel-Kannen," and among many other objects, including a head of clear glass, which showed that transparent glass was undoubtedly already manufactured at that early period The hon, treasurer re-ported that the income of the Fund, apart from special donations for the Osireion work or other purposes, showed a decrease as compared with the previous year, of £575, and that the adverse balance on the year was £653. Measures had been taken by the Committee which should effect a saving of at least £450 in salaries this year. No work in Egypt was proposed this season, either for the Fund proper or the Græco-Roman branch. but the American Committee proposed to take up the exploration of a site in the Delta, Tell Tibelleh, near Mansûra. The public lectures of the Society would go on as usual, and the memoirs would continue to appear when ready for publication.

THE SANITARY INSPECTION OF DWELLINGS.—The annual meeting of the West of Scotland Sanitary Association was held on Friday in the Religious Institution Rooms, Glasgow. Mr. R. Easton Aitken presided, and moved the adoption of the report, which referred to the importance of a regular and systematic inspection of house drainage and piping. The Association had had before them numerous cases in which defects were only discovered after illness had drawn the attention of the occupants to the need of inquiry. It was a false economy to dispense with precautions simply because a defect might not be glaringly apparent. Mr. Paul Rottenburg, LL.D., seconded, and the report was adopted.

# LEGAL INTELLIGENCE.

CLAIM AGAINST A CORPORATION.—At the Manchester Assizes last week, before Mr. Justice Ridley, the greater part of Tuesday was occupied with the hearing of an action in which Mr. Benjamin Place, the owner of the premises 95, Bury Road, Rawtenstall, was the plaintiff, and the defendants were the Mayor and Corporation of Rawtenstall, the local sanitary authority. By agreement between counsel on both sides the case was heard by the judge without a jury. Mr. Eastham represented the plaintiff and Mr. Sutton the defendants. The claim was brought to enforce an award under the Land Clauses Act for compensation in respect of damage alleged to have been done to the plaintiff's property during certain sanitary works which the defendants had carried out. There was an alternative claim for the disturbance of the plaintiff's rights. The questions at issue related to certain drainage, and the Court heard legal argument at some length. In the end the judge found for the plaintiff in the sum of £108. Mr. Sutton asked for a stay of execution in order to consider whether or not the agreed to bring into court the amount of damages awarded, and the costs, and asked for three weeks in which to consider the question of appeal. The judge acceded to the application.

COLLAPSE OF BUSINESS PREMISES AT DEWSBURY.—BLAKEY v. BOOTH.—His Honour Judge McCarthy gave judgment at the Dewsbury County Court on Thursday. November 18, in the action brought by George Blakey and Son, Limited, shop fitters, of the National Works, Wakefield, against Herman Booth, contractor and builder, of 16. Cedar Grove, Bradford Road, Patley, for £33 15s. 3d., damages for alleged negligence in carrying out excavations in the passage formerly running between the London City and Midland Bank and the Oxford, Market Place, Dewsbury, and now embraced in the premiscs occupied by the Public Benefit Boot Company. Mr. T. P. Perks, barrister, appeared for the plaintiffs, and Mr. J. A. Greene, barrister, represented the defendant. The case was heard on October 23, when evidence was given by many witnesses on both sides as to the circumstances which led to the sudden collapse of, and into, the trench which was being excavated, and his Honour reserved judgment. His Honour now said that by arrangement between the learned counsel the only question for his decision at the moment was that of liability. The figures were agreed, except as to one amount on which the defendant reserved his rights, and the negligence was admitted. In June last the plaintiffs were fitting up a shop for the Public Benefit Boot Company, and they arranged that the defendant's men should do all the necessary bricklayers' and masons' work. Defendant received from the plaintiffs 25 to 35 per cent, gress profit on the wages actually paid by him to his men, and a profit also on such materials as he supplied. Mr. Greene conterded that the defendant's men were merely lent to the plaintiffs, and that defendant was not liable for their nerligence. The question arose as to whether the contract was that the defendant was to do the work and have control of his men, or was it one merely to supply workmen who were to be under the control of his men, or was it one merely to supply workmen who were to be under the control of his men, or was it one hoth. Defendant w

opinion, was that the defendant should do the builder's work which might be found necessary as the job progressed, as and when required by the plantiffs, and that his remuneration was to be the profit which he made on the wages and materials by charging the scale of prices of the Federation of Builders of the district, and, therefore, he found that the defendant always had, and the plaintiffs had not, control of defendant's workmen. Accordingly he found the defendant liable. The question of how the judgment had to be entered relative to the figures on both sides was discussed at judgment should be deferred until counsel had had the opportunity of going thoroughly into the figures. It was agreed, however, that plaintiffs should have all costs on the issue of negligence in any event. Mr. Greene asked for a stay of execution, which was granted for twenty-one days.

THE LEGALITY OF STONE ALTARS.—At a sitting of the Consistory Court of Lincoln, before the Chancellor (Mr. G. J. Talbot, K.C.), the petition of the year and churchwardens of Swinstead, praying for a faculty to place a stone altar with brass cross and candlesticks thereon in the south aisle of the church has been heard in Lincoln Cathedral. The petition was opposed by Mr. Houlder, a parisinioner, on the grounds that the proposed erection was illegal, and would be likely to promote superstition; that a cross resting directly upon the holy table was illegal; and that the application for a faculty had not been submitted for approval to the parishioners at a vestry meeting. Mr. Harold Hardy, for the petitioners, stated that the proposal was to place an ancient stone slab, which bore the Consecration crosses upon it, and had been in the church for many years, upon stone piers, or, in the alternative, upon a wooden frame as a side altar in the south side. Mr. Bond, the architect, stated that the stone slab had obviously formed part of an ancient stone altar belonging to the church. Mr. Houlder also gave evidence, and said that he objected to stone altars because they were associated with the Mass and tended to superstition and were illegal. After legal argument the Chancellor allowed a faculty to issue for the placing of an altar in the south aisle with the cross and candlesticks thereon, the altar to consist of the ancient stone slab upon a wooden frame. The Chancellor, in his judgment, said that the objection to the proposal was really merely a technical one. Its covering generally prevented one from knowing the material of which the altar was made. The question was whether a stone altar was allowed by law. Referring to the cases of "Faulkner r. Litchfield," in 1849, and "Western r Liddell," in 1855, he said there were two decisions of the Arches Court and one of the Judicial Committee of the Privy Council, where fixed altars were held to be follow those decisions. But the petitioners had suggested as an alternative

on a wooden frame

RIGHT TO LATERAL SUPPORT

HORSHAM AND SHEARLEY v. T. C.

SMITH.—In this action, heard before Mr.

Justice Bailhache, two freeholders at Blackheath, Kent, claimed damages from T. C.

Smith, builder, of the same district, for removal of lateral support of the rear fences of
seven houses in Eastcombe Avenue, Blackheath,
by the excavation of gravel from the bank between plaintiff's back gardens and Moretta

Road. The defendant attributed the settlement of the fences to rainwater falling from
plaintiff's worksheps, summer houses, and
greenhouses upon the fences. After hearing
evidence, Mr. Justice Bailhache gave judgment for plaintiffs, with costs, for £110, to be
reduced to a shilling if within four months a
bank was erected and the fences repaired to
the satisfaction of an independent surveyor to
the chosen by the experts on either side or
failing that, his lordship.

It has been decided to enlarge the church at Cyfarthfa, Mon., from plans by Messrs. Johnson and Richards, of Merthyr Tydfil.

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son and Richards, of Merthyr Lydni.

In the King's Bench Division last Friday
Mrs. Helena Wakley, the wife of Mr. Horace
Magennis Wakley, of Avenue Road, Regent's
Park, claimed damages from Mrs. Elizabeth
Davies, who formerly carried on the business of
a Court dressmaker, as "Elize Kreulzer," at
11. Hanover Square, W., for alleged slander,
The jury returned a verdict for the defendant.

# Correspondence,

TOTAL BANKS AND ROAD BOUNDARIES

t (Mr. Racy's Chadwick or to 25th mst, and soonts in another part The second of the second of the way of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the s to user to trafficent width to
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so reinportance is the distraction banding lines. Areas
esser y with roads are costly t of maintait, and the excess stand continuous of thought for stand to this question, if in oit; assumed that the building as committee with the road bound t course, quite permissible in a rewly constructed road. It was the record, that the opinion of it is the as implied in their building a situation of 40 ft, wide in which the cost of its about on the boundary (for this dder symperior to a road of less " , e the building line is well set back. selection to consume the selection of the selection to the selection to the selection to the most gold y resided retorns in building by-laws districted between building lines and districtor between building lines and harrier. The torner might well be estimated to the building hims because the straint of the building many in a court of the particular traffic require

of a cays realised what a great bur-ds read is when it has to be laid out test, a with houses of the cottage type, it week accord by constructed, and subently a most entactly be reconstructed as stally necessary when taken ever by the carbor ties, for much less than £5 a foot tage. It will be seen at once that this zerocided to the great value of the land, is services, and it has undoubtedly had a story affine in imposing the narrow, on jed type of placed the average small reliance is seen a trage with which we are

A note of 30 ft is much for the vast rity of suburbar resolutial roads where transfer is cut is the only visitor, and a waste so casioned by the construction, is a constrained by the maintenance, is a constraint state of the data. The maintenance of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s

H. W. LAVARACK

HLITARY EMERGENCY HOSPITALS StE Protocological memorandum of selection of Isothy (I said, more transport to East Eastern Hospital at Cam. The First Existent Hospital at Cam-ig. It represents an act of faith and mage on the part of this only initiated it, get where I may ment of Professor (mov-tion of Sons, Woodhead, and Calond to the Commandian of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community of the Community

# SUPER VIHEORAL

bridge Reynolds, Limited, the glass mosaic by Signor Meo, and the whole of the marble work by ourselves; only on the glass mosaic were any Itahans employed, and evon on this mosaic work the greater part of the traftsmen, we believe, were English.—Yours faith-

FARMER AND BRINDLEY, LIMITED (II. W. Barnes, Director).

65. Westminster Bridge Road.

London, S.E., November 24.

M: C. Blaney, surveyor to the Newry Urban District Council, has had his salary in-creased from £200 to £300 a year.

The city conneil of Cardiff have resolved to complete the electric installation at th rechircal college at an estimated cost of £2,000.

The Local Government Board have given their sauction to the horrowing by the rural district council of Amesbury of £3,629 for works of road repair.

The Lincoln board of guardians have received the sanction of the Local Government Board for effecting alterations at the workhouse at an estimated cost of £1,200.

Mr. A. W. Ward, the borough surveyor of Shrewsbury, gave a lecture on "Town Plan-ning," illustrated by lantern slides, at Tech-nical Schools, Shrewsbury, on Thursday evening m last week.

The housing committee of the Corporation of Greenock have been authorised to prepare specifications and obtain plans for a minimum of seventy-five arrisans cottages at Craigie-

Mr. Thomas Gelethorpe, who for many years curried on a builder's business at Bourne, Lancashire, until his retirement three years ago, died last week at his son's residence at Darwen, Lancs, aged 80 years.

Mr. H. T. Wakelam, M. Inst C. E., M. S.A., the county surveyor of Middlesex, has consented to act as hom secretary and treasurer to the County Surveyors' Society, in succession to the late Mr. T. H. B. Heslop, county surveyor of Norfolk.

Professor Geddes and Mr. 11. Vaughan Lanchester, town-planning experts, have met the members of the Nagpur Municipal Committee at a special meeting, and had a discussion about the details of the exhibition to be held in Nagpur early in 1916.

The Corporation of Lancaster have decided to apply to the Local Government Board for beave to borrow £80,000 for an extension of the were works ne estrated by the prospective Proge increase of population due to Government works. The scheme includes the utilisation of the existing Abbeystead compensation reservoir The Government is to be asked to make a grant m and

The Down County Council have decided to the Down County Comen have decided of ceduce the number of assistant surveyors from twelve to six, with a salary connecting at £200 a year, with animal increments of £5, rising to £250, with 2d, per mile travelling expenses. It is proposed to differ the positions to the assistants in the order of senious. positions to the assistants in the order of seniority. Those whose offices are to be abolished are to be compensated. The assistant surveyors are appealing to the Local Govern-ment Board of Ireland against these drastic

At the list meeting of the rural district At the 1st meeting of the first district conneil of Chapel-ende-Frith the clerk reported that the Local Government Board inquity into the conneil's application for a lean for the erec-tion of heiges at Chapel ende-Frith has been the connects applie than for a lean for the eigention of houses at Chapel ends-Frith has been nell, and that the inspector had asked for an its institute scheme for sanitary accommodation, also fur the building of eight of the houses at ier small rate effect a reduction in cost, also the time induced should prepare a revised estimate of the cost, in view of the increase in across meeting scheme was prepared. It was seen it must be first, the architect, prepare to receive my pluss and estimate.

M A W Brightmore an inspector under to A of Government Board, has held an approx at Walberde-Dale into an appeal by the urbar district conneil for sanction to border of the west interest conneil for sanction to border of the west interest to the thorough from the road through Lancashire, leading best, as the west interest and Carlishe in the north. The have more traffic that passed over the road had left it in a bad state. The council proposed to reconstruct the road after the war, with 4 inches continued in a 9-sinch council pro-

# Building Intelligence.

BIRMINGHAM.-A 10,000 kilowatt temporary electric generating station has been constructed on a portion of a site at Neohells, for the Corporation of Birmingham, to meet pressing demands. The site is bounded by the Birmingham and Warwick Junction Canal and a branch line of the London and North-Western Railway, which is on a high embankment, and by the dust destructor. Between the entrance gates and canal is a roadway 32 ft, wide, and at right angles to this roud is the inclined cartway carried on arches, which serves for the delivery of refuse to use destructor. The foundations for the temporary station rest upon a sub-soil consisting of ash from 5 ft. to 7 ft. deep. Over this sub-soil concrete rafts, composed of steel grillages and reinforced concrete varying in depth from 1 it. to 2 it. 6 in., were floated. The weight of the steel structure is distributed evenly over the steel grillages. The buildings are constructed of a steel framework covered with an asbestos corrugated sheeting, which forms the roof and the walls. The dimensions of the engine and boiler-house together are 92 ft. by 124 ft, wide. The boiler-house contains six marine type boilers. In the engine-room two 5,000-kilowatt 5,500-volt 25-cycle Westinghouse turbo-alternator sets have been erected. As there is no basement to the engine-room, the condensers and air filters have been erected on the same level as the turbines and alternators. The works have been carried out under the direction of Mr. R. A. Chattock, chief electrical engineer to the Corporation. The contractors for the foundation work were Messrs. J. J. Shardlow and Co., of poration. Leicester, and for the walls and roofing Messrs. Thompson and Hughes-Jones, of Messrs. Thompson and Hughes-Jones, or Budge Row, Cannon Street, E.C. HIGHFIELD, SOUTHAMPTON.—During

the past sixteen months there has been in progress at Christ Church, Highfield, neen in progress at Christ Church, Fagineid, an enlargement of the fabric. The whole of the west end of the nave has been extended, thereby increasing the accommodation from 620 to 930, whilst a vestry has been added also. The extension of the east end, and the provision of a porch beneath the west window are introduced by the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s provision of a porch beneath the west window are improvements which will be taken in hand after the war. The present work has cost about £5.500. The walls have Bath stone dressings, and the west end is filled with a four-light window. The building has been carried out by Messrs. A. White-Bowman, of Bournemouth, to plans prepared by Messrs. J. Oldrid Scott and Sons, Dean's Yard, Westminster, the work being under the direction of Mr. H. C. Kite, the foreman and manager. During the progress of the work the builder, Mr. A. White-Bowman, and Mr. J. Oldrid Scott, F.S.A., the father of the present architect, both passed away.

TRADE NOTES.

Boyle's larest patent "Air-Pump" ventilators have been applied to the New Prison (Block B), Saughton, Edinburgh.

Messrs, Palgrave and Co., architects, announce that they have removed from 23. Bloomsbury Square, W.C., to Bloomsbury Mansions, 26, Hart Street, Bloomsbury Square, W.C. Their telephone will be as hitherto—Regent 5175.

Regent 5175.

Me. S. F. Monier-Williams, A.R.I.B.A., Interim District Surveyor for St. Pancras (South), announces that after December 1 the district offices will be 43. Grafton Street, Tottenham Court Road, W. He has just been appointed Interim District Surveyor by the L.C.C.

In most towns swimming baths are closed for In most towns swimming-baths are closed for the winter months. This gives an opportunity to repair any leaky places. The bottom of the swimming-bath at Fetters College. Edinburgh, which leaked very badly, has been re-cemented and lined with glazed bricks. We have re-ceived a report that for making the cement waterproof the powder Pudlo was employed with excellent results.

As St. Augustine's Mission Church at Ches perfield has become dilapidated, a new church is to be built at a cost of £2,500.

A nurses home is to be added to the Here-ord-hire General Hospital in Hereford city fordshire General Hospital in Hereford city after the war. Messes, Nicholson and Clarke are the architects, and the propes d expenditure is about £4 000.

# Om Office Table.

The memorial which the Committee on War Damage is to present to the Prime Minister says: "Although the Government scheme only came into force on July 19 last, immense losses and great hardships have been suffered in many districts, and it seems to your memorialists exceedingly unfair that these should not be borne by the nation; and notwithstanding the fact that the withdrawal of the scheme would now involve a considerable expense in the first instance, it is yet, for the reasons stated above, highly desirable that the Government should retrace their steps in the matter, repay the premiums already received, and, as trustees for the received, and, trustees for the nation, proclaim their intention of giving fair compensation to the owners of property and goods that have already been, or may in future be, damaged or destroyed either by aircraft or bombardment. This, in the opinion of your memorialists, is the mamfest duty of the Government, and one which they are bound by every consideration of justice, expediency and public policy, to recognise and carry into effect. The following bodies (in addition to those already reported) have decided to join in the presentation of this memorial:—Municipal Corporations; Bromley (Kent), Chatham, Croydon, Faversham, Hertford, Newcastle under Lyne, New Romrey. Scarborough. Wednesbury; and than District Councils: Bracebridge, Linguishire, Clacton-on-Sea, Haverhill (Essex). Heston and Isleworth, Long Sutton, Normanton, Seaham Harbour (Durham). Shering-ham (Norfolk), Stanley (Yorks), Tottenham.

The Kalendar of the Royal Institute of British Architects for the eighty-second session, just published, contains 482 pages, against 492 last year. The list of memberagainst 492 last year. The list of membership contains the names of 864 Fellows, 32 retired Fellows, 1,707 Associates, 1,904 Licentiates, 12 Hon. Fellows, 54 Hon. Associates, 249 Hon. Corresponding Members, as against 858 Fellows, 32 retired Fellows, 1,694 Associates, 2,045 Licentiates, 12 Hon. Fellows, 55 Hon. Associates, and 65 Hon Corresponding Members at the same period last year. There is thus shown a slight in-crease in the classes of Fellows and Associates, a natural decrease in the stationary class of Licentiates, part due to transference to the rank of Fellows, and more largely to the inevitable mortality, while the compara-tively large decline in the number of Hon. Corresponding Members is the result of the excision of the names of those of nationalities at war with us. The sessional meetings will be held at 3 p.m. on December 13, January 3 and 51, February 28, May 1 and 13, June 5 and 19. The competitions for prizes and studentships have been suspended for the duration of the war.

Four districts have been chosen for the work of the Civic Surveys now in progress

Greater London, South Wales, South Lancashire, and South Staffordshire. A number of professional men who have been hard hit by the war are doing the work. In each of the areas they are preparing a series of craphic diagrams showing the physical characteristics of the area; vital statistics as to death and disease for, say, fifty years density and growth of population: provision of playing fields, recreation grounds and parks; character and growth of industries; extent to which present traffic needs are met and forecast of probable future requirements: conditions under which housing areas have developed in the past, and a comparison with newer views in the laying out of building estates. These diagrams will be of the utmost value.

Shortly after the death of Sir Laurence Alma-Tadema, R.A., a committee was formed for the purpose of honouring his memory by a public memorial over and above the inscribed slab on his grave in St. Paul's Cathedral which the Royal Academy had undertaken to provide. While funds were being raised for the purpose, the Misses Alma-Tadema presented to the committee the original marble hust of their father executed

by the late Ouslow Ford, together with the pedestal designed by Sa Laurence humselt; and all the subscriptions were then devoted to the purchase of Sir Laurence's library. with a view to presenting it to some public institution in London, where it would be readily accessible to artists and students of ait and archaelogy. An offer of the collection, together with the of the collection, together with the bust, was made to the Victoria are Albert Museum, and was gratefully accepted The "Alma-Tadema Memorial Library," which was tormally presented to the Museum by Princess Louise, Duchess of Argyll, on Wednesday, and was accepted by Sir Cecil H. Smith, the director and of the museum, contains over secretary 4,000 volumes and pamphlets, dealing pain cipally with the monumental and artistic side of the archaology of antiquity. Numerous books treat upon the painting of the Historical School, and an important feature of the collection is a series of 163 portfolios contaming photographs and sketches by Sir Laurence of details of Clas portfolios sical and Oriental architecture, act, costume and life which interested him so deeply. The collection was purchased by subscribers for £1,000, but had been returned for probate at three times that figure, and is housed in two wings of the West Room. No. 74, of the Art Library at the museum. Sie Cecil Smith has had a synopsis drawn up of the contents of the portfolios, and he referred to without any subject can The collection of printed and illustrated books consists of several thousand volumes. A complete catalogue has been prepared, and when funds are forthcoming it will probably be printed

The taxation of sewers was considered on Friday by the Treasurer's Committee of Edmburgh Town Council. The question came up through a letter that was received, intimating that the Treasury would not agree to relieve the corporation of the tax on sewers unless a Bill were introduced by agreement to have the sewers taken out of the Lands Valuation It was resolved to communicate with Act. It was resolved to communicate with the other four large cities, and with the Convention of Burghs, who had been associated with the corporation before in the representation made to the Treasury on the subject, with a view to adopting a course. It is understood that the would not be unwilling to consider the matter sympathetically were it not for the present circumstances of the country and the difficulty of getting through Parliament a Bill that would be agreed to on all sides.

Presiding at the twenty-fith annual meet ing of the Glasgow Workmen's Dwellings Company on Thursday, Sir D. M. Stevenson recalled that the company was formed to provide decent, sanitary houses at lents no gher than those of the ticketed houses the same neighbourhood. They had been higher than those of able to do so for some years, the rents being sufficient to pay the normal value of money from time to time, which the company set down at 4 per cent. For the last nine years, however, the company had not been able to pay more than  $3\frac{1}{2}$  per cent. But matters had now come to a crisis. An amount equal had now come to a crisis. An amount equal to 12½ per cent, of the rental had been laid aside from year to year for depreciation and repairs. That amount reduced the book value of their properties by something over £4,000, but still left the book value a great deal higher than the properties would bring in the market. On the other hand, if they were called muon to randage the landinges in were called upon to replace the buildings, it would cost them a very great deal more than their book values. To meet the present position the rents would require to be in-creased by about one-third, but meantime the directors did not propose to make any change, but to await the promised legislation With regard to the higher rate of interest which bondholders were demanding, he thought it was a shocking thing that the Government should give 45 per cent, to people for their money and say to bondholders that they should not ask more than  $3\frac{1}{2}$  per cent Mr. D. M. Scott seconded the adoption of the report, and other speakers urged the necessity for increasing the depreciation fund, but did not see how it could be done with F.R.4.B.A., the borough architect.

the present rents, and also pay the norma, rate of interest. The report was adopted

"Lime and Cement," by J. G. Alams and C. A. Elhott (London, Blackie and Sch. Lumited, 50, Old Barley, E.C.) is one of the Limited, 50, Old Bailey, E.C.) is one of the interesting. "Rambling Industry Books issued by the publishers, and very readable. Most of the photographs and diagrams and much of the information has been supplied by the Associated Portland Cement Manufactures (1600). I constall an experience of the property of the control of the property of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contro turers (1900). Limited, and therefore it need hardly be said is valuable and reliable.

Two interesting old documents have been presented to Princeton University, near Trenton, New Jersey, by the Hon Bayard Stockton, of the class of 1872. These are the original architect's drawing of Ivy Hall on Mercer Street and the Old Chapel, which stood near the eastern end of Nassau Hall until it was taken down in 1896 to make room for the new University Library. The drawing of the Old Chapel bears the signature of John Notman, the architect, and is dated April 13, 1847. It slows the front and side elevations, the interior and the ground plan. with its cruciform outlines, which at time caused much concern in Presbyterian circles. The other drawing shows the front and side elevations and the ground plan of Ivy Hall, which was originally creeted as the home of the Princeton Law 8 hool.

The new City Hall, in Cleveland, Ohio, which is rapidly nearing completion, is the third building of an important group plan to third building of an important group plan to be erected. It is Free Classic in style and stands at the foot of East Sixth Street, on a high bluff, overlooking Like Erie to the north, and balances the Cuyahoga County Court house in the group plan, being on the opposite side of the Mall. The Mayor of the city has been finally successful in coming to an agreement with Pennsylvania and Xew York Central Railroad interests, and the Gredban-Burnham Commany, Chicago, is now Graham-Burnbam Company, Chicago, is now ergaged in preparing plans for a tew \$17,000,000 passenger terminal to be the key note of the group. Mr Writer R. McCor-rook, architect to the Board of Education, has prepared plans for a central commercial school and office building for the Board of Education, to be erected at East Sixth Street and St. Clair Avenue, on the Mall, at a cost of \$1.000,000. This building will be five stories in height, with an anditoriam on the ground floor, a gymnasium on the top floor, and a running track on the roof. The Post Office has been bulk as part of the plan from designs by Mr. Arnold W. Beunner, of Boston, Mass. The sixth bulling in the group is the proposed public library, to occupy the site of the present City Hall, and for which an architect his not yet been The group plan commission conselected. Messrs, Frederick Law O'msted and to sista Arnold W. Brunner, of Boston, and Frank B. Meade, of Cleveland, who receive \$1,500 a year each and travelling expenses for their advisory services.

Messrs. Robert Jenkins and Co., Rotherham, have issued a new catalogue and list of discounts of their well-known wrought-iron and steel-welded and riveted boilers of every description for heating by low-pressure, and water or steam, and for domestic hot water supply, also of their brazed pure copper boilers and cylinders, and their vertical boilers for steam engines or cooking purposes. In either line the reputation and experience of this well-known firm is second to none in the Empire, and the preliminary notes in the introduction will be found most valuable by all architects, builders and others. It will be noted that the gross prices of boilers from pages 12 to 19 inclusive have been increased, but instead of their being under Class E as formerly, they are now subject to a greater d'scount under Class D.

Mr. Taylor having resigned his as borough engineer to the Maldle-broughs Corporation, Mr. Scotson was on Wednesday night appointed his successor at £300 a year.

#### CHIPS

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### MEETINGS FOR THE ENSUING WEEK

PS FOR THE ENSUING WEEK, To rev. Royal Secrety of Arts. "Thressets and War," by Dr. A. L. Shipley, F. R.S., Master of Christ's College, Cambridge, 4-30 p.m.

St. Paul's Leclessological Society, Some Churches in North-West Koat," by E. Regnald Taylor, 8t. Paul's Chapter House, E.C. S. p.m., Institute of Santary Engineers, 'The Disposal of Sewage by Dilution," by Dr. W. E. Addiey, S. p.m., Shiffield Society of Architects, 'The Stringle for Lifhenery during Price Poriods of English Architecture," by J. B. Mitchell-Withers, I. R.I. B.A. (Seew. Architectural Craftsment's Society, etc.).

F. R. U.B.A.
G. asgow, Architectural Craftsmen's Society,
"In gest Media val Architecture," by
Charles, Gourlay, B.Sc., A.R.I.B.A. narles 45 pent

7 45 p.m.

Future of Minneipal and County
Lingmore, Eastern sub-Distract
Meeting at Bury 8t. Edmunds,
"War Time Ecotemy by Docal
Authorities," by William H. Lley. MONDAY. Roya

WEDNESDAY

THERSDAY

FEIDAY D

The Spanish Government are about to constince it strategic railway from Estada and Tamarire to Balaguer, Spain.

Important additions to Messrs Kynoch's mountion factory at Acklow have lately been empleted by Messrs, G. and T. Crampton, outractors, Diblin.

The Corporation of Dublin are about to take up a loan of £22,400 in onnection with the looking scheme on the Ormond Market site. It is proposed to erect 150 noises.

A L cal Government Board inquiry has been held at Matlock into the application of the unban district council for sanction to continue the construction of a sewerize scheme at an estimated cost of £75.3°9.

A site has been purchased at the corner of Wilzer on R ad and Fenlatt Hall Drive. Newscale on Tyne, for the erection thereon of a reservice church of St. Manca. The estimated of a contract church is \$10,000.

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# TO ARMS!

418 BATTALION CENTRAL LONDON VOLUN.

4TH BATTALION CENTRAL LONDON VOLUNTEER REGIMENT.

Recruits are urgently needed for the Regulars, Territorials, and Volunteers. Intending recruits should apply to Battalion Headquarters, where they will be advised as to the branch of the service for which they are best suited.

ORDERS FOR THE WEEK, BY SUB-COMMANDANT C. S. PEACH.

GENERAL PARADES.

Opening meeting on new Drill Headquarters this evening. Parade in un form, 6.45 p.m, sharp. The Regimental Commandant, Brig.-Gen, the Hon, F. C. Bridgeman, and others have promised to be present. A large attendance is specially requested. Members acting as orderlies should report themselves to Plateon Commander C. H. C. Bond at 6.15 at head-countries. saturday. December 4.—Parade at East Putner

saturday, December 4.—Parade at East runner Station at 2.45 p.m. sharp for route march. As this is the first combined parade with the L.C.C. Staff Corps it is hoped that there will be a large muster. There will be no parade on Saturday, December II.

# ENTRENCHING PARADE.

Sunday next, December 5, at Victoria Station, L.B. and S.C. Ralway indicator board, 5.55 a.m. Uniform, haver-sicks, and water bottles. Midday rations to be carried. Return to town about 6.40. Railway voinchers will be provided, and a special train run by the railway company.

LECTURE.

Tue-day next, December 7, 7 to a p.m., on "Field Engine ring.

RESIGNATIONS.

RESIGNATIONS.

Commandant Lieut. (Col. W. W. Warden resigns appointment on receiving an active command. Acting-Company Commander Gervase Bailey resigns has appointment on receiving a Second Lieut. Commission, Kent (Fortress) R.E. (T.F.).

### APPOINTMENTS AND PROMOTIONS.

Plateon Commander E. J. Castell to be Company

Plateon Commander E. J. Casten to be Platoon Commander. N. E. Brown to be Platoon Commander No. 1 Platoon.
Section Commander C. H. C. Bond to be Platoon Commander No. 2 Platoon.
Platoon Setzeant E. P. Hudson to be Platoon Commander No. 3 Platoon.
E. L. Sanderson to be Platoon Commander No. 4 Platoon.

By Order.
L. R. GUTHRIE, Adjutant. L. R. GUTHRIE, Adjutant, Place, S.W. Battalion Headquarters, Is, Tufton Street, West-minster, S.W.

Dr. James M. Baldwin, honorary professor of the University of Mexico, will deliver the Herbert Spencer Lecture in the Lecture Room of the Oxford University Museum on Wednesday, March 15, 1916, at half-past two in the afternoon.

The West Sussex County Council have agreed to obtain further expert opinion upon the condition of Norfolk Suspension Bridge, which carries the main road over the Adur between Shorenam and Lancing. The scheme for re-Shorenam and Lancing. The scheme for construction is estimated to cost £20,000.

At a representative meeting held at New-castle on November 24 the Lord Mayor (Mr. George Lunn presiding, it was resolved to invite the British Association to meet in New-castle next year on lines similar to those adopted at the Manchester meeting.

A new building is to be erected for the Henne of the Daughters of Jacob on the block bounded by 167th Street, Finlay and Teller Avenues, in New York City, Mr. Louis Allen Abramson, 220, Fifth Avenue, New York, the architect, estimates the cost at \$400,000,

Quartermaster and Hon. Major Llewellyn Plantas, 6th Battalion Welsh Regiment, died at Swansea on Monday while home from the front on sick leave. He was the second son of the late Mr. William Thomas, a well-known Swansea builder, and was staving with his brother. Captain Thomas, Chief Constable of Swats a.

A payement of 2×4-in, timbers is the unique feature of an automobile speedway recently completed near the city of Chicago. The track, which is at Maywood, Ill., is two miles long, and consists of two parallel straight sections connected by curves at the ends. The track is about 65 ft, wide on the tangents and 75 ft, on the turns, which are banked to a maximum of 25 ft. The track is supported on timber trestling, the track proper resting on 2×12-in, joists. The flooring or payement consists of 2×4 in tamarack timbers, placed on edge longitudinally of the course. The timbers are about 16 ft, in length, and lap about 2 ft, at the ends, and are spiked together at intervals.

#### LATEST PRICES.

N.B.—All prices must be regarded as nerely approximate for the present, as our usual sources of information are in many bases failing us.

# TIMBER.

Owing to stoppage of supplies all prices have advanced considerably.

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мо	UL	DED	BRI	CE	s.					
Stretchers and Heade	rs	-								
8d. each 8d. eacl	h	8d. e	ach	1	8d.	ea	eh-	8d.	ea	сb
Internal and Externa	ıl a	Angles	·							
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CONTRACTOR CARRAGE		han a	LIO	o A	are.					

internar and Externar Angres—	
1/2 each 1/2 each 1/2 each 1/2 each	1/2 each
Sill Bullnose, Stretchers, and Headers—	
5d. each 4d. each 6d each 6d. each	5d. each
Majolica or Soft Glazed Stretchers and	Per 1,000
Headers	£22 17 6
Qnoins and Bullnose	27 17 6
Quoins and Bullnese Compass bricks, circular and arch bricks of	Not
single radius £6 per 1,000 over above list	exceed-
for their respective kinds and colours	ing 9 iu.
Camber arch bricks, any kind or colour,	by 4½ ia.
1s. 2d. each	Jby2∦iα.
Stretchers out for Closers and Nicker	d Double
Headers, £1 per 1.000 extra.	
These prices are carriage paid in full tri	uck loada
to London Statious. s. d.	
Thames Saud 7 6 per yard,	delivered.

Thames Ballast	6	0		11		Per ton
Best Portland Cement	36	0	to	41	0	delivered
Ground Blue Lias Lime	21	0	per	to	n,	deliv <b>e</b> rad.
Exclusive of cha	rge	for	sa.	ck!	3.	
						Per yard
Grev Stone Lime	1.3	6	to	14	0	delivered

Grey Stone Lime	13	6	to 1	4 0	deliv	ered.
Stourbridge Fireclay in sack	8 2	7s.	0d.	per	ton at	rail-
way station.						

way station					
	STONE.*				
Red Mansfie	ld, in blocks pe	r foot cube £0	) 2		4
Darley Dale,	ditto	,,	) 2		6
Red Corsehil	II, ditto	,,			6
	ed Fre <b>c</b> stone, ditto				. 2
	to		) ]		11
	itto		) 2	2	0
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	)	"	) 2		103
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landings, r	ı, sawn both sides, andom sizes pe	r foot sup. (	) 2	?	8
	n. slab sawn two	,, (	0 1	l	3
anev. rand	* All F.O.R. Load				

Bath Stone-Delivered in rail- way trucks at Westbourne	£	8.	d.
Park, Paddington (G.W.R.), or South Lambeth (G.W.R.) per foot cube	0	1	7 ½
Delivered in railway trucks at Nine Elms (L. & S.W.R.)	0	1	83
Delivered on road waggons at Nine Elms Depot	0	1	91
Portland Stone—Brown Whit- bed in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park (G.W.R.), South Lambeth			
(G.W.R.), or Nine Elms (L. & S.W.R.)	0	2	5
Pimlico Wharf or Nine Elms Depot White Basebcā-2d, per foot cube crtra.	0	2	61
TILES.  s. d.  Plain red roofing tiles	Ю г	у.	

TILES.				
	Б.			lvrd.at
Plain red roofing tiles	42	0 per	1,000	ry. an.
Hip and Valley tiles		7 per	doz.	11
Broseley tiles		0 per	1,000	
Ornamental tiles		6	* 1	11
Hip and Valley tiles	4	0 per	doz.	**
Ruabou red, brown, or brindled				
ditto (Edwards)	57	6 per	1,000	* 1
Ornamental ditto	60	0	11	1.5
Hip tiles	4	0 per	doz.	11
Valley tiles	. 3	0	11	**
Selected "Perfacta" roofing				
tiles : Plain tiles (Pcake's)		0 per	1,000	11
Ornamental ditto		6	. 11	71
Hip tiles		10 per	doz.	11
Valley tiles	. 3	41		**
"Rosemary" brand plain tiles .		0 per	1,000	11
Ornamental tiles	50	0	-11	**
Hip tiles	4	0 per	doz.	**
Valley tiles	3	8	11	11
Staffordshire (Hauley) Reds or				
brindled tiles	42	6 per	1,000	11
Hand-made sand-faced	45	0	.11	**
Hip tiles	4	0 per	doz.	11
Vallay tiles	3	6	99	1.0
"Hartshill" brand plain tiles,			1 000	
sand-faced	45	0 per	1,000	11
Pressed		6	11	91
Ornamental ditto		6	,,,	17
Hip tiles	4	0 per	doz.	17
Valley tiles	. 3	6	11	11
OILS.				

Rapeseed, English pale,	per tun .	£ 28	15	U to		Э	U
Ditto, brown	- "	26	15	0 ,,	27	5	0
Cottonseed, refined	11	29	0	0 ,,	30	0	0
Olive, Spanish	11	39	10	0 ,,	40	0	0
Seal, pale	11	21	0	0 ,,	21	10	0
Cocoanut, Cochin	11	46	0	0 ,,	46	10	0
Ditto, Ceylon	11	42	10	0 ,,	43	0	0
Ditto, Mauritius	11	42	10	0 ,,	43	0	0
Palm, Lagos	11	32	5	0 ,,	33	5	0
Ditto, Nut Kernel	11	35	0	0 ,,	35	10	0
Oleine	11	17	5	0 ,,	19	5	0
Sperm	11	30	0	0 ,,	31	0	0
Lubricating, U.S		0	7	0 ,,	0	8	0
Petroleum, refined	11	0	0	64,,	0	0	6
Tar, Stockholm	er barrel	1	6	0',,	1 1	10	0
Ditto, Archangel		0	19	6 ,,	1	0	0
Linseed Oil	per gal.	0	3	3 ,,		_	
Baltic Oil	11	0	3	7 ,,		_	
Turpeatine	11	0	3	10 ,,		_	
Putty (Genuine Linsced							
Oil)	per cwt.	0	9	6 ,,	-	_	
Pure Linseed Oil	•						
"Stority" Brand	**	0	9	0 ,,		_	
•							

# GLASS (IN CRATES).

English Sheet Glass:				
Fourths	5d	6 <b>d</b>	61d	73d.
Thirds	6d	63d	7 <u>1</u> d	844.
Fluted Sheet	6d	7d		
Hartley's English R	olled 🛔	in.	a io.	in.
Plate	4	igd	4 <u>t</u> a	43a.
			e. T	
Figured Rolled		4:	ld	6d.
Repoussine		4	d	5 <u>1</u> d.
Rolled Sheet				

VARNISHES, Etc.	Рe	r gallo	n.
Fine Pale Oak Varnish		£0 8	6
Pale Copal Oak			0
Omnilac Copal Oak		0 10	С
Superfine Pa's Elastic Oak		0 12	a
Fine Extra Hard Church Oak		0 10	0
Superfine Hard-drying Oak, for scats			
churches		0 14	6
Fige Elastic Carriage		0 12	0
Superfine Pale Elastic Carriage		0 16	6
Fine Pale Maple		0 10	0
Finest Pale Durable Copal		0.13	6
Extra Fine French Oil		1 1	9
Eggshell Flatting Varnish		0 18	0
White Copal Enamel		1 4	Ó
Extra Pale Papar		0 12	0
Best Japan Gold Size		0 10	0
Best Black Japan		0 16	ğ
Oak and Mahogany Stain		0 9	9
Brunswick Black		0 8	ō
Berlin Black		ŏ 16	ŏ
Knotting		0 10	ō
French and Brush Polish		0 10	ŏ
FIGUUM GHU DIUGH E CUSH ,		~ 40	•

In the north aisle of the Abbey Church at Romsey a tablet, erected as a memorial to Lieut. Athelston K. D. George, who was mortally wounded at the battle of the Marne, has been unveiled. The tablet is of white Carrara marble. In each of the upper angles is a crest, one being that of the Dorset Regiment and the other a family crest. Along the full length at the bottom is a sheathed officer's sword, entwined in branches of leaves and berries. The framing round it is of polished Rouge Royal marble.

#### TO CORRESPONDENTS

on the constants responsible for the opinions of the criespenients. We communications should be drawn by as briffy as possible, as there are many channels upon the space allotted to correspondents.

fraily community upon the space allotted to correspondents. It is particularly requested that all drawings and all communications respecting illustrations or literary mather, beside for review, etc., should be addressed to the latter of the BUHLONG Kinns, Effingham Bussel, Arnabid Street, Strand, W.C., and not to non-orse of the shall by name. Driay is not infrequency otherwise caused, all drawings and other some area of the shall by name. Driay is not infrequency otherwise caused, all drawings and other some above and are contributors, risks, and the latter with a undertake to pay for, or be liable for an essing it contribution.

Tellbraw use of subcreted competition designs, important pair or and private buildings, details of old and in wild work, and good sketches are always welsome of for such no charge is made for insertion. Of in the commonplace subjects, small churches, happing, consists, etc. we have usually far more sent than we can insert, but are glad to do so when space pends, on motivally advantageous terms, which may be ascertianed on application.

When fay at up us with drawings or photographs.

may be ascertained on approachem.

When fay as he as with drawings of photographs, architects are asked kindly to state how long the building has been erected. If does neither them nor as much a set to illustrate buildings which have been some time executed, except under special circum.

Tobas ne: Gerrard 1291.

Telegrapis " I meserver, Estrand, London,"

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SHITTIONS VACANT AND PRETME-HIPS
The charge for advertisements for "Situations
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Twenty for Words and Superme for every Eight
Worth offer An Situation Advertisements must be
frequent

# SITE ATTO NE STANIED.

A conserve for even ding Thirty Words.

IN the finance and a dries, are inserted under the finding "stratutions Waited," free of charge.

Rose for Trade Adversaments on front page and speed or interest perfect can be obtained on all in the finance of the second of the content of the second of the content of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of t

# ALTERNATION OF THE OF THE

Bay Colored Will to pro-" esmonts can be received at the Holes, L. Arindo' Street, Strand over 1f. to be forwarded under to the straichinge of Supence is ce at head of "Situations.")

Advertise: at for the current week must reach the office not and than 3 pm. on Tuesday. Front-

page advertisements and alterations or stop orders for serial advertisements must reach the office by first post on Monday to secure attention.

THE NEW POSTAL RATES. Do not torget that shough we are penalised by the new postal rates because we still keep to our old size, and therefore a copy of the BERDING NEWS (records the saxonnee limit, we are making no extra charge to subscribers who receive their copies direct from the office, the subscription rate remaining as before the peralimination. Its half-yearly, and 5s, quarterly—Now is the time to subscribe.

P. J. F. Phase send

CANTIES. See our first article this week

It is one of a number of similar firms, all forman controlled, in various countries, and a tovernment receiver is appointed here. You can see the list of shardholders, etc., at Sometset Hense, on payment of one shifting.

#### FOR

# Olivers' Seasoned Hardwoods.

WM. OLIVER & SONS, Ltd., 129, Bunbill Row, London, E.C.

#### TENDERS

'.\* Correspondents would in all cases oblige by giving the addresses of the parties tendering-at any rate, of the accepted tender: it adds to the value of the information.

Bedford For electric light installation at the steam and electric pumping scations, for the corporation  $\gamma$ . Wilton, W. S., and Co. (accepted),

BRIDGINGTON. For the supply of whinstone, for the

BRIDEINGION.

was conneil

Ord and Madison. Ltd., 23-m. whinstone,

11s. 6d per ton (ne epted).

brais For works of dramage at University Colleve, Dubhn
Crompt in, G. and T. Dubhn (necepted).

LASHBIGH, HAVES. For the supply and delivery of 400 fons of grainte, for the urban district council; - Cooper and Collected, Lbs. 10d. per ton.

Cooper and Co (accepted), los 10d, per ton,
Leland For the creation of milling and funshing
works, with engine and boiler houses, climiney, and
reservoir, south Lane. Messers, Charles F. L. Horsfull and Son, Lord Street Chambers, Halifax, archiliets Vecepted tenders:—
Mason work. Marshall and Rushworth, Plains Lane,
tomer work. Hawkyard, J., & sons, Timber Street,
Plander-glazier work:—
Planteer-glazier work:—
Collins, s., and Sons, Statuland,
Tronfounder work.—
Mackiell, J., and Co., Etd., Union Foundry,
All of Liland.

For supply of rubber-insulated cables fill tstitett. fown conne Pirelli, Ltd. (recommended for acoustince).

HAISHAD, LSSEA For an addition to the isolation hospital, Womit Hill, Halstead, for the Halstead Joint Hospital Board Meers, Goodev and Cressall, 8t Peter's Chambers, High Effect, Colchester, itchites

Bennett and Share, Ltd., Ipswich, £2,160 0 0 

ter 1,975 0 0 Dobson, G. and Son, Colchester 1,896 0 0 Wenden, C. B., Witham 1,889 0 0 Chambers, W., Colchester 1,778 0 0 Vecepted.

LEEK, STATES. For resetting a bed of retorts at be gasworks, for the urban district council; Gabbons Brothers, Lid., Dudb.y., C227-15, 0 + Accepted.

Livishum, S.L. For the repair of footways, for the bacough council. Per superficial yard Marchers, W., 38 11d.; Manders, W., and Co., is fd; Willis and Fown, 4s, 3d; Feote and Wire, Ltd., 6s 1d; Davey and Armitage, 5s 3d; Alexandra, Paving Stone Co., Ltd., 4s 5d; Brookes, Ltd., 5s, 5d; Atlas Stone Co., 15d; 5, 9d;

Recommended for a ceptance,

1,305 0 0

LONDON. For lighting work at certain premises the London Insurance Committee:— Finch and Wheeler (accepted).. £459 0 0

PAGE PREMEIT. For the supply of water-softening plant at the New County Lunaric Asylum at Park Prewett, mar Basing-toke, for the Hants County Conneil

timted Water Softeners, Ltd. (accepted).

THORRY THANKY, For erecting fencing at Thorpe Tilney for read improvements, for the Sleafon Rural District Council;— Blaze, J. W., Sleaford (accepted).

Wateriord.—For the eraction of mineteen working ass houses, for the corporation:—
Hearne, John, and Son (accepted), £3,100 0 0

WESIMINSTER. For executing during four month items Nos. 5, 6, 7, 8, 10, and 11 of the contract for wood-priving carriageway repairs, for the Westmin Conneil

ster City Council;— Haves, Frank, Century Buildings, North John Street Liverpool (accepted).

You on M. For building retaining walls at the light house cliff and garden, for the urban district coun

Sir William Lever has presented to the Parks Committee of Bolton, for use as a park and pleasure grounds, sixty-eight acres of land on the east side of the borough, which the committee had previously arranged to purchase.

The Road Board have decided to grant the Hants County Council £7,000 towards the cost (£27,972) of surfacing roads with tarmac and tar dressing.

At Childrey Church, near Wantage, a memorial stained glass window to the members of the Old Berks Hunt who have taller in the war has been unveiled by the Arch deacon of Oxford. The window represents the Incornation.

The Victoria Rosms, Clifton, Bristol, have been reopened this week after renovation and internal decoration, carried out by Messrs. William Edkins and Sons, of Queen Charlotte Street, Bristol.

A memorial to the late Earl Nelson in Sali-A memorial to the late Eart Nelson in Sale bury Cathedral was dedicated last week by the Bishop of Salisbury. It consists of a tablet composed of statuary marble surrounded by a green marble border. The tablet contains the Nelson arms and an inscription.

The Bridgwater Rural District Council at their uncerting on Thursday gave permission to Mr. Charles Herbert (assistant surveyor) to join the Wessex Royal Engineers, and intinated that the question of Mr. Herbert's remuneration would be very fairly dealt with

The Board of Trade has recently confirmed the order made by the Light Railway Commissioners, authorising the construction of light railways in Sussex from Hunston to West Itchener, West Wittering, and East Wittering, meluding the reconstruction and working as a light railway of the Hundred of Manhood and Selsey Trainway.

Now that the official tests have been successfully carried out, the floating dock at Prince Rupert, BC, the Pacific terminus of the Grand Trunk's transcontinental railway, is Grand Trunk's trans-continental railway, is ready for business. It has a length of 604 feet, and is capable of lifting the largest vessels at present engaged in the trade of the Pacific-The question of making an excavated dry dock. 1,150 feet long, at E-quimanlt, is now being considered by the Dominion Government

# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

	Effingham	House,	CON
The	Ventilation of Picture Halls		639 Building Intelligence
	Manufacture of Portland Cement		640 Parliamentary Non-

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# Strand, W.C.

# OUR TIALUST RATIONS.

061 Young Men's Christian Asso iation Premises, Ldin burgh. Elevation and plans. Mr. G. Washing-ton Browne R.S.A., Architect. 664 666 .. 666

668

Alliance Assurance Company's New Premises, Smellield, View of exterior, the main office, board room, and secretary's foom, with two plans, Meser , Gold and Catlow, FF.R.L.P.A. Architects.

Details of the Tower, Kharfonin Cathedral, Sudan, Mr. Robert Schultz Weir, Architect.

# THE VENTILATION OF PICTURE doubtedly destined to completely revolu-HALLS.

# By ROBERT BOYLE.

the teaching communities as a valuable educational aid, and it undoubtedly forms one of the most instructive of object lessons, making an instantaneous and lasting impression upon the mind, expecially of the young.

The picture hall may, therefore, justing where will be hopefaid for both their health and the globes, and which it may supersed as a more efficient teacher.

There will be fewer truants then, and object lessons, making an instantaneous and lasting impression upon the mind, expectation of the young.

The picture hall may, therefore, justing where will be hopefaid for both their health and

tionise the present methods of teaching.

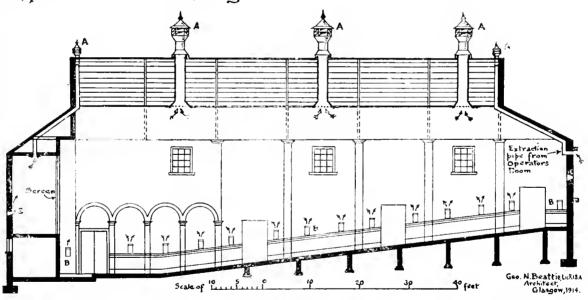
The time will come when the cinema tograph will be an essential in every school—as indispensable as the black-The cinematograph may, at no very school—as indispensable as the black-distant date, be generally adopted by board and the globes, and which it may

commendable example of Leith. It is satisfactory to note that Brighton has already done so, making it compulsory for all picture halls and other places of amusement in that town to be efficiently and satisfactorily ventilated.

Government inspectors should certainly be armed with greater powers in respect to the ventilation of not only places of amusement, but of all public buildings. including churches, schools, hospitals. etc. It is, indeed, well known that many people abstain from going to church or to rank as an educational institution where will be beneficial for both their health and the theatre, much as they would like to do

# THE "BOYLE" SYSTEM OF VENTILATION

Applied to Picture Hall, Glasgow.



B, AIR INLET BRACK. A, BOYLE'S LATEST PATENT "AIR-PUMP" VENTILATORS, DESIGNSNOS. 230 & 231. ETS. FITTED WITH REGULATING VALVES.

a little judicious recreation may agree-ably and profitably obtain both by making a visual acquaintance with almost everything and anything that is worth seeing or knowing about in this wonderful old world of ours; besides bringing within their immediate purview a faithful representation of important and interesting current events throughout the world.

There is really nothing that can compare with the cinematograph as a universal instructor, making the acquirement of knowledge a source of the keenest enjoyment, instead of, as is but too often the case, an irksome task to be shirked when ever possible. Its educational possibilifor the community if the sanitary authorities are, indeed, illimitable, and it is un-irities of other towns followed the highly the success of a natural system of ven-

those in quest of knowledge combined with tempers, as well as that of the scholars, and more happiness will exist all round.

That the ventilation of picture halls, of which there are many thousands in this country, demands, in the interests of the public health, the most careful attention goes without saying, and also the closest supervision, as is evidenced by the published report of the investigations recently made at Leith into the sanitary condition of the air in a number of local picture halls, and which was found from the tests made to be so foul and poisonous that in at least one case the hall had to be closed. Franklin says: "A people's health's a nation's wealth," and it would be well

so, simply because of the foul air or the intolerable draughts so often found in these buildings.

" Statistical inquiries Parkes says: prove beyond a doubt that, of the causes of death which are usually in action, impurity of the air is the most important. Air is the prime supporter of life; health, even life itself, is dependent upon its purity.'

Many different forms of ventilation have been tried, but in most cases with but very indifferent results, artificial methods proving, apparently, as unsatisfactory as natural where these have been incorrectly and unscientifically applied.

ipwar consult if the researched to a creater and the account and the ught the research person of the creater and the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to the country so at some even to t ten the transmiply is a se vener ram, in large (2) to the the similar ound precipitate the

W + 11 1 Stored

CEMENT

THE MANUFACTURE OF PORTLAND

By Henry Boot, M.I Modile, M.I.E.E. Past President, M.I.Mech.E.

Port and cement was probably first manuto and by Joseph Aspilen in the eighteenth stuy, but that was a very different article er a it Potland coment which will pass the standard specification is today. For it s not until some years rates that there is ny necessity for a proper uniform maxing vary more than I per cent, in the whole vary more than 1 per cent, in the whole year, for was 2 considered necessary to grand 1 confinences, we burn the slurry so that wighly as is done today. Chemists have underespecification of chalk or lines, as coment the proportion of chalk or lines, i.e. to the school aumina and ferre exidences to the vary more than 1 per cent. The constituents of cement, as is no doubt well at win by all cityou, consist of chalk or sometimes a hard linestone, and clay or mail, doponling a 2 od deal upon the district from depending a 2 of deal upon the district from which the law materials come.

# RAW MATERIALS.

In Cameridge, for instance, most excellent mark is often found in large deposits, which makes potent cement at a reasonable cost; in fact, it is the nearest aproach to Nature's

in fact, a is con-raw coment.

The chief centres of the coment industry are the Thames, the Medway, Cambridge-sure, Hull, and generally in the North-East

the Thames, the Medis by Cambridges are, HbB, and generally in the Nort's East of England.

Peof and comert was so called on account it its sambridge to Perfland stone when it is sambridge to make the confused with men in him. Which its samply bount limes to account a site of persons of people of the confused with men in him. Which its samply bount limes to account a site the same is hydrarile properties; it is it the same is hydrarile him, which is made out of a slightly bount mixture of pestore and clay, and has hydrarile properties. Great care his to be taken that the axion is definitely and constant propertioned like pead at its ground very fine and bound of a very log temperature into the form of main, the temperature into the form of anish, the tripe atment remay kills being a might as 2.5 day. Then is then ground to powder odd this using it specify a fileness of 8 to be a single of the constant materials and the braining of the constant materials that is, chulk at the participant problems, that is, chulk at the participant problems, that is, chulk at the participant problems, that is, chulk at the participant problems, that is, chulk at the participant problems, that is, chulk at the participant problems, that is, chulk at the participant problems, the rate is a reconstitution of the mixture of the area of the made on the mill of expensive contrage on the raw materials. Hence the censor which is the of most center.

the isolated who retrieved a consession of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the consent of the cons

From the student part the site of a centeral sets should be very carefully closen; that a self-should be carefully closen; that a self-should be carefully tested before my determining the position. Again, the is have to be a residence to avoid having facilities and a considered to avoid having facilities expense of manufacture. Facilities and the present for shapping or railing the mentional distributions have the facilities and it must be remembered that and it must be remembered that a facilities are successful to shape to be dealt with a facilities of a construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the con to solf conett per week and direction should be made for the cut of the sech should be made for the second of the major like of the second of the major like of the second of the second of the enterpolic of the second of the

elected a town, die definalt to keep the 2 1 resty to 2't be deprecated for account of the coment dust.

Virginity of the execution and general test of the contract of the manufacture of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contrac

. Then are  $m_{\rm p}$  ment making what may be called two processes:

(1) The dry process, (2) The next

The wet process.

DRY PROCESS.

In the dix process, assuming the raw materials are limestone and clay, they would have to pass through the Jaw crusher machine and the drying drums, the grinding plant constitution sisting of ball and tube mills, or combination tube mills, and then be conveyed to the mixmg and storage silos, after which it would be burnt in the kilns. From the kilns it goes through the same grirding process as it does

### WET PROCESS

In the wet process the treatment, assuming In the wet process the treatment, assuming the raw materials are coalk and clay, or mark consists of passing the raw material through the reds, from the rolls it drops into the wash mills, from the wash mills, where water is added, it is passed to the wet tube mills for finer grinding; from the wet tube mills it is stored in the slurry mixers and storage tracks. From these tanks it is pumped by the slurry pumps to the kilns. The clinker from the kilns is coaled by passing through a large the kins is cocled by passing through a large cooler like a small kiln, and from there is taken by conveyors into the dry grinding nafl, where it passes through ball and tube mills, and finally, after it has been ground to extreme fineness, sufficient to comply with the British Standard Specification, the cement is taken to the silos or storage bins, and when cool is ready for use.

When the raw materials are limestone and clay they pass through the jaw crushers, from there to the wet ball and tube mill, or combiration wet mill, where water is added; from there to the slurry mixers and storage tanks. and the mixture is pumped by the slurry pumps to the kilns. The dry grin ling plant

i. the same to each method.

# GRINDING MILLS.

s well known to mining engineers, ball and tube mills the latter in particular) are most satisfactory, and probably the cheapest and most efficient method for fine grinding. They lave been in use for many years now, and with the exception of minor improvements, have not been very much altered. In all mechinery in connection with cement menuficture special care has to be given to the heavy and continuous duty, and to the enormous amount of fine particles of cement dust that are liable to get in the bearings The jaw crusher is of the ordinary type used for breaking up ore of the type known as the Marsden crusher. The wash mills into

Marsden crusher The wash mills into which the chalk and clay, or mark, are tipped consist of very large circular tanks, in which mixing and breaking gear is continuously rotating. Water is added here, and the material used from those wash mills is known is "law shirty." For limestone and clay the wash mills are not used, but the wet ball and tale null or combination wet mil! are re quired, the paw crushers taking the place of

KILNS

There are various types of kilns for burning cement, and they may roughly be divided into three classes:

1 The vertical intermittent or bottle kiln, which "The Batchelor" and "Chamber" kilns are types.

2 The vertical continuous or shaft kiln, of which the "Schmeder" is a type. (3 The continuous rotary kiln.

In these short notes I do not propose going into detail with regard to Nos. (1) and (2).

No. 1) is fast becoming obsolete, and was

me of the early designs or methods for burn ng lune. In modern cement works it would ing lume. In modern cement works it would be a insidered far too expensive and unwieldy to work, on a count of the amount of labour rounined to landle the dry shury and clinker. Briefly, the kiln consists of a shaft into which dried shury and toke are fed at a certain beight placed in layers. Originally the gasses aped direct, but a later improvement was to take the gases underneath the shury beds. to take the gases underneath the slurry bedto take the gases undermeath the shirry bed-and utilise the waste heat to dry the shirry. One of the early kilns of this kin I was known as the "Johnson," and was installed at Green hithe. With this type the mixture takes som-ninety six hours to burn, and at least a day to cool down and another day to unload. It must be at once evident that the disadvantiges of this kiln are:—

(a) The heavy cost of labour.

(b) The incomplete burning of the clinker; and it may here be said that, in order to obtain "uniform cement," every particle must be equally burnt.

There is another design of kiln which may be placed between the vertical intermittent the vertical continuous, known as the "Hoffman ring kilu," which is simply a series of intermittent kilns with a common In the case of small works where the shaft output does not exceed about 400 tons per week, and the conditions are suitable, the vertical continuous or shaft kiln may be used. It has the above disadvantages, but on a much smaller scale. In this case slurry and coke are fed into kilus in layers about every halfhonr; this entails more labour than the intermittent type, and requires more skill, but obviates the large waste of time and heat obviates the large waste or time and inseparable from the intermittent type. The burnt clinker is taken from the bottom. difficulty experienced is that the clinker fluxes and adheres to the lining. Methods have been used to overcome this; one is to have a lining of ray material, such as briquettes, built up round the lining when the kiln is loade l. It may be said, generally, that the vertical continuous type of kiln is used with the dry process, when only about 20 per cent, of moisture is added to the raw materials, so that it is particularly economical in fuel consumption.

#### ROTARY KILN.

The third type of kiln, which is a later invention, and was first introduced by Ransome, consists of a long boiler shell, the length of which varies according to the particular design and output required; but in some cases they have been built as long as 250 ft., those in more general use being about 180 ft. to 200 ft., having a capacity of about 1,000 tons per week.

The cement industry has been entirely revolutionised by the use of the rotary kills, for, after a description of same, it will at once be seen that the labour employed is reduced to a minimum, that a much more uniform and even burning of the cement is possible, with the result that for ferro-concrete work rotary-kiln cement is nearly always specified, and will command a higher price than the other kind burned in brick kilns.

The kiln is made up of boiler plates, and consists of a tube, varying in diameter. For an output of 1,000 tons per week it is usually about 9 ft. 6 in. in diameter in the burning zone, and often weighs more than 300 tons. It is rotated on rollers, and is driven through gearing at a very low speed. The fuel is blown in, in the form of powdered coal, and ignited on reaching the burning zone, which attains a temperature of 2,500° Fahr. to 3,000° Fahr. The hot gases travel through the kiln, which is placed at a slight angle above the horizontal, with the cool end at the highest, and on thus to the chimney.

# COOLER.

In the cool or chimney end the slurry, which is taken from the slurry mixers or storage tanks, is pumped in, and finally reaches the burning zone, and the clinker produced drops into the cooler, which is like a small kiln, and also revolving. Cold air is drawn in through this cooler to cool the clinker, which clinker takes the shape of round, hard pebbles. An immense amount of time, labour, and thought has been spent on the designing of these kilns, for it is no easy engineering matter when one remembers the enormous weight to be revolved, the expansion and contraction that take place on a length of 200 ft. or more. There are now several firms in this country who can build most excellent kilns, and there is no need to place orders for these kilns abroad. The hard burnt clinker, on leaving the cooler, is then taken to a clinker storage or to bins, and then to the dry grinding mill. With the rotary kiln it is possible to run a cement works having an output of 2,000 to 3,000 tons per week with a staff of only thirty men per shift; whereas for the same output with the "Chamber brick kilns" this number of men

would have been necessary for working the kilns only.

#### FUEL.

The fuel used for these kilns is generally coal, but sometimes oil is used, and there is reason to hope that in the future waste gases from blast furnaces might be used. For the brick kilns cole is used.

The cost of production of cement has been largely reduced since the introduction of rotary kilns, and many members will remember the visit the Institution paid to the Newhaven Works, and also to Messrs. Martin Earle's, at Rochester, where the rotary kilns were in use, as well as some of the brick kilns.

In the works completed there will be installed three rotary kilns, each having an output of 1,000 tons.

#### COAL-GRINDING PLANT

In connection with rotary kilns, the coal is ground to powder, and for this purpose some form of tube mill is generally used. There are, however, quite a number of other types of mills for grinding coal. The coal has to be dried and ground, then it is fed into be done, and from the hopper is blown by a fan into the burning zone of the kiln.

After leaving the cooler, the clinker is taken along a conveyer that is specially designed for conveying hot materials either to a storage silo or dumping yard, and is then elevated to the top of the bins over the dry grinding mill. The dry grinding mill requires considerable care in planning and designing, for the machinery required is very heavy.

Rotary kiln clinker takes more power to grind than chamber kiln clinker, and the horse-power absorbed in grinding is very large. There are several methods or grinding the clinker, but the usual one is the combination of a ball-and-tube mill, but sometimes only a combination tube mill is used.

Unless special means are arranged for the removal of dust, difficulty is experienced in keeping the grinding mill clean, for naturally the clinker is ground to such a fineness that it penetrates everything, and it is difficult to keep the mill sufficiently closed in to prevent this.

In their mills my firm have arranged for each mill to have a capacity for grinding five tons of clinker per hour continuously.

The cost of grinding depends upon the fineness to which the material is ground; the finer it is ground the more expensive. Purchasers should expect to pay more for rotary kiln cement on account of the extra cost of grinding, and because it is more thoroughly and uniformly burnt, making it much stronger and superior to chamber kiln compart.

# 811 08.

After leaving the grinding mill, the clinker which is now ground is convoved and elevated into silos for storage. The slo buildings will have several bins with a total capacity of three to four weeks' output of finished cement, which will enable any purchaser when carrying out an important contract to have his own bin, and draw from it as he desires, so that he can be assured of the uniform quality of the cement. For ferroconcrete work this is important, as you are all aware.

The why and wherefore of the greater use of reinforced corcrete construction is not difficult to find. Those engineers who have had the designing of large structures to carry heavy machinery, such as is met with in industrial mills or for the building of large storage silos or bins, will fully appreciate these remarks, because with a reinforced-concrete construction it is a simple matter to demonstrate in figures the strength of such buildings and allow a proper margin or factor of safety; whereas with brickwork such a calculation is very difficult and certainly unreliable, for nobody can accurately say what is the adhesion of brickwork, and what factor of safety has been allowed.

Recently my firm has had to design some large silos, capable of holding 10,000 tons of cement, and it is surprising with brickwork how uncertain one is when finished as to the final strength. But if such silos are built with reinforced concrete, one can be certain of the factor of safety.

There are several methods of building the silos, but the best one, I think, is to design it of ferrosconcrete. The emptying of cement silos when packed closely is not such a simple problem as it appears. An ingenious method to use is the vacuum process, in which a cement bag is put into a pipe connecting it with the silo. A vacuum is then produced in this chamb i, causing the cement immediately to rush from the silo through the pipe into the bag, and fill the bag. As soon as the bag (which is automatically weighed) is filled to the correct weight, the vacuum is cut off and the door of the chamber opens to allow the man to remove the sack. The cement in the bag is then ready for rail or shipment. A large loading platform, with ample floor space, is required, with railway lines running alongside it, so that the bags of cement can be loaded into trucks.

To describe cement machinery in deta'l would require several papers, and probably many of you are familiar with the ordinary cement mills.

#### POWER PLANT.

One of the important questions to decide in relation to cement mills is the form of power to use, for in mills of this description the horse-power required is large, and the coal used for power purposes—i.e., for working the wash mills, the wet grinding mills, the pumps, the conveyers and elevators, the rotary kilns, the dry grinding mills, the coal dryer, and several other purposes—is quite an appreciable item of the total cost of cement, so that if this coal item for power can be reduced the price of cement can be appreciably lowered.

In olden days—in fact in many cement mills to-day—the power question has been sadly neglected, and thousands of pounds are wasted annually in fuel in not bringing the power plant up to date. Cement mills, perhaps more than any other industry, form an excellent proposal for running electrically on account of the scattered area occupied by the works and the fact that the wet mills, the rotary kiln, the coal-grinding plant, and the dry grinding mills are usually some distance apart, and each require a considerable amoum of power. If, therefore, steam was decided upon as the motive power, it would be necessary to instal a large steam engine in each of the above buildings.

For the mills that are being erected under my firm's advice, the directors have decided to use electric power throughout, so that there will be an electric motor-house for the wet grinding plant, another for the kilns, another for the dry grinding plant, where the principal power will be absorbed. The total horse-power taken to run mills of this description with the output mentioned would be approximately 2,000 to 2,500 horse-power. This entails a complete electric power-station and boiler-house, and my firm have designed it to contain water-tube boilers, with the usual auxiliary machinery, and in the power-house three turbines of 1,000 to 1,500 km, capacity each. Greut care has to be taken in designing the drives for the mills, as they are exceedingly heavy.

Mr. J. E. Hattersley, sn.veyor to the Sazmundham Urban District Council, has been appointed borough surveyor of Buckingham, at a salary of £150 a year,

At Foleshill Rural District Council meeting on Thursday it was stated that a committee had had before them plans of 600 houses which it is proposed to erect at Wyken, the dwellings to be for the use of munition makers in Coventry. As the by-laws were not complied with in regard to drainage and the width of some of the thoroughfares the plans were reterred back. The plans provide for several classes of houses.

A chapel has been built, at a cost of £500, in connection with the 4th Northern General Hospital on the Wragby road at Lincoln. The chapel is timber built, with galvanised iron frame, lined with matchboard. There is a small chancel, and a make 63 ft. long by 28 ft. wide, scating 326 people. The chancel has simple oak fittings, and there is in the nave an organ which formerly did service in Bardney church. The new chapel was dedicated on Tuesday last by the Bishop of Lincoln.

II ANDON COUNTY COLNEIL Today Consystem Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Co lacsday a report 12to recommend 2 to loans of City Council for at set the angle to loans of the the Western County Council for could be worth Man and Charing Cross the Wandsworth

restriction of the sum in three translations of the Wandsworth Council to the cost of street rounds in Hig. So et and East Hill. It elsewhere in the location to the horizontal translation of the coupleyers who had been in a real damagetic week was Edgar with Me edith, of the Miner Establish to Estates and Vidiation Department, at the at 7.000 members at the Conneil's affinive embsted in the forces.

About Allow on the forces.

Dr. William Garnett, the Council's Education advisor will be aftern a the age of years, return on December 31 on an allow

y (A), between the December 51 on an allow of £5 5 lös, a year.

The Education Commuttee reported that centralits of C. P. Roberts and Co., Etd., Akers and Co. Etd. and W. F. Blake, H. for remodelling the Bonner Street with Green A.E., Wolverley Street with Green S.W. and Star Lane them selvods, respectively, are nearing adotion, and they recommended that sums about the communication and they recommended that sums pletion, and they recommended that sums retention money hold by the Council in 1 and £535, respectively, should be used forthwith.

The Establishment Committee recommended as his retirement from the service at present juncture would cause inconveni-to the coincil's service, an assistant the unastablished staff of the architect's artment who attained the age of sixty-years on December 7, 1912, he retained

r and including December 3, 1914, up and including March 51, 1916. The Highways Comm the recommended that dets be advited for providing for a third attract turbo generator to be installed at twich generating station estimated to cost and for provision of cables to be laid. Woodwich sub-station for providing tional car service in Woodwich district, mated outlay, £4.2.9

mated outlay, £4.2.0

Fig. Parliamentary Committee, in a report to Everase of Rent and Mortgage Inst. War R strictions. Bill, recommend:

Lawrences maying Bill, recommends as seringer Board on the subject of the Bill, to the view of securing amoniments as west of The register of the provision exposure in The register of the intended Act has been to be allegated as a subject to the first manner of the intended Act has been to be for the consequence of this limit, the result of the allegate register of the alternative criteria of a characteristic of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the consequence of £30 in the or £50 or interest of £30 in the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the second for the sec

of for payment r ses. (iv) The r dard rent, see the house to a

NEW HOUSING SCHEME FOR WALKER ON TYNE Housing Committee of Newcastae in

at a bary presented a transpir the largery, and to our £78,419 The transfer on the largery £15,120, the largery has been been by the that expenses including load \$2.157 or angle entry deficiency of the House's Countries that as I dress to characteristic entry deficiency entry deficiency of the House's Countries that as I dress to characteristics.

completion of houses to the cost of which a Government contribution will be given, further tenders have been invited from those of the builders whose tenders in August last were the lowest, to ascertain the number of addings they were respectively willing to complete by March 31 next; and the comunttee, having considered the new set of proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposal proposa for the provisional acceptance of four tenders for the erection of 356 holdings, consisting of 74 two roomed, 144 three roomed, and four-roomed flats, and 48 self-contained houses, at a total capital cost of £67,487 bs. 10d. The proposal involves a gross increase of £5,602 19s. 11d. The committee will seek the authority of the Council to apportion the work among the builders specified as may prove most desirable, subject only to the total contract price of £67,487 not being exceeded, and to the total accommodation not being substantially reduced. The committee recommend the Council to instruct the Town Clerk to apply to the Local Government Board for surction to borrow such capital moneys incollental to the carrying into effect of the present proposal as are not provided from Imp rial sources, and that, subject to contracts being approved by the Town Clerk, and the sauctions of the Local Government Board, tenders to the amount of £67,487 5s. 10d, with the builders named be accepted The report was adopted by the Corporation

on Monday.

---LEGAL INTELLIGENCE.

ALDERMAN AND EX-BOROUGH SURALDERMAN AND EX-BOROUGH SURAEYOR FINED.—The first case of its kind came before Mr. Justice Lawrence at the Kent
Assizes on Thesday in last week, when William
Ellas, J.P., an alderman of the New
Romney Town Council, and a builder by trade,
and Albert Edward Hayward, consulting surveyor to that corporation, pleaded guilty to an
indictment charging them with conspiring
together to contravene the provisions of the
Manicipality Corporations Act, 1832, Section
12, at New Romney.—Mr. Bolkin, who appeared for the presecution, said the two de
tendants were men of position, Mr. Ellis being
a Justice of the Peace for New Romney and an
alderman of the borough conneil, and Mr.
Hayward having for many vears been the
borough surveyor of New Romney. From this
office he retired a short time ago, but was
retained in the office of consulting surveyor to
the borough. Mr. Ellis traded in partner-hip
with his brother. George Ellis, as builders, contractors and troumengers, with two branches,
one at Rye, which Mt. George Ellis superintended, and the other at New Romney, which
was under the charge of the defendant. Ar.
William Ellis. The firm employed at Rye a
clerk named C. A. Gefford, while the New
Romney leanch employed a clerk named Huggett. In September 1912, some work had to
be done to a street at New Romney under the
superintendence of the defendant Hayward.
In the course of that job it was found that
cort in iron paping and other iron work was
needed to carry it out, and in order that that
material should be obtained Mr. Hayward saw
at the spic where the work was taking place,
the two bustlers. William and George Ellis, ALDERMAN AND EX-BOROUGH SURVEYOR FINED.—The first case of its kind material should be obtained Mr. Hayward saw at the spie where the work was taking place, the two brothers. William and George Ellis, and asked them if they could supply the material. They replied that they could get it, but that as William Ellis was a member of the town conneil they could not supply the corporation. So they knew perfectly well the disabilities referred to in the Act. Mr. Hayward attenwards said to the brothers. "Well, supply it through one of your clerks," and that was done. The cost of the goods was £5.11s. 4d.—It was not till January, 1914, however, that the account was rendered to the Ev 11s 4d. It was not till January, 1914, however, that the account was rendered to the van conneil. In one count of the account in question was written "Correct A. E. H." all chaws proved to be Mr. Hayward's handwriting and this also "New Romney Correct, V. S. J. W. J. Commonwer," The KER ON TYNE
Committee of Newcastae and a leave presented of training a teach of the creetion of diverging the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the following the fol

from the books of the firm of Ellis Bros, which were kept at Rye by Mr. Gafford. About November last year another account was reinfered to the town coincil for some air barrels which were required by them. The account was "Mr. A. E. Hayward, surveyor, to C. A. Gafford, care of Ellis Bros, 12 barrels, £2 14s." The body of that account was in the handwriting of Mr. Huggett, who had since joined the Army ind been reported missing for several montas. The words and initials "Correct, A. E. H." were those of Mr. Hayward, and the account was dealt with in the same way as the other one, by being from the books of the firm of Ellis Bros. Mr. Hayward, and the account was deaft with in the same way as the other one, by being put before the council and passed. After the matter had come to light Mr. Hayward was questioned by the town clerk, and denied knowing Gafford or having had any dealings with lam, but he schoitful luncing a lawyal king. with him, but he admitted buying a barrel himself from Mr. Ellis, because the latter could not supply it, being a member of the council. Mr. Gafford was a guardian of the Rye Union, and he happened to see a printed statement of the New Ronney Council's accounts for the year to March, 1914. He saw his name underlined in red, "C. A. Gafford," and was naturally puzzled, but assumed that his name had been used. He gave a strong verbal protest to Mr. George Ellis at Rye and wrote a protest to Mr. Wim. Elhs, the defendant, telling him he ought not to have used his name under with him, but he admitted buying a barrel himprotest to Att. Win. Lans, the accentiant, tening him he ought not to have used his name under the circumstances. Mr. Ellis did not answer that letter. For the corresponding period of the present year Mr. Gafford saw the printed the present year Mr. Gafford saw the printed the corresponding to the content of the present year Mr. Gafford saw the printed the corresponding to the content of the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding to the corresponding the circumstances. Mr. Ellis did not answer that letter. For the corresponding period of the present year Mr. Gafford saw the printed account as to the tar birrels, £2 14s., and then wrote to the town clerk. The town clerk mentioned it to the then mayor (Mr. Maude), and upon that Mr. Ellis, the defendant, was asked to come to the town hall, where he was interviewed by the mayor in the presence of the town clerk. That was only with regard to the supply of bartels. Mr. Ellis's story at first was that it was Huggett's affair, that he (Huggett) made out the account and signed the cheque, and he, he believed, endorsed the cheque. Arr. Ellis afterwards, however, said he had made a mistake and admitted that he himself had endorsed the cheque. At the next meeting of the council the matter was discussed. A small committee was appointed to deal with it, and that committee reported that it was improper for the two defendants to have done what they did. Mr. Ellis at the meeting, took up the attitude that he had a right to sign in any name he liked a cheque which was really due to him, although the mame of the payee was not his own name. As Mr. Ellis still maintained that he was perfectly right in what he did and desired to retain his seat on the council, the Mayor had no option but to communicate with the Local Government Board on the subject. The Board sent all the papers to the Director of Public Prosecutions, and a prosecution was the result. Mr. Bodkin added that the prosecution was commenced for the numbers of corporations could not, without risk of prosecution, enter into trading arrangements with officials or others connected with those corporations, and then sit and pass payments to themselves under assumed names. Counsel rided that he had been informed that since Mr. Gafford gave evidence at New Rommey his services had been dispensed with by the firm of Ellis Brothers.—Mr. Huntly Jenkins, who represented the defendants, addressed the Court on their behalf, stating that Mr. Hayward was now seventy-eight years of ag Court on their behalf, stating that Mr. Hayward was now seventy-eight years of age, and argued that there had been no dishonesty about the metter and no intention to defraud.—His Lordship: I appreciate and am quite ready to accept all you say with regard to there being no fraud and no intention to defraud. But I do not understand the dismissal of Mr. Gafford.—Mr. Huntly Jenk'ns, having consulted the solicitor for the defence. dismissal of Mr. Gafford.—Mr. Huntly Jenk'ns, having consulted the solicitor for the defence, stated that the dismissal of Mr. Gafford had been done by defendant's brother, Mr. George Ellis.—His Lordship, in passing sentence, said it was of vital importance and a first principle, that elected bodies should recognise that they could not be upon both sides of a business transaction at the same time—that was to say, they could not be members of the contracting body, or corporation contracting and also con-tractors with that body. Apart from the statute, it was also clear that a person could not be on both sides of a transaction while his duty was to protect the public and to see that the very best was obtained for the public Therefore, while it was clear there was no Therefore, while it was clear there was ne fraud in this case in the grosser sense of fraud that was to say, the goods were not being that was to say, the goods were not being that was to say, the goods were not being the company when or an under profit

sidd at an improper value or an undue profit being made, or anything of that sort—still there was a clear violation of the statute, con-sciously made and pursued by deception and secrecy. The ugliest part of the whole thing.

to his (the judge's) mind, was the use of Mr. Gafford's name and now subsequently the discharge of the man. He really failed to inderstand how they could have the andacity to treat it as a wrongful act on the part of Mr. Gafford—his protest against what was done—and to allow him to lose his employment. He thought that indicated a perversion of their sense of justice which was distinctly painful. He did not desire to punish defendants' conduct unduly, but the law must not be violated with impunity, and, therefore, Mr. Ellis must be fined £25 and Mr. Hayward the sum of £5, and the costs of the prosecution must be paid in equal parts by them.—Time for payment was granted.

A TEWKESBURY BUILDER'S ESTATE -In the Probate Division, on November 30 the action of Godfrey v. Godfrey and Others which concerned the estate, valued at about £160,000, together with a business, of the late Mr Francis William Godfrey, builder and contractor, of Tewkesbury, came before Mr. Justice Horridge. The testator died in April. 1912, and the action related to a codicil dated April 4, 1912. In announcing that the parties April 4, 1912. In announcing that the parties had settled the action, Mr. J. H. Campbell, K.C., said the plaintiff was Mr. Harold Godfrey, the eldest son of the deceased. The defendants included the widow of the testator, and another surviving son, and trustees and and anomer surviving son, and trustees and executors under the will. There was also an intervener interested in a legacy of £200 which, under the codicil in quistion, was charged to an annuity of £100. Counsel added that he (on behalf of two of the defendants) had discussed the matter with Sir Edward had discussed the matter with Sir Edward Carson, K.C. (who represented the plaintiff), and Mr. Hume Williams, K.C. (who appeared for the widow), and a settlement had been reached. The deceased, by his will of 1903, subject to a provision for the wife, divided his property between his two sons, Harold and Francis, who assisted him in his business. In March, 1907, another will was made which was not contested in the present proceedings. By this later will be revoked the bequests to his eldest son, Harold, and made the second son, Francis, residuary legatee, leaving him practriancis, resutury legates, leaving him practically the entire estate, subject to provision for the widow, the step-mother of the plaintiff. Trouble, however, arose out of a clause which gave the trustees power to make such provision gave the trustees power to make such provision as they thought fit for the eldest son. After a codicil of April 1, 1912, testator made another on April 4, 1912, the effect of which was to appoint a third trustee, Mr. Shanaban, the assistant secretary to the Dublin Board of Works, and a lifelong friend of the testator and his family. Under the codicil there was power for the majority of the trustees to determine any question that might arise, and it was in respect of the provision for the eldest in respect of the provision for the eldest that differences developed. The wider son that differences developed. The wider took one view and the other trustees the other. By the arrangement now made substantial provision was made for the eldest son, who now discharged all the claims against the estate. In the circumstances the Court was asked to pronounce in favour of the will and the two codicils, the terms arranged to be made a rule of Court. Sir Edward Carson concurred in the statement as to the sottlement between the parties. The codicil which had caused the differences was made by deceased the day before he died. April 5. Proper procaused the differences was made by deceased the day before he died. April 5. Proper provision would now be made for the son. Harold, and funds invested for his benefit and that of his child. Mr. Hume Williams said the desire of the widow all along had been to carry out what she thought were her husband's wishes. After evidence, his Lordship pronounced for the second will and codicil

APPEAL AS TO DEFECTIVE STREET GULLY.—PAPWORTH v. BATTERSEA for Court of Appeal on Monday Lords Justices Pickford and Bankes and Mr. Justice Neville gave judgment in the appeal by the plaintiff. Miss Amy Papworth, asking for judgment or a new trial in an action which was twice tried, in which she claimed damages for personal injuries alleged to have been sustained on June 26. 1912, owing to her riding her machine over a defective surface gully in the Lombard Road. Battersea, which caused her to be thrown off into the road, where she was run over by a passing carriage. The original trial was before Mr. Justice Horridge and a common jury, as reported in our issue of November 13, 1914, p. 637, Vol. CVH. The jury answered a series of questions and awarded the plaintiff £1,961. On further consideration the Judge held the plaintiff was entitled to succeed, and entered judgment in her favour. The Court of Appeal set that judgment aside, and ordered a new trial on various grounds. The second trial (reported in our number for February 26, 1915,

p. 258, last volume), was b fore Mr. Justice Scrutton and a special jury. The jury found that the surface guilty, which had been put in by the predicessors of the detendants, the Wandsworth Board of Works, had all along been defective and dangerous, but that the defendants, at the time of the accilent, did not know, and could not by the exercise of reasonsable care have known, of the defect in the guilty. In the event of the plaintiff being entitled to damages they awarded her £755. Mr. Justice Scrutton, after hearing arguments, held that the action failed because the plaintiff had not established any misfeasance on the part of the defendants.—The plaintiff now applied for judgment or a new trial, and contended that judgment should have been entered for her in accordance with the verdict.—Mr. Greer, K.C., and Mr. Sidney H. Lamb, instructed by Mossis, W. W. Young, Son, and Ward, appeared for the plaintiff, Mr. Lewis Thomas, K.C., and Mr. W. R. Warren, instructed by Mr. P. Caudwell, for the Borough Council.—The case having been argued, the Court gave judgment distnissing the appeal, holding that as there was no negligence by the defendants or their predecessors in title in the construction of the gully in 1882, or in not observing that the gully had become dangerous, they were not liable to the plaintiff.

LANDLORD'S LAABILITY TO KEEP ROOFS IN REPAIR.—HART'S EXECUTORS v. ROGERS.—In this action, heard by Mr. Justice Scrutten without a jury, considered judgment was given on Thursday. The plaintiffs claimed £115 9s. 6d., two quarters rent of a suite of furnished rooms at Moscow Mansions, Kensington, and for £20 agreed to be paid for dilapidations at the end of the tenancy. The defendant alleged that, owing to the landlord's neglect to repair the roof, water came through into the flat and rendered it unfit for human habitation, and that because of this the defendant's wife became ill and he had to find another house. He also counterclaimed for damages in respect of his wife's illness. Mr. Distarnal, K.C., and Mr. Morle appeared for the plaintiffs: and Mr. Rose-Innes K.C., and Mr. F. Dodd for the defendant.—Mr. Justice Scrutton, in his judgment, said it was clear that the defect which caused the damage in this case was not in a part of the roof included in the denise. What was the legal obligation imposed on the landlord in respect of the roof? Ordinarily the Mansions, Kensington, and for £20 agreed to was the legal obligation imposed on the land-lord in respect of the roof? Ordinarily the lessor of an unfurnished house did not im-pliedly warrant that it is fit for occupation, and the lessor of a furnished house or apart-ments did impliedly warrant that it was fit for human occupation at the beginning of the tenancy. The Divisional Court in "Hargroves v. Hartopp" (1905) held that such a landlord was at less tander a duty to was reasonable for human occupation at the beginning of the tenancy. The Divisional Court in "Hargroves v. Hartopp" (1905) held that such a landlord was at least under a duty to use reasonable care to keep the roof in repair, following Baron Martin in "Carstairs v. Taylor," Lord Alverstone suggested that in "Miller v. Hancock" (1893) the Court went further, and treated of a landlord who reserved the control of a staircase as an absolute duty to keep the premises in a safe condition at all events. In this case of "Miller v. Hancock" the real question was the liability of the landlord to a visitor of the tenant; but, said Mr. Justice Scrutton, as he pointed out in "Hungott v. Miers" (1908) and in "Hargroves v. Hartopp," the Court approached the natter through the legal relation of landlord and tenant. Lord Alverstone, in the last-named case of "Hargroves v. Hartopp," took the same view, Mr. Justice Atkin in "Lucy v. Bawden" (1904) came to the conclusion that the decision in "Miller v. Hancock" must be limited to the liability for trans as explained in "Indermant v. Dames." The defect, which the jury found in "Ency v. Bawden," was the absence of a fence or rail, which was a defect that anyone could see, In "Miller v. Hancock," as reported. found in "Lacy v. Bawden." was the absence of a fence or rail, which was a defect that anyone could see, In "Miller v. Hancock." as reported, all the judges intested an absolute duty to repair on the landlord. Having dealt in detail with the facts of the present case, his Lordship said he came to the conclusion that the illness of defendant's wife did not result from any section of the land of the legal. negligence on the part of plaintiff. The lega result was that he was unable to see any prin

£114–13s, 6d. As to the defendant's counterclaim, ne was not satisfied that the wife's illness was caused by the leakage, bit allowing defendant the cost of substituted rooms, he awarded hun in all £25 damages on the counter-drim, with costs. If the trae view of the relation of this landlord and tenant was hat the landlord only contracted to use reasonable care to keep the roof in repair, ne found no neighbories in this case, and, on that construction, the plaintiff would have judgment on the counter claim, with costs.

SPHALFIELDS MARKET ARBITRATION Mr. C. A. Russell, K.C., has given his decision, as arbitrator, in the case in which Mr. Robert Horner claimed £650,001 from the City Corporation for the acquisition of his leasehold interest in Spitalfields Market, and certain private property surrounding it. At the hearings held at the Survevers' Institution in October last evidence on behalf of Mr. Horner was given by Mr. Daniel Watney, Mr. J. Seagram Richardson, Mr. W. P. Ryan, Mr. P. A. Mence, Mr. Howard Martin, and by Sir Mexander R. Steining, Mr. F. W. Pixley, Mr. Lesla, R. Vigers, Mr. Howard Chatfold Clarke, Mr. Sydney Perks, F.S.A. [City surveyor), Mr. W. S. Walker, and others for the Corporation. The latter witnesses valued Mr. Horner's interests at not more than from £173,000 to £200,000. Mr. Horner claimed £600,000. Mr. Russell has decided that Mr. Horner is entitled to receive £316,500. At the meeting of the City Solicitor, that Mr. Horner had been awarded £234,500. Sir Homewood Crawford explains that this announcement was quite correct. The total of £316,500 which Mr. Horner will ultimately receive includes an agreed sum of £32,000 in respect of certain outside properties for which Mr. Horner originally claimed £50,000. This claim was not investigated by the arbitrator, although, by mutual consent, the £32,000 appears in the award as a separate item.

TEST CASE AS TO INCREASED RAIL-WAY RATES.—THE ASSOCIATED PORTLAND CEMENT MANUFACTURERS (1900). LIMITED, v. GREAT NORTHERN RAILWAY COMPANY.—Mr. Justice Losh, the Hon, A. E. Gathorne-Hardy, and Sir J: mes Woodhouse heard on four drys of last week, and reserved judgment at the close of the legal arguments on Thursday, in the application of the Associated Portland Cennent Manufacturers (1900). Limited, for a revision of the nucreased goods rates charged by the Grent Northern Railway Company to meet the cost of the concessions granted to their employees in accordance with the terms of the settlement of the railway strike of 1911. The applicants complained that the increased charge of 4 per cent, for the carriage of goods from their works to different parts of the railway company's system, under the special Act obtained by the various railway companies in 1915, was unneasonable and excessive. They said that the £153,393, which the railway company pur forward as their additional expenditure in respect of wages, had not been properly apported a between the passenger and the different classes of goods traffic, and that, having regard to the volume of traffic in 1913 as compared with that of 1911, there had been no rise in the cost of working the railway within the meaning of the Act of 1913. The respondents contend d that the additional expenditure in respect of wages imposed by the terms of the settlement of the strike had been properly apportioned between the different classes of traffic, and that the amount justified an extra charge of 4 per cent, on goods of the character forwarded by the applicants,—Mr. Rowkand Whitehead, K.C., Mr. Holman Gregory, K.C., and Mr. Edwin Clements appeared for the applicants, and Mr. G. J. Talbot, K.C., Mr. Macassey, K.C., and Mr. W. Bruce Thomas for the respondents,—At the conclusion of the evidence and the addresses of the coursel, the Court reserved judgment.

The Boroug r Conneil of Poedar is received the sanction of the Lord Government Board to a loan of £3.693 for electric cable extensions.

At the Edinburgh Dean of Guild Court, on Thursday, Lord Dean of Guild Macmtyre Henry presiding, a warrant was granted to Bertrams, Limited, for the erection of a pattern making shop and pattern store at Sciennes. This is to be a four-story building, 100 ft, by 49 ft., with a frontage of stone. The façade will be treated in such a manner as to maintain the amenity of the district. Bailie David M'Arthy, Lic.R.I.B.A., Frederick Street, Edinburgh, is the architect.

# Correspondence.

FATTY-SION OF AL AL MERGING ROTNEY AND DEFENCE OF BEALM ACTS

7 THE BUT DING NEWS.

Act of Par Concretes augently re-A Act of Paramett is argently remained to positive to obtain equitable and of positive to obtain equitable and of positive to the war, there is no entered and operational equations are aftered to war, particularly essentially as a choice of the proceeding to the where such as the extension of the proceeding at a time where such as a final object of the extension of the badded and war as a positive to the entered to a second of the control of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entered of the entere of the vertice in position to data bound of a process of solutions of otherwise the engager of the series of the State, and where the processing vitings in more ward be against the process interest during the war of vices to difficulties arising from the off war work upon a contractor, if contract enforced during two comes without

It is imperative that an Act should be close including a court before which application out it is made to hear the facts and to grant such pestportunent and relief as toey roy dot runnound where decision has a Work Emergency Court shall be final and  $\log 4.8 \pm$ 

The following some xamine case to illustrate the necessity for soft an N(t)=

In March, 1944, a by long site situate Fins my Payament and Finsbury Circus, City of Lindon, was part up by a ution and City of London, was put up by a action and set upon agreement for a sector eighty years at £5. 40 per athorn; pessess, on et site and works to commence March 25, 1945. The see a received work is to an appropriate for an I producing good income, but the scheme was to pud down all existing property and clear site for row block of effice property. Five themsand pounds deposit pad to ground owners by proposed lesses. The expenditure upon the new works we in execut. £150,000.

 $16 - 1 \text{ eV} \sim 1 \text{ E150,000}$   $16 - \text{A} \approx 1 \text{ 2.85} + 1014$ , was been eat. Letter In August 1914, was been end. Letter that written by pripes i lesse pointing out altered condition, caused by wind thoulties of financing such a large indeptaking, as menory equired by State difficulties of labour and the industry of the condition and the industry of the property of will be as it was a way, or mad be retained to its present outline. In dispending to the ground art first agree to postpone the outline to the state of the postpone the contraction of after the variety of the retained to zero and as they were in the resulting the appearing to acted to postpone ever, both parties of the resume the tier the war.

I do to all, that the cartract are say were to remain as to you were to be a residual.

Reply who gives a better aggression and start gith a green of a edited sequired contract proceeded with father correspondences that against the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequired continues of the sequ cart proceed with fother are spond-cherolitized risks to be one-spond-cherolitized risks to be of proceeding, organization of the model of the proceed with a last tig on the control proceed of the problem process, and exist an arrangement so the control of the mis-son to the first process of the control of the first terms of the control of

1.1 proposed lessee in this case has given of his time since war broke out service of the State, raising three battalions of infantry and reserves, nearly five thousand men, has contributed largely in time and money to national purposes of the war, has two sons, officers (whose patrimony is involved), in the New Army, and, notwithstanding, is to be shot at and penalised by the old ground leasing law which takes no account of war conditions, but leaves the ground landlord in position to exact the last

Smiling, notwithstanding the wir.
The State cannot have it both ways, take The the land der's men, money, and materials, but still expect a builder to fulfil contracts, or tested consequences of non-fulfilment, not withstending that the State has made it impossible. The remedy is to give the opporunity of fair and equitable relief, and as the Defence of the Realm Act does not seem to fully apply, an extension of the powers of that Act, or another similar Act, to apply should be passed, to deal with undoubtedly numerous similar and other cases of contract difficulties occasioned by the war.

Howers, J. Williams, J.P., L.C.C., H. Bermondsey Street, London Bridge, S.E.

# \_\_\_\_ OBITUARY

We regret to aunounce the death, suddenly, of heart disease, on November 23, of Mr. Mark Fawcett, one of the directors of the Fawcett Faxcett, one of the directors of the Fawcett Construction Co., Limited, of 47, Victoria Street, S.W., at the age of fifty-five, at Hampton Wick, where he had resided for many years, indulging in his favourite pastime of sculling. Born at Lincoln in 1860, he was apprenticed in 1875 to Mr. W. D. Harrison, of Lincoln, and for four years worked at the bench. In 1879 he was articled to Messrs, feelbany and Harding, architects, of Lincoln, and on the completion of his articles he and on the completion of his articles he assisted Mr. J. Thorpe for some time in connection with main drainage and water supply work at King's Lynn and Horncastle. He came to London in 1882, and entered the office of Mr. J. Douglass Mathews, F.R.I.B.A., remaining with him till 1887, when he commenced practice on his own account. He began then to experiment with improvements in the construction of fireproof floors, and in m the construction of hrephod mores, and in March. 1899, took into partnership his old friend and colleague, Mr. Brett A. Elphicke. The demand for the Fawcett Construction system rapidly grew, and in our issue of fuly 25, 1899, when we gave a portrait and biography of Mr. Fawcett, we were able to record a substantial list of important buildings the state of the construction. ings where it had been used Later on the firm developed into the Fawcett Construction Co., Limited, with Mr. Fawcett and Mr. Elphicke as managing directors, and year by year our pages have recorded the many contracts in connection with which the system tracts in connection with which the system has been adopted. Among the latest of these are the extension of Messis. Lambert and Butler's factory in Drury Lane and the extensive alterations and additions to Freemasons' Hall. Mr. Fawcett was buried at Norbiton Cemetery. He leaves a wife, two sons, and three daughters. His eldest son, John, holds a commission in the Royal Engineers in Judic and his second son has instringers in Judic and his second son has instringers in Judic and his second son has instringers. gineers, in India, and his second son has just obtained his certificate as an aerial pilot at Hendon. The surviving managing director of Hendon. The surviving managing our even of the company, Mr. Brett A. Elphicke, who has been responsible for the active part of the business during the last few years, will remain as sole managing director. There will, therefore, be no change in the management of the company, whose business will continue to be carried on as in the past at 47, Victoria Street, Westminster, S.W.

After a long illness, the death is amounted of Mr. Arthur Byrne Hudson, at the age of 76. He was born at 19, Bennet's Hill, E.C., on February 10, 1546, the son of a member of on F-branzy 10, 17.4%, the son of a member of the Vinthers' Company, and surveyor to the Saldiers Company. His education finished, he entered his father's office, his father then taking no partnership Mr. Booth, and the trin becoming a little later Hudson, Son, and Booth. He entered the Court of Common Frails. Booth. He entered the Court of Common and it bears it bears of the Commission of Sewers, and a number of the Commission of Sewers, and off his served as chirman of the Streets Committee of that body. Later he was chairman of the Mansion House Underground Station.

Bridge House Estates Committee. Mr Hud-Bridge House Estates Committee. Mr. Hud-son served the office of Prime Warden of the Saddlers Company. At Richmond, where he resided, he was the hon, secretary and treasurer of the Fire Brigade, and was also a commissioned officer in the Surrey Rifles.

The death occurred at Silloth, on Friday, at the age of 61, of Mr. John Walton Taylor, a well-known architect in Newcastie-on-Tyne, Mr. Taylor was born in May, 1854, and spent his boyhood and youth in Bishop Auckland, and in 1881 began as an architect in Newcastle. During the past year ill-health had affected Mr. Taylor severely, and at the time of his death he was staying at Silloth, where he had gone in the hope of recuperating. Mr. Tayfor was architect for the Y.M.C.A. building
In Blackett Street; the Soldiers' Home, in
Hunter's R ad; the Dilston Road Wesleyan
Uhapel: Messis, Bainbridge and Company's
extensions and turniture depository, all in
Newcastle, and a large number of churches
and Synday schools in the counties of and Sunday-schools in the counties of Northumberland and Durham. He was a past president of the Northern Architectural Assoiation, and had been a Fellow of the Royal Institute of British Architects since 1892, and a Fellow of the Surveyors' Institution since February, 1887. The Society of Friends knew Mr. Taylor as a valued and prominent member; he taught in the Sunday-school for thirty years, hesides helping in all the work of that institution. The deceased leaves a widow, two sons, and two daughters, the elder son having been a partner with his father. The interment took place on Menday afternoon at St. An-drew's Cemetery, Newcastle.

The deaths are announced of Mr. George The deaths are amounced of Mr. George Alexander Kay, A.R.I.B.A., Second Lientenant, Sherwood Foresters, of Finchley, killed in action at Hooge, and of Mr. Edward Herbert Gibson, A.R.I.B.A., Lieutenant, Royal Naval Volunteer Reserve. Lieut. Gibson, who was 27, was severely wounded at the Dardanelles on October 23, and died two days later. He was the youngest son of Dr. Gibson, of B-ech Grove, Harrogate. After leaving school he studied for one year in the Engineering and Art Departments of Leeds University, and for one year at the Leeds School of Arl He served his articles with Messrs, Cannon and Chorley, of Leeds, and remained with them for two years as assistant. He was afterwards in the office of the late Mr. John Oldrid Scott, of Westminster. In 1914, while with Mr. Scott, one of his drawings was exhibited at the Royal Academy. On the outbreak of war he joined the R.N.V.R., and in February was appointed sub-lieutenant. being sent down to the cump at Blandford with 160 men to prepare roads. He went to the Dardanelles in June, and was gazetted lieutenant from October 18.

Mr. John Elv, F.R.I.B.A., of King Street West, Manchester, died on Friday last, aged 67 years. He was the third son of the late George R Ely. M.D., of Rochester, and had been a Fellow of the Royal Institute of British Architects since 1883, and had served upon the Council. He was a past president and former hon, secretary of the Manchester Incorporated Society of Architects, and was at the time of his death a member of council of

Calians Presbyterian Church, Ballybay, has Calains Pre-styletian Churea, Ganybay, assertently been reopened after undergoing extensive improvements and renovations. Mr-David R. Drum, The Diamond, Monaghan, was the contractor, and Mr. Harry Skelton, C.E., Market Street, Monaghan, the architecture.

C.E., Market Street, Monaghan, the architect-Extensions to the Girls Industrial Home, Ipswich, which have been opened by the Bishop of St. Edmundsbury and Ipswich, com-prise an entrance hall, with matron's office, beard-room, staff-room, store-room, class and sewing-room, schoolroom, three dormitories, staff badrooms and bath-room with four baths. Mr. Henry J. Weight, M.S.A. of Museum Street Ipswich, is the architect.

By permission of the Rev. Preb. Reynolds the meeting of St Paul's Ecclesiological Society is to be held on Wednesday in next week, the 15th inst., when a paper on "Carols" will be read by the Rev. G. R. Wood.

# Currente Calamo.

On the 30th ult, an urgently important question was put by Mr. G. A. Touche, M.P., in the House of Commons, which, with the reply thereto by the Prime Minister, will be found in our Parliamentary Notes on another page. It deals, as will be seen, with a matter of the most vital importance to builders and property owners, which is more fully explained in a communication elsewhere from Mr Howell J. Williams, J.P., L.C.C., which, although posted on November 30, only reached us in the forenoon of Friday last, and, therefore, too late to deal with in our last issue. It will be seen, we regret to say, that, as usual, Mr. Asquith was unable to express an opinion whether it would be deemed desirable to apply the remedy suggested for the gross injustice detailed by Mr. Touche. He has, however, consented to receive a deputation from the London Master Builders' Association, and that body will meet this afternoon to consider the matter. We trust the deputation will be a strong one and that the grievance will be adequately presented; but, remembering the broken promises of the Premier and Mr. Llovd George in the past, we are not sanguine as to the result.

If no redress is obtainable the position is that, as the law now stands, while everybody else is being relieved under the Defence of the Realm Act, or by subsidiary legislation, ground landlords can enforce on a builder a contract taken before the war begnn, under peace conditions, and sue the unfortunate lessee for ground rent, although he is totally unable to build, because the State has taken his men, money, and materials. Surely in such cases as that Mr. Howell Williams outlines, the least that can be asked for is a short Act creating a Court competent to deal promptly with such cases, and to grant postponement of contracts, or such other relief as seems just? If this is denied, ruin stares not a few of us in the face. Moreover, when a builder, at great sacrifice, manages to sustain the burden thrust upon his shoulders, he will for the time fly in the face of and frustrate all the appeals that are being made to us all to economise, and to facilitate the transfer of the services of every ablebodied man to the State that can be spared.

An important case affecting the position of auctioneers came last Thursday before Justices Ridley and Coleridge in the Division i Court, on appeal from a decision by Judge Tindal Atkinson in the Southend-on-Sea County Court. It appeared that on February 26, 1914, a lady named Miss E. H. Hurley, of Westcliff, apprenticed her brother for three years to Mr. G. W. Creaser, auctioneer and estate agent, Leigh-on-Sea. On the outbreak of war the boy asked Mr. Creaser to cancel the deed, but he refused. The boy left, and Mr. Creaser sued Miss Hurley in the county court for £10 due on the deed of apprenticeship. It then came out on the evidence that Mr. Creaser had not taken out his excise licence entitling him to act as an auctioneer 'until six months after the date of the deed of an prenticeship, and this, it was contended, in validated the deed. The county court judge upheld that contention, gave judgment for Miss Hurley, and cancelled the deed. Mr. Creaser appealed, submitting that, though he had not taken out his licence, he was entitled, to practise, and to take an apprentice. The court, without calling on respondent's country country are higher. The relation between the second section of the new water main from the reservoirs on Dartmoor to the town, a distance of eighteen miles, being proceeded with. The name as a whole will cost about £50,000.

sel, dismissed the appeal, with costs, holding that the county court judge's decision was right.

The building of flats is a thorny subject. Many builders have burnt their fingers over the business. Some, indeed, have been burnt up altogether. For flats go in and out of fashion rapidly, rather like big hats. And an empty high-rented flat, with ground rent and mortgage interest running on and up, is a very sieve for losing money. But flats have also proved a dark problem for the lawyers. The recent case of "Hart and Another v. raised some pretty points which are likely to be heard of a good deal in the Courts probably on appeal. The plaintiffs sued for two quarters' rent of a flat in the Cromwell Road, let furnished to the defendant for one year, from March 25, 1914, at a yearly rent of £180, with £20 to pay at the end for dilapidations. The defence was that owing to the roof being in a bad state of repair the place became quite unuhabitable, and so no rent was recoverable, and the defendant further counterclaimed damages for expenses and illness caused to his wife. Mr. Justice Scrutton, after saying that, in law, apart from agreement, there was no warranty that a house was habitable if let unfurnished, but that there was if it were let furnished, found the cases confusing as to flats, which were legally neither. In the end he inclined to hold that there was an absolute duty on the laudlord to keep the roof of the flats in repair. He ruled that the roof was not let with this flat, so here we have the metaphysical mind of the lawyer regarding the roof as a separate entity, and dealing with the flats beneath it as dwellings without any roof. On the view of the absolute duty of the landlord to repair the roof, he found that a breach of this was no answer to his sacred claim for rent. so judgment was for the plaintiff, while, on the counter-claim, allowing nothing for the wife's illness, he gave £25 for expense incurred, with costs. But the Judge also held that if there was no absolute duty on the landlord to repair and only a contract to do so reasonably then, as there was no proof of his negligened the plaintiffs would have judgment also on the counter-claim, with costs. It is now the turn of the Court of Appeal to make what it can of this legal muddle.

Bulletin 47 of the University of Illinois is a valuable contribution to the none-tooplentiful literature concerning the influence of temperature on the attainment of strength of concrete, by Assistant-Professor A. B. McDaniel. It is issued in the United States at fifteen cents, and can be obtained here of Messrs. Chapman and Hall, Ltd., Henrietta Street, W.C. Full tables and diagrams are given of the results of the tests. The general conclusions arrived at are as follows: Under uniform temperature conditions, there was an increase of strength with age within the limits of the tests. For any temperature the rate of increase decreases with the age of the specimen; and this rate of increase is less correspondingly at the lower temperature conditions. For the specimens tested under normal hardening temperature conditions of from 60 to 70° F., the compressive strength of the concrete subjected to a uniform temperature at the ages of seven, fourteen, and twenty-one days may be taken as approximately 50 per cent., 75 per cent., and 90 per cent, of the strength at twenty-eight days, respectively. For

the percentage values at the ages of seven, fourteen, twenty-one, and twenty-eight days is nearly the same for temperature conditions from 30- to 70 F. However, the values for the lower temperatures should be used with caution. Concrete which is maintained at a temperature of 60° to 70° F, will at the age of one week have practically double the strength of the same material which is kept at a temperature of 32° to 40° F. It should be noted that generally in this investigation the specimens were stored under temperatures which were nearly uniform during the whole storage period. In one set the variations in temperature include a number of alternations above and below the freezing point, and the specimens were seriously injured.

The first quarterly issue of the "Journal of the Institute of Arbitrators," published by this newly formed association, the headquarters of which are at 32, Old Jewry, E.C., sets out its aims and objects, and contains many short articles on arbitrations which will interest our readers. Lord Headley is the president of the Institute, and Mr. Henry Adams vice-president. council embraces, among others, Messrs. E. C. P. Monson, the president of the society of architects; Mr. E. J. Sadgrove and Mr. A. Alban H. Scott, vice presidents of that body: Mr. H. D. Searles-Wood, Mr. Max Clarke, and Mr. F. Malcolm Burr. The aim of the Institute, to which we wish all success, is to raise the status of arbitrator to the dignity of a distinct and recognised position as one of the learned professions. The successful achievement of that aim can only be realised by concerted action, by the association of members in the interchange of views, the dissemination of valuable information, and a closer study of those principles and conditions which have to be taken into consideration when dealing with difficult questions arising in the solution of differences and disputes, both in commercial and other relations. The settlement of matters by means of arbitration has received a considerable support from the public, but it has been found that the cost of arbitration has frequently been unnecessarily high, and the economy, looked for by parties in their avoidance of proceedings in the Courts in favour of a less fettered procedure in arbitration, and which the public has been led to expect, has not been realised. Hitherto there has been no special training in the discharge of those quasi-judicial functions which an arbitrator is called upon to exercise; and, although an expert of the highest integrity and experience has been called in to decide a matter in that sphere in which he had, through his profession, acquired a considerable knowledge and experience, difficulties in the construction of written contracts and other documents, the application of the rules of law and equity to the consideration of the matters in reference and other problems of a more or less technical character have arisen, and even in comparatively simple cases these difficulties have to be met by the invocation throughout of legal and other professional assistance, resulting ultimately in the statement of a case for the opinion of the Court. This special training it is one of the Institute's foremost aims to facilitate.

The Local Government Board have intimated to the Torquay Town Council that no further objection will be raised to the work of laying the second section of the new water main from

# Gur Illustrations.

PREMISES EDIN FN

s ladding presently in this scotted in limited that we with the recom-pletess enal assess r. It 150 feet, a depth of 75 feet. s in her to including the her slat in of the four or on the ac omparaing second is devoted to the differ ty appear the is to a possibility and a caretaker's left soft his, and a caretaker's left soft here stone from very, as dethe floors as destauchions

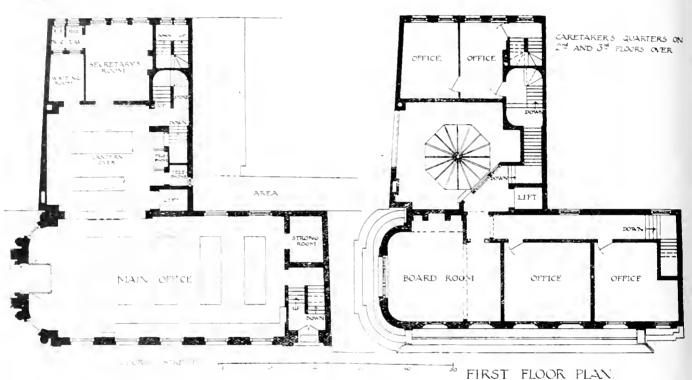
the result of a limited competition. We give a general exterior view of the binding and interior of the public office, with plans of the four principal floors as well as views of the board-room and secretary's office.

THE SHIPPIELD FIRE OFFICE AND 118 AMALGA-MATION WITH THE ALLIANCE ASSURANCE COM-PANY

As a meeting of the inhabitants of the town and meighbourhood of Sheffield, held on December 31, 1807, at the Cutlers' Hall, the Recember 31, 1807, at the Cutlers' Hall, the Master Cutler in the chair, it was decided to establish a fire office with a capital of £5 0.0 ) in £100 shares with 10 per share prid. Of the sum asked for, £200,000 was readily subscribed, and the "Sheffield Fire Office" storted business on June 24, 1308, in the Market Place, Sheffield, with Mr. I Willey as "principal agent." Within a year larger premises were taken in the Hay Market and a salvage haranda was premised. to fix banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidete, but fixed banda zoomidet

have been in hands of Mr. John D. Hill. Mr. Arthur Wightman, J.P., of the old-established firm of Messrs. Broomhead, Wightman and Moore, is chairman of the local board, and other old and influential families in York-shire and Derbyshire are represented. The Alliance Assurance Company, of which the Hon. N. Charles Rothschild is chairman, has now an authorised capital of £5,450,000, of which £1,000,000 is paid up, whilst the accumulated funds of the Company amount to £24,000,000. The operations of the Company embrace all branches of insurance business, including life assurance of various descriptions, the granting of annuities, fire insurance, consequential loss following fire, marine insurance, workmen's compensation old. insurance, insurance against personal accist dent and disease, third party and drivers a risks policies, motor-car and lift insurance, plate glass, hailstorm, burglary and larceny

MURBERRY STREET



# GROUND FLOOR PLAN

ALLIANCE ASSURANCE COMPANY'S OFFICE, GEORGE STREET, SHEFFIELD. Messrs, GODDARD & CATLOW, FF.R.I.B.A., Architects.

We want to Browne, with a century B - A of the again

ALLIANCE ASSURANCE COMPANYS OFFICE GEORGE STREET, SHEF

I similarly which his roce thy been com-ternous wholly utrison for the Company's ses. All the frontages to thorough-re fixed with Pirtuid story with a to base, the main roof is covered with to case, the main roof is covered with and the floors and flats are of rem-t overete. Internally, the principal to overete in oak from floor to colling.

Fire Assurance Company, now known as the Adhance Assurance Company, Limited. The Adhance was established in the year 1824 by deed of settlement, and was incorporated.

in 1902 under the Companies Acts 1862 to 1906 as a limited liability company. The Sheffield as a limited liability company. The Sheffield Telegraph of February 29, 1864, announced the amalgamation in the following words:

The terms upon which the two establish m its are to be united appear to be very satisfactory, and it is stated that the busi-ness of the Sheffield Fire Office will be cona sheet of working drawings of the tower, because the satisfactory, and it is stated that the birst of the same enriched posses realized to the Sheffield Fire Office will be contributed from the lead of a local board, constituted from the lead of a local board, constituted from the lead ing inhabitants of the town, an arrangement which will perpetuate the advantage which will perpetuate the advantage which will perpetuate the advantage which will prove the insured have so many years enjoyed in the insured have so many years enjoyed in the insured have so many years enjoyed in the insured have so many years enjoyed in the insured have so many years enjoyed in the insured have so many years enjoyed in the insured have so many years enjoyed in the insured have so many years enjoyed in the insured have so many years enjoyed in the insured have so many years enjoyed in the insured have so many years enjoyed in the insured have so many years enjoyed in the will afford the security of one to Bromsgrove Guild:

The baster and bronze of the most wealthy and influential offices in the lit will afford the security of one to Bromsgrove Guild:

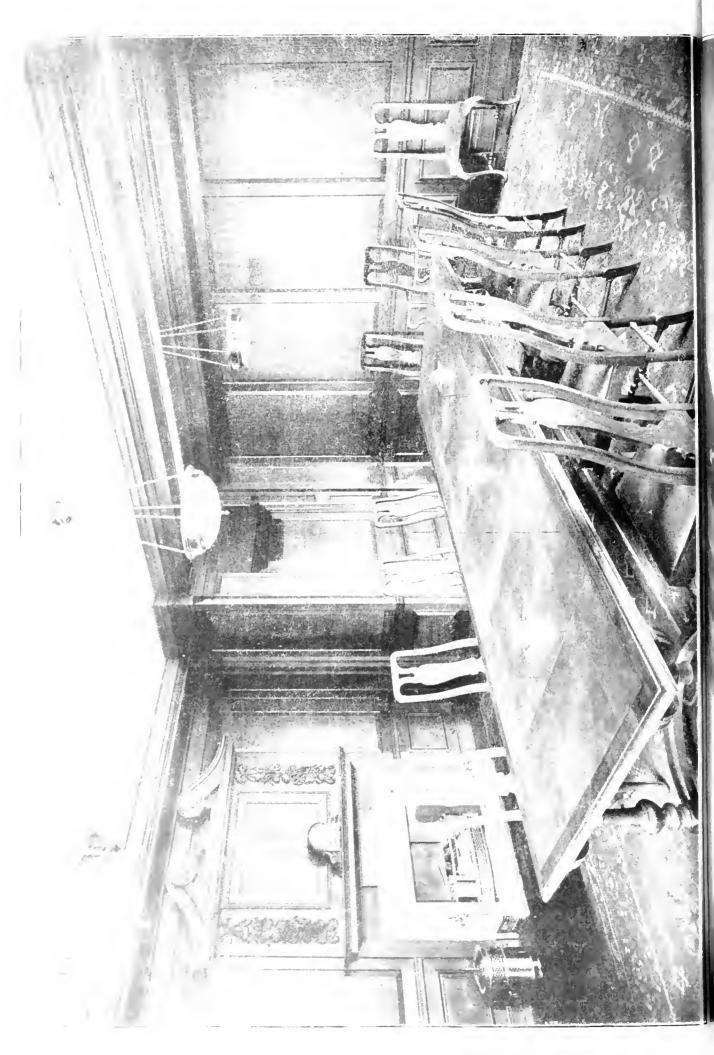
The business has increased enormously and the Sheffield branch of the Alliance has now two sub-branches, one at Leods and one at two sub-branches, one at Leods and one at the Buildings. Westminster, S.W.

Fight a century. With the year 1854, however, its individuality became marged in the at each office, thus enabling their ansured to at each office, thus enabling their insured to transact business with the minimum amount of troubde.

THE TOWER, KHARTOUM CATHE DRAL, SUDAN.

A double-page illustration from this year's Royal Academy drawing of the west front of this cathedral, showing the tower, and giving a plan of the church, appeared in the Building News for November 24, with a description of the building. To-day we give a sheet of working drawings of the tower, lent us by the architect, Mr. Robert Schultz

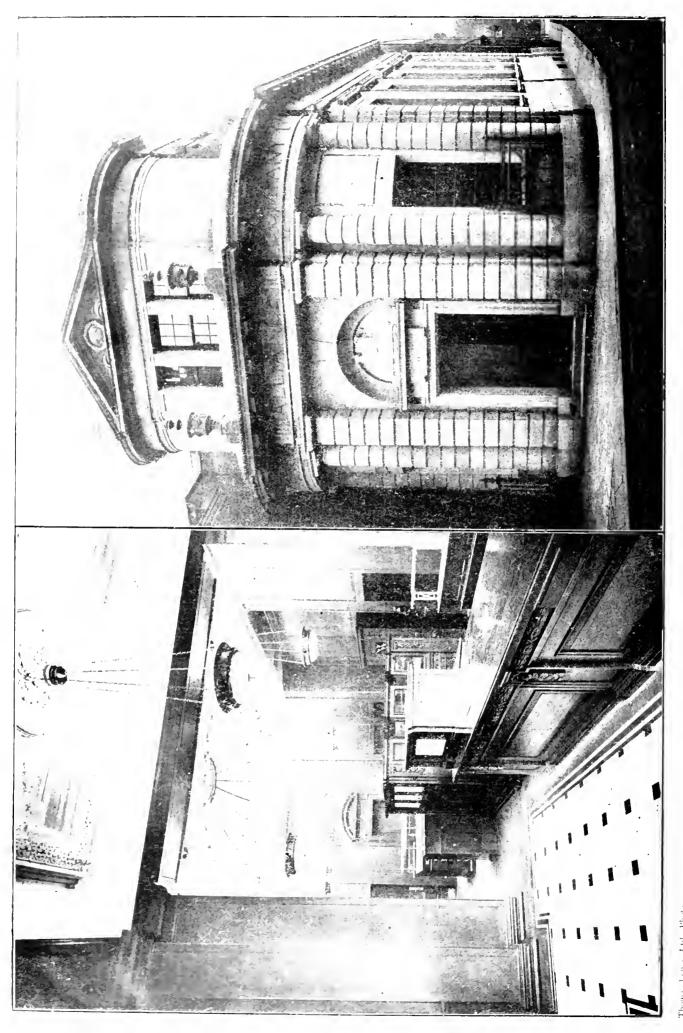




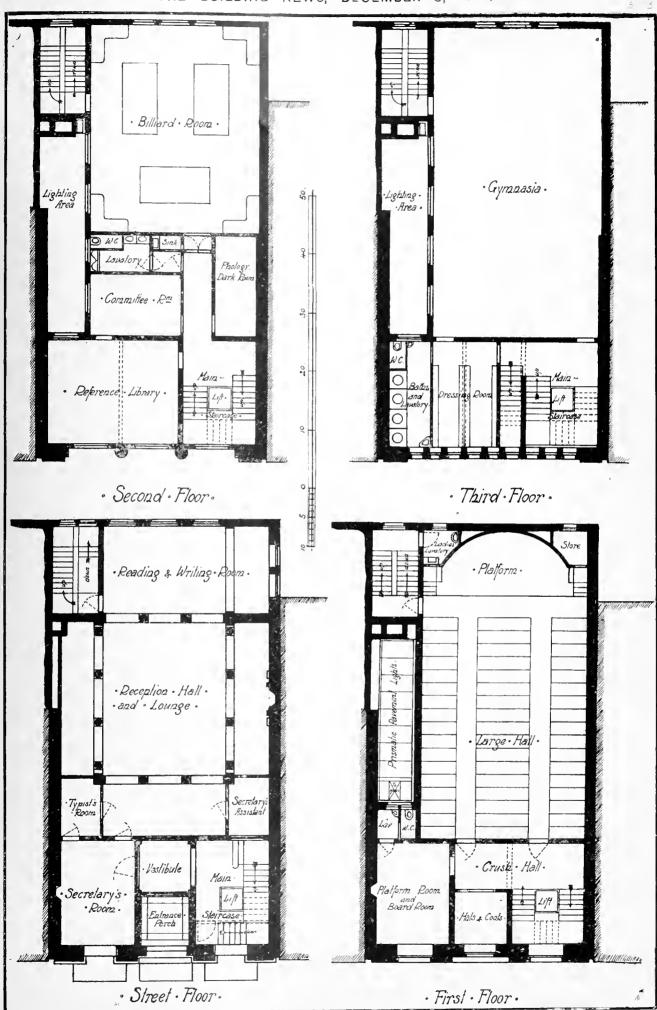








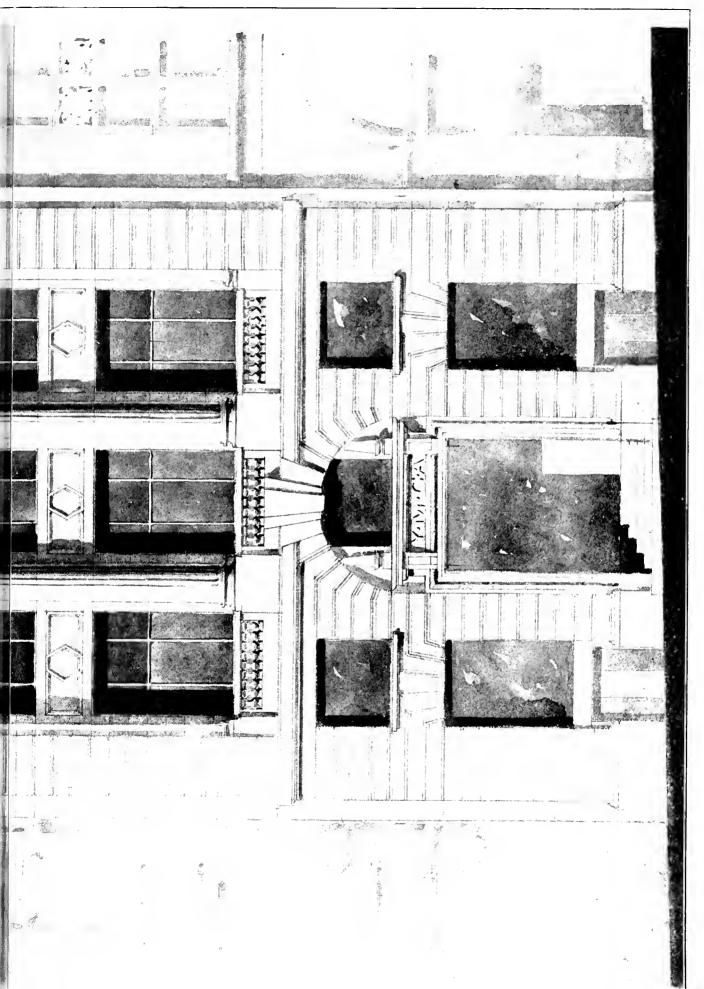
Thomatics, Let. Photo ASSURANCE COMPANY'S OFFICE, GEORGE STREET, SHEFFIELD,—Messis. Goddard and Catlow, FF.R.I.B.A., Architects.



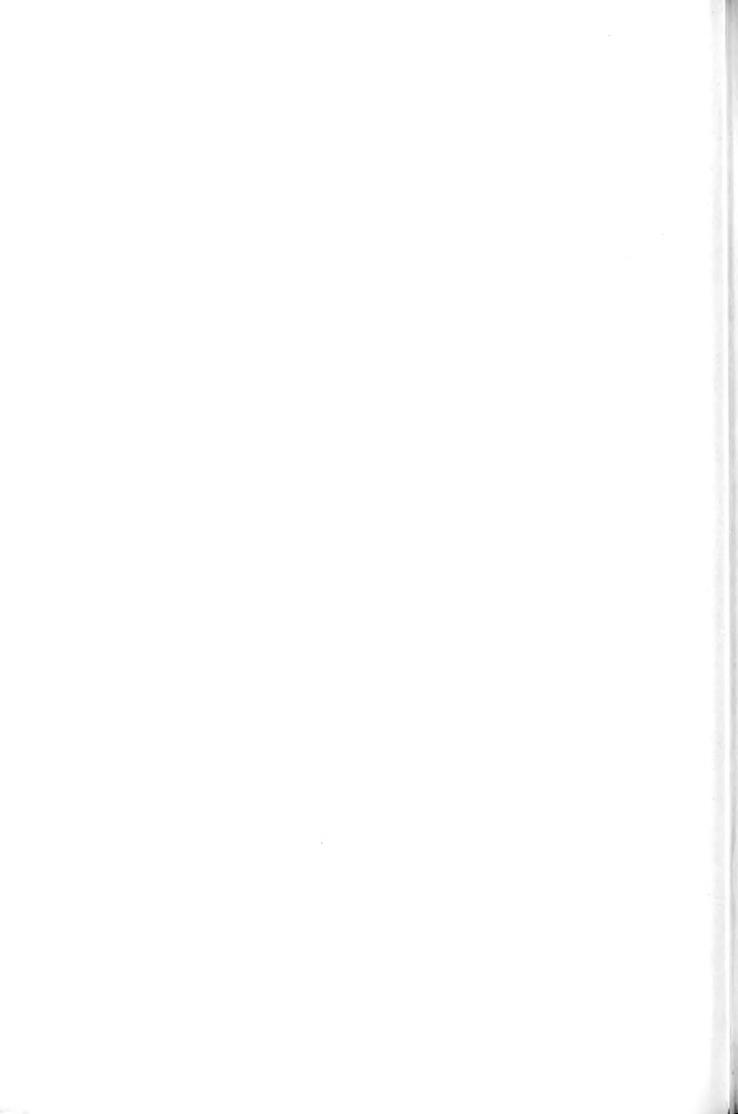
YOUNG MEN'S CHRISTIAN ASSOCIATION PREMISES, EDINBURGH.
Mr. G. Washington Browne, R.S.A., Architect.

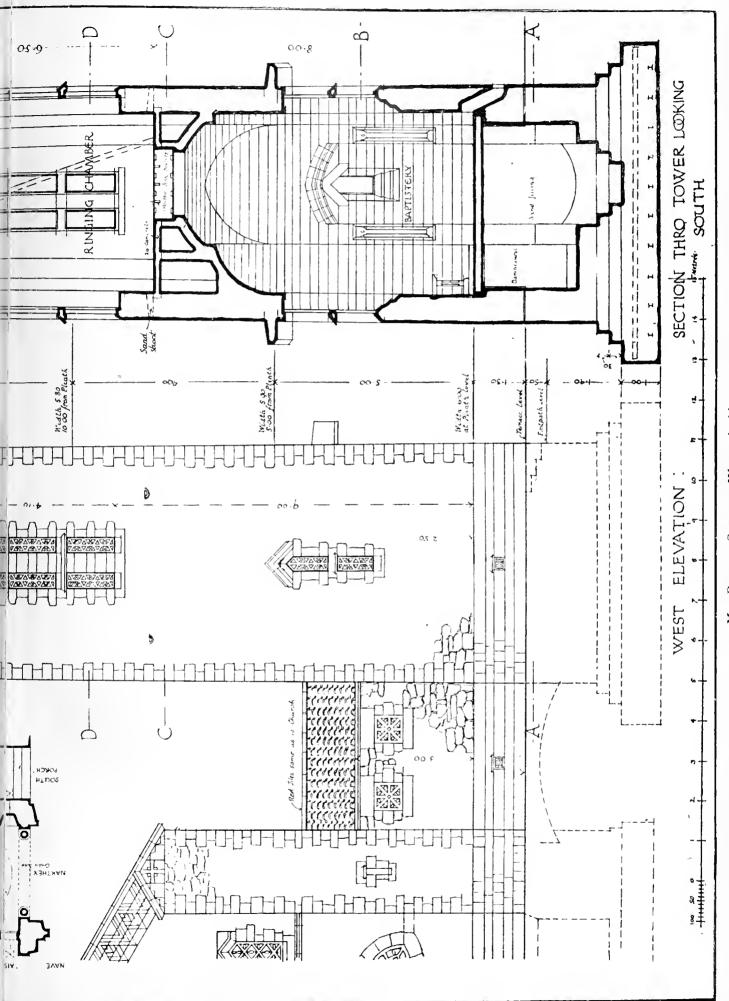


LIBRARY C. OSO ... 1015 THE BUILDING NEWS, DECEMBER 8, 1916.



YOUNG MENS CHRISTIAN ASSOCIATION PREMISES, EDINBURGH. Mr. G. WASHINGTON BROWNE, R.S.A., Architect.







#### PROFESSIONAL AND TRADE SOCIETIES.

ARCHITECTURAL ASSOCIATION OF IRELAND.—At a meeting of the Architectural Association of Ireland on November tectural Association of Ireland on November 25, at the rooms, 15, South Frederick Lane, Dublin, Mr. H. G. Leask, President, in the chair, a lecture was given by Professor Steele, M.A., M.R.I.A. his subject being "Some Towns of Northern France Affected by the War." He spoke of the towns first occupied temporarily by the Germans when they invaded France. These were Rouen, Amiens, Beanvais, and some others. No harm was done to these towns, at least no serious harm, and the inhabitants rejoiced at their good luck. Pictures of many of the principal buildings in these towns were shown on the screen. The lecturer then showed scenes from Soissons, Compiegne, Rheims, and other towns which suffered grievously from the bombardment. The lecture was mainly a description of the Gothic cathedrals, the architecture of which was the admiration of The lantern slides showed all beholders. these buildings as they were before the Germans committed havoc upon them, and also as they are to-day, many of them in ruins. A cordial vote of thanks was passed to the lecturer.

RELICS OF ROMAN LONDON.— Mr. Frank Lambert, curator of the Guildhall Museum, in a lecture before the London and Middlesex Archæological Society, given at the Bishopsgate Insti-tute on the 30th ult., stated that on the old Post Office site, St. Martin's-le-Grand, he had found 120 old Roman rubbish pits, from which he had recovered 10,000 fragments of pottery. Many of these fragments he had been able to piece together, and they were now in the Guildhall Museum. One of the most interesting discoveries was a fine gold ring, now in the possession of the Gold-smiths' Company. Other discoveries of Roman pottery had been made in King Wil-liam Street, E.C., where considerable clear-ances had lately been made. Part of the site belonged to the Corporation of London, and the relics found in that particular area had been housed at the Guildhall. On the other part of the site a large building had been erected for the Phoenix Assurance Office, and the company had taken possession of the old Roman remains found underneath, and had placed them in a private collection in the offices. Mr. John Todd, M.S.A., district surveyor for the Eastern Division of the City, the chairman, said that although those valuable relics of Roman civilisation might in law, and to a certain extent in ethics, belong to the company, in a very true sense they be-longed to the public. Every private owner who had a site in the City where relics were found should consider earnestly whether it was not his duty, instead of preserving them in private ownership, to send them to the Guildhall Museum. A vote of thanks was passed to the lecturer on the motion of Dr. William Martin, F.S.A., seconded by Mr. A. C. Knight.

ROMAN MARCHING CAMPSSCOTLAND.—At Edinburgh University, on Tuesday in last week, Mr. George Macdonald, F.B.A., LL.D., delivered a Munro Lecture on "Scotland During the Roman Period." Dr. Macdonald the Roman Period." Dr. Macdonald enumerated the various temporary or marching camps, whose existence has been fairly established. These were described in geographical order, attention being drawn to the points that differented them from native strongholds and justified the conclusion that they were the work, not of the Caledonians, but of the invaders. The Romans had evibut of the invaders. The Romans had evidently crossed the Cheviots near the newdwaters of the Coquet, and marched north-west towards the great landmark of the Eildon. A mile or two to the north of what is now the border one can still distinguish the outline of what seems to have been one of their halting places at Pennymuir or Towford, on the banks of the Kale Water. Eighteen miles further north, hard by the permanent settlement at Newstead, which must be Ptolemy's Trimontium or Town of the Three Peaks, Mr. James Curle discovered another temporary they did his serenc and beautiful outlook on life. Mrs. Webster expounded the art of

mirably situated so as to command the cross ing of the Tweed and the entrance to Lauder date. Fifteen miles beyond this again, on the southern fringe of the Lammermoors, Channelkirk, in the neighbourhood of which the remains of yet a third were observed by Melvill and subsequently planned by Roy. Traces of the Roman invasion are less definite on the west. But remains at Cleghorn, near Lanark, and at Torwood Moor, near Lockerbie, suggest an advance through Annandale and Clydesdale, while yet a third line of attack is indicated by the comparatively wellpreserved temporary camp at Gilnockie, near Canonline. This last must have been con-structed by a force that was detailed to dear with Eskdale. Between the Forth and Alyde isthmus and the southern end of Strathmore there were also temporary camps at Ardoch. and at Grassy Walls on the east bank of the Tay.

the Tay.

THE ART OF THE ITALIAN RENAISSANCE.—In St. Andrew's Hall, Drumshengh Gardens, Edinburgh, Mrs.

The began on Tuesday in last Webster began on Tuesday week a series of three lectures art of the Italian Renaissance. The

on the Kelman, who presided, in introducing the lecturer, said that to the Italy of the past also, with its glorious literature and art, they were immensely indebted, more than many of them could realise, and infinitely more than they could ever pay. To hear that Venice was threatened with destruction by bombs from Zeppelins made them feel in the same way as if they saw a child in a den of ferocious beasts. Mrs. Webster defined art as the language of the emotions-the emotional utterance of life—and craftsmanship as its grammar or tool, and dealt with some or the early Florentine artists. Beginning with Cimabue, she showed how Italian art in the Gothic age advanced from the Byzantine pattern, and how this early Florentine, while not able to shake himself free of tradition, infused the figure with more appearance of life. This was illustrated by lantern pictures on the screen of one of three Madonnas, which were known to be from his hand. His pupil Giotto, whom Cimabue took from tending his sheep, advanced further along the same lines, and surpassed his master as an artisc. Among his chief works were the frescoes in the Church of Assissi, illustrating the legend The devent character of the of St. Francis. art of Fra Angelico was next commented on and in concluding Mrs. Webster gave a short sketch of the life and work of the sculptor Luca Della Robbia-speaking of his versatility as an artist in many materials, as the discoverer of the famous blue enamel Tuscan pottery, the secret of which had been lost; and showing on the screen fragments of the celebrated Cantoria frieze, with the singing angels which he made for the Cathedral, and

which are now in the Museum at Florence. In her second beture delivered on Friday under the chairmanship of Processor G Bald win Brewn, Mrs. Webster dealt with some of the great Florentines and Umbrians of the the lifteenth and the beginning of the sixteenth century. After referring to the Renaissance spirit as reconciling Christian sentiment, which at that time dominated the civilised world, with the imagery, legends, and theories of pagan poetry and philosophy. Mrs. Webster spoke of Botticelli, who made a religion of the study of heanty, and plac d on the screen some of his principal work, and demonstrated in detail how his willowy figures were attractive in their tenderness and Botticelli was the greatest artist in grace. linear design that Europe ever had. Leonardo da Vinci was described as one of the most wonderful organisations that ever existed The complexity of his nature included the gifts of the painter, sculptor, mystic, engineer, and savant. He had been called "the most nniversal genius of all time." Several of the most famous of Leonardo's pictures were

shown on the screen and were individually discussed, especially the "Mona Lisa" of the

Louvre, with its charming personal presence and alluring, wonderful smile. Bernardino

Luini, the most distinguished pupil of Leon-

ardo, cultivated the master's style. His pic-tures were always interesting, reflecting as

Perugino, the teacher of Raphied, with it t inderness and religious feeling materialised in beautiful types. One of his faults was that he frequently repeated hunselt. Dealing with Raphael, Mrs. Webster spoke of him as an "eclectic" who Lorrowed from all the masters that had gone before, and issimihasters that had gone being, and technical lated it by his genius in so marvellones a manner. By a union of all the elements he manner. By a minor of an array was above all others successful in his works in producing a perfect harmony. With a in producing a perfect harmony. With a few words on Sidoma, of the Siema school also a pupil of Leonardo, the lecturer passed Michael Angelo with a consideration of whose genius as painter, architect, and especially as a sculptor, the discourse of the afternoon was brought to a close.

# TRADE NOTES.

Boyle's latest patent "Air-Pump" Ventila-tor has been employed at Messrs. Pears' factory. Brentford.

The business of the London Cabinet and The business of the London Cabinet and Joinery Co., Lyme Grove, N.E. has been acquired by H. H. Elhott, 63, Queen Victoria Street, London, E.C. He is manufacturing all kinds of cabinet and joinery work.

Wesers, C. Jennings and Co., tunber importers, 952, Pennywell Road, Bristol, have received a parcel of birch plywood at London and Liverpool slarge sheets 48 in, by 48 in, and 50 in, by 50 in, and would be pleased to impote against any inquiries. Their stock also includes ash, oak, and all other kinds of plywood, also Archangel red and white goods.

A cement finish to a concrete flat roof is likely A cement finish to a concrete flat roof is likely to become much more prevalent now that the question of making them absolutely watertight has been solved by waterproofing the cement. In this respect we learn that some roofs have been successfully constructed at Newcastle-on-Tyne during the last three years. The cement waterproofing powder "Pudlo" was employed, and the architect learning and the sentences of the sentences. and the architect has expressed his great appro ciation of the result.

The church at Cyfarthfa, Mon., is about to be enlarged from plans by Messes, Johnson and Richards, of Merthyr Tydfil.

In last week's issue, on page 555, we mentioned that Mr. Taylor had resigned his appointment as "borough engineer." This should outment as "borough engineer." This are read "borough electrical engument have read Middlesbrough

Middlesbrough.

The partnership hitherto subsisting between
A. Skinner and S. Taylor, builders, at High
Vitan Widdlesex, and at Linden A. Skinner and S. Layar, and at Linden Street, Acton, Middlesex, and at Linden Avenue, Wembley, Middlesex, under the style of Skinner and Taylor, has been dissolved.

A sub-committee has been appointed by the A sub-committee has been appointed by the corporation of Preston to confer with the Estate Sub-committee with respect to the improvement of Fishergate Hill, consequent upon the erection of the new Penwortham Bridge.

In succession to Mr. J. Fazackerley, who has resigned the position of gas and water mana to the Goole Urban District Council, Mr. L. manago: Nutrall, gas engineer, Cosport, has been appointed out of fifty applicants. Mr. Nutrall was formerly assistant gas engineer and manager with the Keighley Corporation.

The Bishop of London has dedicated the new military section which has been added to the Royal Free Hospital, Gray's Inn Road, together with a new chapel and mortuary chapel. The chapel stands apart from the main hospital buildings; its furnishing and decoration are et the simplest character.

The new wing of the Dental Hospital in Lincoln Place, Dublin, will be open for use by coln Place, Dublin, will be open for use by the New Year. On the ground floor is a new board and lecture-room; on the first floor s the anesthetic department, with waiting and reboard and lecture-room; on the first floor is the dispensary and general waiting-room; while on the third floor are an extension of the Weir Hall, students'-room, and offices. There is also some remodelling of the older part of the building. The cost will amount to £3,600.

The new offices in Kingsway and Lincoln's Inn Fields, erected for the Public Trustee by H.M. Office of Works, are now so nearly com-pleted that the furniture and deeds will be transferred thither from the present head-quarters, Clements Inn. Strand, between the quarters, Clements Inn. Strand, between the 17th and 20th inst. The new buildings, which are nine stories in height, in addition to a basement, are faced with Portland stone, the area of the premises being 20,400 square ject. They have been erected from plans passed by II.M. Office of Works, and were illustrated in our issue of August 2, 1912.

# Building Intelligence.

HALLY AND worm our which B. d. Considers have Read Designary at a cost test of the Wednesday and tempole of washing to the applies of washing to the arrows of clothing soft of the reeds of about the rank back accommodates a soft groom, the large to the vashing machines in extractors, the drying of g departments. Open it i binding are smaller are parts for dealing with are of the machinery is or we will electric heating is you as of the plant. The archi-W. H. Ward, of Birmingham.

BRESTOL West recorded on with the descent to Bantist College in Wood-LR are Lyndal's Park, a nearing content at different processible to remove that district some be possible to remove of the bolic gugs from the eld college see Visit to the new quarters in Tyn Sizes the rice new quitters in type is Physics. Entering by the main portal, the converse is custibled the date of the dat. If the college, 1679, an entrance is met with The dado, staircase, is met with The dado, stancase, by and or any are of oak, enriched by nervel design and curving. The doors to be seen even by a set the plan pal's rooms being to peed. In the nuseum the windows of this plan to be seen, even the peed. In the nuseum the windows of this plan that a choice stanced glass defices, removed from the red college, what 2 back as far as 1210. The library that is a the nuseum days room, and ds on the museum, class room, and the control of the many through the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of erry the mathematical half a con-troller than the whole length of the error than the sms on either hand. On one are the lecture room, the matron's it zerom and the during half, which has tide to the down on the main façade of handing. On the left-hand side there a quadratize with students' entrance. A services at land. The serving room discrete fatheres and tradesmen's trace to the principal's house, a the distriction is through a quadrangle trible and vivial. Messis, Oatley and trible to the additional Messis, Oatley and the trible to detail and Messis, John and Sess, of Backheath, Birmingand Sees, of to acknown, priming-less of the factor desired by a control of the massive of August 1915 to a Talbot writes to the Magazine regarding the A day Garaging the A day Garaging the A day Garaging the State of the great gateway effects here sized at the blocking up to the North Arman, at the side and a state of the Garaging way. A fine first of the control of the side and the state of the side and the state of the side and the state of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side of the side o " a tered and the full signs to back to it hand of the 20 for the Signer has been depended as sage of the signer for the treatment. From John the treatment is been as some for the contract at the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer for the signer f and the Trest of the been carried to December 4 Crapter, with the issisted Mr. to age Willis and others, under the conference of Mr. Roland Paul These income from with the reewed the 2 ory of a Bustol. The civic 2 to their lelb in the cath and sout. ...... acceded to 11 ander to restore

# PARLIAMENTARY NOTES.

PARLIAMENTARY NOTES.

TRE WAR BUILDING LEASE CONTRACTS. In the House of Commons, on
Wednesday, Mr. Alderman and Sherrif Touche
asked the Prime Munister if he was aware that
builders who, owing to the war, are not able
to command their usual resources in men,
materials, and money, are being required, in
some instances, by ground landlords, to early
out large interware building lease contracts in the out large pre-war building lease contracts in the City of London and elsewhere for which at common law they are hable; that these con-tracts involve financing for large amounts at a time when such financing is against the public interest, and the employment of able bodied men who should be engaged in the service of the State, and, in view of the desire Government to protect all interests, will be consider the question of taking such steps as may be necessary, by legislation or otherwise, to cenable such cases, whether few or many, to be referred to a tribinal empowered to grant rehef by postponement, or as they may determine, in all cases of real hardship. The Prime Minister replied that the subject referred to in the hon, member's question was under the consideration of the Government, but he was not in a position to express any opinion whether it would be deemed desirable to set up such a tribunal as was suggested in the latter part of his question. Mr. Touche further inquired if the Prime Minister would be willing to receive a deputation from the London Master Builders' Association on the subject. The Prime Minister

HOUSING SCHEMES AND THE LOCAL GOVERNMENT BOARD.—In the House of Commons, the President of the Local Government Board has been asked whether he would publish a list of the housing schemes that had been sanctioned since the outbreak of war and of those that had been refused. In reply, Mr. Long said he was afraid that any such list would be misleading, and would scarcely repay the trouble of preparation. Speaking generally, the Department had since March last been forced, owing to the restrictions on expenditure, to take the line that loans for housing and other purposes could not be sanctioned at the present time. An exception had been in the case of munition areas where An exception had been made accommodation was urgently required for the workers, and in some half-dozen cases terms had been arranged under which housing schemes would, he was glad to say, shortly be put in hand.

1NTRFASE OF RENT AND MORTGAGE INTEREST (WAR RESTRICTIONS) BILL.

The Increase of Rent Bill was read a second time in the House of Commons on Wednesday without a division. As the result of representations made by various members during the debate, Mr. Walter Long promised that in Committee he would consider in the most friendly way an amendment for the application of its provision to the country generally, and of its provisions to the country generally, and its one for extending it to more highly its one for extending it to more inguly-rated houses. Replying to various quest are and criticisms, he said the Government had no intention of including ground tents in the Bill. They were a totally different class of property from that with which the Government desired

THE NEW DELIII. Mr. Chamberlain, replying on Thursday to the question by Sir E. Conwall whether it was necessary to spend £267,000 this year on the building of the new Indian capital, said Before the war the mornal expediture on New Delhi was taken at £666,000 a year. In the Budget for the current year provision to the extent of £267,000 only war made, and this was stated to be the lowest ormaint reconical to rany on work actually in amount required to carry on work actually in progress and obviate the deterioration of plant and disbanding of establishment.

At Newn 11, Moll a fave-cell dust destructor, constructed at a cost of £3,330 for buildings and plant, has been formally opened in Tweedy Lane. It was built under the supervision of the Lorough engineer, Mr. II. Tremelling.

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Messis, F. Lowis and T. Tingle, surveyors to the Louth Rural District Council, have been granted permission to join the colours. The control have agreed that their Army pay shall be made up to their present salary, and their positions kept open

At the Soke of Pererborough County Council At the Soke of Pregrationing County Council to the Pairs of the Pairs of the Wednesday the Main Roads and Bridges Committee reported that after consultation with Mr. W. B. Purser, A.M.J.C.E., they recommended certain works to be carried out at Northborough Nine Bridges at a cost of £200. This was adopted and Mr. Purser's assistance gratefully, acknowledged.

# Our Office Cable.

The head of the angel in the north-west portal The head of the angel in the north-west portal of Rheims Cathedral, widely known as "The Smile of Rheims," which was injured during one of the German bombardments, and was reported to have been sold to Mr. Alfred du Port, of Wilmington, U.S.A., has been found by a priest of the cathedral chapter among the debris, and is now preserved on a bench amid the fragments of shattered wall that represent the former palace of the Arch-bishops. "La Sourire" is much blackened, and a broad slice of stone has been cut from the cheek and forehead. It can, however, readily be replaced, as a cast of the entire figure exists in the Trocadero at Paris. The angel was one of a group on the western anger was one of a group on the western side of the portal representing the fineral of Saint Nicasius, the first Archbishop of Rheims. It is satisfactory to learn that since December last all fragments of stone, glass, and wood have been scrupulously preserved, by order of the French Ministry of Fine Arts, and every item of any significance is stored either in the cathedral or in the annexe of the Archiepiscopal palace.

Writing in the Contract Record on "The Justifiable Outlay on Highways," Mr. Clifford Richardson, of New York, says the greatest enemys of good road construction lies in original economies. The satisfactory nature of any form of road construction is not to be determined by its original cost, but is only demonstrated by the travel which it has carried during the period of its existence and the amount of service obtained from it. slight additional outlay on the construction of a road with the best material will give more than an adequate return in the cost of maintenance during the entire lifetime of the highway. Experience shows danger in road construction is to be found in the following seven errors:—False economies in original design; bad or inferior workmanship; awarding the contract universally to the lowest tenderer; unsatisfactory execution of the work due to lack of intelligent control on the part of supervising engineers; neglect of careful study of individual problems of con-struction and of successful work under similar conditions: the influence of mercenary motives: and neglect of proper maintenance.

The annual report of the 119th session of the Royal Technical College, Glasgow, states that on the outbreak of war, immediately before the opening of last session, the rooms of the building were thrown open to facilitate recruiting, the laboratories with their equipment were placed at the service of the Government and the expert services of members of the staff freely offered for scientific and testing work. The roll of members on service is a creditable record. It comprises eight members of the governing body and of committees, 37 members of the staff, 1,152 students of 1914 and 1915, and 622 students of previous sessions—in all 1,819 Of these, 490 are serving as officers, 351 as non-commissioned officers, 966 as men, one as a nurse, and eleven on special service. Ninety-one of those whose names appear on the roll have already given their lives country's cause, including four members of the staff. Captain Engene Bourdon, B.A. of the French Army, the Director of Studies in the School of Architecture, has received the British Military Cross and also the French Croix de Guerre, and has been gazetted a Knight of the Legion of Honour. The normal work of the college has naturally suffered, there being but 3,028 students this session, against 5,011 in 1913-14, and drastic measures of economy had to be observed In the School of Architecture, maintained by the college and the Glasgow School of Art, three senior course certificates and two junior course certificates awarded

An influential domestion from the Civic Arts Association, including, among others, Mr. George Clausen, R.A., and Mr. John Lavery, A.R.A., waited upon the Lord Mayor at the Mansion House on Friday, to interest him in the aims of the Association. Mr. Edward P. Warren, F.S.A., F.R.I.B.A., who introduced them, said that at the close of the War there would be a great demand for national, regimental, local, and domestic memorials of those who had fallen, and there would be a national reaction in the architectural world after its enforced time of small output. It was of the greatest importance that such memorials should be excellent in both design and workmanship. They might often take the form of public buildings, such as recreation halls, or of small collections of beautiful objects for schools. There was thus a great chance and opportunity of bringing into prominence the advantages of order and beauty and town-planning. Other speakers addressed the Lord Mayor, who, expressing his warm sympathy with the objects of the Association, consented to allow it to hold a public meeting at the Mansion House, under his presidency, on Friday, January 28.

A scheme has been prepared for solving the housing difficulty in the Langley district, near Birmingham, which has become acute through the influx of so many working entergaged upon Government work. It is proposed to develop a freehold estate of about 44 acres, having frontages to Darly Road and Bason's Lane, Langley, and extending to Victoria Road, West Smethwick. The owner of the land has expressed his interest in the scheme, and the promoters have obtained from him an option to purchase the estate upon advantageous terms. The co-operation of the district surveyor has been obtained. There is room on the estate for the erection of over 500 houses of modern design and convenience after allowing spaces for a playing field and allotments. Applications have been received already by the promoters for close upon 100 plots.

The Gwydyr Forest, which extends from Dolgarrog, in the Conway Valley, to Pontst-Pant, in the Lledi Valley, and almost up to Capel Cerrig in another direction, is esti mated to cover an area of about 45,000 acres of mountain slopes, and contains some of the finest timber in the United Kingdom. It is at present the scene of considerable activity. Messrs. Green, timber merchants, who have secured Government contracts for railway sleepers, employ a large number of men, who are engaged in felling the huge trees on the platean adjoining the Park Lake, at an altitude of about 1,500 feet. The Gwydyr mountain here slopes steeply towards the main road to Bettws-y-Coed, and the trunks. denuded of branches, are released on the summit to slide down to the roadside, where a screen of timber has been erected to stem the rush. They are subsequently loaded up in traction and horse waggons and conveyed to the sawmills in the station yard, where they are converted into railway sleepers and despatched by rail en route to their destina-Large areas have already been denuded tion. of timber, which includes a large percentage of oak. Trees gracing the mountain slopes facing the Conway Valley are as yet untouched.

A new mill is to be built at Brighouse from the plans of Mr. E. C. Brooke, architect, Central Chambers, Brighouse.

At a general meeting of the Royal Society of Painters in Water Colours, Mr. H. Hughes-Stenton, A.R.A., was elected a member.

It has been decided by the Board of Agriculture to appoint a committee, armed with somewhat extensive powers, to deal with the whole question of the timber supplies of Great Britain.

At Failsworth on Wednesday Mr. W. O. E. Meade-King held a Local Government Board inquiry into an application by the urban district council for sanction to borrow £1,160 for providing public offices.

At a meeting of the Public Health Committee of the Barking Urban District Council, Mr. C. J. Dawson, F.R.I.B.A. architect to the council, attended and reported upon the application of Messrs. Clement and Co, for a further allowance over and above their contract price for the erection of the second block of fifteen houses in Gascoigne Road, owing to the increased price of materials in consequence of the war. It was resolved that a further and final increase of £10 per house over and above the contract price be allowed the contractors, subject to the architect being satisfied with the contractors' accounts of the increased cost incurred.

#### CHIPS.

The urban district council of Bideford has received the sametion of the Local Government Board to a loan of £3.658 for works in connection with the water supply

Mr. Charles R. Ashbee, F.R.I.B.A., becurred before the Society of the Frac Arts at Washington, D.C., on November 27, his subject being "The Province of the Arts and Crafts."

The Qu'en Princess Marx, and Prince Albert have vested Sn George Frampton's studio to see a statue of her Majest, which has been finished for Dellin. At the same time the Queen saw the model sketch for the Cavill memorial.

M), A. W. Brightmore, an inspector under the Local Government Board, held an inquiry at Whitefield yesterday (Tuesday) into an application by the urban district conneil for sanction to horrow £2,595 for sewerage and sewage disposal works.

Plans for the new Hall of Justice which will be creeted in the Court House block at Sacramento, California, have been formally adopted by the City Commission. Tenders will be received in a short time for the construction of the building, which will cost about \$203,000.

The Mersey Docks and Harbour Board have under consideration a recommendation from the works committee to reconstruct the southerminost section of the shed on the east side of the Darrington Dock (recently destroyed by fire), at an estimated cost of £10.855.

After clong and heated discussion, the Austrian Society of Engineers and Architects has expunged the name of Sir William Rainsay from the fist of its corresponding members. A fourth of those present voted against the motion, and inged that action in the matter should be postponed. We heartily congratulate Sir William Rainsay.

M. R. D. Summerield recently read a paper on "The Inspection of Engineering Material" before the Britishian Association of Engineers. He divided his subject into. The necessity for inspection, the advantage to the buyer, the benefit to the contractor, the abuse of inspection, the inspector and specifications and inspection.

The Rochelale Corporation were informed at their uncetting on Thursday lass that an expert ment with a new invention for the treatment of "sewage sludge" (not sewage) at the borough sewage disposal works is enharrassed by the liquidation of the firm which initiated the work, and the matter is at a standstill.

At the Styal Cottage Homes, belonging to the Manchester Bound of Guardaus, the Besugof Chester has formally dedicated a new chapel. It accommodates 618 children, and has cost £3,000. The work is carried out in a characteristic Cheshire style in brick and half-timber work, with red-tiled root. Mr. F. H. Overmann, of King Street, Marchester, was the architect.

was the architect.

At an inquest held in Sc. Paneras on Saturday on the body of Elizah th Bridle, forty-eight, wife of a builder and decorator, of Aybrook Street, Marylebone, it was stated that on Wednesday evening she and her husband while crossing High Street, Marylebone, were knocked down by a motor-cab. The wheel of the cab passed over the right leg of Mr. Bridle, but his wife sustained a fracture of the skull and internal injuries, from which she died. A verdict of accidental death was returned

verdict of accidental death was returned. An interesting egremony took place at Halifax, Nova Scotia, when the foundation stone of the quay wall of the new ocean terminals was laid by Sir Robert Borden, the Premier of Canada. Eight bassenger steamers of 600 ft, each can be accommodated alongside the quay wall when the present unit is completed. The whole undertaking, however, provides that a fleet of twenty-tom ships, each 600 ft long, can be loaded simultaneously at the piers. The depth of water at low tide alongside the piers will be 45 ft.

At a general assembly of acidemicans and

Ar a general assembly of academicans and associates held on Monday, Mr Charles Sins, A.R.A., painter, was elected a Royal Academician. Mr. Sins, who is in his forty-third year, began to study art at South Kensington at the age of seventeen, and was afterwards a student of the Academic Julian in Paris and at the Royal Academy Schools, His "Childhaod" was bought for the Layembourg in 1900. He first exhibited at Burlington House in 1994. In the Tate Gallery he is represented by "The Fountain" and "The Wood Beyond the World," which were bought by the Chantrey Trustees. He married a daughter of the late Mr. John MacWhitter, R.A.

The death is announced of Mr. John Dolan, late deputy surveyor for Roscommon. Less than thee weeks ago he resigned his position after fifty years' service.

Mr. Beresford Graum Walls, M Inst.C.E.s. late superint edding engineer in the Punjaub, Indian Public Works Department, died on the 25th ult, at his residence in Quesustown, Un-

The corporation of Doneaster have appointed Mr. R. E. Ford as acting borough surveyor and water engineer during the absence of the horough surveyor. Mr. F. O. Kirby, on active service.

We regret to hear that Second Lieut, Ceel B, Fubbs (6th Somerset Light Infantry), the third son of Mr. Percy B, Tubbs, F.R.I.B.A., president of the Society of Architects, Aldersgate Street, E.C., has been wounded in action in Flanders.

The twentieri use of members, licentiates, and students of the Royal Institute of British Architects, published yesterday, who have joined the Army or Navy, gives the total to date of 47 fellows, 365 associates, 188 licentiates, and 234 students.

A picture-drome and concert hall have been built in Chapel Street, Worthing, from plans by Mr. Peter D. Stonham, M.S.A., of Eastbourne and Bexhill. Accommodation's provided in the picture-drome for 1.6° persons and for 1% in the concert hall.

In the course of excavations in connection with the extension of the Stephey Borough Council's electricity generating stution at Limeboure specimens of ancient pottery have been discovered. They are to be placed on exhibition in the Stephey Borough Museum.

The new raccourse stand at Cheltenham is constructed in reinforced concrete, and is 90 ft. in length by a width of 44 ft. On the first floor behind the balcony is a restaurant. The architects were Messrs, Chitters and Smithson, Regent Street, Cheltenham.

At the last sitting of the Carlisle Consistory Court a faculty was granted to the vicar and gardens of St. Cuthbert's Church. Holme Cultram, to erect a tower at the west end of the nave and to carry out several other improvements, including rehanging the hells.

Extensive additions to the county club premises in Phienry Street, Cork, have been compared to the county of the rock has

Extensive additions to the county club premises in Phienix Street, Cork, have been completed at a cost of about £3,000. The work has been executed by Messis, J. D daney and Co., builders, Cork, from plans and specifications prepared by Mr. J. F. McMullen, architect, Cork,

pared by Mr. J. F. McMillen, architect. Cork. The county surveyor of Monaghan, Mr. J. J. Hannigan, reported to his county connell at their last meeting that over £4,900 with of road works would this year be thrown on his hands in consequence of the failure of the rural council and county council to obtain contractors.

At the last meeting of the Stoke-on-Trent education committee the chairman reported that the architect, Mr. Ashworth had joined the forces, and had received a commission as second hentenam in the Royal Garrison Artillery. The assistant architect was appointed in his stead during the continuance of the war

Under the General Powers Bill to be promoted by the corporation of Tynemouth next session further authority is sought with respect to streets, buildings, sewers and drains, infections and other diseases, cleausing of vermicous persons and houses, overcrowding, and removal of persons suffering from pulmonary tuberculosis. It is proposed to add the urban district of Ashington to the corporation's area of water supply, and to acquire the waterworks at Ashington.

The death has taken place at Carnaryon of Mr. John Williams, master builder. A native of Milford Haven, Mr. Williams took up his home at Carnaryon thirty eight years ago, and carried on business with his sens and his brother. He was a skilled woodworker. Though in his eighty-fourth year, he worked regularly at the bench till his health began to fail him some two years ago. Mr. Williams leaves a daughter and four sons.

regularly at the bench till his health began to fail him some two years ago. Mr. Williams leaves a daughter and four sons.

Lord Justice Bankes opened on Thursday the new buildings of the Francis Holland School for thris in Clarence Gite, Regent's Park. Owing to the extension of Baker Street Railway Station the school has been removed from the site it had occurred since 1873. The new premises are faced with small rad bricks. Portland stone being employed for dressings. The floors and stairways are of firsproof construction, and the internal joinery is of whitewood. Mr. Henry T. Hare, F.R.I.B.A., was the architect, and Mr. James Carmichael the builder. The new schools were illustrated in our number for October 16, 1914.

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#### TO CORRESPONDENTS.

TO CORRESPONDENTS.

We do not hold ourselves responsible for the opinions of our correspondents. All communications should be drawn up as briefly as possible, as there are many claimants upon the space allotted to correspondents. It is particularly requested that all drawings and all communications respecting illustrations or literary matter, books for review, etc., should be addressed to the Editor of the Britishs News, Ellingham House, I. Arundal street, Strand, W.C., and not to nembers of the staff by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributors' risks, and the Editor will not undertake to pay for, or be 'liable' or, unsought contributions.

\*\*Drawings of selected competition designs, important public and private buildings, details of old and new work, and good sketches are always well some, and for such no charge is made for insertion off no-re commonplace subjects, small churches, chapels, houses, etc. we have usually far more sent than we can insert, but are glad to do so when space permits, on mutually advantageous terms, which may be a-certained on application.

may be ascertained on application. When favouring is with drawings or photographs, architects are asked kindly to state how long the building has been creeted. It does neither them nor is minch good to illustrate huildings which have neen some time excented, except under special circum

Telephone: Gerrard 1291.

Telegrams: "Timeserver, Estrand, London."

#### NOTICE

NOTICE.

Sound copies of V.d. CVIII. are now ready, and should be ordered early (price 12s. each, by post 12s. 10d., as only a limited number are done up. A few bound volumes of Vols. XXXIX. XLI., XLVI. XLIX. LXIV. LXV. LXVI. LXVII. LXIV. LXV. LXVI. LXVII. LXVIII. LXIV. LXXV. LXXVI. LXXVII. LXXIII. LXXIV. LXXVI. LXXVII. LXXIV. LXXXVI. LXXXVII. LXXXII. LXXXII. LXXXII. LXXXVII. LXXXVII. LXXXVII. LXXXVII. LXXXVII. LXXXVII. LXXXVII. LXXXVII. LXXXVII. XCV. XCV. XCVII. XCVII. XCVIII. XCVII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVIII. XCVI

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Most of the back issues are to be had singly. All back issues over one month old will be charged ed. each, postage 1d. Subscribers requiring back numbers should order at once, as they seen run our print.

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The charge for Competition and Contract Adverusements, Public Companies, and all official advertisements is is per line of Eight Words, the first line contring as two, the minimum charge being 5s for four lines

for four lines. The charge for Auctions, Land Sales, and Misscellaneous and Trade Advertisements (except Situation Advertisements) is 6d, per line of Eight Words the first line counting as two), the minimum charge being 4s 6d for 50 words. Special terms for series of six misertions or more can be ascertained on application to the Publisher.

SHUMIONS VICAM AND PURINERSHIPS
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SHUMIONS WANTED.

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Replies to advertisements can be received at the office, I flingham House, I. Arundel Street, Strand, W.C., free of charge, If to be forwarded under sover to advertise, an extra charge of Suspence is nade. (See Notice at head of "Situations.")

nade (See Notice at head of "Structions.")
Advertisements for the current week must reach the office not later than 3 p.m. on Tuesday. From tage advertisements and alterations or stop orders for serial advertisements must reach the office by first post on Monday to secure attention.

THE NEW POSTAL RATES. Do not forget that though to are penalised by the new postal rates be answered the term out of the BUIDING NEW speeds the sixonnes and, we are making no extra charge to subscribes who receive their copies due to trom the office, the observation rate remaining as before CL per amount to half yearly and is quarterly. Now is the time to subscribe

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JERUS W. Mayo no record CoxCLITE II is not a system we should use

# TO ARMS!

418 BATTALION CENTRAL LONDON VOLUM-

TELR REGIMENT.
ORDERS FOR THE WEEK.

Other for the week.—Platoon Commander C. H. C. Bond.

Next for duty Platoon Commander E. P. Hudson, GENERAL PARADIS, There will be no general parade on Saturday next,

Saturday, 18th unst., pare le at Chester House, 245 p.m. Unitorm, havetsacks, and water-bottles. The next general parade will be on Saturday, 1st

LECTURES

LECTURES.

This evening (Wednesday), 5th inst., Colonel Sir E. Baban at the Institution of Civil Engineers, Great deorge Street, S.W., at 5.45 p.m.,
Thursday, 9th inst., at Chester House, 5.45 p.m., the Adjutant's becture to officers and N.C.O.'s on "Bridging."
And at 7.15, Mr. Gunton's lecture to officers and N.C.O.'s on "Field Communications."
Thesday, 14th inst., 7.15 to 8.15, at Chester House, the Adjutant's becture on "Military Engineering."

the Adjutant's betture on "Military Engineering,"

DRILLS AND PARADES.

A detailed order of all drills and parades up to
January 31, 1916, is posted on the notice board at
headquarters. Members must make themselves
familiar with same.

Wednesday, 5th inst., No. 2 Piatoon drill at headquarters, 6.15 to 8.15.
Wednesday, 15th inst., No. 3 Platoon drill at headquarters, 6.15 to 8.15.

# ENTRENCHING PARADE.

ENTRENCHING PARADE.

Sunday next, 12th inst., Victoria Station, L.B. and S.C. Railway indicator board. It is hoped that the pecual train, 9.15, will be run again on this Sunday. Notice will be posted on board at headquarters and also in later orders. Uniform, haversacks, and water-bottles. Midday and tea rations to be carried. Return to town about 6.40. Railway vonchers will be provided.

#### FIELD COMMUNICATION.

Parade, Saturday next, 11th inst., 3 p.m., Victoria Gate, Hyde Park, officers and N.C.O.'s only, for instruction in use of field communication and the sending and receiving of messages in the field. By kind permission of the Commandant of the Post Office V.T.C.

By order, L.R. GUTHRIE, Adjutant.

# CORRESPONDENCE.

All correspondence should be addressed to the Orderly Room. Drill Herdquarters and Orderly Room, Chester House, Eccleston Place, S.W. Battalion Headquarters, 1s, Fufton Street, Westminster,

December 6, 1915.

A notable addition has been made to the decoration of the Royal Exchange by the unveiling of a fresco painted by Mr. A. E. Cox, R.B.A., and presented by Sir Frederick Green, the subject being "Philip the Good presenting the Uniter to the Merchant Adventurers."

The borough surveyor of King's Lynn has reported to the corporation that a very serious settlement has occurred in the main outside wall on the east side of the Red Mount; he submitted that the restoration of an historic building of this description is the work of an expert. The corporation agreed to at once obtain a report on the building.

Mr. W. W. Gladwell, district surveyor for the East Harling division of Norfolk, has been appointed, temporarily, county surveyor of Norfolk, to fill the vacancy caused by the death of Mr. T. H. B. Heslop, at a salary of £200 a year. Mr. Gladwell has occupied his present post since 1894, and was previously assistant surveyor to the Prestbury Highway. Board, and afterwards to the corporation of Sutton Coldfield.

Board, and afterwards to the corporation of Sutton Coldfield.

At the meeting on Thursday of the Licensing Justices for Birmingham, Mr. Hurst applied on behalf of the London and North-Western Railway Company for alterations to certain plans which were approved by the justices when the provisional grant for the rebuilding of the Queen's Hotel and its extension was made in April, 1912. The scheme originally proposed to be carried through had been rendered impossible for the present. That was a scheme by which a new bridge was to be provided for through traffic through the station, but the necessary capital expenditure for the work had not received the sanction of the authorities. Consequently that part of the scheme would be abandoned until the necessary capital could be secured. The alterations which it was desired the justices should approve were three in number. The chairman asked whether, if they sanctioned this arrangement, it would shut out permanently any chance of making the station a closed one. Mr. H. A. Briggs, the architect said the alteration would not preclude the station being made a closed one in the future a closed one. Mr. H. A. Briggs, the architects said the alteration would not preclude the station being made a closed one in the future Having received this assurance the justices granted the application.

# LATEST PRICES.

N.B.—All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

# TIMBER.

Owing	to	stoppage	of	supplies	all	prices
have adv	anc	ed conside	rab	ly.		

IRON	have advanced considerably.
Rolled Steel Joists, English	
Steel Sheets (Single or Double)	Rolled Steel Joists, English£14 15 0 to £15 15 0 Compound Girders, Ordinary
Bar Iron, good Staffs	Sections         16 10 0 , 17 10 0           Wrought-Iron Girder Plates         13 10 0 , 13 12 6           Steel Girder Plates         13 15 0 , 13 17 6
Bar Iron, good Staffs	Steel Sheets (Single or Double)       . 11 10 0                                                                                                             .
Boliar Plates, 1701—    South Staffs	Bar Iron, good Staffs
6ft. to 8ft. long, inclusive Per ton. Per too. gauge	
6ft. to 8ft. long, inclusive Per ton. Per too. gauge	Best Snedshill 9 0 0 , 9 10 0 Angles, 10s, Tees 20s, per ton extra.
Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Otto £12 10 0   Cast-Iron Stanchions   12 0 0 ton £12 10 0   Rolled-Iron Fencing Wire   815 0   9 5 0   Rolled-Iron Fencing Wire   815 0   9 5 0   Rolled-Iron Fencing Wire   815 0   9 5 0   Rolled-Iron Fencing Wire   815 0   9 5 0   Rolled-Iron Sash Weights   65 0   615 0   Cast-Iron Sash Weights   65 0   615 0   Cut Floor Brads   15 0 0   15 5 0   615 0   Cut Floor Brads   16 0 0   9 0   0 0   15 0   Corrugated Iron, 24 gauge   16 0 0   9 0   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   P	Ditto galvanised, £20 to £20 l0s, per ton. Galvanised Corrugated Sheet Iron—
Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Otto £12 10 0   Cast-Iron Stanchions   12 0 0 ton £12 10 0   Rolled-Iron Fencing Wire   815 0   9 5 0   Rolled-Iron Fencing Wire   815 0   9 5 0   Rolled-Iron Fencing Wire   815 0   9 5 0   Rolled-Iron Fencing Wire   815 0   9 5 0   Rolled-Iron Sash Weights   65 0   615 0   Cast-Iron Sash Weights   65 0   615 0   Cut Floor Brads   15 0 0   15 5 0   615 0   Cut Floor Brads   16 0 0   9 0   0 0   15 0   Corrugated Iron, 24 gauge   16 0 0   9 0   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   Per ton.   P	66t. to 8ft. long. inclusive Per ton. Per too.
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B,B, Drawn Telegraph Wire, Gaivanised—    O to 8 9 10 11 12 B.W.G.     £10 10s. £10 15s. £11 10s. £11 15s. per ton.     £20 10s. £10 15s. £11 10s. £11 15s. per ton.     £3 in. diameter	Cast-Iron Columns         £12         0         0         £12         0           Cast-Iron Stanchions         12         0         0         12         10         0
B,B, Drawn Telegraph Wire, Gaivanised—    O to 8 9 10 11 12 B.W.G.     £10 10s. £10 15s. £11 10s. £11 15s. per tou.     £20 10s. £10 15s. £11 10s. £11 15s. per tou.     £3 in. diameter	Rolled-Front Fencing Wires 7 15 0 ,, 8 0 0
B,B, Drawn Telegraph Wire, Gaivanised—    O to 8 9 10 11 12 B.W.G.     £10 10s. £10 15s. £11 10s. £11 15s. per ton.     £20 10s. £10 15s. £11 10s. £11 15s. per ton.     £3 in. diameter	Cast-Iron Sash Weights
Cast-fron Socket Fipes	Galvanised Wire Strand, 7 ply, 14 B.W.G
Tron	0 to 8 9 10 11 12 B.W.G. £10 10s. £10 15s. £11 0s. £11 15s. per tou. Cast-fron Socket Pipes—
Tron	3 in, diameter       £7 5 0 to £7 12 6         4 in, to 6 in       7 0 0 , 7 2 6         7 in, to 24 in (all sizes)       7 7 6 , 7 12 6
Cold Blast, Lillieshall       137s. 6d. to 142s. 6d.         Hot Blast, ditto       100s. 0d., 107s. 0d.         Wrought-Iron Tubes and Fittings—Discount of Standard Lists f.o.b. (plus 2½ per cent.)—       61½ pc.         Gas-Tubes       57½ s.         Water-Tubes       57½ s.         Steam-Tubes       55½ s.         Galvanised Gas-Tubes       50 s.         Galvanised Water-Tubes       47½ s.         Galvanised Steam-Tubes       40 s.	Parton
Standard Lists 1.0.0, tpins 23 per cetal.   Gl3 pc.	Cold Blast, Lillieshall
Steam-Tubes	Standard Lists 1.0,0, (pins 23 per ceut.)
Steam-Tubes	Weter-Tubes 578
Galvanised Steam-Tubes	Steam-Tubes 534 .,
Galvanised Steam-Tubes	Galvanised Gas-Tubes
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Lead Water Pipe, Town	Per ton. Per ton.
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ontside	Lead Pipe, tinned inside, Town '36 10 0 —  "Country '37 10 0 —
" , Country +40 0 0 ., -	outside
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Country *	38 10	0 ,,	
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Over 41 in. £1 per ton	extra.	]	
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	168 0	0	169 0
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brom di	0.16	1)	_

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# SCRAP METALS

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SLATES.									
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Blue Bangor	20 ,,	10	11	5 0	11 11				
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# BRICKS.

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Red Wire Cuts			Õ			11	
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Best R. d Pressed	_			"	19	*1	
Ruabon Facing	5	0	0	11	11	11	
Best Blue Pressed	_			1.	**	**	
Staffordshire	3	15	0	**	11	11	
Ditto Bullnosc		ő	Õ	11	13	11	
Best Stour bridge Fire-		•		""	"	**	
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crington Plastic	4	10	6			ick load	
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Ditto Ordinary Sec							6
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Ditto Plastic Engineering Bricks	1	17	6
Sewer Arch Brick, not more than 31 in			
tbickest part	2	0	0
31" Chimney Bricks fit for outside work	2	6	0
3g" ditto ditto through and through			
34" Beaded, Ovolo and Bevel Jambs; Octa-			
gons; 21" and 1" radius Bullnoses; Stock			
patterns	3	7	6
Accrington Air Bricks, 9" × 2 course deep, each	0	0	6
Ditto ditto 9" × 1 course			
Accrington Camber Arches:—			

e c	rington	Camber	Arches:-					
3	course	deep 45"	soffit, per	foot	opening.	. 0	l	
4		4 4 4"		11	11 .	. 0	1	
5	11	45"	11	11	11	. 0	2	
6	11	4§"	11	**	,,	. 0	2	
3	11	$9^{\bar{v}}$	11	11	11 .	. 0	2	
4		9"	**	11		. 0	2	1
5	- 11	9"	11	11		. 0	3	
6		9"		11	- 11	. 0	4	
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### GLAZED BRICKS

HARD GLAZES (PER 1,000).

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5. each	4d.each	ba, each	bu, each	oa. each
Rounded Int	ernal Angle	es		
4d. each	3d, each	5d. each	5d, each	4d. each
		DED BRICE	s.	
Stretchers at	nd Henders	_		
8d. each	8d. each	8d. each	8d. each	8d. eacb
Internal and	External.	Angles—		
1/2 each	1/2 each	1/2 each	1/2 each	1/2 each
Sill Bullnose	. Stretcher	s, and Head	lers	
5d. each	4d. each	6d each	5d. each	5d. each
1	Class Class	. A Dimotule	ore and	Dor I 000

5d. each 4d. each 6d each 5d. each	5d. each
Majolica or Soft Glazed Stretchers and	Per 1,000
Headers	£22 17 €
Headers Dullman	
Quoins and Bullnose	2(11)
Compace bucks, circular and arch bricks of	1 Nor
single radius £6 per 1,000 over above list	excesq.
for their respective kinds and colours	>ing9ia
Camber arch bricks, any kind or colour,	hv 44 in
Camber aren blicks, any kind of doloni,	by 27 in
ls. 2d each	/ Hy Zg Iu
Stretchers out for Closers and Nicke	d Double

Headers, £1 per 1,000 extra.		٠.
These prices are carriage	paid in full truck load	us
to Fondon Stations	s. d.	
Thames Saod	7 6 per yard, delivere	a.
Pit Sand	70 ,, ,,	
Thames Ballast	6 0 ,, ,,	

						Adlivared
Best Portland Cement Ground Blue Lias Lime	21	Ö	per	to	n,	delivered.
Exclusive of cha	rge	103	r sa	ска	з.	
	0	d		0	а	Per vard

ł		s.	α,		8. O	. 1	ег у	yasru,
	Gran Stone Line	13	6	to :	14 0	) de	live	ered.
	Grey Stone Lime Stourbridge Fireclay in sacl	ks :	275.	0d.	per	tou	at	rail-
	way station.				•			

way station.			
STONE.*			
Red Mansfield, in blocks per foot cube	£0	2	- 4
Darley Dale, ditto	0	2	6
Red Corsehill, ditto	ō	2	É
Closeburn Red Freestone, ditto	ŏ	2	2
	ň	ĩ	11
Ancaster, ditto	ň	2	-
Greenshill, ditto	ň	ñ	7
Beer, ditto	0	•	•
Chilmark, ditto (in truck at	0	١	10
Nine Elms)	0		10
Hard York, ditto	U	4	
Do. do. 6 in. sawn both sides.	_	_	

Do. do. 6 in. sawn both sides, landings, random sizes.....per feot snp. 0 2 8 Do. do. 3 in. slab sawn two gides. random sizes......, 0 1 3 All F.O.R. Loodon.

Bath Stone - Delivered in rail- way trucks at Weatbourne	£	9.	d.
Park, Paddington (G.W.R.), or South Lambeth (G.W.R.) per foot cubs	0	1	7½
Delivered in railway trucks at Nine Elms (L. & S.W.R.)	0	l	81
Delivered on road waggons at Nine Elms Depot, Portland Stone—Brown Whitbed in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park	0	1	91
(G.W.R.), South Lambeth (G.W.R.), or Nine Elms (L. & S.W.R.)	0	2	51
Pimheo Wharf or Nine Elms Depot	0	2	61
TILES.	Ð	wri	l at

I		s.	Ct.		DIALGUMA
١	Plain red roofing tiles	42			ry, sn.
١	Hip and Valley tiles	3	7 per	doz.	11
I	Brosaley tiles	50	0 per	1,000	51
I	Ornamental tiles		6		
I	Hip and Valley tiles	4	0 per	doz.	11
I	Ruabon red, brown, or brindled		-		
I	ditto (Edwards)	57	6 per	1,000	11
İ	Ornamental ditto		0 "	**	11
ı	Hip tiles	4	0 per	doz.	• • •
l	Valley tiles	3	0	11	
١	Selected "Perfecta" roofing				
Į	tiles : Plam tiles (Peake's)	46	0 per	1,000	11
İ	Ornamental ditto	48	6		11
I	Hip tiles	3	10 per	doz.	- 11
I	Valley tiles	3	43	11	11
l	"Rosemary" brand plain tiles .	48	0 per	1,000	11
ĺ	Ornamental tiles	50	0 ^	11	- 11
ı	Hip tiles	4	0 per	doz.	11
ł	Valley tiles	3	8 -	11	11
ı	Staffordshire (Hanley) Reds or				
ı	brindled tiles	42	6 per	1,000	,,
ı	Hand-made sand-faced	45	0	- 11	11
ı	Hip tiles	4	0 per	doz.	
I	Valley tiles	3	6	11	11
	"Hartshill" brand plain tiles,				
	sand-faced	45	0 per	1,000	1,
	Pressed	42	6	**	11
	Ornamental ditto		6	**	- 11
	Hip tiles		0 per	doz.	11
	Valley tiles		6	11	11
	·				
	OILS.				

#### ours

Rapeseed, English pale,	per tun :	£28	15	0 to		0
Ditto, brown	,,	26	15	Ο,,	27 5	0
Cottonseed, refined	11	29	0	0 ,,	3 <b>0</b> 0	0
Olive, Spanish	11	39	10	0 .,	40 0	0
Seal, pale	11	21	0	0 ,,	21 10	0
Cocoanut, Cochin		46	ō	0 ,,	46 10	0
Ditto, Ceylon	11	42		ŏ ;;	43 0	0
	**	42	10	Α	43 0	ō
Ditto, Mauritins	11	32	5	• .,	33 5	ŏ
Palm, Lagos	11			Δ	35 10	ŏ
Ditto, Nut Kernel	11	35	ō	· ''		ŏ
Oleine	11	17	5	0 ,,		
Sperm	11	30	0	ο,,	31 0	0
Lubricating, U.S	per gal.	0	7	0 ,,	0 8	0
Petroleum, refined		0	0	63,.	0 0	6
Tar, Stockbolmr	er barrel	1	6	0,,	1 10	0
Ditto, Archaogel		0	19	6 .,	10	0
Linseed Oil		0	3	3 ,,	_	
Baltic Oil		0	3	7	_	
Turpentine	**	0	4	0 ,,	-	
Putty (Genuine Linseed	**	-		,,,		
	nar out	0	9	6	_	
Oil) Pure Linseed Oil	per car.	•	_	0 11		
		0	9	0	_	
"Stority" Brand,	11	U	9	٠,,		

# GLASS (IN CRATES).

English Sheet Glass:	15 oz.	21 oz.	26 oz.	32 oz.
Fourths	50,	6d	6 <u>1</u> d	73d.
Thirds	5 <u>4</u> J	63d	74d	87d.
Fluted Sbeet				
Hartley's English R Plate	olled 1	in.	a in. 44d	¼ io 44d.
		Whit	e. T	inted
Figured Rolled		4	ξd	6d.
Reconssine		4	d	5¼d.
Rolled Sheet		40	l	_

Tioned object titinititititititititititititititititi		
VARNISHES, Etc.		
Fine Pale Oak Varnish	£0 8	6
Pale Copal Oak	0 10	0
Omnilac Copal Oak		0
Superfine Pa'e Elastic Oak		0
Fine Extra Hard Church Oak		0
Superfine Hard-drying Oak, for seats		
churches		6
Fine Elastic Carriage		0
Superfine Pale Elastic Carriage		6
Fine Pale Maple		Ō
Finest Pale Durable Copal		
Extra Fine French Oil		
Eggshell Flatting Varnisb		
White Copal Enamel		
Extra Pale Paper		
Best Japan Gold Size		
Best Black Japan		
Oak and Mahogany Stain	0 9	
Brunswick Plack		
Berlin Black	0 16	
Knotting	0 10	
French and Brush Polish	0 10	0

The parishioners of Oatlands Park, Surrey, propose to erect an oak chancel screen in memory of the late Rev. J. H. Townsend, rural dean, who for twenty-eight years was vicar of the parish.

Burnley Corporation is promoting a Bill next session to extend the time limited by its Act of 1903 for the completion of the Hurstwood reservoir and the catchwater drains or conduits and other works authorised by the Act

# MEETINGS FOR THE ENSUING WEEK.

Your Way at Night the way at Night line ms. 4 and the line ms. 4 and the line ms. 4 y Al so Brokes Institute

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EXPERTS in HIGH-CLASS JOINERY.

ALTERATIONS & DECORATIONS.

# Olivers' Seasoned

# Hardwoods,

WM. OLIVER & SONS, 1rd., 120 Bunhill Row, London, E.C.

# TENDERS.

\*.\* Correspondents to the reason whose oblige by giving the addresses of the parties fendering -atary rate, of the suegied tender, it adds to the value of the information.

Districtor. For the supply and erection of a  $\frac{1}{108}$  a  $\frac{1}{108}$  to the scatternator, for the corporation  $\frac{1}{108}$  to an i-Chalmers, Ltd., Erith (accepted).

Genushy For the cleaning and siding of the dyk's and ditches on the Bradley estate and in the Bradley Wood, a total length of 400 chains, for the corporation Mr. H. G. Whyatt, M.E.C., borough coaliner and surveyor.

Emry and Co., Burmingham, Bradley estate, 4s. 3d., per chain, 210 chains, £40 L7s. 6d., Bradley Wood, 4s. 24, jet chain, 250 chains, £58 Sec., Smith, W., Grimsty =1s. 9.d., £48 L6s. 3d.; 1s. 1.d., 537 L5.

small house

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tire u. F	Opens	istomally	лестр:	0-1 1	27	- 11	- (1)	
Darvill, e					21	10	-11	

New Norfork, Taswanty For the supply of electrical plant to the mental diseases hospital, for the Public Works Department. A cepted tenders—

Power plant

British General Electric Co. 142:347 0 0

Electric-highting installation and overhead equipment of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the con

SOUTHAMETON For the supply of higher inson, lead-covered, prober insulate i cable, for the corporation Mr. H. F. Street, electrical engineer:

British Insulated gral Helsby
Cables, Ltd. (accepted) ... 4212 s. 0.

WEYMOUTH For repairs to No. 4, Devonshire Buildings, for the town council
Procs. R. ... ... 415 is 0.

Whettam, A. E. caccepted) ... 13 is 0.

Wismouther For the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the consistency of the

WINDHOMEE -For the supply of 250 tons of stone round repairs, for the rural district council: -Clee Hall Co. (accepted).

# LIST OF COMPETITIONS OPEN.

March 1, 1916,—Dutch East Indian Rubber Factory—Premiums, 1,500 floring and 500 floring—International Association for the Culture of Rubber in the Netherlands East Indias, 13, Kneuterdyk, The Bague.

# LIST OF TENDERS OPEN.

Dec. 8. Para Market, Artiga , Uruguay For the Man ipa Arthorities, Intendencia Muni-para Artigas

Dec. 9. Settley Lover at Decay Factory, Raem of the First Miler Brown, Lid. Obyer and Son, Vente to Brigge 1 de Barnstaple

Dec. 9. Vente to read Repairs at Workhouse, Carrier For the brand and J. T. J. Williams, Vente to Nagler Street, Configur.

Dec. 14. Paryland, County Sigo Sanatorium, Clearmannell Hore, Collegary For the Sago County Council—M. Keane, Secretary, Court House, 8, 20.

- Dec. 14.—Chapel Hall for English Presbyterian Church, Tonyretail, A. El. Thomas and G. S. Morgan, Architects, 23. Gelliwastad Road, Ponty-
- Dec. 17, School, Linares, Spain.—The Municipal Authorities, Linares, Spain

#### ELECTRICAL.

- Dec. 8.—Ascumulators (294 of 15 ampère-hour capacit)), Perth, Western Australia.—For the Postmaster-General.—The High Commissioner for the Australian Commonwealth, 72, Victoria Street, S.W.
- Dec. 14,-Trunk Line Switchboard, Melbourne.-For the Deputy Postmaster-General.-The High Commissioner for the Australian Commonwealth, 72, Victoria Street, S.W.
- Dec. 15. Low-tension Cable, Walthamstow.—For the Urban District Council.—G. R. Spurr, Elec-trical and Trainways Engineer, Priory Avenue, Walthamstow.
- Dec. 20.—Telephones, Sydney, N.S.W.—For the Deputy Postmaster-General—The Commercial Intelligence Branch, Board of Trade, 73, Basing-hall Street, E.C.
- Dec. 31.—Telephone Apparatus, Durban.—For the Corporation Telephone D-partment.—Webster, Steel, and Co., 5. East India Avenue, E.C.
- Jan. 4.—Measuring Instruments and Telephone Parts, Melbourne.—For the Deputy Postmaster-General.—The Commercial Intelligence Branch, Board of Trade, 73, Basinghall Street, E.C.
- Jan. 5. Hard-drawn Copper-clad Steel Wire and Jointing Sleeves (5,500), Brisbane.—For the Deputy Postmaster-General.—The High Com-missioner for the Australian Commonwealth, 72, Victoria Street, S.W.
- Jan. 19. Multiple switchboard at Telephone Ex-change, Adelaide, south Australia.—For the Deputy Postmaster-General.—The Commercial Intelligence Branch, Board of Trade, 73, Basing-hall Street, E.C.
- Jan. 26.—Telephone Instruments and Galvanised Iron Wire, Brisbane, Queensland.—For the heputy Fostmaster-General.—The Commercial Intelligence Branch, Board of Trade, 73, Basing-Lall Street, E.C.
- Jan. 31.—Three Freight Car Transferers, Sydney, N.S.W.—For the Harbour Trust Commissioners. —The Commercial Intelligence Branch, Board of Irade, 73. Businghall Street, E.C.

# ENGINEERING.

- Dec. 13. -Ventilating Shaft, Tewkesbury.—For the Corporation.—W. Ridler, A.M.I.C.E., Borough Surveyor, Tewkesbury.
- Dec. 14.—Weighbridge, Johannesburg.—For the Manuelpal Conneil.—The Town Clerk, Municipal Offices, Plein Square, Johannesburg.
- Dec. 16.—Fifteen Cast-iron Wall Sluices (3ft. diam.), Madras.—For the Corporation.—James Mansergh and Sons, 5, Victoria Street, Westminster.
- Dec. 17 30.—Laying of a Distributing System for Water Supply and Sanitation in Athens, Piracus, and Neon Phalerum.—For the Greek Ministries.—The Ministry of Communications, Athens.
- Dec. 17 30.—Water Supply to Athens.

  Dec. 17 30.—Water Supply to Athens and Princips.—For the Greek Ministries.—The Ministry of Communications, Athens.

  Dec. 18.—Michanical Tipping Apparatus for Cosl Wagens, Warrington.—For the Corporation Gas Department.—W. Indidock, Manager, Gas Office, Warrington
- Dec. 20.—Centrifugal Pumps and Electric Motors at Pumping Station, Marrickville, Sydney, N.S.W.—For the Metropolitan Board of Water Supply and Sewerage.—The Metropolitan Board, 041. Pitt Street, Sydney, N.S.W.
- Dec. 36.—lee-making Plant at Municipal Abattors, Johannesburg.—For the Municipal Council.—The Commercial Intelligence Branch, Board of Trade, 73, Basinghall Street, E.C.
- Jan. 12, 1916.—Two Water-tube Boilers, New-castle, N.S.W.—For the New South Wales Government Railways Department.—The Elec-tical Engineer, cl., Hunter Street, Sydney, N.S.W.
- Feb. 9.—Filtering Plant at Public Baths, Dunedin, New Zealand. For the City Council.—The City Engineer, Jown H.dl. Dunedin, N.Z.
- Feb. 19.- Strategy Radiway from Estada and I mart to Balaguer, Spain.- Direction-General de Obras Publicas, Manisterio de Fomente, Madrid.- The Commercial Intelligence Branch, Board of Trade, 7%, Basinghall Street, E.C.
- May 31. Secondary Railway from Palencia to Vratida de Duero, spain. Direccion-General de Ovras Publicas, Ministerio de Fomento, Madrid.
- No date. Steam-Jacketed Cooking Boiler at Work-fours. Newbury For the Guardians. S V. Paninger, Clerk, Market Place, Dewsbury.

# FENCES AND WALLS.

- PERCES AND WALLS.

  Doc. 18 Wronghtaron and Steel Feneing, Sowerby
  Bridge.—For the Urban Instruct Council.—J.
  Eastwood, A.M.I.C.E., Surveyor, Council Offices,
  Sowerby Bridge.

  No date. Dwart Wall and Oak Fence at corner
  of Five Arch Bridge, Vidershot.—The Town Surveyor, Aldershot.

Royal Academy Annual Prize Distribution The Society of Architects 

English Timber: Before, During, and After the War Currente Calamo

Competitions
Professional and Trade Societies
Legal Intelligence
Water Supply and Sanitary Matters

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# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

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OUR HILUSTRATIONS. Flu New Zealand Government Office, Strand, Lendon, W.C. Elevation and plans, Messis, Cack may and Sons, A chitech.

#### Strand, W.C.

Straint, W.C.

School Chaper, Cl. of Heepta, Horsham, setten showing postnor of tempera decerations, signation with higher than 1 highest Bell, Architects. St. Witted, Life L. Ingless Bell, Architects. St. Witted, Life Bellop of Selsy, Teaching the South Saxons, Ab. 987, One of the pendels of the settle by Mr. Frink Brangaya, A.R. A. he White Hause. Heaton, hear Boston, for Mr. Oryce, H. Ha 'im. View of extent, and in terms of the satting-norm, with pain, Mossis, R. Reywood Hislam and Herman Crook, Joint Architects.

R. Reywood Hashim and Herman Creek, John Architects
Pactory, U'd Foundry Rond and St. Margaret's Seriest, Ipswich, for Messes, Phillips and Piper, Ltd. Plan, sections, and elevation, W. R. C. Weinsh, A.R.L.R.A., Architect.

# surate with the occasion, so that the Silver Medal and £30 have not been given. The schemes sent in as a whole tell short of what the President rightly called "Architectonic qualities, which are, of course, indispensable for great decorative designs. Most of the competitors seem to have simply sought to secure a protty pictorial effect. The winner of the Second Silver Medal and \$10, Mr. James Pollard, has paished a titler decorative method, but his vertical composition falls far short of real success, and the ungainly upraised arm of the warrior, of whom a big carbon is shown, goes far to spoil the whole scene, which is rather too theatrical and not sufficiently simple for mural treatment on a big scale such as the size d the cartoon determines. Miss Florence May Asher's scheme, placed proxime accessit, is in some respects preferable, and her full-size nucle female figure has und her tun-size mude remare lighte has uncommon merit, but the riverside scene hardly realises, perhaps. "The Triumph of Peace," and it is not quite conformation. able to true decorative design as a panel for a public building in a technical sense. As a picture, however, we prefer her work, and are not surprised that the judges had to appeal to the President to give his casting vote to settle their divergent opinions concerning these twain.

Both the Silver and Bronz Medals for paintings of the Nude from Life were won by ladies, and both are quite excellent in drawing and charm. The first prize was taken by Miss Florence May Asher. and the second by Miss Murjory Florence Mostyn.

The three competitions for which Silver Medals were offered for an Architectural Design with coloured decoration for one bay of the nave of a big church, an original composition in ornament open to architects only, and an interior perspective drawing of St. St phen's Church. Walliro A, fell through, no one responding. The first Silver Medal also and £15 for an Architectural Design was not awarded. though we ruther funcy this decision was not arrived at till the last moment. The second Silver Medal and £10 for Archi-tectural Design was given to Mr. Daniel Rose Lane (108) for a design of a loggia set betwixt a pair of piazzas, each lead ing to an atrium, with a summer and winter withdrawing room at the ends of The President said that in this countries the building right and left of the there was a tie between two of the works the building right and left of there was a tie between two of the works the building right and left of the submitted, but he had no hesitation in these apartments being hands mely submitted, but he had no hesitation in these apartments being hands mely submitted. The scheme as a whole turally conceived. The scheme as a whole evinces more than common promise. besides showing good taste and refinement

# ROYAL ACADEMY ANNUAL PRIZE DISTRIBUTION.

In the ordinary course of events this year's competitions among the Royal Academy students would have included the Council's gold medals for architecture, painting, and sculpture, but owing to the war and the consequent depletion of the Academy schools it was decided at the outset of the session to withhold these scholarships. This is the first time since the foundation of the Royal Academy 147 years ago that it has been found advisable to suspend these premier contests, but owing to the absence of so considerable a number of the best students with the colours abroad and to other contingent causes, competitions in subjects so advanced as those for the gold medals would not have insured results likely to justify their award. No fewer than 134 of the past and present students on the roll have given up their studies and joined His Majesty's Forces. Among those who have thus gone forth for the defence of hearth and home no fewer than seventynine men were architects, while fifty-live were painters and sculptors. So considerable is the number of architects and sculptors who have left that the Council had no choice but to close the Architectural Schools altogether during the duration of this devastating war, and also to discontinue the day classes in the Modelling School for sculptors. Besides this, ten lady students have sacrificed the profession of their choice and taken up work in hospitals for the Red Cross of at munition making. That this is most creditable to the patriotism of the students of the Royal Academy goes with out saying, and as the President. Sir Edward Poynter, pointed out at the annual meeting last Friday afternoon at Burlington House, it is impossible to over-estimate the seriousness of such a step on the part of those who had their calling at heart in the pursuit and practice of the Arts. The realities of such self-sacrifice have, indeed, been brought home to the ranks of the architectural profession in almost every part of the Empire, and especially among the members of the Institute and the Royal Academy, where the members lately learned that one of their most promising painter students, who won the gold medal in that class, had been killed in action.

The exhibition of competition works this year naturally is comparatively small in extent and less attractive, but the collection of works displayed certainly, considering the conditions, must be described as highly creditable to those who remained at their posts. The lady students, as was

demonstrated, is no new experience, seeing that the women have many times out-distanced the men in work from the life. in figure cartoons, and in painting. The landscape competition for the Creswick Prize (£25 and a silver medal) this year is in evidence, the result being that two ladies come out at the top, though the entries were more than usually numerous, and, on the whole, the works submitted are highly creditable and above the average. The subject is an attractive one, being a homestead, or "rickyard," to use the official term. We entirely end ase Sir Edward Poynter's remarks upon the merit of Miss Sylvia Ellen Gauntlett's winning picture. As he said, Gauntlett's winning picture. it was "not only first in the competition, but the best I have seen during the numeteen years that I have occupied the high position of President. In observa-tion of the true effect of Nature, in the rendering of pure light and transparent shadow, and in study of detail, all of which was carefully given while unobtrusive, and in the quality of the painting simple, but free from pretentiousness of skill which looked clever but meant nothing. This work is worthy of all praise. setting a good example and giving promise of high success in the future." Miss Ura Hook is placed proxime accessit, and in such a connection her work deserves a degree of praise which a mere hon, mention would scarcely imply.

The Turner Gold Medal and £50 scholariship is well won by Mr. Harold Williamson, the subject being "Dawn," and his picture, understood to represent sunrise from Hampstead Heath, is a remarkably fine piece of imaginative painting, with the dark folinge seen, as it were, in silhouette against the glamoni of the rosy dawn, treated, as it must be, more from study of lighting effect than by going direct to Nature. The odd-shaped tree rising towards the front of the scene near the middle of the picture is quaintly handled and almost conventionalised it effect, recalling the ideal of an old master. The author has cleverly set out his work by inserting a black slip round the scene and using a broad, flat. gold frame in an adroit and admirable way which is very different from the expedient of painting in a low key to fit the scale of a dirty old gilt frame often adopted by the so-called "New School." The President said that in this confest the award.

" The Triumph of Peace" was the subject set for the design for the Decoration very much in evidence, though this, as of a Public Building this year, and the as well as study, for the detail is good the competitions for several years have result has certainly not been commentant and not mediocre. Another competitor

to teb with a vs sensed having - centre while a counds the morth. and anti-ance, flanked a by a bidd car The style, and and w between the a differ of the PHONE SWILLS TO 1. it will few and col-\* as deal one from on therly aspect s oursistent and to the chawn out in 107 shows a get and having s a saprom sensusly. bulanced at scale. N 109 is a loggia ach formal flower iss sor of stanway. If this sty should proposal is at the World who is a little susse, and especially if these in we of hist coin students The Memorial to a Fullen tophy set within an archesizesting a tophheavy look. of the group of the red tights on a platform re-N 111 is a less select of the memory of a select with his martial a a sucaphagus of N 110 is a monument us general, whose cenedaph is stablemente figures. Almye is 12 (they of the soldier perched countried roces below a fanthe pointing of the frowning archiver he the monument is housed. Section this year is rather strong, M Arth nas G. W. Slobbe are disthe last of the three competitors the New Medal and £15 pitze. Mr. the heaville is yes Medal and £15 pitze. Mr. the heaville is Cawo of takes the Second Metal area £10 pitze. No one competed the Save Medal dirend for a set of the Save Medal dirend for a set of the Save Medal dirend for a set of the Save Medal dirend for a set of the Save Medal set two Houses on the Nath Save at Caronich Square. "Pando and the save of alms frame allows, and the prize of \$20 . The the Silve Medal was awarded M - 11 th Traser Litchfield, show-Primar seated tragnally holding the Thera seated tragnally holding to The talk of the figure perhaps a force of the drawing but the test of the drawing but aportos de apita y bandled and the marrier of Albert Durer Let people out of twolve proteins, more pretorial 27 with its well-set up a real head showing 12 expectantly into her first to a cold orghts and the factor have been a first as at entire le-

# THE SOCIETY OF ARCHITECTS.

The monthly meeting of the Society of Architects was held on Thursday evening at 20. Bedford Square, W.C., the chair term scrip ed by Mr. E. J. Sadgrove, F.R.L.B.A. Size President A nomination for member sup was announced

Major Herbert Freyberg, USI, member, dien fead a paper, cut tied :

### TROM MANSION TO MAISONFILLS,

The expression "mans on" seems to imply a building at once extensive, and certainly is regards management and accommodation one which is now endy. This must be taken to a relative sense and to mean that in this case there are more rooms, more floors, and, drove all, more stars than are necessary ane occupation of the premises by the class of tenant likely to be obtained in the par-cular district. The neighbourhood and its obvantages or the reverse are therefore so anner a dominating factor that unless this s tarry studied to start with, a satisfactory esult can scarcely be hoped for. It has been inted that conversion of houses into maison itis tends to lower the tone of a residential listinct, but surely it is far better to have two small families of good position in a residence rather than the omnam gatherum crowd which usually occupies the average boarding aouse, and that, with a large residence, is often the only alternative.

### THE DISUST OF THE LABOUR TOWN RESIDINCES.

The causes tending towards the disuse of the larger town residence are several, and

(1) The higger staff of servants required, (2) The increasing difficulty in scentring efficient servants and retaining them when secured.

(5) The unlimited hability entailed by strict repairing covenants on the part of the bessee, more particularly as regards struc-tural and external works.

(4) The general to The general shruckage of middle-class meanes coupled with the increased cost of

18 The influence of the ever-present motor-car and the not immatural desire for a bitle place in the country in which to spend week-ends.

As none of these factors are likely to be of less influence in the future than in the past, it follows that the single occupation of the larger town residence is likely to become more and more a negligible quantity. Nursing homes, private hotels, boarding-houses and clubs already exist in numbers greatly in excess of the general requirement and ne increased demand in that direction is either likely or desirable. The occupation of a single residence by more than one household has been tried in my own experience, but only people who can keep their tongues well under ontrol, and can ensure their servants doing the same, should venture on this experiment. The constant self-restraint has a tendency, however, to become irksome and does not add to the restfulness of home life. Few, if any, s dences are constructed so as to adapt their selves without any alteration to this nature of occupancy, and even if the domestic offices ne so arranged, the use of a common stair case, with doors opening directly on to other wople's rooms, does away with privacy and nereases the chances of friction, especially friendly with your neighbour, but don't re-move the hedge," is a nece of advice as applied be now as when it was first given. over three centuries ago, by one who evidently had learned and was therefore deter m and the bright by his own experience. The eed of a domestic ring fence requires no

# CONTINUES AND THITE INFLIFTOR UPON THE CUTTAL ALTERATIONS

Wire, the property has the disadvantage of lems bersehold, the bearing of the covenants and be considered first of all; in most cases treatrend will be both to probibit the alterato the force of the bundang and to prevent the furpose of our paper, he deemed to be two or more separate tenements, and to prevent the furer ises being used other than as "a private dise ing here only." This is a detail which must be dealt with before any alteration is

attempted, or trouble is likely to ensue l'attence, perseverance, and politeness are required in making applications for consents of ground landlords, and the issue of their licence, and, although one cannot grudge the payment of a reasonable professional fee for one does complain services entailed. of time so often wasted before the necessary consent is obtained.

While it seems only right that the freeholder should not be put to any costs in the matter, it does not seem fair that an increase in the amount of the ground rent should be made one of the conditions of the licence. That is only previlent on a few estates-fortunately very few. Of course, if an extension of the term were granted at the same time no one would object. An unfortunate leaseholder often cannot use the property for the purpose for which it was originally intended, owing to conditions over which he has no control, so he should not be charged extra tent for being allowed to adapt the residence to the altered conditions of the surrounding neighbourhood. Another condition which is sometimes insisted on, is an undertaking required from the lessee to reinstate at the if called upon; a condition which, with a trust lease, benefits no one and puts a blot on the title. It is a doubtful advantage for detailed drawings to be embodied in the licence until the works are "completed to the satisfaction of the freeholder's surveyor," since various improvements suggest them-selves as the work proceeds which can be shown on the plan attached, and the record thus made more complete. A freehold generally gives a free hand, but we most of us know the particular instance where this was not the case, but the position and surroundings were exceptional and the grants of the freehold subject to particular covenints. With an ordinary freehold the owner of the fee simple has no one to consult but his own professional adviser, coupled with a study of his neighbour's rights and conveni-

# BUILDING BY-LAWS AND RATEABLE VALUE.

This is a most important matter to deal with, and must be faced at the outset. Under the London Building Act, so long as the suites do not exceed either a given area or are more than two in number with a user in common of the street door, they are not treated as new buildings within the meaning of the Act, which means a considerable saving of might be a big expenditure on making floors and staircases what are called fire-resisting.

Proper means of escape in case of fire are, however, very properly insisted on and are generally easy to provide. In a recent case at a well-known seaside town the contention was raised by the local authority that the alteration of the residence into two maisonettes made them new and separate buildings. but although this general principle was sought to be established, the requisitions made by them were scarcely consistent with that contention. An inquiry as to the principle upon which the particular local anthorities administer the rule as to rateable value before and after alteration is most advisable, as in my experience their practice has varied considerably, and in some cases has not erred on the side of equity. To take a concrete case: a residence which had an original rateable value of £75, so that when it was occupied only produced about £25 in rates, was, after alteration, increased in rateability by the local authority, with the result that nearly £45 per annum was levied on the unfortunate owner. The action of this particular local authority was by no means encouraging; was, indeed, very shortsighted, as while the miconverted houses always had a large percentage of empties, the maisonettes, perly altered, were seldom or ever without an occupant. Owners in this particular borough naturally hesitate before embarking on a scheme where the cream of the revenue taken by the local anthority. The question of cost is a difficult matter upon which to express an abstract opinion, as the outlay for adaption is influenced by many considera tions, the most important one being the original condition of the premises. A rough rule of thumb to apply to the structural altera-tions pure and simple is to calculate that it

will never be less than one-fourth, and it may be as much as one-half of the first cost of the original structure. The necessity for partial or complete reconstruction of the samta tion is a matter which can only be judged by the individual property. In any case this important detail must be rendered above sus picion. Hot water supply will most likely nave to be new throughout, while a system of central heating in some cases will be ro quired as well. Electric light even if already mstalled will have to be separated into two systems, and the same will apply to the gas supply, which is a most important detail both for cooking and heating. A certain number of chimney pieces and stoves with tiled hearths will usually have to be provided, certainly for the reception rooms. The decorations will have to be new throughout and stinting the coats of paint will be found to be false economy, while good wall-papers always attract by giving the finishing touch. One detail which it is almost impossible to be too generous upon is the provision of cupboards, because flats, with which maisonette have to compete, seldom have more than one or say two if the space in which the servants sleep is counted as one.

EXISTING MATERIALS.

In these days of scarcity of timher, every scrap of sound joinery should be preserved and refixed in fresh positions, doors and frames, architraves, windows, panels, skirting-boards, etc., used in again will not only keep down expense, but provide a more seasoned article than stuff newly put together. SOME STRUCTURAL DIFFICULTIES.

The first most important, and certainly the most difficult, is that of the stairs, for hardest task an architect is ever called upon to perform is to alter an old or provide a new staurcase to an existing building. Like everything else in life, the simplest plan is the but inspiration does not always respond best. immediately to invocation. As soon as architect has solved the staircase difficulty the next most important problem is to plan the sanitation, so that, while the Public Health Acts are followed convenience of ar rangement is studied and the whole system so designed that pipes of all descriptions are the fewest as regards numbers and the short est as regards length. In most cases some strengthening will be necessary to the floors. especially of the original bedrooms, which are now to be changed into sitting-rooms, as what is strong enough for a hedroom with its com-paratively light and scanty furniture and certainly few occupants is not necessarily strong enough for a sitting-room with, say, a metal frame piano, book-cases, heavy books, weighty tables and chairs, and, at times, possibly a dozen visitors, the latter a moving weight.

Another matter which may require attention is the conversion of a room into a habitable apartment which before could only be legally used as a store or box-room. Any reasonable outlay in this direction should be a profitable investment where increased accommodation is effected.

ARRANGEMENT OF THE ACCOMMODATION

Where the basement is not too extensive and possesses the advantage of being light and airy, it can be often included in the lower suite, which would then comprise the first. ground, and basement floors. This, however, has the disadvantage of possessing three flights of stairs, but as the suite is entered on the central floor and, by including the first floor, the basement can be given up to the domes tics, it does not so much matter. The plan ning on three floors generally means more domestic service, and therefore, two servants. so one of the advantages of compact planning is at once lost. The best plan of all is no doubt to ignore the basement, or at least the greater part of it for letting purposes; and retain it for a residential caretaker, with provision for central heating and continuous hot water. This arrangement allows the lower suite to be entirely planned on two floors, while the upper suite can be arranged similarly on the same number. The accommoda tion appealing to the larger number of people comprises four bedrooms, bath-room, two w.c. s, two reception rooms, kitchen, senl lery, etc., and in many large houses of five floors, it is possible to get this accommodation contained both in the two lower and two

united floors. utilised, and there must be no dark corners.

CONVENIENCES AND FIFTINGS.

Economy of working must be the watch word, and every detail arranged with this end re view. With central heating and rudiators in the principal rooms, and auxiliary gas stoves, the labour and dirt of hies can be reduced to a minimum. With continuous hot water supply the cumbersome range with its extravagant fire is not required, as a gas cooker is all that is necessary in summer, while the smallest and most economical of grates can be used as an auxiliary in cold weither. Lavatory basins with hot and cold water supplies sive much unnecessary work in bedrooms, and provide are iter convenience. Electric light is so well known as to need no recommen lation. Tradesmen's lifts to the upper suite obviate many difficulties, and they should, if possible, be made accessible from a special back-door entrance. One of the most important features is that the entrance should be impressive, and, therefore, sufficient space must be given up for the outer hall, entered through the street door, and from which the two doors lead to the respective suites. arrangement of the staircase usually has to depend largely upon the original planning of house, but the smaller the interference with existing stairs (providing they are well arranged), the better the effect and the smaller the expenditure. In some cases, how ever, nothing but a clean sweep will give satisfactory results. So many alterations of a residence into so-called maisonettes merely amount to the enclosure of the ground floor stairs, generally by a match-lined partition. with a door at the foot. This is merely divid ing the premises into a couple of tenements, the upper one with three complete sets of stairs, and therefore, having all the disadvantages of a house with none of the conveniences a maisonette, while the lower tenement comprises the ground floor and the basement with inconvenience of arrangement so palpably in evidence, that this suite, which should produce the larger return, is often empty and never commands a renumerative ADVANTAGES OF THE MAISONETIF OVER THE

BIOUSE OR LLAD.

For a very much lower rent the resident can live in a much better neighbourhood than he otherwise would be able to afford, his payments are inclusive, while his liability for repairs is strictly limited and easily calculated. In comparison with flats, the rents are from 50 to 80 per cent. less, the accommodation is not only much better in every way, as nearly, if not all, the rooms have a bright and open outlook, instead of facing a blank wall in a central area, as is the case in so many flats. There is more privacy, as the stairs are in each case used only by the porticular tenant, while, if there is central beating, continuous hot water and a resident carctaker, all the advantages are on the side of the maisonette

# RENTAL RUTURN.

In taking this into account, the price that the existing building would fetch in the open market (not what it originally cost), should be added to the cost of the alterations, and the total treated as capital outlay upon which to reckon the rate of interest returned. The outgoings on a freehold property com

(2) Water rate.(3) Inhalated house duty

(4) Caretaker's remain ration.(5) Find and sindries.

External and structural reports

(7) Insurance

The first two depend on the rateable value. and the rates current in the district, the third upon the amount of gross value. The outlay under 4 and 5 should be calculated and charged to the tenants, while to provide for the sixth item, a certain amount should be put away every year to form a fund available for periodical external repairs. As regards in ternal repairs, the suites should either be redecorated by the tenants on leaving, or an agreed sum paid by them in lieu thereof.

CLASS OF TENANT TO BE CYLERED FOR.

In the properties dealt with, it must be assumed that while the neighbourhood is

Every mich of space must be emmently good and respectable, a fashional ac part of town like Maytair, or even Belgi iv.a. at not alluded to, but rather Kensington, Bayswater or Chelsea, so that the possible tenants, although of fair position, would be of innited means, of incomes from, say, £500 to £700 per annum, a rather numerous class who find each year greater difficulty in get ting comfortally housed than the much subsalised working man with the buildings where rooms are to be rented upon uncommercial The £500 to £700 class have lad their houses pulled down and replaced by mansions, if not palaces, so that small houses in really good positions fetch rents out of all proportion to their real value, and are there probabitive as regards terms and tenure to this class of tenint. In regard to premises already altered and results so far obtained, these carried out as designed by me comprise buildings in various localities, and practically for all sorts and conditions of men, ranging from semi-slum neighbourhoods to a fashionable watering place, and in most cases the two-floor principle has been adhered to, although the working class massonettes were confined to one floor each, while those over shops had to be arranged on three. In all cases the works were carried out in the hest possible manner, and where the owners have been sufficiently far sighted to keep them up to the original standard, the renes have been sustained, but where repairs have been neglected the rents have correspondingly fallen. That applies to all property of a residential class, and is often the reason for the deterioration of a neighbourheod,

### MAISONETTES AS AN INVESTMENT

For purposes of comparison in judging the property from this standpoint, certain points must not be overlooked, viz,

(1) The present market value of the property

(2) The outlay required to jut it into complete structural, sanitary and decorative repair, in order to secure a tenant in one cupation.

(3) The sort of tenant likely to be obsaimed, the amount of rent and conditions as to

an illustration, say, a five-floor residence with some eighteen rooms in a neglected condition, and requiring immediate expenditure of some hundreds to put it into order as a single dwelling, will only realise for the for simple in its present condition, say requires an immediate expendituron structural repairs, new sanitation. hot water, electric light, new decorations, etc., costing, at present rates.

£1 250

£300

where complete will let at, say, £100 per an mm in a three years' agreement, which, on paper, appears a very good return, but when, as each tenant vacates, a loss of six months rent is entailed ere the property is let again. and partial, if not entire, redecoration has to be faced, the nominal 8 per cent, is reduced to 4 per cent., and that with much trouble entailed.

Now take the property remodelled. Original value of fee simple of the

Original value of ree simple of the	1.51	
property in had order, say		
Less nots of sale	2.7	
		6.770
Cost of Works.		
New starcase, new partitions, add		
tional windows (with prismati-		
glassi, new ceiling, root, etc., turning		
<ul> <li>a room into a habitable quarticent.</li> </ul>		
provision of escape from fire, steel		
work necessary for strengthening		
<ul> <li>upper floors, also 6 m, of concrete</li> </ul>		
over basement with wood block		
floors	1.150	
New samuation, complete with		
httings	2.3	
System of heating with radiators,		
liot water supply, and certain new		
stoves and climney pieces		
Installation of electric light with		
fittings complete, and electric bells	38.5	
New gas services, heating and cook-		
ing for two flats, and lighting and		
heating for caretaker	_20	
Internal decorations	1601	
Cupheards and fittings	*(1)	
External reports and pointing	70	
General and sundry work	4+1	
		1,330
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#### OTHER METHODS.

These to no doubt many other methods eside this mentioned, and if the expense arrants the outlay, and the property commission of the name of the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property community for the property co rises more than five floors, and provides for the account dation than is required in two ales, and did not with suite can be arranged at the provision of a self-acting passenger. In many large houses the ground floor is a neight of some 11 ft, or more, with 12 ft can the first theory and 10 ft, on the case is a self-acting theory and 10 ft, on the case is a self-acting and the floors is provided a with the distriction of the windows in the figures and the substitution of a few acting to the formular doors, one extraction of the case of the formular doors, one extraction of the case of the first timber doors, one extraction of the substitution of a few acting one, while an extra storey in the first and is the arranged at the same use of so very great addition made to the door at a general modification. I have carried out the star general modification of the star general modification and obtained as a substitution of the star greatest and the substitution of the same use of so very great addition made to the star greatest and the substitution of the same use of so very great addition. I have carried out the star greatest and the substitution of the same use of the substitution of the same use of the same use of the same and the substitution of the same and the substitution of the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same a de al. 1 Servey 2000.

de 2000 annodation. I have carried out 2000 and 1 de generat in transforming an olderende to the del into a block of self-contained 4000 al. 1 de cheres. By advocating such 4000 al. 2000 and alaborate improve the charge transfer of the transfer of the charge transfer of the transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge transfer of the charge at gat a but it must be borne in mind that we some districts would amount less as per blue would in others to get the an insurative outbay to the east start by return could not a rise. The question, therefore, to the rise of mean position, outlook, a control of and I should like to start as a contract the meditests, especially a control of the meditests, especially a control of the start of the meditests as performed as the medites with the cost of the medites with the cost of the medites with the as rethe thiers, are in 200 acressing to the useful was up to date as reserved that for even a few man make all the difference of the and a unrenumerative

Mr. F. T. W. Goldsond, F.R.I.B.A., properties I a vote of the control by the lecturer for his Mr. F. T. W. Goldsond, F. R.I.B.A., progressive and the property It was to be suggestive and the property It was to be regarded that the second diamon or neconverted a tree by it to a solution of fluts than the matter than the result of the state of the second diamon sengel enter that the matter of a solution of the angelong provided for first first countries at a reasonable cost, as a first of a factor of Freshold's starting a solution of the formal diamond control of the second provided for first first control of the second provided for first first control of the second provided for first first control of the second provided for first first first control of the second provided for first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first first firs of Seas ettain describing the print see they be all red or the all red of a least into · appearing tord westerd

retical, but practice provided. The great drawback to English then some works in asonettes, as compared with those in Con-traction some works in asonettes, as compared with those in Con-traction wiks carried out in contrained. The architect called in to advise on that manner, the hot water a scheme of conversion should have the a scheme of conversion should have the courage to advise the building owner at the first inception to expend a sufficient capital sum and provide adequately for repairs if he would secure satisfactory tenants and avoid deterioration of values.

Mr. Christopher Chart, in seconding the vote of thanks, emphasised the point that the question of neighbourhood should be the dominant factor in determining where it would be prudent, from a financial viewpoint, to convert old property into maisonettes. There was no doubt that the majority of people preferred a self-contained house, even if it cost a little more than a flat. The length remaining of intexpired lease was very imporeven if it cost tant when considering a proposition for con version. Any attempt to bargain with a tating authority as to the assessment to be placed on altered property should be decomaged, as it opened the door to serious abuses. The assessment committee was bound in equity to adopt the rental value as the basis of rateability, but in the case of maisonettes an allowance ought in fairness to maisonettes an allowance ought in ranness to be deducted from rental for such services as caretaker, central heating and lift, which were not obtainable in an ordinary house. He thought it would very seldom be practicable under modern by laws as to heights of rooms to get an add tonal floor into an old house, and the alterations would be so drastic and the sacrifice of existing floors. doors and windows so costly that one would lestate to attempt such a scheme. he believed the conversion would often pay a building owner, the lecturer's figures ap-peared to him to be a little too highly celetared.

Dr. Parkes said that, like Mr. Goldsmith. he had personally inspected some houses at Hove concerted under the lecturer's direction. and would testify to the careful supervision and attention to small details that had been given. II - doubted if a building owner could reasonably expect a return of 7 per cent, with to day's prices: if he made 52 per cent. after altering his premises it would be a satisfactory return. There was no question that the aftered conditions after the war, and the reduced size of families, and the argent need for economising, would render the conversion of existing large houses in such towns

wersion of existing large noises in such covariance as Brighton one of pressing necessity.

Mr. J. P. Williams said he collinorated with Major Freyberg in carrying out a scheme for the Borough Council of Kensingt m, with the best possible results. Their aim was to provide for each working class family housed in flats an independent entrance, staircase, and we also as to provide the privacy desired in a home. The paper was most helpful, for it would enable the owner of out of date property to realise what should be done to make it remunerative. In some districts owners had been discouraged by rating authorities from altering their premises, because of the heavy increase in the assessments

Mr. T. Geoffry Lucas, F.R.L.B.A. did not believe that a house divided into two suites of maisonettes would bear the expense necessitated by providing a caretaker, conheating system, and even a lift, though a four tenancies it would be financially

feasible.

M. Arthur H. Salisbary pointed out that me of the important factors in dealing with property was the provision of a sinking fund by the ewiser Large houses in the inner shoulds of London, such as Islangton and Camberwell, were being deserted by the old class of tenants, who were moving further cut, and it was only possible to let them as they stood as tenement. If the landlord should be the pents and painting he would retain his tenants, but not otherwise. In any conversion it was necessary to keep all drainage and other pipes as short and direct as possible.

agreed time.

The vote of thanks was spoken to by the build conserveral was briefly acknowledged by Major Freyberg.

THE TRADES TRAINING CLASSES

The annual distribution of prizes gained in the classes of the Trades Training Schools of the Worshipful Company of Carpenters, Joiners, Painters and Stainers, Plaisterers, Tylers and Bricklayers, and Wheelwrights, at on Monday evening at Carpenters' Hall, London Wall. Mr. Walter T. Pullein, Master of the Carpenters' Company, presided. The annual report of the schools, read by the Rev. C. Blakesley Bartlett, chairman of the committee, stated that throughout the year their director. Major H. Phillips Fletcher, F.R.I.B.A., had been engaged upon important military duties of observation and draughtsman "somewhere in France" as a member of the Royal Flying Corps under a French pilot, and had been awarded the Croix de la Guerre by the French President. In his enforced absence the work had devolved upon his brother, Mr. Banister F. Fletcher, F.R.I.B.A., to whose tact, skill, and untiring energy they were immensely in debted. Mr. Charles H. Hartwell, the untring energy they were immensely indebted. Mr. Charles H. Hartwell, the instructor in the Life Class, had been elected an Associate of the Royal Academy. He regretted that owing to ill health Mr. S. Moultine had retired from the position of instructor of the Wood Carving Class.

Mr. Banister F. Fletcher, the acting director, gave a detailed report of the work in the province of the work in the province of the work in the province of the work in the province of the work in the province of the work in the province of the work in the province of the work in the province of the work in the province of the work in the province of the work in the province of the work in the province of the work in the province of the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the work in the wor

There had carried out in the various classes. been a still further diminution in the numbers of students. In spite of the war, however, there were yet 120 students in attendance, all of whom were ineligible for military service, and he considered that the school was still doing a great and useful work, and that it would have been a grave mistake to have sus pended its operations. The output of the session in the various departments had been to provide a very creditable exhibition of handicrafts as applied in various trades to the requirements of the present day.

Sir Thomas G. Jackson, Bart, R.A., in presenting the prizes and certificates to the successful students, observed that he had been greatly interested in seeing the ex-cellent work which the combined City Companies had undertaken during recent years in training youth in the various branches of the building crafts from which these Companies took their names, and of which in the area of the City they formerly had entire control. The other evening he had the privicontrol. control. The other evening he had the privilege of visiting their schools in Great Titch-field Street, and of observing the students engaged in their work. They displayed such energy and industry and had obviously such joy in their tasks that he felt he should have liked to have taken off his coat. and joined them in their occupations. These training schools were essentially modern institutions, and had taken the place of the old apprenticeship system, which he regretted was dead or nearly dead. The technical student of to-day laboured under a very grave disadvantage as compared with the old apprentice, in that whereas the apprentice realised he was doing actual work of ultimate value the student could not ignore the fact that he was merely performing an exercise, and this contrast of outlook made all the difference in the world. The apprentice had a personal responsibility not felt by the youth in a school. The member of a technical class was thus under a disadvantage, and must over come it as far as and as best as he could. The most useful feature of the schools was that they provided continuation classes for those engaged in the classes, and so enabled the men to turn out hetter work, and incidentally to command higher wages. That a workman should have a keen enjoyment in the work he turned out was most important; he could not improve his output nor his position ne could not improve insolupit for his postation unless he had a thorough pleasure in carrying out his task. That sense of enjoyment the technical training classes put within the reach of every ispiring workman, enabling him to bring his brains to bear on the problems on which he had been employed throughout the day, and to apply to them. throughout the day, and to apply to them the higher qualities of taste and imagination. They might say that the bricklayer's task was a very ordinary occupation, but as soon as he dealt with moulded brickwork he became an artist in his way and took a real pleasure in his task. Every step in training a man to the higher qualities of his craft brought with it new interest and pleasure There was one great danger inherent in all technical schools, against which the director and masters needed to continually be on their guard—the risk of stifling the originality of the student. There was a great tendency to persuade the student to follow the master's ways unthinkingly. This manifested itself at South Kensington and at the Royal Academy Schools. The highly trained master was tempted to induce the students to do their work in his way, and not to leave them free to exercise their own individuality. This was quite wrong, and if allowed to exist would destroy the originality of the young men. The master ought to welcome every spark of freshness in a student, and not seek to impress his own individuality upon him. He noted that the schools had suffered, like all other institutions of the kind, very seriously from the effects of the war. Many brave young fellows had felt the call to action, and they would never see some of them again in the schools. They looked They looked forward to welcoming the great majority of the students back, and, when victory was gained, to a long period of peaceful and happy fellowship in their educational

work.
Sir Thomas Jackson then presented the awards in accordance with the following

prize list :

Examination in Carpentry and Joinery (held in London on Jame 30, July 1, 2, and 3, 1915).—J. W. Large—silver medal and first-class certificate (H.M. Forces); G. W. Gather--bronze medal and first-class certificat A. E. Walker—bronze medal and first-class certificate. First-class Certificates: J. E. Fell (Grantham); T. S. Henley; D. F. Hilliam (Parkstone, Dorset); L. E. Trevers. Second-class Certificates: W. T. Wells (H. M. Forces); I. T. Wiggett (Newport, Mon.).

schools. TRADES TRAINING SCHOOLS.

Carpenters: Thomas James W sodard—
certificate and £2 in books or tools; J. Haroll
West—certificate and £1 10s, in books or tools
Ceoil Davies—certificate and 15s, in books or

G. Austin-Alexander Joiners: medal and £2 in books or tools; W. S. Hales—certificate and 15s. in books or tools; J. Dipple—certificate and 10s. in books or tools.

Handrailing: H. G. Howe—silver medal

Handrailing: H. G. Howe—silver medal (presented by the Joiners' Company) and £2 in books or tools; E. C. Owen—certificate and £1 in books or tools; W. Chance—certificate

and 15s. in books or tools: W. Chance—certificate and 15s. in books or tools

Musons: Herbert George Bush—Banister Fletcher medal and £2 in books or tools (H.M. Forces); Henry Joseph Maibach—certificate and £1 in books or tools (H.M. Forces); Richard Sherman—certificate and £1 in books or tools (H.M. Forces); Frederick James Moore—certificate and 15s. in books or tools: Horace—James—certificate and £1 in books or tools: Horace—James—certificate and £1 in books or tools: Follower—Edward Leander—silver medal and £1 in books or tools: E. Fowler—certificate and 15s. in books or tools: L. Nailor—certificate and 10s. in books or tools: Plasterers:—Thomas McDonnel—silver medal and 10s. in books or tools: Plasterers:—Thomas McDonnel—silver medal and 15s. in books or tools (H.M. Forces): W. Guldins—certificate and 10s. in books or tools.

Plasteers: — Thomas McDonnel — silver medal and 15s. in books or tools (II.M. Forces); Alfred Austin—husanze medal and 15s. in books or tools; James Donovar—certificate and 15s. in books or tools; John Lowe—certificate and 15s. in books or tools; John Lowe—certificate and 15s. in books or tools; Stanley Thresher—certificate and 10s. in books or tools; Walter Pettitt—certificate and 10s. in books or tools; tools.

tools.

Plumbers:—Albert Henry Briffett—silver medal and £1 in books or tools; Alfred Griffey—silver medal and 10s, in books or tools; William Parsons—silver medal and 10s, in books or tools; Charles Lambure—bronze medal and 15s, in books or tools; Charles Porter—certificate and 15s, in books or tools; Henry James Briffett—certificate and 15s, in books or tools; Percy Harris—certificate and 15s, in books or tools; Percy Harris—certificate and 15s, in books or tools;

15s, in books or tools.

Smiths:—Harry Collins—special prize of £2 in books or tools; Harold Pound—special silver medal and £1 in books or tools (former recipient of silver medal); S. Jones—bronze medal and £1 in books or tools (presented by the Blacksmith's Company); S. Blake—certificate and 15s in books or tools

Phillips-certificate and £1 in books or rods: William Cooke certificate and £1 in books or tools; F. C. Legge certificate and £1 in books cools; F. C. Legge correlicate and £1 in books or tools; John Stock certificate and £1 in books or tools

books or tools

Life Chass. Affred Hardiman special prize of £2 in books or tools (former recipient of first prize); F. R. Hedges special prize of £2 in books or tools (former recipient of first prize); Herbert Hart certificate and £1 in books or tools.

Tylers and Brucklapers: Albert Henry Smiths silver medal and £1 in books or tools:

and £1 in books or tools.

Tylers and Bricklayers: Albert Henry
Smith-silver medal and £1 in books or tools;
George Henry Wilmot silver medal and 15s.
in books or tools; George John Reynolds—
special prize of £2 in books or tools (former
recipient of silver medal); Alfred Hurst—
certaficate and £1 in books or tools; George certificate and £1 in books or tools; George Win. Billinghurst certificate and £1 in books or tools; James Walsh certificate and £1 in books or tools; Joseph Henry Grove certificate and £1 in books or tools (H.M. Forces); Francis George Bond certificate and 10s in books or tools; George Wiles certificate and 10s in books or tools; Harry Wiles =certificate

and 10s, in heaks or tools.

Wheelwhights: W. H. Dawson-certificate and £1 10s, in books or tools; F. Mitch II - certificate and £1 in books or tools; G. Pack

certificate and £1 in books or tools; G. Pack-ham—the master's prize, £1 in books or tools; M. Ellis—certificate and 10s, in books or tools. Wood Carrers: James Shirley certificate and £2 in books or tools (H.M. Forces); Frederick Devisse certificate and £1 in books or tools (given by the Joiners' Company); Hardd Crow certificate and £1 in books or tools; Thomas Waltham certificate and £1 in looks or tools. Hugh Chittham—certificate and tions, from a Warmann contineare and 21 in books or tools; Hugh Chittham—certificate and 21 in books or tools; Ernest Brock—certificate and 21 in books or tools; Sidney Lett—certificate site and in books or tools (given by the

care and 14s. in books or tools (given by the Joiners Company).

Wireman (A. E. Darlow certificate and £1 in books or tools; A. Jordan—special prize of £1 (former recepient of first prize). A. V. Morgan certificate and 7s. 6d in books or tools (H.M. Forces); G. Hastings—certificate and 1s. in books or tools; H. Rickards—certificate and 5s. in books or tools; P. Doody—certificate and 1s. in books or tools; H. A. Murphy—certificate and 10s. in books or tools.

A variety of thanks to Sir T. G. Jackson

A vote of thanks to Sir T. G. Jackson was proposed by Mr. W. Hayward Pitman, past-Master of the Painter-Stainers Com-pany, and seconded by Mr. F. L. Wiginton, Muster of the Joiners Company, and a similar compliment to the Chairman on the motion Mr. John Marsland, Master of the Tylers and Bricklayers' Company, and Mr. F. Costello, Wister of the Plaisterers' Company. concluded the proceedings.

# THE ARCHITECTS' AND SURVEYORS APPROVED SOCIETY.

The annual general meeting of the Archi tects' and Surveyors' Approved Society was held on Tuesday, December 7, 1915, at No. 18, Tufton Street, Westminster, S.W., when Mr. Ernest Newton, P.R.I.B.A. (retiring pre

Air. Ernest Newton, P.R.I.B.A. (retiring president of the society) occupied the chair.

Air. F. R. Yerbury (secretary) gave a statement of the progress and work of the society. Approximately there were, on July 3, 1915, 1,800 members of the society, of whom thinks in work work. whom thirty-six were women. These figures show an increase of 100 during the year.

It will not be possible to ascertain definitely the exact financial position of the society until the official Government valuation has This valuation, which became taken place. This valuation, which became due when the Insurance Act had been in force one when the insurance Act had been in force for three years, will no doubt take place shortly, and the committee confidently anti-cipates that an extremely satisfactory state of affairs will be revealed. In the meantime, the society has investments to its credit amounting to £2.140, £700 of which consists of new Government 4t per cent. War Loan Stock.

The claims paid by the society during the ear have been as follows :- Men : Sickness laims, 96: maternity claims, 48; disablement Sickness claims, 6. daims, 4 Women:

The amount actually expended on sickness and maternity benefit during the year has been considerably below that allowed for by the Covernment actuaries. At the present time there are over 600 members known to be serving with the forces, and a very large percentage of these hold commissioned rank. cate and 15s, in books or tools.

Stone Carres:—Alfred Phillips—bronze medal and £1 in books or tools; Reginald From the committee of management, Messrs.

Maurice E. Webb, C. T. Steward, W. G. Newton, and H. A. James, are serving. is with the deepest regret that the committee records the deaths of five members on active service. An expression of sympathy on half of the society has been communicated to the relatives in every case. The benevolent fund, which is supported by contributions annual subscriptions from honorary members, has fortunately had no great calls upon its resources, but it has been able to render some really valuable assistance to certain members in argent need of it.

Mr. Philip E. Webb (who is retiring from

the office of treasurer on account of his enlistment) spoke on the financial position of the

society.

Mr. Ernest Newton moved the election of the committee of management as follows :-Chairman, George Corderoy, F.S.I. Members: E. H. Blake, F.S.I.; C. MacArthur Butler, F.C.I.S.; A. G. Cross, F.S.I.; Ralph Ellis, F.S.I.; H. M. Fletcher, F.R.I.B.A.; A. Goddard: George Hubbard, F.R.I.B.A., A Goddard; George Hubbard, F.R.I.B.A.; F.S.A.; H. A. James; B. Marr Johnson, F.S.I.; R. G. Lovell, A.R.I.B.A.; Ian MacAllister, B.A.; E. C. P. Mouson, E.R.I.B.A.; W. G. Newton, M.A., F.R.I.B.A.; Herbert Passmore, F.R.I.B.A.; F. R. Priest; G. Reeves; Clifford T. Steward, F.S.I.; H. W. Virgo, Maurice E. Webb, M.A.; Philip E. Webb, A.R.I.B.A.; H. D. Whitham, Treasurer, H. D. Searles-Webb, M. Steward, F. S. George Philip E. Webb, A.R.I.B.A.; Wood.

The motion was seconded by Mr. George

Reeves, and carried unanimously.

Mr. George Corderoy, replying on behalf of the committee, endorsed Mr. Webb's rethe committee, endorsed Mr. marks. Mr. George Reeves proposed a vote of thanks to the Architectural Association for granting the society free office accommodation. Mr. E. C. P. Monson (president of the Society of Architects) seconded motion, and it was carried unanimously.

Mr. Ralph Ellis proposed a vote of thanks to the retiring president, Mr. Ernest Newton, who was kindly presiding in the unavoidable absence of Mr. J. H. Hanson (president of the Surveyors Institution). He regretted to say that Mr. Hanson was at present seriously The motion was seconded by Mr. H. Searles Wood, and carried unanimously. Newton, in expressing his thanks, proposed that the secretary should write to Mr. Han son, conveying the society's sympathy and hopes for a speedy recovery.

ARCHITECTS' AND SURVEYORS' SOCIETY BENEVOLENT FI

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We have examined the account of the Benevo-but Fund as set out in the books, together with the vonchers for payments, and are of the opinion that the above balance-sheet correctly shows the position of the Fund at this date.

(Signed) FRANK R. PRIEST. hers for particular to the state of the Fund at this date.

(Signed) FRANK R. PRIEST.

G. TURVILLE BROWN,

(Hon, Auditors).

November I, 1915.

# OBITUARY.

Mr. Frederick Simon, M.I.C.E., has died Mr. Prederick Simon, M.Lo.E., has died at the advanced age of eighty one years. A pupil of the late Charles Vignoles, F.R.S., Mr. Simon, who was born in Jamaica, was one of that engineer's assistants in the making of the Bilbon and Tudela Rail way, Spain. In 1864 Mr. Simon proceeded where he was engaged on the Imperial Mexican Railway. Twice during the Mexican revolt he was captured by to Mexico. outlaws, and once he was be shot. Finally, he marched to with the French Army under bands of ordered to be shot. the coast Marshal Bazaine, and returned to Engli in 1867. After several years in India irrigation work in the service of the Public Works Department, Mr. Simon returned for a time to Mexico to assist in the making of the National Mexican Railway.

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A lack of ergansed effort on our part tero me difficulties. A tachire to see that the position is

thresh the exagger its these hands to some than to take them into take them alter. I have a few detailed suggestions, and explain what I mean by torgan-

the lither to carried details of the market globes, variety, and, same the straight details as the satisfactory discussion of a gent destination as the satisfactory discussion of a gent destination and the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactory discussion of the satisfactor in the others more gonerally. Please note, the country of the matter to addy, and it will depend upon the quany and laracter of timber in any locality on the ny remains will apply to any par-tial lists to I deal with the war under segan to ranguagh, and my arguments and tree and y to pre-van conditions.

# WARRELS FOR INGLISH OAK

We have divide the markets for oak into sses, a ording to the size and

1 Le test cass overs the largest and stress, suitable for quartering, for which FP, so a ductor is important, but eight of faction of the country required. Omitting attricty spess and other special war re-arements the last mired for these trees of minditness is far parelling and for the men is the times as for parelling and for the many is represents of the building trade. The edit mest generally used for these purposes is Artian oak; but it is a in the lower energy and it hat, although A string is fitter and easier to work than Erross, and therefore preferred by pomers, private regards in the preferred by pomers, and other important had respectively as regards. In the nate of Austrian of perfect the born in too long seasoned of the first text of a seasoned of the first text of a season the preferred by the perfect as at the rate of 10s perfect to the Parellin made of Fig. fore the currous at the rate of the fest. Parello, made of Eng-ter and higher than

1 188 of the timber in sol of a lis looked upon the fact alone .\ od to the Bughsh oak od to the Bughsh oak 0.041 ed a life is ally cost in it to be Spanish the meet lights of oak of the meet lights of oak of the tan er meet he gartening; the tan er meet light is present and the light than er the early it the cost become and the light terms of hy to tally cost = (lost, removed by Texpelter experies e. The seasoned or ey a birth and of looking the a limit tak to general marking of the control by

board a minimum of two years from the telling. Some might think a little longer seasoning advisible if artificial methods are not resorted to, but a very short time is necessary with the best modern artificial dry mg plants. The results are quite satisfac-tory, and I would point out that nearly all the much advertised foreign timber is seasoned by these modern methods. The ancient prejudices against artificial seasoning if oak were due to the interior results given by experimental stages. Again, objections that might be raised against seasoning oak artificial v for slepbuilding or similar special inced not apply to timber required for pinelling or interior work, or used under conditions which entail neither strain nor exposure to the weather.

Furning to the price, I think you will agree that, after allowing liberally for waste, cost of felling, hauling, transport, conversion and seasoning, the price which the producer receives for the standing oak tree differs ridiculous'y from that paid by the contractor

for the same timber in Linch boards.

Much Austrian oak has been used for panelling and similar purposes, and there should be in the future a sufficient demand for all the English oak we can offer, provided the demand is cultivated and the market properly organised. Unfortunately this class of oak is now converted for interior

12 The second class of oak is the coppicegrown oak averaging 25 to 50 cubic feet per tiec, for which the present largest outlet the wagon and carriage departments of our ratways. This is cultivated by English tim-ber merchants, who have to compete principally with the white American oak, or, in some cases, with Russian oak or even Austra-han words. The oak is converted into wagon scanting, and the price varies according to size, quality and specification; but we may assume an average figure for the converted tunber of, say, 5s. 6d, per cubic foot. Thanks to the great superiority of English oak for this purpose a far wider demand should be possible at considerably enhanced prices, it united action were taken to encourage it and improved 'methods of marketing were erganised. Owing to the case with which the foreign oak can be obtained, and the greater trouble caused to the railway officials by the native tunber, there is a prejudice against the latter, but it is absurd that native oak, much more valuable for this purpose, should invariably be priced at the same figure as the ioreign.

(3) The third class of oak comprises the small trees of under 20 cubic feet, which, on account of small size, large proportion of sapwood and to the high railway rates, should be account of the proportion of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compression of the compressio be converted principally locally. There should be ample toom for increasing the demand for this converted oak in the great wood-co-suming centres, where enormous quantities of oak are used. Many local markets also could be cultivated to a far greater extent than they are, such as gates, teneing, building fittings, repairs, and local requirements generally. Native timber could be used to a far greater extent in the district in which it is grown.

There are other outlets and uses for oak of various sizes and quality in London and other centros sizes and quanty in Louisea and elec-centros at correspondingly diverse prices, ranging from the high priced Austrian or best quality to the various classes of Ameri-can oak at prices ranging from 3s, 6d, to 6s, per cubic noot to converted sizes. The lowest per cubic noot for converted sizes. The lowest is probably American window-sill oak at about 3s per cubic foot, in which a propor-tion of sap is allowable. There has been an There has been an tion of sap is allowable. There has been an illerease in price of hearly 5 per cent, since 1885 on lower classes of imported oak and the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the cont or terroras and a so a observate in quality. Much of our rocky ability and English oak might be suitable to replace these of consoring it must determine what can be done in each a land cak in tance, and compet from might not be practically steed from the five in all cases. As I have shown, the precious case of the uniquestal stress is enormous. The imports of oak exclusive of the lands for the lands have shown to be fet. As the demand improved and the market became better organised, we mug it expect to find plenty of scope for all the test be on't we could offer

One of the staple objections taken to Enghsh oak is that it is harder than foreign. This should make English oak the timber par excellence for wool-bleck flooring—to name but one use in which such a characteristic is a recommendation. Yet, in spite of the large and increasing demand for wood-block flooring at good prices, there never has been any serious attempt to capture this and similar markets for English oak, and the softer foreign oak holds the field.

Again, take the question of oak spokes, for which the native timber is absolutely unequalled. Although the English market was flooded with cheap American spokes several years ago, and although the importation is still large, the price of these spokes has increased very considerably during the past ten years, and especially during the two years previous to the outbreak of war. Not only was there this considerable increase in price, but, as in the case of foreign timber generally, there was a considerable falling off in quality. We have an exceptional market for spokes; we have the finest timber of its kind in English oak for this purpose: we have large supplies of this timber obtainable at low prices; and yet there has been no serious attempt to retain or capture the spoke trade for this country.

I am units aware that the introduction of notor vehices has recently partially revolu-tionised the spoke trade, and that the introduction of iron or wire wheels would possilly appear to have restricted the market for wooden spokes. But here, as in other in stances, testruction in some directions is ac companied by wider opportunities in others and modern increased facilities for transport and travel greatly increase the number of vehicles required. The spokes used for highvehicles required. class carriages for a long time past have been made principally from imported wood of special varieties. There has been, of course, a falling off in the quantity of spokes wanted, but the number of horse-drawn carts and other velice's for agricult tral purposes, local trades, and commercial industries generally, is still very large, and will not be greatly reduced by motor traffic in the near future. There are also gover possibilities for English cak in the motor spoke trade.

These are only a few out of many directions where the conditions, possibly unfavourable twenty yers ago, are now propitious to suc-cessful competition by the native produce. We must, however, instil enterprise into the untive trade and surmount the difficulty of capital. We must also assist by organised marketing and regular supplies of the necessary timber, and he everything possible to cultivat, the lemand for the mitive produce. There are many other existing and suggested outputs for salt, but the above must suffice

as an illustration.

METHODS OF MARKETING.

Having pointed out improved and proper outlets for our timber, it is now important to consider what is the most practical method of catering for these markets which lie open before us, and how we can take due advantage of these wider opportunities.

I will again take oak as an illustration, although similar arguments will apply to other timbers. The exact methods will depend on locality and character of timber.

We must appreciate fully all the existing conditions relating to the marketing of timber, and must shape our policy accord-ingly. In some cases it will be practicable for large merchants to purchase the timber standing, and arrange all details as to mor-keting. Facilities are accessary for estates to get in touch with such firms, and also to enable a firm to purchase timber from several estates in a district. In other cases large merchants and firms in London and other centres might require selected parcels limited perhaps to one variety. It might be difficult also for them in some cases to send teams and tackle for hanling, or gangs for felling, or to inspect small and detached parcels

We all wish to assist any honest and oldestablished local firms who have dealt with estates for a number of years, and whose principal business fault, perhaps, is an old-fashion of conservatism, or want of capital. The local firm has knowledge of local condiconvert the smaller classes of trees, but it is want of capital that limits its trade.

I think it will oft it be best for the large firm at a distance to act in conjunction with the local firm, the latter felling, hauling and dealing with mixed parcels, and the former storing, marketing and cultivating the defor the timber. For instance, the London or other large min would porchase the first class of oak to which I referred. delivered on rail. The same principle might apply to ash, beech, and other classes of our timber. The local firm also, to a far greater extent than at present, could convert to the requirements and specification of the large firm in the consuming centre. Markets should be organised between producing and consuming centres so as to reduce expenses, railway charges especially.

I am not wishing to prejudice the trade and output of the local firm. There are many There are many directions in which this might be encouraged or developed. And I appeal to landowners and land agents to specify native timber wherever possible. My object is to take advantage of those more lucrative markets to which I have made reference, but which at present are not developed for want of organised marketing; especially to encourage large firms who now deal so exclusively with imported timber to take up the marketing of the native timber and introduce capital, enterprise, and knowledge into the native timber trade. My object is also to organise market-ing so as to eliminate unnecessary profits caused by the timber pasing through so many hands.

A small amount of English oak is sold in spasmodic quantities somewhat on the above lines at present to a few large firms who have occasional inquiries for the timber. These inquiries are due to a tew architects and other consumers who absolutely misist on English oak being supplied. No attempt, however, is made to deal with the problem on an organised and large scale, or t cultivate the demand for the native timber.

I have already detailed the handlenes with which the native timber has had to contend. and it is not necessary to explain the reasons why these better markets have not been cultivated. It is due principally to a succession of unfortunate conditions and influences. The architect and consumer complain of the diffi culty or impossiblity of getting the timber. and of there being no firm generally known to stock it. The contractor and builder inform them that supplies of English oak are not available, and persuade them to accept the readily obtained foreign timber. The large merchant says he is not asked for it and the local merchant complains that there is no demand for it. And so one works round and round in a vicious circle.

The only method of dealing successfully with this problem is that an influential independent body should take up the matter and to organise supplies, and demand on proper lines and on an extensive scale. This is to be done by the English Forestry Association. who have formed a special committee to deal with the question, and on which committee this Institution and other hodres are represented. It is to the interest of all sections that this work should succeed, and to the prejudice of nobody, and, in view of the importance of diminishing imports and encouraging native supplies I trust that everyone will render all possible cooperation and help.

I have taken English oak as an illustration. but I do not think there is any country whose native timbers and native industries experience so deplorable a lack of encouragement as our own. It is typical of the present position that our finest brown oak has to be exported to America to be appreciated, and that the high prices paid are due entirely to the fore an demand, to which the present consumption is almost wholly limited.

I believe that with organised marketing area proper encouragement there are outlets to English oak and other native timbers abroad. particularly in America and some of our colonies, and I hope, in the future, with our present allies. Let us hope that in the recolonies, and I hope, in the future, with our present allies. Let us hope that in the result in the property of public buildings, churches, and state of afters. Wheat at 20s, per quarter was

tions and of felling and hauling, and can large residences in Belgium and France the world famed English oak shall find a place, if only as a memento of the war in which the nations have jointly shed their blood. reminder could there be more typical of England and of the far reaching innuence of the British Navy, whose glorious history was founded on ringlish oak

As regards timber other than oak, I shall hope to publish information and some strong elsewhere, since I cannot explain radic here After years of careful investigation it is no opimon that given organised macketing, increased demand and improved prices are possible for nearly all kinds of native timber and hardwoods partien aly

#### REPLACING EXPORTS.

We all welcome suggestions for extending the use of native supplies and displacing some of the imported timber, but I think that undue importance is often given to conferons tumber (latch excepted), to the exclusion of our relatively more important hardwoods. providing notice Scots pine for the Forestry Building at the Shrewsbury Roya, Snow and otherwise advertising it. I have tried to en contrage its extend douse, and have organised supplies of it for creosoted boards and other estate purposes. I think, however, that as a general policy we shall have a far better hope of success if we concentrate most of our energy on extended uses of native hardwoods. There is ample room for these woods in place of imported varieties of similar timber, and as a substitute for such timbers as Hickory and some of the finer foreign timbers. I would go even further and advocate that, given enterprise and proper encouragement we could with native goods displace some of the wood imports that arrive in a finished or partially manufactured state. I hope that far greater attention and encouragement, especially by consumers and the public, will henceforth be given in this direction.

Taking all the facts into consideration, link it will be agreed that it should be easier for English oak to compete with Austrian or American call for building or other trades than for inner of our native Scots sine, as a present grown an English words, to compute with first, so ond, or even third Archangel. would point out that our hardwoods are more plentiful and important; they are gener ally of comparatively better quality and possess superior characteristics; being higher priced, they can bear more cost in transport and for many purposes length or freedom from knots is not so vital. Moreover, imported hardwoods usually have higher freights to pay than the nominal return freights which Jarge Baltic supplies enjoy

I think, therefore, that, speaking "enerally, most of our present supplies of native Scots pine timber would be better used for sleepers, wagon battens, fencing, and many collery requirements than if converted into scantling or building timber

By encouraging our hardwoods we shall als cencourage wood industries that can carried on in the provinces and rural dis-

# CONSUMERS OF NATIVE TIMBER.

The responsibilities and duties of the producer of timber in this country are constantly emphasised in the press, but never the obligations of consumers and manufacturers to use native supplies. Consumers and manufac turers have drawn their best labour from rural districts, and surely they have obliga-tions in return to these districts. They have benefited far more than the much-abused land d interests from the resources of the country, to which they ove a correspondingly greater debt. I think that many consumers would have felt far more comfortable at various peareds of this war had there been larger native supplies available, or had planting in the pist not been so much discoursed by consumers. This is not the time benefited far more than the much abused conraged by consumers. This is not the time for varn regrets or accusations; we have all made mistakes, and the best course is for all sections to mate in preventing their repeti-

# THE TIMBER IRADI.

All members of the native timber trade

bull for the home merchant, for the producer, and for all interests. Good English oak at 1s. 6d, per cubic foot is equally bad for all. The native timber trade has been particularly short sighted in thinking only of cheap buy ing instead of paying most attention to cultivating the consumer, encomaging the demand, and selling in the best market. I have no hesitation in saying that timber rings have been the curse of the native tumber trade, and have largely contributed to the present position. They have inflicted great damage on the timber trade itself. They have brought discredit on what is an honest and honourable cading: they have prejudiced producers against improving the riwoods, and consumers against using native timber; they have di verted necessary capital from the industry. and have throttled enterprise so needful for competing with imported timber.

I have no wish to dwell upon the unfor timate practice of timber rings. I appreciate

tunate practice of tunber rings. I appreciate fully the depressing and anxious period through which the native timber trade has passed during the list thirty years.

I now appeal to members of the timber trade to decline to support, and, in fact, to deal set only with those who try to form rings and prevent legitimate competition.

Merchants often criticise not always in

the most comp imentary terms -our ignorance of the requirements of their trade, and of the variety, size and character of the timber that should be grown, and of its marketing. They are often unduly suspicious, however, when we diseass trade requirements, in giming that we wish to enter the timber trade

It is important that people interested in woods should be better informed as to the markets for timber and the requirements of merchants and consumers. The various timbers can then be placed on the market more in the form required by purchasers and parti-cular trades, and so secure the best results. It is part of the English Forestry Association's work to give information on these points.

Since our main object is to encourage the demand for the timber, and to see that this demand shall be properly met, the Association should receive the hearty support of the

timber trade.

I would appeal strongly to the timber trade there is from so constantly decrying native It is periority natural that a merchant should wish to buy as cheaply as pos-sible, and with that view to enlarge on the inferiority of the timber he is go d enough to purchase. I fear we take many of these bar gaining criticisms far too seriously, and that they are advertised far too generously to con sumers and others. For many of markets in oak, diameter is much more important than length of butt; but, because want of length is a fault that can be raised. we are ant to think that length is all impor-

The native timber trade is carried on un der many difficulties; we can do much to help place it on a more satisfactory footing, to the advantage of all concerned. I would to the advantage of all concerned. appeal for a better spirit of co-operation, and would ask the trade to institute enterprise in developing new markets Merchants must see that we cannot allow the welfare of our woods to be prejudiced.

# ENGLISH TIMBER DURING THE WAR.

A detailed report of the demand, sales, and prices of English timber since the outbreak of war would be interesting but very long, and I can here deal with the matter in general I have also a rooted objection terms only. against quoting prices excepting to illustrate a point if separated from details of locality. quantity, size, and character of the trees, cost of transport, etc. It is common knowledge that good prices have ruled for ash and other timbers in special demand, although I fear that in many cases the landowner did not re-ceive his proper share of the increased price Without wishing to labour a point unduly, I think all must admit that the war has illustrated strikingly the great importance of orgamsation in marketing timber, and the very great need of a central body to keep owners and agents informed as to what is or is not in demand, and guide them as to prices ruling.

The great demand has been for ash for all kinds of military requirements, for general service and limbered wagons, for felloes, for

ds and ribs, for tool handles, z pigs, and, in fact, for any pur-casticity and strength combined while factors.

The denated shows no present containing, and landowners should be the action of some obtaining record prices, the containing record prices, and the containing record prices, and the containing record prices, and the containing record prices are should request, if of what is in special request, than the effrestrying oak or other when the demand is not pressing. in worder is wanted as to the a hadd for the different time y to per an surprised, because y has not commanded a ready is the first of the communication of the war. The reference has been greatly handreapped the reaction of such as railways), posting in has sofe ak and the building of . of a farming their activities to . of monitions and war sup-igent denead for ash and other an it is a war purposes, combined or it is disabling difficulties due 2007 12 day the commandering of as the fed in merchants concentratthere is a second these tembers to the as it ak, etc.

ntendr - conversion have affected de discrepances timbers. It has had also are is result that, although small larch, So tell, etc. found a ready sale at good prices for not wood, etc., the larger sizes were often ith at to dispose of, even at lower prices, spors have commanded a record price. "I s regrettable that our Scotch could the corrected much more extensively for and their purposes connected with

Share that to its freedom from splitting ints general toughness, has been in de-crifer our as war purposes, and also in our stricts for chair seats, boat building,

The h has been in demand for tent peg and to tree, chans, furniture, toys, and all descript, as of turned parts.

Very prime oak has been in demand for The ty-pows and general service and lim-neral wards and for various purposes.

There has been a large demand in some assures for coppies poles and inferior tim-er, and thumings for defence work, barbed be entarglements, fuel for the camps, and die i us purposes.

The a final demand for any particular class of the timber depends on sizes and other That's timber depends on sizes and other its but particularly the actual locality in the student stream, and whether a runer to mean for or other special dependent with a with a casy reach of the district. Dealing with the native supplies is now and entirely dependent on labour and enteres, and also transport by rail. These these are known to all and analysing the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the stream of the

chees, and also transport by rail. These thaltes are known to all and apply in try like tien. It is needless for me to employ the very set ans nature of the positive value when all the native support in a rail of any required for military of the first a way out of the difficulty istuated with the first and estenably in view tree into the yand cost of shipping, the improvement of the foreign exchange and stopof the foreign ex hat ze and stop-tives, and the necessity of being more that if the Baltic or other supplies.

ON O'R ON THE SALE OF TIMBER.

deed table that, in connection with the city words, large sums have been the large sums have been the large of the city with the city large. there imply the dan has a of remain, in about the sale of selar command the services with each at dam afford to this to be or a bisers. There is untry, however, is less tot justify the o accili permanent the standard enter the render to fit timber of the indary of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of t

producers has depressed prices, encouraged timber rings, and is particularly unfair to adjoining estates. It is, therefore, impor-tant that there should be facilities for obtaining experienced men to advise when ad vice is needed.

### FORESTRY MUSEUM.

You will notice that the planks exhibited in this room are from the Institution's Forestry Museum. This museum was founded by Mr. Daniel Watney during his presidential year. I have been for some time reorganising this collection. Although it is slow and often discouraging work collecting good specimens of timber or other exhibits, I hope soon to make the collection a really interesting one. The upper floor has now been extended, so that we have more room for specimens.

I should like to state briefly the basis on which the exhibits will be arranged and the objects in view. We desire to interest three sections of members particularly: (1) Students who wish to study the exhibits with reference to forestry or architecture: (2) land agents or others interested in the product on and commercial utilisation of timber; (5) architects, building surveyors and others interested in specifications for building con-

struction.

In the hotanical cases each tree is described botanically and illustrated by photographs of the tree in summer and in winter, with examples of the foliage, bud, twig, bark, timber, seed, and other features. There are many examples of the timbers of various trees, illustrated by cross and tangential sections. There are also photographs of fine specimens of trees growing in this country, taken principally from Messrs. Elwes and Henry's well-known book.

Planks are included of different timber as a basis for comparison of structure, rate of growth, proportion of sapwood, and other points. Both knife and saw-cut veneers of English timber are shown; also exhibits illustrating important points in forestry, injurious insects, effects of bad pruning, examples of oak paneling, the conversion of oak, etc. hope to include an exhibit illustrating the conversion of coppice for rural wood industries. The specimens are now temp to labelled, and as much information as possible included on each label.

An exhibit which I hope will be of speciai interest is that of building timbers, which is now being arranged. This covers the timbers used in the building trade, showing (1) the popular and botanical names of the tree from which the timber is sawn; (2) the various names by which the timber is known in the tride and the country from which it is imported. Our familiar "Scotch," for instance appears as follows: "Scots pine (Pinus sylvestrist, timber imported under the name of 'Baltic fir,' 'red deal,' 'red fir,' 'yellow deal,' 'Archangel,' etc.'' I hope also to illustrate trees whose planting in this country is advocated, such as Douglas fir. I shall include instances of the timber imported under the names of "Oregon pine," "Columbian pine," etc., and examples of the timber of the same species grown in this country. will enable architects and land agents to appreciate the possibilities of our home-grown Douglas fir.

Other countries and colonies have exhibits. in London and elsewhere, of their native timbers, and I should like to make this a fine permanent collection of English timber. The museum might then become the recognised exhibition of English timber and forestry, and I hope would do justice to and be a worthy memorial of its founder, our senior

past president.

Lappeal to numbers to take an interest in this museum. We shall welcome exhibits of this museum. We shan we come general interest, and, especially, good speci-general interest, and especially, good speci-consecutive forest produce. Our space being somewhat limited. I do not wish to in clude too many "monstrosities."

I hope to arrange an exhibit illustrating the timbers required for the war, so members will apreciate the timber in demand and

thorough investigation of all aspects of the forestry problem, to find a solution which, I am convinced, is bound up with the extent of the support it shall receive.

We now have a golden opportunity to try to remedy matters by joint action, since the public is sympathetic in discouraging imports. and consumers wish to avail themselves of

native supplies.

An independent and influential body can succeed where individual and unorganised efforts would fail. A central body in close touch with estates, merchants, and consumers, must possess special information and be in a far stronger position to ensure good results in the sale of timber than are individuals. working separately.

Let me summarise some of the details of

our work:-

1. We keep a register of firms who supply goods made from English timber, and we give their names to Government departments and to all other people open to contracts or sales.

2. We keep a register of consumers who require English timber for their business, and we help them in every way possible to obtain, with the least trouble, the necessary

supplies of the most suitable timber.

3. We keep a register of timber merchants, with details of the timber they consume or special trades for which they cater; we give their names where converted timber or such goods as they supply are required; and assist. them in competing with imported timber. We also put them in touch with estates which have timber for disposal, and help them to secure the supplies of timber which

they require.

4 We place estates who write to us offering timber for sale in touch with merchants requiring timber, selecting the best buyers in

each case.

5. We collect and classify valuable information on practical points concerning timber and its markets, and we issue this information in leaflet form. We have experienced representatives in different districts, and give to members information relating to local and special demands. Only by means of a fuller knowledge of every section can we make proper use of our native supplies and their markets, and ensure each section receiving its due part of the price paid by the consumer.

We are not yet through this war, and itis impossible to foresee what the future has in store or what demands there will be on our native timber. We are dependent on other nations and on our shipping for the imported timber, and it would be serious for the country if the Baltic or other supplies were diverted or restricted from any cause.

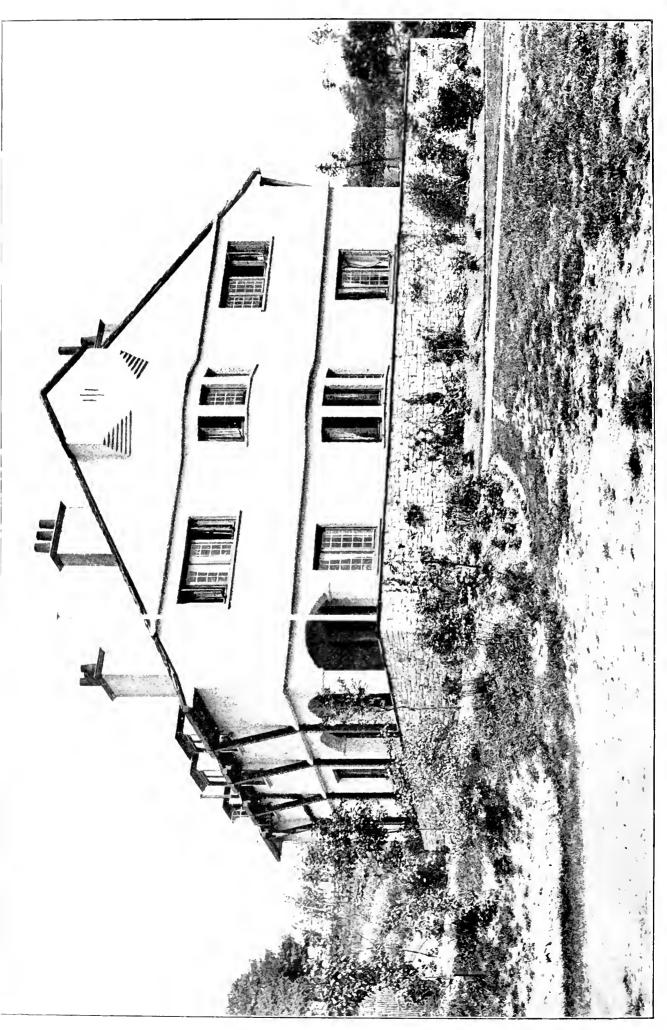
When a struggle extends to the sources of a nation it is a case of exhaustion ir the final stage, and organisation must be a large determining factor at the time, and also as to the extent of the resulting

Again, no one can foretell the after-war conditions. Germacy, like the United States of America, is more powerful as, and more of America, is more powerful as, and more adapted to be, a commercial than a military nation. We cannot foresee the industrial war which may follow the declaration of peace. We were unprepared for this present war, and are we all doing our best to prepare for an industrial war?

It is a time of great national emergency and there are great issues at stake in every direction, and particularly in the case of the native supplies of timber. Instead of being forced into action let us show what we can do by voluntary effort and give a lead to the country By joint action we shall then be prepared for any emergency, and in any case we shall be able then to place English oak and our native timber in the position which they ought to occupy.

The Senate of the Queen's University, Belfast, have resolved that a tablet to the memory of the late Mr. W. H. Lynn, R.H.A., architect, be placed in the Examination Hall. Mr. Lynn was long and intimately connected with the University as consulting architect, and, by his will, a generous benefactor. The Senate of the University have also appointed Mr. R. M. the new translation of the share and the second to the above in a previous paper, and I have further and I have further illustrated its work in the share of timber and I have further illustrated its work in the share of the part of the Association was formed, after the succession to Mr. Lynn.

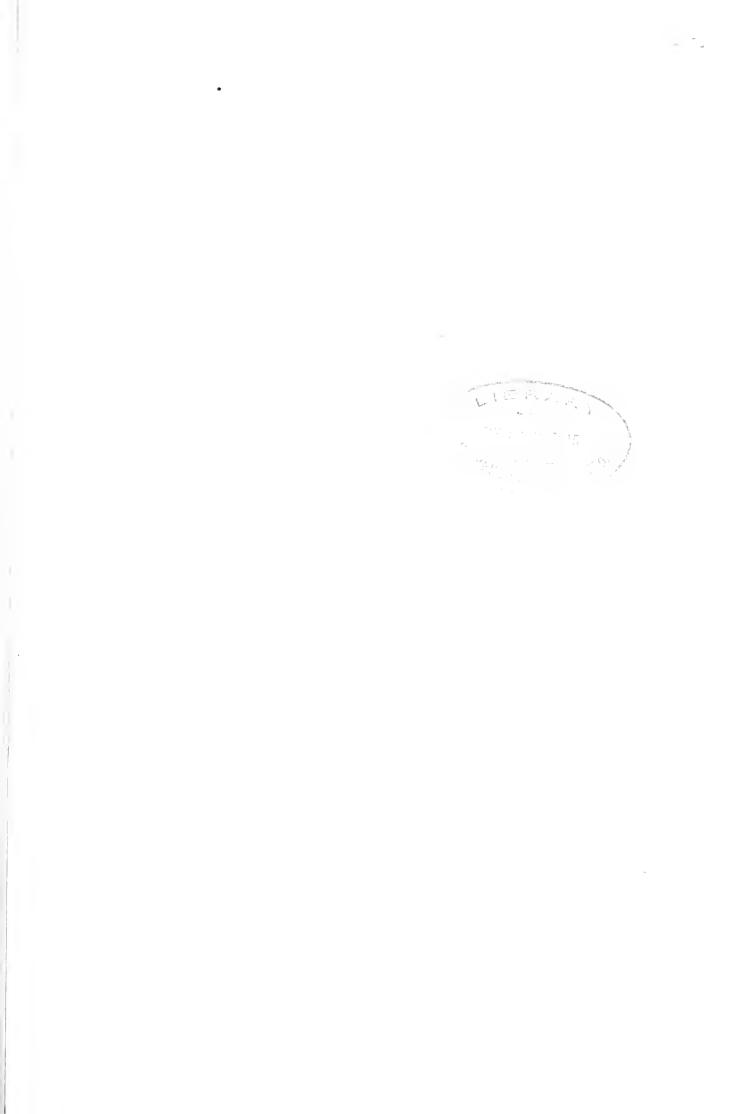


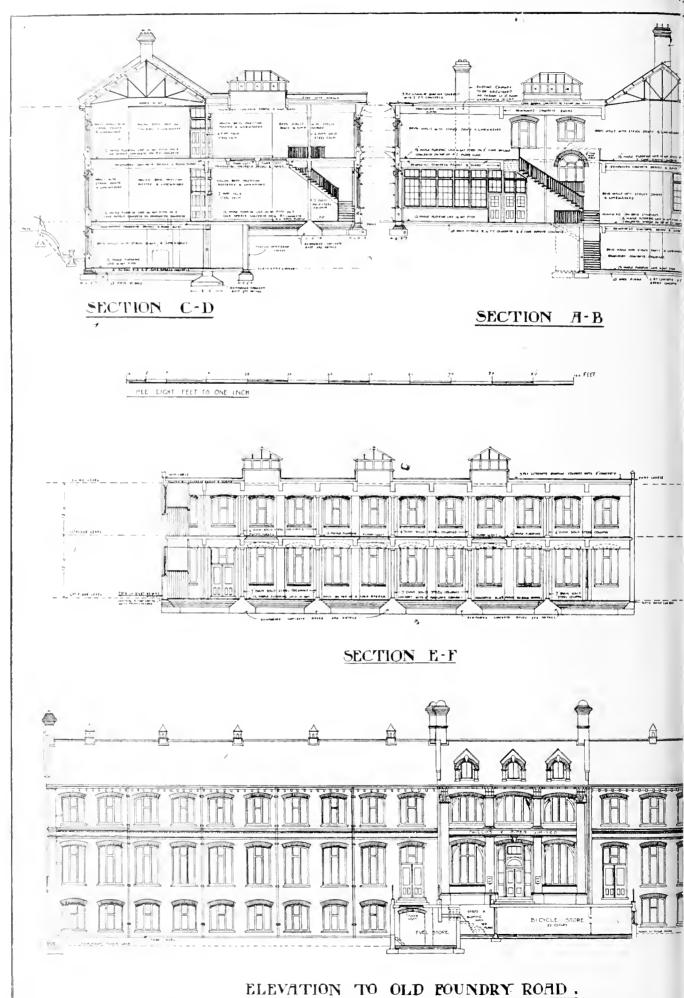


Thes. Lewis, Ltd., Photo.:

THE SITTING-ROOM, "THE WHITE HOUSE," HEATON, NEAR BOLTON, FOR MR. OLIVER H. HASLAM. Mesers, R. Heywood Haslam and Herman Crook, Joint Architects.

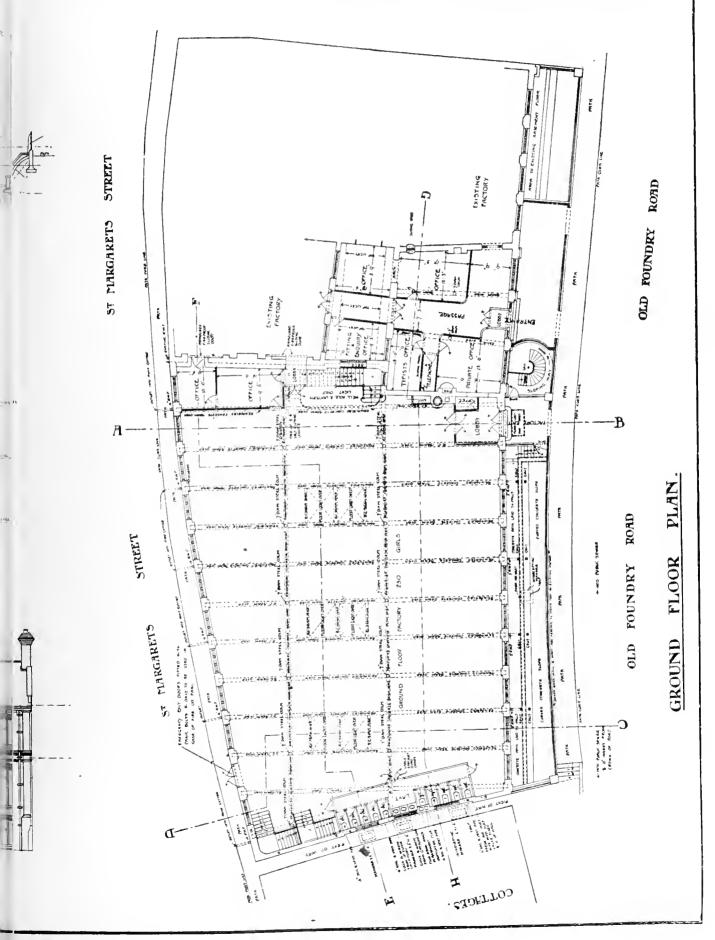






# MESSRS PHILLIPS & PIPER LT. IPSWICH

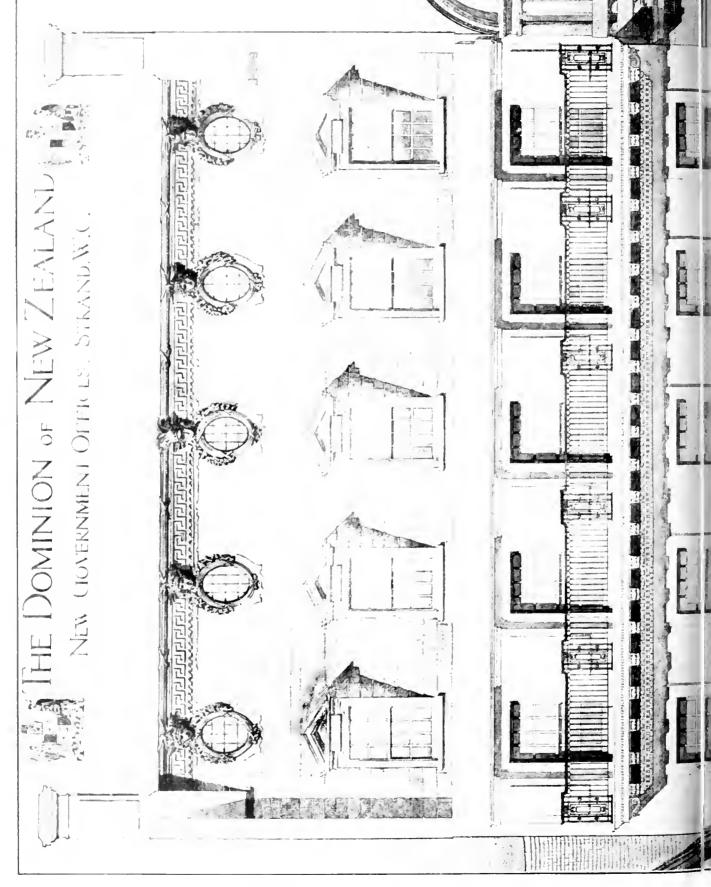
ADDITIONS TO FACTORY OLD FOUNDRY ROAD & ST MARGARETS STREET;

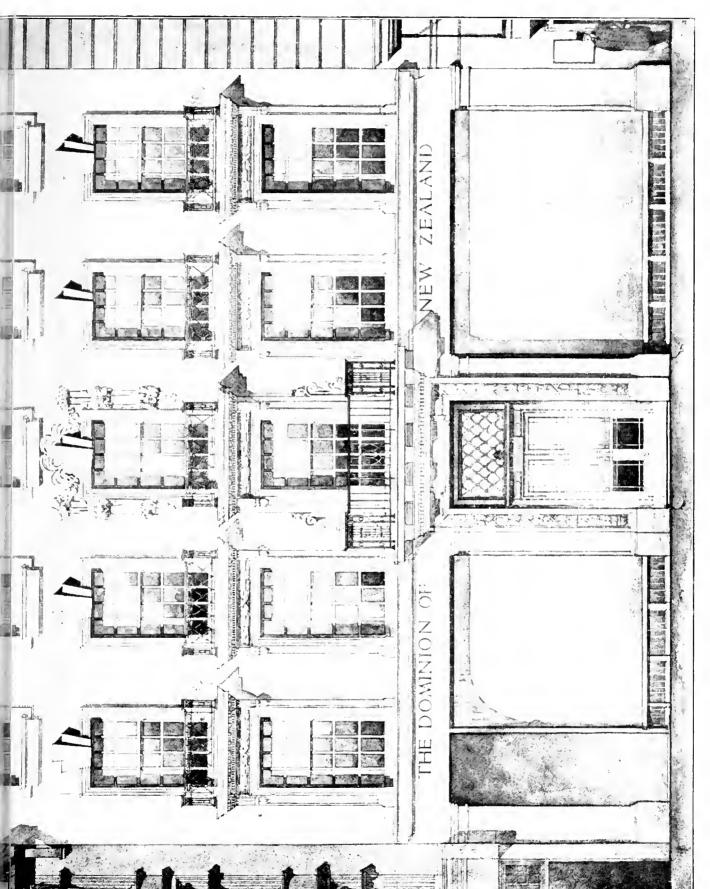


VICH.-Mr. RAYMOND C. WRINCH, A.R.I.B.A., Architect.



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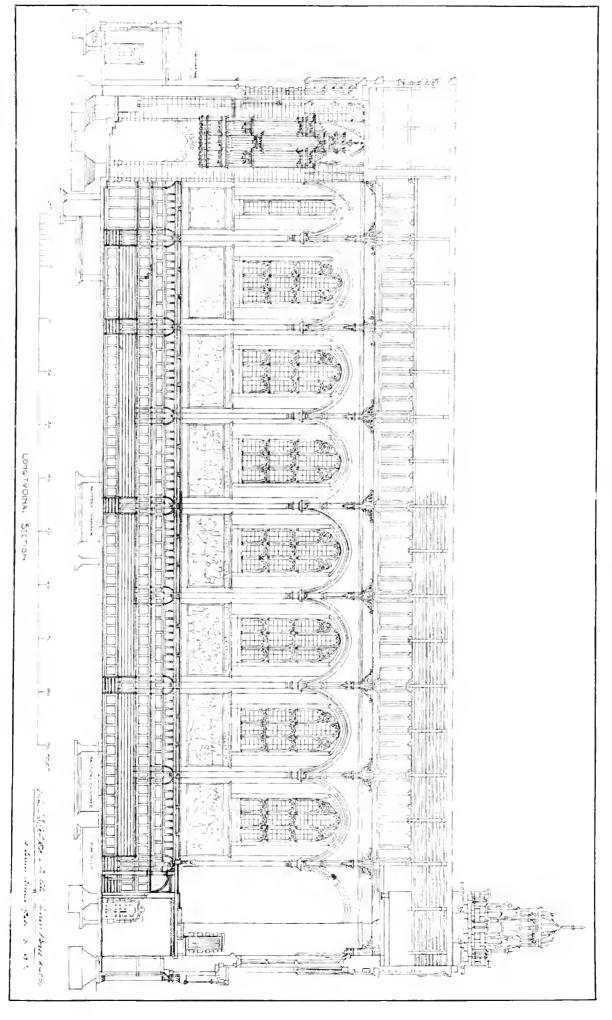


THE NEW ZEALAND GOVERNMENT OFFICES, STRAND, LONDON, W.C.-Messes, Creckmen and Sons, Architects.









SECTION SHOWING POSITION OF TEMPERA DECORATIONS BY MR. FRANK BRANGWYN, A,R,A, Messrs. Sir Aston Webb, R.A., and the late E. THE SCHOOL CHAPEL, CHRIST'S HOSPITAL, HORSHAM. INGRESS BELL, Architects.

## Currente Calamo.

At the annual meeting of the London Master Builders' Association held at Koh-i-Nor House, Kingsway, W.C., on Wednesday afternoon, Mr. W. F. Wallis, of Maidstone, the president, in the chair, the urgent need for the extension of the scope of the War Emergency Act so as to relieve builders and lessees who had entered into pre-War contracts for the erection of buildings or for leasing building sites which altered circumstances render it impossible to fulfil, was brought forward. On the motion of Mr. Renshaw, seconded by Mr. Hill, of Messrs, Higgs and Hill, a resolution was unanimously adopted calling upon the council to collect evidence from their members, and from master builders' associations throughout the country, with a view to preparing a memorial to the Government urging the necessity for an amendment of the Act. When the terms of the memorial have been settled, a deputation will be appointed to wait upon the Prime Minister and put before him the gross injustice of the existing state of things and the need for further legislation.

The Officer commanding the Second Battalion of the Artists' Rifles, Officers' Training Corps, has decided to form a special company to consist mainly of professional men whose technical experience renders them qualified for appointment as officers to those units or branches of the Army in which knowledge of construction and civil engineering is especially useful in the conditions obtaining in modern war. A large number of men have already been enrolled, but there are still vacancies for civil, mechanical, and mining engineers, architects, public works surveyors, and borough engineers, to receive the military training which is essential if the military authorities are to make full use of their professional skill and experience. The training will be directed to the development of that portion of the candidates' peace training which is applicable to military work and such further instruction as will enable them to apply their technical knowledge effectively to military requirements. The scope of the training will extend beyond ordinary field engineering, and will be both of an individual and collective character. It will include en gineers' reconnaissance, building and repair of bridges and roads, work in connection with embarkation and disembarkation of troops, military sanitation and water supply, the construction of defensive positions, animal management, and such other instruction as is necessary to render the candidate for a comnnission a thoroughly efficient officer. Pro-fessional men having Colonial experience will be particularly welcome, and during their training will be associated with men of like social position and education. Application for nomination to the Corps should be made to the Headquarters, Artists' Rifles, O.T.C., 7, Duke's Road, Erston Road, W.C.

No one conversant with the rapidly increasing badness of the roads in most districts can ignore the strong criticism offered last week of the action of some of the county councils, and more especially of the Road Board, at the meeting of the National Traction Engine Owners and Users Association. It was insisted that the proposals of the County Councils' Association were of such a drastic nature that if they became operative they would effectually ruin all those who were engaged in the business of heavy locomotive handage. The Traction Owners also view with

considerable apprehension the proposal to suspend the activities of the Road Board during the war. If one fact has been demonstrated more clearly than another during the present crisis, it is that self propelled traffic of every kind is of almost vital importance in the country. The railways are congested, and likely to become more so. The committee on Public Retrenchment appear to look upon the maintenance and strengthening of the highways as a species of luxury. If their recommendations as to the suspension of the Road Board, etc., are carried into effect, not only will present road transport be immediately impeded, but the country will pay dearly for such false and mistaken economy, for the roads will be living on their capital account, and unfortunately, in most cases, the margin is a narrow one.

In a sensible letter in the "Manchester Guardian," the secretary of the Manchester and District House Builders' Association. writing from 27, Brazennose Street, Man chester, deals trenchantly with some of the statements of well-meaning people who, while quite rightly deploring the present shortage of houses in Manchester and elsewhere, talk nonsense about the "enormous profits of the speculative builder," a statement which has no foundation in fact, and which is proved baseless by the records of the wealth left by men in the trade. As is further pointed out. two causes have combined to put an end to building in Manchester. First and foremost the Finance Act, 1909, rightly or wrongly, had the effect of trightening investors who had hitherto been the customers of the house builder and whose capital had enabled the house-builder to provide homes for the work ing classes. This is not confined to Man chester alone; it has had the same effect throughout the land, and the housing problem is consequently a national affair. Next, the building by-laws which came into force in Manchester in 1908 imposed unreasonable and arbitrary regulations in certain respects, which have made the houses more expensive and thereby deterred the house builder from carrying on his trade.

As regards the alleged superiority of Manchester municipal built houses, the secretary asks what was the total cost per house of the corporation houses on the Blackley estate, what interest on the outlay is received by the city, and whother those houses were passed by the building inspector as being built in accordance with the by-laws? If these questions are satisfactorily answered, it will be time, possibly, to consider the further building of cottages to the extent of £1,000,000. In opposing the municipality spending such a sum of money no one contends that the housing question must be left as it is. It is a difficult and intricate problem, but it is quite capable of solution on ordinary business lines. The house builder has built, according to the best authorities, 98 per cent. of the cottage houses in the country, and by his enterprise and foresight he has provided the comfortable and convenient homes which the people now enjoy. He can continue to supply the need, if only the many unnecessary exactions and restrictions which harass him on all sides are removed. At present, as far as the Government is concerned, there is little chance of that; but in any great centre of population it is surely the duty of all to see that those charged with the direction of local affairs should try to realise what are the real causes of the evils for which so many

The response to the appeal of the Empire has been so glorious that an impulse higher than the sense of duty calls upon those at home to give of our best in the interests of the gallant men who return sick and wounded from the conflict with a dishonourable foe. For some time Miss Margaret Lindsay Williams has been most desirous of helping this great cause, which must be near to the hearts of all. She is giving an exhibition of her pictures as a means of benefiting the funds of the Welsh Hospital, and feels sure that, in addition to the small entrance fee charged, many will avail themselves of this opportunity to contribute towards such an object. As a means of obtaining a substantial amount, it is her intention to offer to paint a life-size three quarter length portrait of the lady or gentleman on whose behalt the highest bid is made for an empty trame shown at the exhibition no bid to be less than £100. The entire sum for this portrait, together with all subscriptions and receipts, are to be handed over to Sir William James Thomas, the hon, treasurer of the Welsh Hospital. In addition to her own work, some sculpture by Sir William Goscombe John, R.A., and Mr. Leonard S. Merrifield, and architectural designs by Colonel E. M. Bruce Vaughan, have been kindly lent for the exhibition, which opened on Monday at the New Galleries, 131, Queen Street, Cardiff, and closes on Saturday next.

One of the many ill-effects of the war is the hindrance to the work of building the Liverpool Cathedral. The staff of artisans and workmen has become so depleted that the committee have now reluctantly given up all hopes of completing the choir, and the magnificent double transept adjoining, within the period formerly thought possible. They propose now to concentrate their efforts upon the completion of the bare roof and the wills. Meanwhile, in the face of all difficulties the task of raising this great national meanment goes uncersingly, if tardily, forward

The late Mr. James Longley, of The Beeches, Crawley, Sussex, builder and contractor, offiestate valued at £55,887.

Lieutenant Stanley Vanstone, of the Rifle Brigade, late assistant surveyor to the Teignmonth Urban District Coancil, has died f.om wounds in France.

Mr. A. W. Sinclair, of Scarb-rough, the president of the National Federation of Building Trade Employers of Great Britain and Ireland, has been appointed a justice of the procefor that borough.

A Primitive Methodist church is about to be built at East Cramling.on. The architects are Messus, Harrison and Ash, of Newcastle entyne, and the contractor is Mr. W. Robertson, Whinney Hill, Choppington.

The urban district council of Sittingbourne received at their last meeting tenders for the erection of a public convenience, estimated to ust £500. As the lowest tender amounted to £017, the scheme was referred back for revision.

The church of St. John, Chopwell, in the parish of Winlaton, was consecrated on the 7th inst. by the Bishop of Jarrow. The district which it sorves is shortly to be formed into a new parish, and has a population of quite 7,000.

A new Wesleyan church at Carcroft, near Doncaster, built at a cost of about £3,000, has been formally opened. Mr O M Therpe, of Long Eaton, was the architect, and Messrs. Sprakes and Sons, of Doncaster, were the builders.

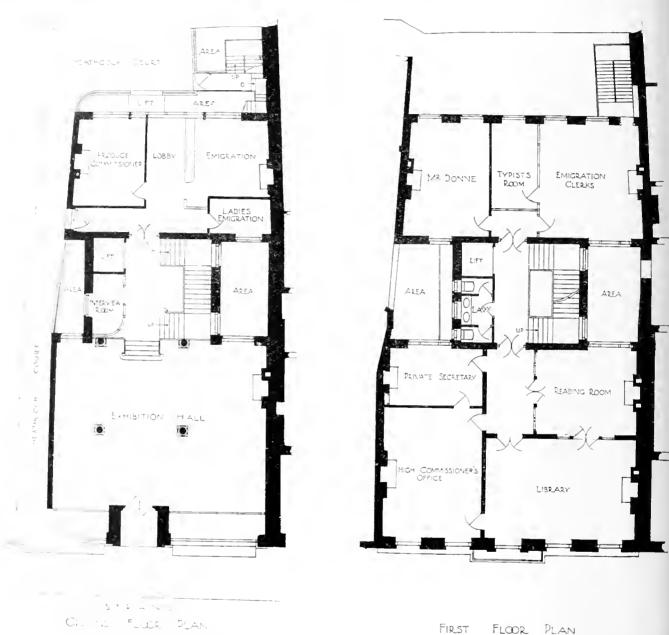
At the meeting of the London County Council on Tuesday afternoon of last week. Mr. Debenham, replying to Mr. J. D. Gilbert, said that the new County Hall now stood at about the average level of the fourth floor. There were 636 men employed on the work, but in view of the conditions obtaining it was not possible to-say when the hall would be ready for use.

## Gur Illustrations.

FILE STOR THE GOVERNMENT OF THE LOWINDON OF NEW ZEALAND.

Or estrate is shows the new offices now logically the transfer to back and areas faced with regarded teks. The root, which is flat, is tructed of stee, and concrete covered to with the additional of the trong is mainstrated, covered to with a district the street of the state of the state of the state of the state of the state of the state of the state of the state of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the various departments. The backers of the works, Mr. B. T. Price: the marble work by Messrs. J. Whitehead and Sons. Ltd.; enriched plaster ceilings by the Bromsgrove Guild: asphalte by Claridge's Asphalte Co.; slating by Messrs. Strling and Johnson; sanitary work and heating by Messrs. Strling and Johnson; sanitary work and heating by Messrs. Speedy, Eynon, and Co.; lift by Messrs. Waygood-Otis, Ltd.; ironnongery by Messrs. Chaskers of the various departments. as offices for the various departments. The

new factory on the other. The new factory, which is now being roofed in, comprises a basement floor, staircases, one at each end, with a cloakroom between the staircases, 96 ft. by 8 ft. wile, fitted up with cloak stands formed with 1½-in. diameter hot-water pipes, with numbered hat and coat hooks attached thereto, for the 500 additional workers that the new factory will accommodate. The rest of the basement, apart from the heating chamber and fuel store comprises a dining-room for the girl workers, 87 it. long by 28 ft. 6 in. wide, and fitted with a cooking range. There is also a bicycle storage room approached from the ontside by a



FEET 10 NEW ZEALAND COVERNMENT OFFICES, STRAND, W.C.-Messrs, CRICKMAY AND SONS, Architects.

SCALE OF

Sorts, or 15. Victoria Street, Westminster, S.W.

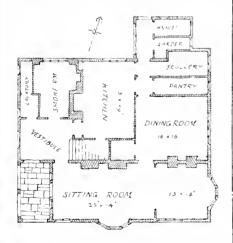
ADDITIONS TO CHRISTCHURCH CLOTHING FACTORY, IPSWICH.

We reproduce the ground floor alove a comprises an open room, an average of 75 ft. wide by 120 ft. long, and having the latter of the control of the second of the control of the second of the control of the second of the control of the control of the second of the control of the second of the control of the control of the control of the second of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the

inforced columns being in this instance, 15 in, in diameter. A goods lift has been provided between the ground floor and first floor. The whole of the floors, staircases, flat roofs, and columns have been con structed in reinforced concrete on the Kalm system of reinforcement, the bars having heen supplied by the Trussed Steel Concrete Co., Limited, Caxton House, Westminster, and the floors have been calculated to sustain an evenly distributed load of 1½ cwt, per toot super, the spanning of the primary beams being 18 ft. 6 in, and the secondary beams 28 ft. The walls have been constructed with bricks on the inside, and best quality local facing bricks on the outside. The windows have wood mullions and transomes to match the existing windows to the old factory, and have been fitted with iron casements. Excellent lighting has been obtained by these large windows lacing Old Foundry Road on the one side and St. garet's Street on the other, and in addition to these, four large lantern lights, each 15 ft by 9 ft., have been constructed over the llat roof above the first floor, with prismatic lights in the first floor immediately underneath same to give additional lighting on the ground floor. These lights have been mainground floor. These lights have been manufactured by the Luxfer Prism Company, 16, Hill Street, Einsbury, E.C. The ventilators are of copper, and have been manufactured by Messis. Ewart and Sons, Limited, Enston Road, N.W. The heating is by low-pressure hot water from a Robin Hood boiler, con with hot-water radiators throughout nected the building. The electric lighting through out has been installed by the Ipswich Corpora out has been installed by the Ipswich corpora-tion Electric Supply Company. The whole of the work has been carried out from the designs and under the superintend-ence of Mr. Raymond C. Wrinch, A.R.I.B.A., architect, 16, Museum Street, Ipswich; the contractors are Messrs, Cubit and Gotts, Station Works, Westerfield, the contract for huilding being £8,058 The subcontractor for the heating engineering work is Mr. E. Scott, St. Margaret's Green, Ips wich and for the reinforced concrete Mr. H. T. Yelf, of Norwich. The building is now Yelf, of Norwich. The building is now nearing completion, and it is hoped to be able to hand it over to Messrs. Phillips and Piper, Limited, early in the new year.

#### "THE WHITE HOUSE," HEATON, NEAR BOLTON.

We give two photographs, and in this column a plan, of Mr. Oliver H. Haslam's house, near Bolton. There are very few particulars to give respecting the building. The house is of brick, rough-casted, and the roof is of heavy



local stone flags. The contractors were Messrs, J. C. and F. Woods, of Bolton, and Mr. R. Herman Crook, also of Bolton, was acting architect on the spot, the design of the house being by Mr. R. Heywood Haslam, of 32, Essex Street, Strand, W.C.

by Mr. Frank Brangwyn, A.R.A., there is little to be said to day in respect to the further subject now illustrated. The incident chosen is "St. Wilfred, First Bishop of to the Our previous reproductions of the ploto-graphs, lent us for the purpose by Mr. Brangwyn, appeared on October 6, 15, and 27 last, a general description appearing with the commencement of the series. To day we are enabled, by the courtesy of 8n Åston Webb, R.A., to give a longitudinal section of the chapel, showing how these decorations range as a frieze over the stalls. This draw ing greatly enhances the value of our representations of the paintings themselves, as it enables the reader to understand their positions and sequence in the general scheme. The late Mr. Ingress Bell was, of course, joint architect with Sir Aston Webb tor all the buildings carried out for Christ's Hos pital at Horsham. Our previous illustrations of the school will be found in the BULLING News for June 22, 1894, after the competi-tion was decided, and on October 22, 1897, the day before the foundation-stone was laid by King Edward VII., when he was rained by King Edward VII. when he was Prince of Wales. We hope shortly to give further illustrations of Mi Brangwyn's tempera paintings, and complete the whole set with a general view of the chapel.

#### PARLIAMENTARY NOTES.

INCREASE OF REAL BILL. Alterations of a far reaching character in the list two clauses of the Increase of Rent Bill were made during its consideration in Committee on Wednesday evening. By the omission, on the proposition of Mr Wilter Long, of the first clause, which provided that the scheme should operate only provided that the scheme should operate only in special areas, defined by Order in Conneal, the Bill was made applicable to any part of the United Kengdom where an unfair harden has been imposed on small tenants by the raising of their rents since the commencement of the war. A Government amendment was also inserted prohibiting the raising of rents on account of decorations or reputs. By a further change it was laid down that where the landlord pays the rates the Bill shall not apply to an increase of rent not exceeding any increase an increase of rout not exceeding any increase in the ratis. Several other incoding were passed, and further alterations were fore shadowed by Mr Long.—The Bill passed through Committee on Thursday last after some discussion as to us scope. As the outcome, Mr. Long said he understood that the Committee were willing to accept the suggestions to which the Committee were willing to accept the suggestions to which the Committee. tions to which the Government were prepared to agree. These came to this, that the rental or rateable value as mentioned in the Bill would now stand at £35 for London, £30 for Scotland, and £26 for the rest of the country. The compromise would be these differences in the rent, and the extension of the area from the adminstrative county of London to the London police area. A Government amend ment was also agreed to providing that the Act should not apply to a house let at a rent which was less than two-thirds of its total levalue. A further Government amendment to the concluding provision of Clause 3 extend ing its protection to sub-tenants, was adopted

## WATER SUPPLY AND SANITARY MATTERS.

DEFERRED SEWERAGE CONTRACT AT ADM The war has created a singular problem with regard to the Adel sewerage scheme. Adel is a village on the Wharfedale boundary of the a village on the Wharfedale houndary of the Leeds Corporation, and some time ago a schema-to cost £6,764 was approved by the Local Government Board for the sewerage of the village, at being arranged that the Leeds Co-poration should continue their main sewer in order that the sewage could be treated by them. On the outbreak of war only about half the schema had been secondary. them. On the outbreak of war only about nair the scheme had been completed. A sum of £3,000 had been spent. The Leeds Corpor: tion then wrote, stating that, owing to the altered conditions, they could not carry on the ripart of the contract, and, whilst the cur-tractor for the rural district council would not the house being by Mr. R. Heywood Haslam, of 32, Essex Street, Strand, W.C.

THE CHAPEL, CHRIST'S HOSPITAL SCHOOL, HORSHAM: LONGITUDINAL SECTION AND DECORATIONS.
Having already illustrated six of the mural panels in tempera painting, giving incidents in the History of the Fathers of the Church, guiton into the problem to-day (Wednesday).

#### COMPETITIONS.

Alexander Thomson Travelling Student SHIP. As will be seen in our advertisement pages, owing to the war the Glas-ov Institute of Architects announces that the Trustees have again decided to postpone this stalentship for one year. All stalents who were originally eligible and have zone on mithturn service will be allowed to compete when competition is held.

#### PROFESSIONAL AND TRADE SOCIETIES.

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THE SHIFTY OF ENGINEERS. mail meeting of the Society of Engineers held on Manday night under the presidency of Mr. Norman Scorgie, borough engineer of Hackney, it was reported that the President's Gold Medal had been awarded to Mr. Arthur H. Barker, the Bessemer Premium to Mr. Alphonse Steiger, and Lacy Premiums to Mr. sydney G. Turner and Mr. Frank Groves Mr. Percy Griffith was elected president, and Messis, H. O. Adams, W. B. Esson, and W. N. Twelvetrees vice-presidents. The Sectetary reported a membership of 538, with 85 affiliated members. About 50 were on active service, and many more engaged on miscellaneous war work is befitted engineers, when the result of the war depended so largely on engineering science. With regard to the effort of the society to improve the status of professional engineers if all classes considerable progress had been unde in the preparation of a comprehensive scheme dealing with the proa comprehensive science deading with the pro-fessional qualifications, fees, and etiquette of consulting engineers. Consideration was also being given to the position of salaried engineering officials, particularly these om-ployed by municipal and similar bodies. The welcomed information which would council. assist them in accomplishing their object.

#### LEGAL INTELLIGENCE.

Costly Litterties as to Fromise. To differ action at Local Assics—Messis, d Costay Littleation as to Frombia. The Halifax action at Leeds Assaces—Mesers J. and J. Baldwin, Lid. v. the Corporation promises to rank in history is the longest case of Litgather, and probably the mest costly, the borough has provided. Africady it has excupied Mr. Justice Atkin, sitting with air a jury, live days, and the plaintiffs side of the case is still unlimished.—His Lordship, on the coachision of Saturday's sitting, elie ted that it would take antil Wednesday to complete the plaintiffs case, and thereus in announced that the furthermy of the retion would have to be the ring of the action would have to be adjourned to London. The action actions of the thouland of the finding of plaintiffs' full premises in the great storm of January 1, 1914. Plaintiffs contend that the flooding was due to be 2byte. an the part of the fronting was due to be 20.250 on the part of the corporation in a st providing, as they assent, subquiste drainage provision to the destruct, and in failing to maintain that provided in good condition. The corporation on their part, plead that the flooling was more act of God, "cause I by the abnormal rainfall.

The death is announced, at the ege of saxy three, of Mr. John Brown, are of the principals of Messis, R. B. Hagart and Co., umber measures, Port Glasgow

At a meeting of the Poston Saw Mid Piprietors' Association, it has been ununimously agreed to advance all prices in their printed parietors' har a further 10 per cent.

Mongside the Alexandra Dack at Newport, Mong, the building of a warehouse 4% fit, to 50 fit, for goods for outward singment has just been begun by a firm of slap whers. Large cold-storage depots will also be constructed.

works of Mr. W. J. Johnson, Oswestry, on Wednesday night, the winds of the extensive saw mills being gutted and all the viduable machinery which they contained being completely destroyed.

Mr. 197

Mr. John Gordon has been appointed borough surveyor of Merdoen, in succession to the late Mr. William Dyack, at a salary of £450 a year. Mr. Henry Stewart has been promoted to the office of assistant borough so veyor at a salary of £300 a year.

The renains of Mr. William Knight, a well-known Liverpool builder and contractor, who passed away at his residence, 353, West Derby Road, Thebrook, on Thesday last, at the age of seventy-three years, were laid to rest it West Derby Cemetery on Saturday afterneon

## Our Office Cable.

Firmy afterment of a Board the General n ated that arising out at an in July last for at Metripolitan Water Treasury raised the i the ere ton of the new be pre-ecded with. The These i at that time, but and since been transferred and son, the Treasury now country any further diffit un starces arising, under possible to postpone the yourt of the building, the an shoil with particulars and the any steps to continue As there is be no objection to unities to inmended "that in any inthe testor new circum-101 00 connection with the erec thees in Rosebery might be possible to on plot at of any part of the L. rd. Commissioners of H.M. ar ished with particulars before any steps to continue the sumer dation was adopted.

and annual exhibition of the Settles, Artists, which was opened S.A. Gastories, the Mound, Edin-Saturday aftern son, is chiefly occur of a with the works of the older yelf the younger members of the beling for King and country, exceeded by Mr. Walter B. Mr. John Munnich are crowned to of laurel, as a memento that s of laurel, as a memento that s \_ y u.g printers, both stu-Euroburgh College of Arts, laid tes in a flon Some naval pic-tent in the last Royal Academy positions of honour, not Life of Death: Be-: Arthur J. Burgess's : and Charles Dixon's 25. 1914 The land-president, Mr. Robert Craft Dyke and per ted in a Fire wealls of interest and Evening on the Dundee from Tay-The Neuk, East Among the best the president First and David

Balybay,

T. R

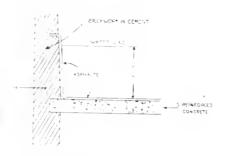
## Intercommunication.

QUESTIONS

QUESTIONS [Our offer of guineas for answers is suspended during the war, but we appeal to reader able to respond to the tew queries that reach us to do so for the common good.]

the e-minion good.]

[BH43.]—WATER TANK.—I have to provide a wat r tank on the roof of a factory, the size being 40 ft. by 36 ft. and 2 ft. deep. The bottom of the tank will be 5 in, reinforced concrete, covered with 1-in, a-sphalte, and I propose to form the sides with brick work in cement, battered from 14 in, to 9 in, as sketch. The tank will be in a very exposed posit or and hable to get frozen over, and I wish to be quite certain that the expansion of the ice in frosty weather will not push over the parapet walls. Would any of your readers give me an opinion as to whether



salls as suggested would be strong enough, and, what would they recommend, or to what ex-should the walls be hattered.—Frost. walls

#### TRADE NOTES.

C. Jennings and Co., 952, Penny

Messis, C. Jennings and Co., 952, Pennywell Road, Bristol, inform us that the details in their page advertisement last week were not quite in order, but they will be pleased to send a revised sheet upon receipt of a postcard.

The "Hoyle" system of ventilation teaturally embracing Boyle's statest patent "Air-Pump" ventilators and air inlets, has been applied to Wallingbrook School, Chulmleigh.

The first ensideration of reparation is the cost, and many wet structures are neglected because the owners are unaware of an inexpense roundly. The makers of Pudlo state that they will be glad to advise property owners of the least costiv way of successfully combating dampness and water in any building. We learn dampuess and water in any building. We learn that the well of a lift at Haslingden, which has after the level flowed data has been made bone dry of Pudland coment.

## Trade Arlus.

#### WAGES MOVEMENTS.

WAGES MOVEMENTS.

THE PROSPERITY OF OPERATIVE ENGINEERS.
The December report of the Amalgamated a lety of Engineers shows that the membership has advanced from 173,629 to 204,162 in deven months, and the funds have increased a £257,770 in ten months. It is estimated that, taking into account increases in weekly wages, therease in precession must be deventing, the carrings of members must have increased by about two million ten ds per increased.

To death of Aldermae William Braith-out to its occurred at his residence at Hors-torta Leeds. He was head of the firm of Messas II. Braithweste and Co., Ltd., sanitary or gineers and contractors, Leeds.

At the last meeting of the Western District Courn titles of East Lothian County Council. committee of East Lothian County Council, all in Haddington, it was reported that the stability water supply reservoir had been exampled to 38 ft. it, kept at that level being raised to 38 ft. it, kept at that level for a week. This was kept for the purpose mainly of ascertaining by for the translessom leakage in the emprovement of the reservoir was possibly silting to The results of the test had been generally constitution.

The leath of Mr. Thomas Parker at his residence sayer. House Ironburdze, Salop, remaining the of Midland of Leaves, to whose inventive gordus is due to a collection of the progress made in the deviation of the leavest activate frequency. Mr. Parker was also for a pioneers of cherric rallways in Evaluation. He was the designer of the Liverpool Overhead Rallway which was constructed as the experiment leaves.

MEETINGS FOR THE ENSUING WEEK

MEETINGS FOR THE ENSUING WEEK
WEDNESDAY (TO-DAY).—Royal Society of Arts.
"Carullons and Carillon Playing," by
J. J. Demyn, of Malines, and William
W. Starmer. 4.30 p.m.
St. Paul's Ecclesiological Society,
"Carols," by Rev. J. R. Woodward,
M.A. Church of St. Mary Aldermary,
Queen Victoria Street, E.C. 8 p.m.
Inursday (To-Morrowy).—Royal Society of Arts.
"The Indian Jute Industry," by
C. C. McLeod. 4.30 p.m.
Institution of Electrical Engineer,
"The Design of High-pressure Distribution Systems," by J. R. Beard,
p.m.

tribution Systems," by J. R. Beard, s. p.m.
Architectural Association of Ireland. "Rural Housing," by T. J. Byrne, A.R.I.B.A. 15, South Frederick Lane, Dublin. 8 p.m.
Friday. Institution of Mechanical Engineers. "Engineering Colleges and the War," by Dr. R. Mullineux Walmsley and C. E. Larard. Institution of Civil Engineers, Great George Street, Westminster. 6 p.m.

Mr. James Newman, for many years surveyor to the Sandown Urban District Council, died recently at Shanklin.

Sewage outfall works are about to be con-structed at Newthorpe, near Nottingham, Jor the Basford Rural District Council The engineers are Messrs. Elliott and Brown, of Parliament Street, Nottingham.

The Duchess of Marlborough opened on Fri-The Duchess of Mariborough opened on Fuday the new nursery training school of the Women's Industrial Council, which has been erected on the Hampstead Garden Suburb at a cost of between £7.000 and £8,000. The school will provide accommodation for forty nurses and twenty-eight children.

There has opened at the Outlook Tower, Edinburgh, on Saturday, by Mr. James Caden-head, A.R.S.A., the second exhibition and sale head, A.R.S.A., the second exhibition and sale of the craftsmanship of the younger artists in Edinburgh, the general demand for whose work has greatly diminished since the war began. There are fifty-five exhibitors, and on the walls of the two rooms, which their exhibits occupy, are many artistic productions of merit. The works include framed specimens of wood block printing, exhiuse litherents. ment. The works include framed specimens of wood block printing, etchings, lithographs, and water and oil paintings, and also handmade and hand-painted pottery, leather and linen articles, and gesso jewellery.

linen articles, and gesso jewellery.

At the meeting on Friday night of the Royal Birmingham Society of Artists a lecture was delivered by Sir Whitworth Wallis, who chose as his subject. The King's Pictures at Windsor Castle and Buckingham Palace. There was a large attendance, presided over by Mr. J. A. Cossins. Sir Whitworth described the painting, and gave the history of the Royal collection of pictures from its origin in the time of Henry VIII. down to the works acquired by Queen Victoria, the Prince Consort, and Edward VII. The lecture was illustrated by permission of his Majesty the King by a series of slides which had been specially prepared for the purpose. the purpose.

Some Roman relies recently unearthed in King William Street, E.C., between Abchurch Lane and Nicholas Lane, have been added to the City Guildhall Museum. They include a fragment of tesselated pavement, some pottery, and a small whetstone. In some excavations at Finsbury Circus even more interesting disconnections and a small whetstone when the form of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control coveries were made, including a deer-horn boe, an urn filled with burnt human remains, a Samian bowl, and some bronze bracelets. The Saman bowl, and some bronze bracelets. The unseum has also received, as a gift from the City of London Real Property Company, three pillisters, with capitals, from the facade of the old Saracen's Head Inn, Aldgate. These date from the middle of the seventeenth century. The pillisters are of pitch pine, with repairs in deal, and the capitals in oak. The foliated organization of the pillisters are nailed upon the brokground, and many of the original nails remain. ramain.

The Bent Colliery Company, Ltd., who own The Bent Colliery Company, Ltd., who own the Bothwellhaugh Colliery adjoining the Hamilton Palace Estate, have been granted authority to work one of the four main coal seams. This is the ell coal, which here has a depth of 6 ft. 9 ins. Lut liberty to work it is confined exclusively to the area under the Palace. No authority to remove coal has been granted so far as the Mausoleum is concerned. Before operations are begun the driving of the connecting mines from the Bothwellhaugh Colliery will occupy about eighteen months. Any possibility of the Palace being affected by subsidence cannot occur within three or four years from the time operations were comyears from the time operations were commenced. The Palace has long ceased to be a residence of the Hamilton family.

### LATEST PRICES.

N.B.-All prices must be regarded as merely approximate for the present, as our usual sources of information are in many cases failing us.

### TIMBER.

Owing to stoppage of supplies all prices have advanced considerably. IDON

IRON.	Per ton. Per ton.
Rolled Steel Joists, English	
Sections Wrought-Iron Girder Plates Steel Girder Plates Steel Sheets (Single or Double) Stee Strip Basic Bars Bar Iron, good Staffs Do., Lowmoor, Flat, Round, or	11 10 0 — 10 15 0 — 11 15 0 —
Do., Lowmoor, Flat, Round, or	
Square  Do., Staffordshire Crown  Boiler Plates, 1ron—	24 0 0 ., <u>-</u> 14 0 0 ., 14 10 0
South Staffs	8 0 0 ,, 8 15 0 9 0 0 ,, 9 10 0
Best Snedshill	g, £13 5s. to £13 15s.
Ditto galvanised, £2 Galvanised Corrugated Sheet Iron	1—
Sit. to 8ft. long, inclusive gauge£2 Best ditto 2	25 0 0 25 10 0 Per ton. Per ton.
Cast-Iron Columns Cast-Iron Stanchions Rolled-Iron Feneing Wire Rolled-Steel Feneing Wire Galvanised Cast-Iron Sash Weights	£12 0 0to £12 10 0   12 0 0 , 12 10 0   8 15 0 , 9 5 0   7 15 0 , 8 0 0
Orrugated Iron, 24 gauge	16 0 0 ,, 15 5 0
14 B.W.G	vanised— 12 B.W.G.
3 in, diameter 4 in, to 6 in 7 in, to 24 in, (all sizes) [Coated with composition, 5s. Turned and bored joints, 8s. per t	OLL CYMA.
Cold Blast, Lillieshall	Per ton. 137s. 6d. to 142s. 6d.
Cold Blast, Lillieshall  Hot Blast, ditto  Wrought-Iroo Tubes and Fittings Standard Lists f.o.b. (plus 2)	B—Discount off
Gas-Tubes Watar-Tubes Steam-Tubes Galvanised Gas-Tubes. Galvanised Water-Tubes	
Galvanised Water-Tubes	47½ ;;
OTHER META	
Lead Water Pipe, Town	Per ton. Per ton.
# 1D 1D . (D	
Lead Pipe, tinned inside, Town	*36 0 0 ,, —
Lead Pipe, tinned inside, Town  Lead Pipe, tinned inside, Town  Lead Pipe, tinned inside and outside	*37 0 0 ., -
Country	*70 0 0
Lead Soil-pipe (up to 42ia.) Town	*37 0 0 —
Lead, Common Brands. Lead, 4lb. sheet, English. Lead Shot, in 28lb. hags. Copper sheets, sheathing & rods.	n extra.] 25 10 0 ,, 26 0 0 33 0 0 —
	105 0 0 11 00 12 0
Tin, English Ingots Do., Bars Pig Lead, in lcwt. Pigs, Town Sheet Lead, Town	185 0 0 — 185 0 0 — 23 12 6 24 12 6 *33 10 0 —
Genuine White Lead	*31 10 0 —
Patinad Rad Land	42 0 0 ., — 120 0 0 ., — 24 0 0 ., —
Sheet Zinc. Old Lead, against account Tin	9 5 0
DIMPUI	0 16 0 ., -
* For 5 ewt. lots and	upwards.

## I BUY **SCRAP METALS**

### ARTHUR P. COLLINS, Snow Hill, BIRMINGHAM.

Phone: Central 1020. Telegrams Metalise, Farmingham. Bankers: The National Provincial Bank of England, Ltd., Bennett's Hill, Birmingham.

	S1.	ATES	•				
	in.	10.	£	s.	đ.	per	1,000 of
Blue Portmadoc							
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Wirst quality	20 ,,	10	11	0	U	* 1	11
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	16	8	- 5	10	0		

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#### BRICKS.

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Ditto Ordinary Seco						1	11	,
Ditto Plastic Engine						1	17	-
Sewer Arch Brick, no								
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3%" Chimney Bricks fit f						2	6	-
3½" ditto ditto through a	md	l ti	rc	ugh		2	0	-
34" Beaded, Ovolo and	В	eve	el	Jambs;	Octa-			
gons; 21" and 1" rad	ius	3 E	312	lnoses;	Stock			
patterns						3	7	
Accompaton Air Bricks	19.5	r 2	cc	mrse de	n each	0	0	- (

# 1 8 2 1 2 6 2 1 2 11 3 6 4 6 ;; ... 0 ;; ... 0 ;; ... 0 ;; ... 0 Net free on rail, or free on boat at works

#### GLAZED BRICKS. HARD GLAZES (PER 1,000).

HARD GLAZES (PER I 200).

White, Ivory, and
Salt Glazed. Buff, Cream, Other
Best. Seconds. & Bronze. Colours.

Stretchers£12 7 6 £11 7 6 £13 17 6 £17 17 6 £12 17 6

Haaders11 17 6 10 17 6 13 7 6 17 7 6 12 7 6

Quoins, Bullnose, and 4½in. Flats15 17 6 14 17 6 17 17 6 21 7 6 16 7 6

Double Stretchers17 17 6 16 17 6 20 17 6 24 7 6 18 7 6

Double Headers-

Double Stretchers—
17 17 6 16 17 6 20 17 6 21 7 6 18 7 6
Double Headers—
14 17 6 13 17 6 17 17 6 21 7 6 15 7 6
One side and two ends, square—
18 17 6 17 17 6 21 17 6 26 7 6 19 7 6
Two sides and one end, square—
19 17 6 18 17 6 22 17 6 26 7 6 19 7 6
Splays and Squints—
17 7 6 16 7 6 21 17 6 24 17 6 20 7 6
Splays and Squints—
17 7 6 16 7 6 21 17 6 24 17 6 17 17 6
Plinth and Hollow Bricks, Stretchers and Headers—
5d. each 4d. each 6d. each 6d. each 5d. each
Double Bullmose, Round Ends, Bullmose Stops—
5 ', each 4d. each 6d. each 6d. each 5d. each
Rounded Internal Angles—
4d. each 3d. each 5d. each 4d. each
MOULDED BRICKS.

Ronnded Internal Angles—
4d. each 3d. each 5d. each 4d. each
MOULDED BRICKS.

Stretchers and Headers—
8d each 8d. each 8d. each 8d. each
Internal and External Angles—
1/2 each 1/2 each 1/2 each
sill Bullnose, Stretchers, and Headers—
5d. each 4d. each 6d each 6d. each
Majohea or Soft Glazed Stretchers and Per 1,000
Headers — Quoins and Bullnose — 27 17 6
Compass bricks, circular and arch bricks of single radius £6 per 1,000 over above list cort their respective kinds and colours — by 2½ in Stretchers cut for Closers and Nicked Double Headers, £1 per 1,000 extra.

These prices are carriage paid in full truck loads to London Stations — s. d.
Thames Sand — 7 6 per yard, delivered. Pit Sand — 7 0 , "
Phames Ballast — 6 0 , "
S. d. s. d. Per ton, Best Portland Cement — 36 0 to 41 0 delivered. Exclusive of charge for sacks.

Exclusive of charge for sacks.

S. d. S. d. Per yard, S. d. S. d. Per yard, Stane Living 113 6 to 14 0 delivered.

way station. STONE.\* £0 2 4 0 2 6 0 2 6 0 2 2 0 1 11 0 2 04 0 1 7 Red Mansfield, in blocks ..... per foot cube £0 

Closeburn Red Freestone, ditto
Ancaster, ditto
Greenshill, ditto
Beer, ditto
Chilmark, ditto (in truck at
Nine Elms)
Hard York, ditto
Do. do. 6 in, sawn both sides,
landings, random sizes.... per foot sup.
Do. d. 3 in, slab sawn two
sides, random sizes...
\*All F.O.R. London. 0 2 8

Bath Stone-Delivered in rail-	£	s.	d.
way trucks at Westbourne			
Park, Paddington (G.W.R.)			
or South Lambeth (G.W.R.) per foot cube	0	1	73
Delivered in railway trucks			
at Nine Elms (b. & S.W.R.)	0	1	
Delivered on road waggons			
at Nina Elms Depot	0	1	91
Portland Stone-Brown Whit-			
bed in random blocks of 20 ft.			
average, delivered in railway			
trucks at Westbourne Park			
(G.W.R.i, South Lambeth			
(G.W.R.), or Nine Elma			
(L. & S.W.R.)	0	2	5
Delivered on road waggons at			
Punhco Wharf or Nine Elius			
Depot,	0	2	6
White Basebed-2d, per foot cube extra.			
TILES.			

71	s.	d,	Divrd.
Plain red roofing tiles	42	0 per 1,00	0 ry. s:
Hip and Valley tiles	3	7 per doz	. ,,
Broseley tilas	50	0 per 1,000	) ,,
Ornamental tiles	52	6 ,,	11
Hip and Valley tiles	4	O per doz	,
Ruabon red, brown, or brindlad		_	
ditto (Edwards)	57	6 per 1,000	),,
Ornamental ditto	60	0 ,,	11
Hip tiles	4	0 per doz	,
Valley tiles	3	0 ,,	11
Selected "Perfecta" roofing			
tiles: Plain tiles (Peake's)		0 per 1,000	),,
Ornamental ditto	48	6	**
Hip tiles	3	10 per doz	• 11
Valley tiles	3	41/2	11
"Rosemary" brand plain tiles .		0 per 1,000	) ,,
Ornamental tiles	50	0 ,,,	11
Hip tiles	3	0 per doz	. 11
Valley tiles	3	8 ,,	11
Staffordshire (Hanley) Reds or	40	6 man 1 00	1
brindled tiles	42 45	6 per 1,000	
	43	0 per doz	11
Hip tiles	3	c .	
"Hartshill" brand plain tiles,		0 0	11
sand-faced	45	0 per 1,000	)
Pressed	42	C .	
Ornamental ditto	47	6 ,,	37
Hip tiles		0 per doz	, ,,
Valley tiles	- 3	6	' '1
		- 11	"
OILS			

Rapeseed, Engli-h pale, per tun :		0 to		0
Ditto, brown	26 15	0 ,,	27 5	0
Cottonseed, refined ,,	29 0	0,,	30 O	0
Olive, Spanish	39 10	0 ,,	40 0	0
Seal, pale	21 0	0 ,,	21 10	0
Concernt Co-Lin	46 <b>Q</b>	0 ''	46 10	Õ
Litto Corles	42 10	ō "	43 0	ŏ
Ditto, Ceylon		Δ,,,		ŏ
Ditto, Mauritius	42 10	0,,	43 0	
Palm, Lagos,	32 5	0 ,,	33 5	0
Ditto, Nut Kernel ,,	35 0	0 ,,	35 10	0
Oleine	17 5	О.,	19 5	0
Sperm	30 0	0 ,,	31 0	0
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Linseed Oil per gal.	0 3	4 11	_	
Baltic Oil,	0 3	8 ,,	_	
Turpentine	0 3	11 ,,	_	
Putty (Genuine Linseed				
Oil) per cwt.	0 9	6	_	
Pure Linsced Oil		- 11		
Of Charles H. Davis J.	0 9	0	_	
"Stority" Brand	0 3	٠,,		
GLASS (IN CR	ATRS	١		
GLASS UN UN	A LES			

English Sheet					
Fourths					
Thirds		53d	63d	71d	84d.
Fluted Sheet		6d	7d		_
Hartley's Eng	glish R	olled 1	in.	A in.	1 in
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Reconssine			4;	d	5 <del>1</del> d.
Rolled Sheet .			40	1	-

VARNISHES, Etc.	Per	ge	allo	n.
Fine Pale Oak Varnish	£	0	8	6
Pale Copal Oak		0	10	0
Omnilae Copal Oak		0	10	0
Superfine Pa'a Elastic Oak		0	12	0
Fine Extra Hard Church Oak		0	10	0
Superfine Hard-drying Oak, for seats	of			
churches			14	6
Fine Elastic Carriage			12	0
Superfine Pale Elastic Carriage			16	6
Fine Pale Maple			10	0
Finest Pale Durable Copal			18	6
Extra Fine French Oil			1	9
Eggshell Flatting Varnish			18	0
White Copal Enamel		1	. 4	0
Extra Pale Paper			12	0
Best Japan Gold Size			10	0
Best Black Japan			16	9
Oak and Mahogany Stain			9	9
Brunswick Black		0	. 8	0
Berlin Black			16	0
Knotting		-	10	0
French and Brush Polish		0	10	0

Estate valued at £5,993 was left by the late Mr. George Lister Sutcliffe, F.R.I.B.A., formerly a member of the firm of Messrs. Sutcliffe and Sutcliffe, of Hebden Bridge and Tod-

A new Congregational church in the old Leigh Read, Westeliffon-Sea, built at a cost of £13,000, has been formully dedicated. The architects were Meesrs Burles and Harris, of Southend, and Meesrs. E. Strange and Sons, Limited, of Lendon, were the contractors.

#### FO CORRESPONDENTS.

ce as not hold ourselves responsible for the opinious of car correspondents. An communication should be drawf up as briefly as possible, as there are many calmants upon the space afforted to correspondents.

many commants upon the space allotted to correspondents. It is particularly requested that all drawings and a communicate in respecting illustrations or literary matter, books for review, etc., should be addressed to the lift of the Building Naws. Ellingham House, I. Arundel street, Strand, W.C., and not to members of the staff by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributors' risks, and the Editor will not undertake to pay for, or be hable for, unsought contributions.

\*\*Drawings of selected competition designs, important public and private buildings, details of old and new wirk, and good sketches are always well come, and for such no charge is made for insertion of in the commonplace subjects, small churches, chapils, houses, of the we have usually far more sent than we can insert, but are glad to do so when space prints, on initially advantageous terms, which may be ascertained on application.

When favouring us with drawings or photographs, much tests are asked kindly to state how long the building has been created. It does neither them nor us much good to illustrate bindings which have been come time excented, except under special circumstates.

Telephone: Gerrard 1291.

Telegrams: "Limescryer, Estrand, London."

NOTICE.

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Most of the back issues are to be had singly, block issue over one month old will be charged to each, postice tell. Subscribers requiring back unders should order at once, as they soon run out

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#### TERMS OF SUBSCRIPTION.

TERMS OF SUBSCRIPTION.

One Pound per annum (post free) to any part of the United Kingdom; for the United States. 21 6s 0d (or odols 30e; 20d). To Finance or Belgium, 21 6s, od (or 135, 30e.). To India, £1 6s, od. To any of the Australian Colonies or New Zealand, to the Cape, the West Indies, or Natal, £1 6s. od.

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for for lines. The charge for Aictions, Land Sales, and Mis-cellaneous and Trade Advert sements (except Situa-tion Advertising his self-per line of light Words who first the continue as two, the minimum charge being 48 for for the words. Special terms for keries of except the centure on he ascertained on appli-cation to the Publisher.

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SITUATI NE WANTED.

Advertisements for eveneding Thirty Words, inclusive of care and address, are inserted under the heading "solutions Warted," free of charge. Rates for Trade Advertisements on front page, and appendight of the Publisher.

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Replies to advertise that can be received at the Office, Effingham House, I. Arindel Street, Strand, W.C., free of charge. If to be forwarded under cover to advertise, an extra charge of Sixpene is taide. (see Notice at head of "situations.")

Advertisements for the current week must reach the office not later than 3 p.m. on Tuesday. Front-

page advertisements and alterations or stop orders for serial advertisements must reach the office by first post on Monday to secure attention

Telegraph C. J. and Co. W. A. W. L. S. C. Co., Ltd. C. V. Co., Ltd. S. T. S. W. F. S. and Co., Ltd. J. H. and Co. F. McN. and Co., Ltd. J. W. G. and Son. J. T. and Son. V., Ltd. L. and Co. H. M. W. H. S. and Son.

R No.

D. I. Please send.

U.S. A. Thanks, buildly in our line

Dervits. With pleasure, Good details are always

NORTHINGS, ). The system is not one we should of  $\phi(t,-2,-V)<-3$  . Cannot advise,

it pictures the standard arrivation of the partitions, and the standard stability of the small house in question would suffice if extended as your sketch actually substantially built and in a thoroughly sound and stability of the proposition would suffice if extended as your sketch shows, always provided that the old walls are actually substantially built and in a thoroughly sound and stable condition. This is, of coinse, a grime question, and only the opinion of a qualified expert, who has personally examined the work, will be reliable enough to act upon. It is impossible for us to say or any reader who has not seen the premises. Wey not construct the additions entirely of timber, including studding for the partitions, in heu of the 12-m, walls proposed. The external parts could be covered with tiles. Sloping cephing poists 5 m, by 11 m, as shown, do not furnish a very efficient the top cent the new 9 m, story from spicading. If in timber the cephing oasts 5 m, by 2 m, at the livel of heads of the dormers would held the training of the roof together better and the weight of the brickwork would be avoided. Local by-laws commonly do not allow OPTIMISE.

THE NEW POSTAL RATES. Do not torget that though we are penalised by the new postal rates because we still keep to our old size, and therefore a copy of the BURIANO NEWS exceeds the sexonine mint, we are making no extra charge to subscribers who receive their copies direct from the office, the sub-cription rate remaining as before \$1 per annum, 10s. hall-yearly, and 5s, quarterly. Now is the func to subscribe.

#### TO ARMS!

THE BATTALION CENTRAL LONDON VOLUN-TEER REGIMENT

ORDERS FOR THE WEEK. or the work, Platoon Commander L. P. Office, for the Hirdson

Next for Duty, Platoon Communder R. W. Carlett, GENERAL PARADES

Saturd to Asthematic parade at Chester House, 45 p.m. Unitern, haversacks and water-bottles. The next General Parade will be on Saturday, 181

SCHOOL OF ARMS.
The slays, 6 to 7 p.m. Members should give their names to Surgeant-Instructor Stables for new course naw commencing.
LFUTPES

LECTUPES
This evening (Wednesday), 45th inst., Colonel Sir
E. Raban, at the Institution of Civil Engineers,
Great Goorge Street, S.W., at 545 pcm.
Tamsday, 16th inst., Chester House, 545 pcm.,
Vigitint's between to officers and N.C.O.s on
"Bridging."

DRILLS AND PARADIS.

A detailed order of all drills and parades up to January 31, 1916, is posted on the Notice Board at Headquarters. Members must make themselves familiar with same.

Wednesday, Eddi, No. 5, Platron, Drill, at W.Q.,

Wednesday, 22nd, No. 4 Platoon Dull at 11.9, 645 to 8.15 join.

ENTRENCHING PARADE.

Sunday n.M., 19th inst., Victoria Station (L.B., and 8.C. Railway), indicator board, at 8.55 sharp, for special 4 am at 9.10. Uniform, haversales and wite shorths. Mediay rations to be earried. Return to town about 5.40. Bailway vonehirs will be

By Order, L. R. GUTHRIL, Admitant.

L. R. GUTHRIL, Adputant.

Note: The Drill Headquarter, will be closed from
Thursday, 270d, to Thursday, 30th inst, inclusive,
Core-pondence, All correspondence should be
addressed to the Orderly Room.

Drill Headquarters and Orderly Room, Chester
Hower, Leebeston Place, 8 W.

Buttalien Headquarters, 18, Tuftan Street, Western tee, 8 W.

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16 sember 15, 1915. ->-

Consequent on the additional space provided at the Barrish Museum by the completion of Sir J. J. Barnet's galleries in the northern extension, Sir Hercules Read and his staff have recarranged the British and Mediaval Depart-ment. A firsh feature is the display of Early British and Anglo Saxon antiquities in the new Iron Age Gallery, where a length of about 56 ft is fulled with illustrations of the history of Britain from the end of the Bronze Age is the Norman Conquest, as distinct from the four centuries of Roman occupation to be represented in another room.

## Olivers' Seasoned

Hardwoods.

APPLY TO-

WM. OLIVER & SONS, Ltd., 120, Bunbill Raw, London, E.C.

#### TENDERS.

\*.\* Correspondents would in all cases oblige by giving the addresses of the partner tendering-at any rate, of the accepted tender: it adds to the value of the information.

Accuments.—For widening of bridge over Scat-ific Street, for the Lancashire and Yorkshire Rail-

Late and Gordon, 2, Park Lane, Higher

Boughton, Manchester (accepted),
Ashovek, For sinking a 14-m, borehole at Ashover, for the Affreton Urban Instrict Conneil;—
Rollmon, Basford (accepted) ... £398 0 n

BARLEY. For carrying out a sewer extension, for the Riccall Rural District Council:— Parker and Sharp, of York (accepted).

BATTERSA.—For the supply of \( \frac{1}{2} + \text{in} \) screw-down stopeocke and ferrules for wiped joints, at the Battersea Station of the Metropolitan Water Board:—Woodhouse and Co., Ltd. (ac-

Conditions and Co., Ltd. (ac-

epted

nouse at Admiral's Park waterworks, for the town conneil. Mr. P. T. Harrison, A.M.I.C.E., borough Chemistorp.—For erection of a temporary engine-

 $93 \cdot 10 = 0$ Accepted.

Newton, L. Ackroyd Street, Mor-Plumber work - Hargreaves, F. Elland Road, Chowell 369 3 4

128 6 -Cherwell Plasterer work 70 0 0

Plasteret work:—
Fredale, J., and Son, Bradford
Road, Bristall
Slater work:—
Rogerson, G., Bank Top, Morley
Painter work:—
Haberghain, C., Commercial
Street, Morley
Fredale, Fredale,
Leeds ...
Fredale,
For the account works 66 13 4 24 3 4

42 7 1

(in one con-tall stable and

Hartley, H., Fountain Street, Morley succepted: ,. .. £299 5 0

Choldox - For election of offices and stores at Crofton Hall Sulings, near Crofton, for the Lan-ershire and York-line Raily ay Co.;— Leake, R., and Sons, Normanton, Yorks. (Accepted.)

FARBHAM. For the construction of a new road along the top of the cliff at Hill Head, Crofton, for the rural district council. Mr. J. F. Whitear, 18, southampton Road, Farcham, surveyor:—

Uroad, J., 98, High Street, Gos

Port Cl. 280 0 0
Franks Harris Bross, Ltd., Station
Approach, Guildford 1,200 0 0
Grounds and Newton Richmond
Chambers, The Square, Bournes
month
Protectte, T. W., 5, Queen Anne's
Gardens, Bush Hill Park, Enheld (accepted) 685 0 0

For KESTONE — For supplying a boarhoad from 300 to 406 tons) of Cherbourg quartzite, delivered into earts, for the town council: Road Maintenance and Stone Supply, Ltd. (ac-cepted), 17s. tod. per ton.

(Recommended for acceptance.) GRIMSBY. For the supply of service and fuse box for the public lighting committee. Accepted t dere

MIDDIETON, LANCS For extensions at the electricity station boiler house, for the town conneil:

Taylor, R. Grecepted).

# THE BUILDING NEWS

## AND ENGINEERING JOURNAL.

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#### Strand, W.C.

#### OUR ILLESTEATIONS

Restoration of a Fence of a century has Chara-ber in France, by Mr. Leshe B. Cook

Proposed Memorial to a Great Wee Royal lead-my Exhibition, 1915. W Warman, Architect

Bridlingto ( Priory Church | Detail of size hay of the Nave and South Arsle | Interior and Ex-terior Elevatents with Plans of Parts. Wea-sured and drawn by Mr. Gordon Hemm.

#### HARMONIOUS ACCORD IN ARCHI-TECTURAL FORM.

Harmonions Accord in Architectural Form ...

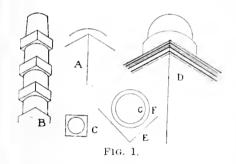
Competition and Contracts ...

Rural Dwellings in Ireland .. The London County Council ..

The R.I.B.A. Examinations ... Norman Castles in Scotland Currente Calamo

Professional and Trade Societies ... 

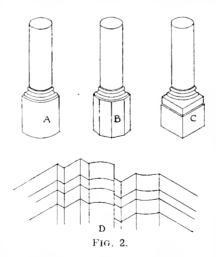
Since the forms seen in architecture are all reducible to the rectangular and the curvilinear, any principles that govern the harmonious co-ordination of such form must be founded, basically, on a general law relative to the juxtaposition of curves and angles. In a recent article on synthetic architecture we endeavoured to show that the laws regulating contrast



and harmony in two-dimension design bear relation, necessarily, to the rules regulating composition in three dimensions. In such, the circle, the circular, and the curvilinear are set off, and their esthetic attributes enhanced by opposition to the sharp, spiny, and angular. The fundamental principle respecting the smooth and sharp in architecture may be reduced to a simple diagram, A, Fig. 1, wherein an arrow-like object-the rectangular, as seen in perspective-is brought into opposition with the rotund. We may note this effect everywhere in architectural detail and mass. It is displayed in crude boldness in the rusticated column, as in our rough isometrical sketch, B, Fig. 1. In any consideration of the principles governing harmony in architectural form we consider this effect paramount, because, wherever we may look, curve and angle, in their solid presentation, are offered to the eye.

The effect represented in B, Fig. 1, may, therefore, be considered to be the most crude and potent means of gaining effect by the opposition of curvilinear to rectangular mass. We cannot, justly, term it vulgar. It is crude and elementary; but vulgarity does not attend the vigorous handling of simple form, but the showy ostentation of high involution, as in a parade of unreasoning detail in great complication. We should undoubtedly revolt at the idea of rusticating the columns of a refined Classic temple; but objections to rustication, as such, are futile, and the more so because, beyond any special æsthetic effect that may per-

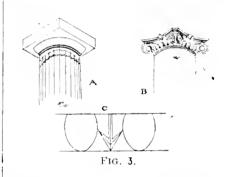
tain, is highly expressive of constructionalism—the basic attribute in architectural effect, that we miss in wholesale homogeneous casting, as in ferro-concrete. We may take it, then, that the value of the sonare blocks in rusticated columns is to give emphasis by opposition, or a species of contrast, to the rotund drums of the columns. We should not get the same effect by employing circular rusticationthat is, by the alternate insertion of drums of diameter beyond that of the column proper. In the same way, square pedestals to column bases must enhance the rotundity of the drums and of the circular-planned base-moulds. In Fig. 2 we give three bases, with round, multangular, and square pedestals, roughly sketched in isometrical perspective. The effect upon the column of base A—its smoothness and rotundity—is neutral; base B, by its angularity, sets off the rotund, but since this effect is an approach towards the circular, the opposition of character-the mutual enhancement of form-cannot be so powerful as in base C, where the cubical mass gives the Inllest foil to the column and circular base-mould. These several points we do not note in elevational drawings; nothing of the angular effect is, in such representation, presented; we do not see the



rotund swing of the mouldings or the elliptical drum-joints. Yet, strangely enough, some writers set out to criticise and expound the ultimate effect of architecture by direct and sole reference to elevational representation. In Fig. 1, D, we have a further representation of contrasting rectangular (perspective) mass, and the rotund of drum and dome. Elevation gives nothing of this, but a plan

and dome, G and F, the contrast to be anticipated where viewed in perspective, opposed to the rectangular mass as E.

The considerations we have offered should afford some kind of base of reasoning respecting the pure aesthetics of such a building mass as the aggregated rectangular and curvilinear forms of Fig. 2. D. Assuming fitness for constructional duty, and discounting the effect of colour and texture, and allowing, also, that the joint-lines of the masonry sketched are



potent in architectural expression, we must conclude that the pure aesthetic resultant of design refers in direct manner to the bald composition as determined by the plan or contour of the masses, and that the correlation of square to round are basic in ultimate eye-effect. Admitting so much, the remaining effects are produced by that operation in design which we call "proportioning." The rela-tive ratio of sets-off and the size of the rectangular and curvilinear masses must largely determine the ultimate effects, and we cannot, in analysing these effects, draw conclusions so simply as in the plain, square and round of "rustication." In some way the curved and incurved parts relate and react. The curved— belied --and the incurved must be mutually enhancing-by opposition-and both are foil to arris of rectangle. Our bald representation, shorn of any colour or texture, must be an object of interest only so far as the proportion of areas is concerned.

As presented to the eye, in the sketch, these masses, whether or not specially elegant, appear suitable as means, say, of upholding arches, and in the effect of the sketch we must allow for the unsightly absence of caps or impost of any kind. But how far fitness, or association, or a combination of such, affects general aesthetic considerations may be easily comprehended by turning round the sketch and viewing it from either side and thinking of horizontal members of architecture. We cannot ignore fitness, but it does not assist us greatly in rengenerally indicates, as by circles of drum dering the bare demands of constructionFig. this series of the necessary of pure as the ties of

to the Fig. 3. In that the Fig. 19 day of the w. Lavecettain : givin eye m-1 ... 11 11 11 15 15 11 q and I run of the \_ 3. B. the volute he sought lines of -00 foutlines to eq when we analyse abreas which we sofevidore axi m in information in the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s in the lean-Thus aghi 1 .. ( )

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s ries of alternate light and shade, and when light concentrates in points, as at the angles and arriss, a vivacious, sparkling, "staccato" impression is left up n us. When light glows and gradu at s. as on illuminated curved surfaces. such seem to represent a divergency of effect that is pleasing mainly by opposurem of character. Light spread out in includations and light scintillating in points seems to be the cause of graceful appearance, whether in mass or detail, it in place of two dimension design and solid perspective we base our consideratrons, in harmony of form, upon charos are. In our recent article on synthetic architecture we gave a deagram of a curvilinear figure within a triangle. We gave this as packing within a small compass the whole principle of opposing the curvilinear to rectangularity, and we give herewith a further diagram I the egg and-tongue enrichment, which, again, reduces the essence of the principle to the opposition of smooth rotundity to arms-head acuteness. When the eve has long regarded red it the more forcibly appreciates green; when we have long looked at the round, we turn with relief to the acute in form. This principle rules in every one of the examples that we have given. We say that an object is square to a great extent because we thereby definitely declare it not to be its opposite, i.e., round. We cannot have much more pronounced opposition form-character than is discoverable in the egg and the arrow-heal, and we may here see how mustaken is the idea of the designer who seeks to pervert the best types of ancient example, with its sharp arrows tigues and raz r-like edged shrouding to the elegant and regularmodelled rotund ty of the egg, by substi-tuting between the available ets dull and blunted forms. A powerful and harmonious contrast is prickly helly leaf against natural \*zz We obtain here not merely contrast of form, but also of colour and texture. Contrasts in the design of gramental enrichments need to be hold and effective. In the deep lark capital the vizour of the florations is a ally opposed in carve and reflex and and trip set to carve and truck and e-e avening caustic, but the small, under-ent indentations enhance the general varied lumin sity of pure white marble e-sparkling sun and shadow dapple.

The strong of Eviter has submitted to an interest spead works. The scheme new to pased with Modding is estimated to a \$1.571. The corner will submit this come to the Lord Government Board, leaving to Beard to decide whether it should be prome hard rower deferred until the constant of the war.

Som of the war.

Inc. R. p. English. Arbericalinna. Society to ast assent a reaflet on the subject of the Transcon timber, the important process on tained in Section 9 of the Finance A. 1722 not being a widely known as the cost of the transconding to be. Copies of the filter may be obtained from the Secretary for a Retal English Arbertanlural Society.

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COMPETITION AND CONTRACTS.

The last "Monthly Letter" of the Master Builders' Association of Boston, Mass., U.S.A., contains the following appeal to American builders by the directors, much of which will be read this side with interest.

#### WHAL IS COMPETITION?

The use of other methods for handling or awarding building contracts, in preference to the badly misused competitive plan, seems to have gained most favour in the vicinity of New York. This is at first surprising to those who look upon New York as the natural home of the sharp-fanged wolf, the rare sabretoothed tiger, and of the original Wall Street for smong such fauna, they might say, does modern cut throat competition in the business of building flourish like the proverbial green bay tree. And yet, even should these prejudicial opinions stand the white light, it is natural enough that a district suffering most should seek relief the most diligently.

At West Point, where our National Govern-

At West Point, where our National Government has been spending millions for building construction, the cut throat competitive plan was used as long as possible—until altogether too many buildings were being completed by the bondsmen of the contractors. Then followed the plan of letting work on a cost and commission basis, with a maximum guaranteed, and with a further commission to the contractor on any savings effected and bringing the final price under the named maximum. The percentages were so arranged that the contractor made more money by saving than by spending—a pi-caution found needful when dealing with—shall we say anybody in "inde teiness" !—yes, lonsiness ethics are peculiar. This power plan, or some modification of it,

This newer plan, or some modification of it, is growing in favour even around Boston—for anyware by taking thought may see that to compare a half-dozen contractors and their prices is like comparing a half-dozen tailors. If the six are chosen very much at random, the suits they make may vary in price between 2 000 dollars and 60.00 dollars while a more are full selection will get a variation in price between 45.90 dollars and 60.00 dollars. But what is the use of doing it? And why does the 60.00 dollar-man stay in business? Of course, it is because he is not put into price competition with the others all of the time—and yet even, the lowest-priced man has his plane if he does horsest work worth the price he charge. Owners realise this with a suit of dathes—for they have had the experience of haying such things every season. But building a different the but the only difference in treatment is on account of the typical account is held a knowledge and Leyerience or provided the price of the season of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the price of the pr

ewner's lack of knowledge and experience. Owners, as a rule, are misled by three things. First of all, the plans and specifications of their architect are set up by them as a standard for what they want done in the way they consider proper, and they assume these documents, coupled with the architect's superintendence, to be sufficiently compelling to obtain these desired results from any contractor at any price. As stated, the last few words signify an extreme case; but to an extent this is the viewpoint of the typical owner. Architects do not believe it, for they know that words are not capable of expressing what is wanted no quality of result, and no standards are available for comparison. An architect's interpretation of desired and proper quality cannot be enforced on a contractor incapable of giving it, he he ever so willing to do so; and can still less be imposed upon a contractor not wanting to give it. If, perchance, the contractor then wins—for a question of quality in building operations cannot be appreciated by a jury. (A review of scores of cases in several States shows the truth of this statement. A jury recently declared that a plain maple floor was good enough, and satisfied a requirement calling for parquetry flore in a set of the contractor and calling for parquetry flores.

The second point in the misleading of the owner is in the bids themselves. In spite of average care in the selection of bidders in a connection, the bids received will vary widely

the low being so far below the lich that the typical owner feels sure that estimating is in exact, and that there is little about the price which will much affect the result has will get. Then, as a thirl feature of his mideading-

1 gets no later opportunity to learn differ

ently—unless his work is very poorly done-for when he begins to spend, in driblets per haps, but yet to spend, for repairs and thinghe did not "expect to spend money on so soon, Heaven knows," but then "everybody's -even then Mr. Owner does not doing it have an opportunity to learn that perhaps his neighbour's outlay for upkeep is one quarter of his own, nor possess sufficient impartiality to see that his neighbour's property continues to look fresh and in good condition, while his own does not.

It would be feolish to allege that an owner. in accepting a low figure, expects, usually, to get what he does not pay for. He believes that variations in estimates are due to inaccuracies or to larger profits taken by higher-priced men. Neither is true. Estimating is an exact science. A careful contractor, working on good plans and specifications by an architect with whose work he is familiar, gets his cost within two per cent, on new work, and will average but little higher on altera tion work. A low-priced man can easily make as much money on a contract as a high-priced one—unless the low price is due to inability.

Many an owner, on small work, has been impressed with the argument put out by small contractors that they can work cheaper because they have not so much expense to carry. And yet the man assenting to this argument may himself be in an organisation which knows by experience that up to a certain limit (?) the larger a business is the less it costs to do a thousand dollars' worth. The lowpriced man is low, usually, because of a difference in quality of result. An owner who relies upon his architect to produce a proper result under all conditions is very often expecting the proverbial silk purse from a sow's ear. Good architects do not claim to do it—and the most successful among them aim for good contractors and shun those not doing the grade of work they want to get. A leading Boston architect voiced this opinion in saying. "Architect and contractor must both be good or the result is poor.

What is competition?

Competition is the life of trade. Competition is the death of trade. Your choice of phrases will vary as you are a buyer or a seller; as you have downed a competitor or are being stifled; or, you

may say, competition is the other fellow after my job, the other man after my customers, the fierce struggle for life and means.

Competition! Unions will have none of it. neither will socialists nor capitalists

What is competition?

Is it the success of the strong, well-managed, and efficient over the shrewd, the tricky, and the deceitful? Obviously not when price is a large factor in the resultalthough the reverse may be true. One writer calls it a legalised form of struggle for annihilation in modern life. Any proposition that contractors, or any other producers, may be encouraged to ruin each other in order that the community may get something at cost or less is unworthy.

Trade has always had one meaning synonymons with trickery, and any business man need only recall personal experience and observation to know that business with its competition has been at best only a war of wits in a games the rules of which are busi-

ness ethics. Business ethics—what are they? Certainly a very peculiar brand.

And what of competition at its worst?

And who suffers from the results? In the business of building he is called the owner. Does he know this? No, not at the time: usually not at any time.

What is competition?

On a bank alteration iob an alleged ambiguity in specifications led to one contractor's success. He found, after he had expended about one hundred dollars on the job, that the architect was expecting him to do things he had not estimated to do. Inquiries easily established the fact that four other bidders had all included the items in question—the successful one had not. Owner, architect. and builder each paid one-third of the cost of the error, about three hundred dullars each. But what of the unsuccessful bidders?

On a house some distance from Boston, work he about ten years ago, three bidders figuring reasoning?

about alike were above the price set by the owner for his expenditure. The architects a leading firm, told him he could cut his requirements, or could get another series of hids from men doing a lower grade of work. He chose the latter alternative, and his house was built within his price.

On a job of interior finish, some distance from Boston, three or four years ago, three Boston bidders doing a similar high grade of work were within one thousand dollars of 137,000 dollars. The work was let for 92,000 dollars in another city, and, even after adding on an acknowledged error of dollars, the successful hidder would still have been 16 per cent, under the Boston men. None of the Boston men would have made over 15,000 dollars on the job.

On a small job in a small town, five figures were 9,500 dollars, 9,300 dollars, 9,000 dollars, 8,900 dollars, and 6,600 dollars. What is obviously within a few hundred dollars of the right price? The owner was delighted at the low price. Why should be have been?

On a recent bank alteration job with six were eliminated after the bidders four bids were in because they were not local men. Refiguring of cuts was done by the other two, and one dropped bids were in local men. F one thousand dollars more than the value of the cuts (finding he had to do so), and although still high was awarded the job because he was a depositor in that bank, while the other was not.

On a job in 1912, where cuts were figured. one competitor dropped five hundred dollars where twelve hundred dollars' worth of stone mason's foundation work was changed from stone to concrete in location where materials for either were easy to get. Cuts offer a splendlid opportunity for one man to drop by another, and win by—in fact, submitting a second figure when he surmises his first

one was a little too high.

Recently sub-contractors for painting figured so eleverly that the lowest on a job was 650 dollars and the highest 2,180 dollars with enough good men together around 1,500 dollars to show that probably there was the right price. Some contractors figuring would use the low figure: others not wanting to must do so, or risk their chances of winning. This element is a common feature of competitive bidding.

In September, 1915, a reputable Boston architect of a fairly large job stated that the owner had a fixed price set for his work and that he had purposely selected a list of bidders commonly varying widely in price and in quality of result. From them he had chosen as good a man as he could, and come within the price established; and he said that he regretted not being able to choose

a better man.

Two or three years ago an owner, who formerly let a contract to a bidder about 20 per cent, under a group of competitors, who was not satisfied with the results and obtained, strove to mend matters upon some further work by a most stringent three years' guarantee—the strongest document of the sort ever seen by Boston contractors who estimated the work. This document was the work of the owner, not of his architect. Here was a direct intent to make a silk purse out of a sow's ear by legal verbiagefollowed, if needed, by legal procedure.

A few years ago a very hard-fought large

job near Boston was awarded to the contractor fourth from the bottom in a list of six bidders. Later he was told that the owner always intended him to do the work. Later he was told that the

Recently on a job a few miles from Boston the owner told one bidder that he wanted him to do his work, and that he would pay a preference, but not a large one. The ent to another man, who by the use of two sub-contractors, whose bids the preferred man had, but did not care to use, saved more than the difference between the two figures.

In 1915 a job near Boston had four bidders within a fifteen hundred dollar variation figuring around 62,000 dollars, while a fifth was about 59,000 dollars, and won the award. What will happen to the winner and to the work he does? What was the owner's

" Fime is of the essence of this contract. How often this is written! A year ago large job was let to be completed August 15, On October 1, 1915, it was nearly done. A contractor's promises for time are commonly taken in preference to an examination of his performances.

Not long ago the wife of an owner told a triend about to build to put a forfeit clause 10(to his contract, for the reason that it could always be collected, for some reason or other,

and was a good way to save on a contract.

Recently an architect asked for two bids from general contractors. With one of these the architect was in league to the extent of giving him competitors' prices in order that he might bid under them—and the other contractor knew it—and knew the owner. After the bids were in he approached the owner, thus: "Now, Mr. Blank, I have a grudge against Smith, my competitor, and I can work it out and show you how to make a thousand dollars if you will give me fifty dollars." Mr. Blank agreed. "I will go to your architect, claim I made a mistake, withdraw my hid, put in another one, one thousand dollars lower; your architect will tell his friend, who will do the same thing. You will make a thousand, and can then send me tifty." It was all done as planned.

On a job of plumbing worth 750 dollars a low hidder was awarded the work at 475 dollars. Recently, two years later, alterations were made, and the hot and cold water piping, specified "iron-sized brass"—a good brass pipe-was found to be gilded iron. meant that the architect was either ignorant.

careless, or dishonest.

What is competition?

The above cases, excepting one or two, are typical instances of occurrences which are very common-so common that they would not be worth reciting were our readers only those familiar with building operations. The cases quoted are not garbled or exaggerated, but are normal, and are all actual happenings.

What is competition?

The statement that a careful contractor gets his estimate costs within 2 per cent, was carefully qualified to apply to well-made plans and specifications, and to an architect whose methods the bidder is familiar. Architects vary widely in their methods—not affecting the quality of the result—and in their requirements in developing scale drawings from which estimates are usually made. Contractors knowing the architects of Boston (for example) can vary their figures according to the personality or office practice involved. This variation may, on the average, amount to 2 per cent., and is something for which. of course, a contractor figuring for a strange architect cannot allow.

Beyond the personality of the architect lie the plus and specifications-varying widely in definiteness and accuracy from a very low limit, amounting at times to guesswork upon many points, to a degree of perfection, leaving no element indeterminate which affects the estimate-and this latter accomplishment means some knowledge of how an estimate is made up and of what features affect cost, for no plans and specifications issued for estimating can ordinarily tell everything needful for the execution of the work. Here, again. a contractor's general familiarity with the architect's personality and usual customs are a great help.

What is competition.

The story is told of a contractor in Greece who stood before a statue of a famous oracle. which—following a custom of this perch."

Hermione, and others—" came off his perch."

Why and walked up to the contractor. "Why this variation from proper statuesque practice?" said the contractor. "Are you not." replied the oracle, "the man considered dis-honest until proven honest; the man who has to know what is in an architect's mind when he draws a line; what 'suitable,' 'approved.' to know what is man and the draws a line; what 'suitable,' 'approved.' 'satisfactory,' and 'practicable' mean as he uses them; and how 'reasonable' he is going to be; and do you not have to forecast prices on materials, and particularly on labour with variations beyond your control?" "Cervariations beyond your control?" tainly." said the contractor: "but that is my pob, and I am used to it". "I am something of a proplat myself," said the oracle:

y favour. tractor walked a vay alor the tersdactio in that kind of a bust Cast, as in estimates, as commonly the cast and average case the lew cast 20 per cent, under the high, that it a new of understanding of an cast has plans and specifications at the estimaters are involved. The cast is in so hacases would probe tax-sect their oper cent, and this color of the interference with a cast to a good architect a poor to work to be a good architect a poor to work to be cast, and to be a good architect a poor to work to be cast, and to be cast. The balance of a go variation in bids is from other cont. ... in estimates, as commonly a year of the to clow. The balance of a 20 variation in bids is from other largely the use of sub-contractors madry of the result. These two to are related, but a good general conas took, squeeze, capole, or drive sub-ners revise low that only poor work from or solitarned. Or course, in dull times onto well be out, but in the best of times essent near halt so large as the differtra to rin Boston would be glad to be assured on last on goos or 7g per cent, net, and on 15 2 ad y taxe all the work he could get at

Tre- lement of error in estimating, due to are essees or other mistakes not arising in a maleicty, is, of course, a recurring one. it choice careful men this is far less freat the is commonly supposed. Error te had judgment or downight incom-. ir estimating always plays a part estimate is obviously dangerous. The use filled to secure an owner puts a certain area of investigating the matter. 

-- it there is e-contractors can get bonds. A. estimate far below a group of figures, a count happening, can only mean one of the things

A . First on the part of a man doing and who will do the job properly ed offer by his error.

An honest price from an honest man who the lest value of which he is capable, it value work is low in quality.

A cat-throat price from a cheap man who Save +1 skimp where he can, trust more these to maket come out square, and who are tile for results if he can "get by."

The two latter are the usual low bidders.

it a last is the man more commonly found the structure by his low figures, until - -am kind takes his place

What is ompetition

At related who, through carelessness or 20 time allows your to be done in any re-ter i formally, except as to quality which e a bet much control, from what is planned to the much control, from what is planned to the local plans the local bidders and hurts of the for the others may have figured it worship to while the low man may have to have modifications made for him. What so impetition.

Here have been cited some of the things

mass modern connects on in the build siness usually a take. Here we hald things are then are telling their is a thing here is stated contrary to the etalley erience of etallish and a n

strength to the fortent the heaven any somal man and the tarbon the fress of these connection. The first of large non-monetary, but some some depends on the minerial in The first out have not been included an ability. The last case of pendicular training and contability. The last case for any order of the contability of person of the contability of person of the contability which is which the person of the contability of the managed. Because a large group of them, and in the Why did they agree that the decrease but probably our readers are they to the Rull class, and won't read the June of Rullo method correct further in the

er leavourms to gain at the same time. This definition in itself seems sufficiently clear be easily comprehended by all of us. But what has become the meaning of the word as applied to the building business; what is it as we really understand it !

To such extremes has the meaning or convord been distorted as to almost blot out its primary definition. Competition in feats of provess or skill or art always has meant, and always will mean, only strength, agility, personal excellence, and quality. Why should the excellence of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording terms of the convording

it not mean the same when applied to work? Unfortunately, we have grown to associate this word with one consideration only—that price; and the word to-day often means endeavouring to gain what another wants by the exercise of cupidity, without regard to perfection, excellence, or quality. Such sompetition is unfair and is based on the policy of "each one for himself and the devil take the hindmost." Those conducting take the hindmost. Those conducting their business along these lines show an utter disregard for the rights of others. Competi-tion in the form of mere price comparison is the most degrading form of competition to those who indulge in it. As has been said recently: "The only phase of competition which can benefit humanity is quality competition, and that is the exact antithesis of price competition. The two cannot ride in perice competition. The two cannot ride in the same boat. When price competition begins, quality competition ceases. We all know that to be a fact. Why should it not be adopted as the fundamental principle

not be adopted as the common of the building business?

Where did the practice of awarding the business bidder begin? What excuse has such a practice for existing? is impossible to secure the best or even good

work by such a method.

Why should not the Master Builders' Association take the initiative in an attempt to correct this method? Why should it not lead in an earnest endeavour to persuade architects and owners to abandon this pracarchitects and owners to abandon this practice and adopt a new one? Suppose, as another suggestion, they were to award the contract to the "average" bidder; would not this retain all the essentials of competitive bidding, eliminate all temptation on the part of the bidders to "skin the job," and secure for the owners better results in accordance with the true intent and meaning of the ance with the true intent and meaning of the plans and specifications

Mr. Owner, does all this mean nothing to Are you in the position of an interested listener to a Sunday morning sermon-which is a dandy and just fits the other fellow? If so, awake. The welfare of each of us helps us all, and in this case you, as well as ourselves, will benefit from these truths exacted

from a burdensome experience.

The Roscommon County Council have appointed Mr. M. J. Leech to the position of assistant county surveyor, to succeed Mr. Dolan, deceased.

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The partnership of T. Collinson and W. Collinson, in the business of builders and contractors, at Nateby and Garstang, Lancaster, under the style of Jonathan Collinson and Sons, has been dissolved.

and Sons, has been dissorted.

Mr. Clarke-Thornhill recently enriched the Department of Textiles in the Victoria and Albert Museum with a gift of Algerian embroideries. Most of the pieces of this collection date from the nineteenth century, and bear the influence of the Turkish domination which lested from the time of Barbarossa in the sixteenth century until the French occupation in 1830. A descriptive catalogue has now been is-not by the Museum authorities furnishing a summary of the history and artistic qualities of these embroideries. teenth century until the French occupation in of these embroideries, illustrated with repro-ductions of some specimens.

the relatively and a maldist. The last net of the interest of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of the last net of

RURAL DWELLINGS IN IRELAND.

Last Wednesday evening a general meeting of the Architectural Association of Ireland, was held in the Hall, South Frederick Lane, Dublin, when the principal feature of the evening was a lecture by Mr. T. J. Byrne, A.R.I.B.A., clerk and surveyor to the South Dublin Rural District Council, upon "Rural Dwellings in Ireland,"

Mr. Leask, president of the association, occupied the chair, and the minutes were read by Mr. N. Giron, hon, secretary,

Mr. John O'Donohoe was elected a member

of the association. Mr. T. J. Byrne, in dealing with the sub ject of his lecture, said that at the present time every district council in 1reland had built some cottages for labourers living within their borders, and the cost of erecting such cottages had been very small on the varying from the tenth of a penny in the £ in Clitden, County Galway, to twelve and a-quarter in Gortnahoe, Tipperary; £8,950,000 odd had been spent by the Government in this direction; 53,868 houses had been built, with the result that over 325,000 persons had been decently provided for. Nearly 150 years ago the conditions of labourers dwellings were as rotten as they could be, although in the year 1767 people were walking through large streets in the cities and building imposing dwellings. The conditions under which the labourer lived at that period were very bad; anything was considered good enough for him. The lecturer went on to contrast what was thought good enough for the labourer even so recently as the year 1873 with the great strides made up to the present day. Rural authorities had been better financed and given a much larger scope. In 1906 a great advance was made when money was available at a much lower rate of interest. Four and a-half millions was sanctioned then, and at the same time every effort was made to make all the houses much more decent and commodious.

Mr. Byrne, who exhibited several score of interesting drawings, which showed the various stages in the development of labourers' cottages, then explained in detail his minimum ideal of what such a dwelling should he. He considered, for one thing, that no cottage should have less than four rooms, and, in the metropolitan county at least, should have a water service if sewers were convenient. would also be in favour of what were known as "parlour honses" in Belfast, where a little room could be provided that would not be immediately entered from the front door. Mr. Byrne then went on to deal with the extensive work which had been accomplished by his own council, the Dublin Rural District Council, and he was glod he was working for a council which recognised this great public necessity-(hear, hear)-and of the fact that they had given him Mr. Geoghegan as assistant architect. His council gave the most careful consideration to planning, and he was gratified to them for the latitude they had always given him in the details of construction. (Applause.)

A hearty vote of thanks was accorded to Mr. Byrne, on the motion of Mr. Edwin Bradley, seconded by Mr. R. M. Butler,

A commission in the Royal Engineers (Tunnelling Section) has been granted to Mr. E. Potts, assistant to the Rotherham borough surveyor.

Difficulties attending the construction of the headquarters of the Theosophical Society in Bleomsbury have now been overcome. When Bicomsbury have now been overcome. When the building is completed, it will have cost £200,000 instead of £40,000, as originally contemplated. Three years and a half have elapsed since the scheme was initiated. The builders' lock-out accounted for a delay of twelve months after a portion of the place had been erected, and then the war and other matters stopped the resumption of work. Now building operations have recommenced, and St. Paneras Borough Council has been informed that the financial difficulty has been removed, as a wealthy person has come for formed that the linancial difficulty has observed, as a wealthy person has come for ward and agreed to complete the building, which will have frontages to Tayistock Square and Burton Street. The architect is Mr. E. L. Lutyens, A.R.A., and we published the plan and perspective of his design in our issue of September 6, 1912.

#### THE LONDON COUNTY COUNCIL.

At the meeting of the London County Council held vesterday (Tuesday) afternoon the Finance Committee recommended that sanction be given to the horrowing by the Hackney Borough Council of £9.362 towards the cost of street improvements in Mare Street Upper Clapton Road, and Ball's Pond Road by the Hammersmith Borough Council of £16,000 in respect of the acquisition of property for an improvement at Hammersmith Broadway; by the Islington Borough Council of £985 for the purchase of electrical pressure-recording instruments; by the St. Paneras Borough Council of £15,000 for turbo-generator and building work in connection with their electricity undertaking; by the St. Marylebone Borough Council of £3,800 for mains and house services in connection with their electricity undertaking; and by Wandsworth Borough Council of in respect of the High Street and Felsham Road improvement.

The General Purposes Committee reported with regret that Mr. Arthur Maxwell Phillips, senior assistant in the Architect's Department and captain 14th Service Battalion the King's Own Yorkshire Light Infantry, has been killed in action. (Captain Phillips, who resided in Wolverton Gardens, Hammersmith, has been a Lighting 1212). has been a Licentiate R.I.B.A. since 1911.)

The Building Acts Committee stated that on November 23 last they reported to the Council that under the Council's General Powers Act of 1909 they were advised that the regulations made in July last under Section 23 of that Act with regard to the construction of buildings wholly or partly of reinforced concrete, and with respect to the use and composition of reinforced concrete in such construc-tion, must be published in full in the Landon Gazette at a purposeless expenditure of £180 The committee had been before the meeting of November 23 and were in communication with the Local Government Board, whose officers had endeavoured to arrive at arrangement whereby, with the consent of the Treasury and the Stationery Office, a sub-stantial saving of the Council's money might be effected. These efforts had not, however, met with any success, and the regulations must, therefore, be published in the ordinary way.

The Finance Committee stated that they are "strongly of opinion that the proposed expenditure, which both the Local Government Board and the Building Acts Committee admit will serve no useful purpose, is most difficult, in present circumstances, to justify, but in view of the legal necessity for advertising the regulations, and the failure of the efforts made to reduce the expenditure thereon, there appears to be no alternative but to submit the estimate.

The Establishment Committee recommended that the operation of standing order No. 342 be suspended, in order that the services of two assistants on the unestablished staff of the architect's department, who have attained the age of 65 years, he retained up to and including January 31, 1916.

#### ---THE R.I.B.A. EXAMINATIONS. THE FINAL: ALTERNATIVE PROBLEMS IN DESIGN.

1. The drawings, which should preferably be on uniform sheets of paper of not less than imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 9. Conduit Street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, and his full name and address and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3. Ail designs, whether done in a school or not, must be accompanied by a declaration from the student that the design is his own work and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice.

4. Drawing for subjects (a) are to have the shadows projected at an angle of 45° in line, wonochrome, or colour. Drawings in subjects

(b) are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly, and unaffected character.

#### SUBJECT AXV.

(a) A Small Public Library. The building to be on an open "island" site, and is to The building is to be on an open "island" site, and is to cover an area of 70 ft. by 40 ft., exclusive of projections. It is to be faced with stone, and should contain a lending library, magazine room, reference library, committee room, heat ing chamber, rooms for a resident caretaker. and usual offices.

Drawings: Two plans, three elevations, one section to  $\frac{1}{8}$ -in, scale. Detail of small portion to ½ in. scale.

(b) A Municipal Gymnasium. (b) A Manacopal Gymnasium. Lo be a detached building on an open site. The interior dimensions of gymnasium are to be 60 ft, by 35 ft., and the building is to contain in addition an entrance hall, office and pay box, changing room with lockers, lavatory and shower baths adjoining.

Drawings: Two plans, one elevation, one ection to bin, scale. Detail of roof over section to  $\frac{1}{8}$  in. scale. Dogymnasium to  $\frac{1}{2}$ -in. scale.

#### SUBJECT XXVI.

(a) A Roll of Honour—A monumental tablet in a church, bearing the names of parishioners (male and female) who have served in the Forces, or as doctors and nurses in the hospitals, and have given their lives for their country in the war. The tablet to be their country in the war. The tablet to be either of stone, marble, or bronze, used separately or in combination. It is to be fixed on a blank wall inside a parish church, and the space it should cover is to be approximately

15 ft. by 8 ft.

Drawings: The tablet and details to oneeighth full size. Details of mouldings and
lettering to full size. Details of mouldings and

(b) 4 Cottap Hospital for both Sixes, to Accommodate Twenty Patients (not infectious cases).—All suitable rooms to be provided upon an open site of four acres, approached from a main road.

Drawings: A block plan showing drainage, to a small scale; plan, elevations, and section,

to a-inch scale.

#### SUBJECT XXVII.

(a) A Town House in a Terrace.—Centre to centre of party walls, 25 ft. Cost not to exceed £4,000. Roadway in front is 50 ft. wide.

Drawings: Plan of each floor, cross section, back elevation to 1-inch scale, front elevation

to 1-inch scale.

(b) Small Warchouse in the City of London for woven goods. Centre to centre of party walls 25 ft., depth 60 ft. Main building 40 ft, deep above the ground story. Work-people's entrance to be at the back from a back street. The building is to contain a basement, ground floor, and four stories above; office and counting-house are to be provided.

Drawings: Plans of basement, ground, and first floors. Front elevation, and cross and longitudinal sections, to  $\frac{1}{8}$ -inch scale, with constructional details to 1-inch scale.

DATES FOR SUBMISSION OF DESIGNS IN 1916.

	Subject XXV.	Subject XXVI.	Subject XXVII.
United Kingdom Johannesburg Melbourne Sydney Toronto	Feb. 27	April 30	June 30
	April 30	June 30	Aug. 31
	May 30	July 31	Sept. 30
	May 30	July 31	Sept. 30
	March 31	May 30	July 31

With a view to restoration, the interesting with a view to restoration, the literesting double piccina, near the high altar in All Saints' Church, Maidstone, has been cleared of the accumulated rubbish which, the viear says, has been allowed to choke its deep drains ever since the days of the Puritan iconoclasts who first damaged it and the canopies of the allowing colding. adjoining sedilia. Amongst this rubbish Mr. Malyon, the verger, has discovered some in-teresting remains of fifteenth-century stained glass, presumably from the great east window. These fragments comprise the lower half of a These fragments comprise the lower names, figure of a saint in flowing white robes, because of the spangled with yellow rosettes, which had become broken into about thirty separate pieces. These have been joined together. There are These have been joined together. There also some pieces of ruby and blue glass.

### NORMAN CASTLES IN SCOTLAND.

Mr. Wm. M. Mackenzie, secretary of the Royal Commission on Ancient Monuments (Scotland), delivered a lecture to the members of the Edinburgh and South-East branch of the Historical Association of Scotland in the geography classroom of Edinburgh University last Friday night.

The lecturer said the private castle, that was the castle in the ordinary sense of the term, was introduced into this island by the Normans. The word first appeared in the Anglo-Saxon Chronicle in 1048 in circum stances which showed that the thing as well An historian of the as the name was new. An historian of the Conquest expressly said there were very few in England at that time. What sort of structure the ordinary Norman castle was appeared on the Bayeux tapestry, from which several illustrations were shown. These, with illustrations were shown. These, with accounts from various French and English chronicles, proved that its essential feature was a mound of earth, known as a dungeon. more familiarly as a mote, on which the de-fences of tower and wall were constructed of These terms in time changed their meaning. A large enclosure on the level was also palisaded with timber, and was known as a bailey. Each division normally had an independent ditch.

Reference was made to the herisson or prickly hedge in advance of the ditch—the mediaval equivalent of barbed wire-as it figured in the description of Scottish attacks upon English border castles in a French poem of the twelfth century. In Scotland there had been confusion as to Norman castles owing to a belief that these must have been great stone keeps. Now that it was known what to look for, the mote or mote-and-bailey earthworks were found to be numerous and present over the greater part of Scotland, indicating the thoroughness of Norman penetration, and probably, too, a following of Norman example. No precise figures, however, could be given till the archæological survey was completed. So far a dozen were allotted to Wigtown, twenty-six to Kirkcudbright, and nearly as many to Dumfries, but one only to Berwickshire. Many must have disappeared either by levelling or under sub sequent building. The type seemed to cease at Dunskaith, on the north side of the Cromarty Firth, where the traces of the castle of 1179 were still distinct, but there were two cases in eastern Sutherlandshire where a mote foundation for a later stone building was strongly suggested. Examples were shown on the screen of various types of mote castles in Scotland. Mr. Mackenzie said there were certain puzzling features still awaiting expla The wooden "peel of the War of nation. Independence was substantially a revival of the same sort of fortress as had been used to subjugate England at the Conquest.

The town clerk of Edinburgh has been instructed to draft a town-planning scheme for Craigentinny.

Mr. James Wykl, urban surveyor to Clayton Urban District Council in the West Riding, has just completed a housing census and finds there is not a single house to let. A housing scheme has been prepared, and an inspector from the Local Government Board has viewed the proposed site.

A serious landslip in the Clarence Gardens, Scarborough, has been in progress for some The slide has reached such dimensions that, following upon a report from the borough engineer, the corporation have decided to approach the Local Government Board for permission to proceed with the work of repair.

Mr. D. Y. Cameron's picture of the castle of Craigievar, after being for some time on loan in the Aberdeen Art Gallery, has been presented thereto by the Hon. Gertrude Forbes-Semphill. The landscape, with "castle set in its own valley twixt the two main ways of the Dee and Don," was exhibited at the Royal Scottish Academy in 1900. Royal Scottish Academy in 1909.

Alderman William Urquhart, of Mapesbury Court, Shootup Hill, and Church Street, Paddington, and High Street, Notting Hill, colour for nearly fifty and varnish manufacturer, for nearly fifty years a member of the Paddington Vestry and Borough Council, and formerly a member of the London County Council, who died on Soptember 7, left £7.442 personalty.

## Currente Calamo.

- sand, ready, if e contito es who are step Frigheid sate, and to the engineer of all real try be a household in Alerry Christmas " ees mic heartness of ces uncleartness of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of the end of th that we continued by statched the one has the base that no elliptidings so have been approach us, and that our many battle And may God puty the The ast is, all a variety seeking distractions share the markers self-indulgence

M. I on a May be the was appointed better. Greek, to be proved to design a town but for Attends, goes in a letter the improved for the found from freedship with the K ng at 1 Queen of Greece of their English synquities. He says — For instance, before my firm was entrusted with the commission for the replanning of Athens, a scheme was proportion great detail by a famous Berlin cells of the Leaf been introduced on the personal to him adatum of the Kaiser. He is so and one that Germany should have the great homem trade-igning the world's most great home in the designing the world's most face is the plans were presented free at charge excepting for out of-pocket express. This adaptive was utterly condemned to the King and Queen, who insisted on a largest last to prestation of the many problems which resided so ving. During the progress of my pents I have on many cases should be on to submit sketches for their Wiesels scriptism, which, though 2000 to a real control triefly friendly, has a ways a sessed to adity of trankness. It tropy in a real of trankness, he provides a proval they would say. That is lead to a real to coughly English is the first polymer with that is lead or Not English. No English and the of books would be given by all English, or a construction of the order of fall to distribute the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the construction of the constructi i sondertal

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The corps. Alto a M. Jaco Groot in the transfer of distribution scales and the Elec-ter distribution scales and the contract of the Elec-ter May a stagger of May to an account a country to all the fin.

counsel on their side and three for the determents, this will come out as a costly busi ness, even regarded as an advertisement. In fact, the expense of all this legal fighting s enormous to the parties concerned, and in the way of pidicial time to the mation. Mr. E. P. Hollams, a retired solicitor, who was in practice for thirty three years, put the cost to suitors in cases of this kind at £1 a mimite, in his recent letter to the Times, where, as he so well says, the time of the judges is wasted by the way counsel, at high fees and daily refreshers, conduct cases Much mischief and expense are also caused by the wholly unnecessary length and complexity of modern pleadings. No doubt the matter has still to go before the Law Lords, Meanwhile, it is to be noted that so far only the question of infringement has been settled, and the greater point, raised by the defendants, is to the validity of the plaintifts' patents, has not yet been decided or fully

The Browning Settlement in Walworth, which so brating its coming of age by planting twenty one trees in a street that needs them badly, has been a busy source of reforming ideas. Its name commemorates the tact that it is housed in the old chanel to which Browning was taken by his parents to worship when he was a boy. Its minister in early days was the Dr. Andrews from whom the young Ruskin took lessons, and whose daughter was, according to the London correspondent of the Manchester Guardian, "the Angel in the House" of Coventry Patmore's noem. The head of the Settlement, Mr. Herbert Stead a brother of the late W. T. Stead, and the late Mr. Frederick Rodgers worked together to popularise the idea of old age pensions many years before there was any chance of Government action. The Queen's Fund for the Unemployed, opened in 1904, which was the first important effort of the kind, originated at Browning Hall, and the conferences that were held at the hall on housing and transit facilities prepared the way for the appointment of the Royal Commission on London traffic. A large increase in the number of public gardens in this part of South London in the last fifteen years is due very largely to the propaganda carried on in the Settlement.

The nonmonger claims kinship with one of the oldest crafts in the realm. Mr. Allen Walker, lecturing to London University students in the hall of the Ironmongers' Company, traced the corporate history of the trade back for nearly 500 years. It was not [11] 1455 that they received their coat of arms a shield containing three pieces of nor, the symbol of the wholesale departthe ut, and a number of links of chain, the mind of the retail department, the supparters of the shield being two salamanders. Later still, in the reign of Edward VI., they b' and the r charter. Henry VIII, was not to particular as to his methods for obtain money and he robbed the company of  $\mathbb{A} \mathbb{Z}^{7,r} \otimes \mathbb{A}$ . A portion of the plate was inclted the or that occasion, and the remainder the serificed to meet the demands of Os mosellon Parliament. The iron Cosever were loyal to a man when bits of the realm was at stake, and but and fitted out at their own ex one complete ship for service against

## Gur Illustrations.

TORATION OF A 14TH-CENTURY BEDCHAMBER IN FRANCE, RESTORATION

This handsome water-colour frawing was. shown last summer at the Royal Academy in the Architectural Gallery. The subject is unusually interesting, indicative as it is of the traditional simplicity of daily life in the Middle Ages. It makes an excellent picture of the period, architecturally speaking, as well as showing the type of furniture in those days in common use in the homes of the well-to-do. To judge more correctly the pictorial merits of the drawing, which the artist, Mr. Leslie B. Cook, has lent us, it is necessary, of course, to see the original water-colour. This restoration has been worked out as an attempt to realise a scheme to be judged as a whole more or less in accord with the 14th Century, this being the date of the building of which this chamber forms an important part. The beams traversing the ceiling are of oak, some of the chief timbers being chamfered. The bigger or main joists and wall-plates are supported on stone corbels, which are carved and coloured with heraldic bearings and rebus devices or monograms connected with the history of the owner's family tree. The old ashlar stone walls are partly covered with tapestry and banners, mostly of a crude colouring toned down by time. The floor in this room is paved with random slabs of stone, mostly paved with random slabs of stone, mostly irregularly shaped and of varied tints, which artistically is no small advantage. The floor is relieved of its sternly primitive character by skins and mats. Tiles of quaint patterns occur in parts of these rooms and add to the imaginative spirit of romance suggested by such a study of old work. The bed shown Mr. Cook is similar to that in the house, and described as a fine example, typical of its date. It harmonises very well with the stone-hooded fireplace, and serves to complete an ungratiating composition.

#### MEMORIAL TO A GREAT WAR

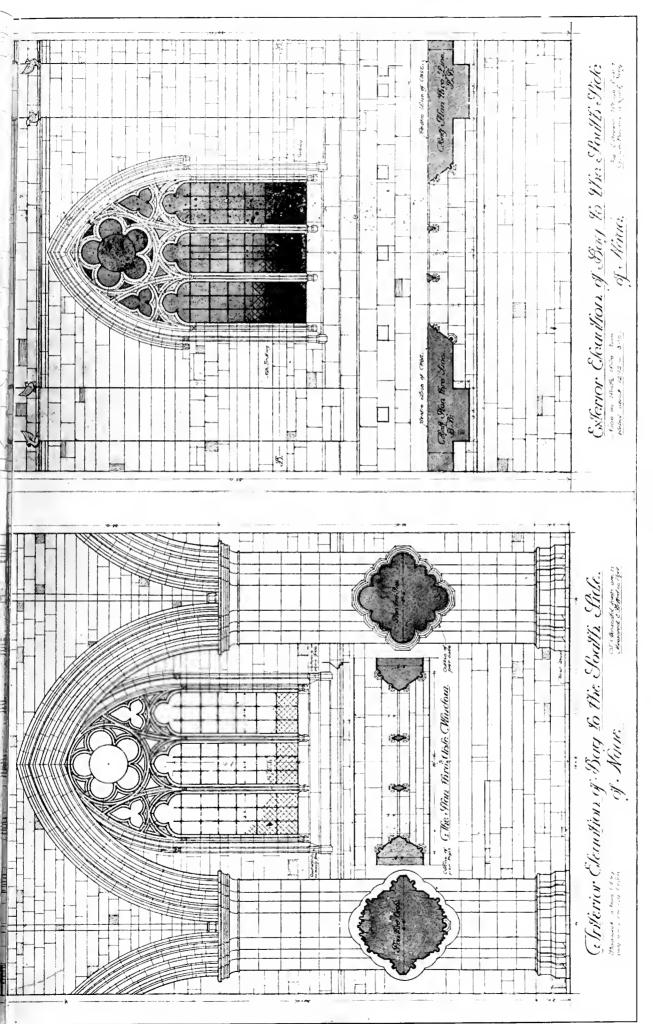
This drawing was hung on the line at this year's Royal Academy Exhibition. The conception of the design is based on the Victoria Cross, adapted to the plan of a war memorial for a site situate on high ground, commanding extensive views of the surrounding country. The structure is approached by four wide flights of steps between the four arms of the cross, which latter are treated The structure is approached by as bastions, the outer face of these being sculptured with the figure of the "Spirit of War" seated in the mouth of a huge piece of artillery, and below on either side are placed attendant winged lions. At the top of the steps and connecting up the four bastions is a massive screen, comprising a deep plain frieze supported at convenient intervals by winged Hermes, which are intended to by winged Hermes, which are intended to represent the idea of sentinels encircling a large domed Hall of Trophies boldly occupying the centre of the composition. The whole scheme is more or less Assyrian in feeling, and would be carried out in a grey-green stone with bronze doors and grilles. The original water colour, reproduced herewith, is by Mr. William Warman, of Bodiam. 62. Arthurdon Road, Brockley, the architect of the design.

# BRIDLINGTON PRIORY CHURCH, YORKS: DETAIL OF ONE BAY OF THE NAVE.

Some particulars will be found in THE BUILDING News at December I of this famous priory church. We then gave a sheet of letails of the North Porch delineated by Mr. Gordon Hemm. To day we are by his courtesy enabled to reproduce his measured study, showing one bay of the nave and south aisle, both inside as well as put, reduced from his half inch scale drawing. Shortly we hope to follow on with another similar detail of the same beautiful example of the Early English and Geometrical periods.

The borough surveyor of Warrington, Mr. V. M. Ker, has been instructed by the corporation to prepare a plan for raying out the land on the south-east side of Warrington

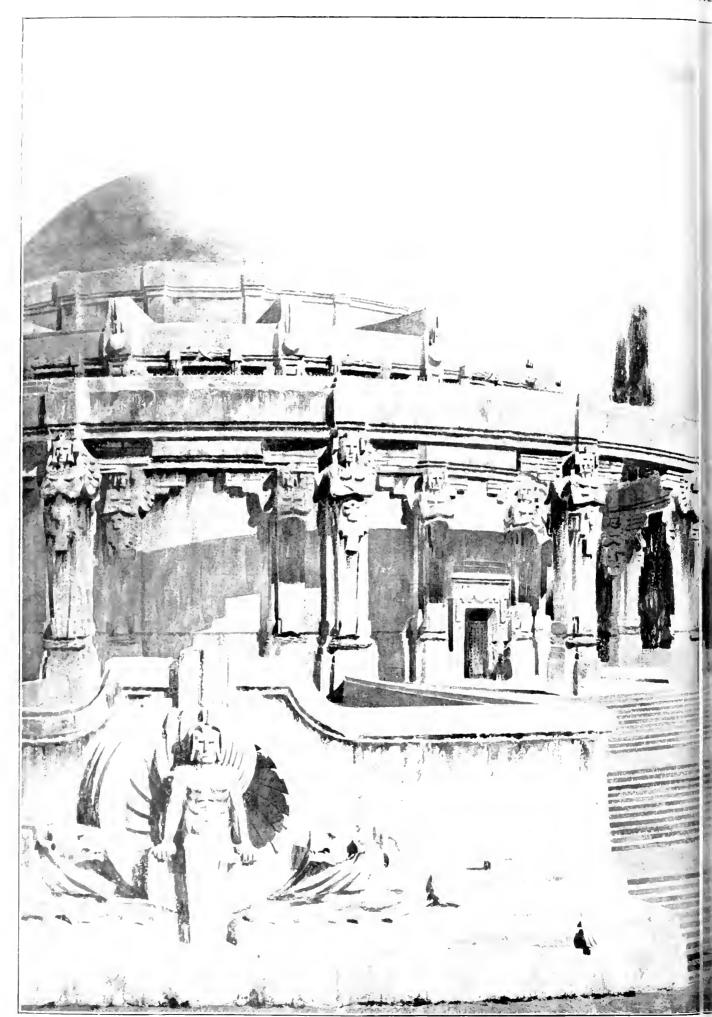
THE BUILDING NEWS, DECEMBER 22, 1915.



DETAILS OF THE NAVE, BRIDLINGTON PRIORY CHURCH, YORKSHIRE,-Measured and Drawn by Mr. Gordon Heave.



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PROPOSED MEMORIAL TO A GREAT WAR, FROM THE RO



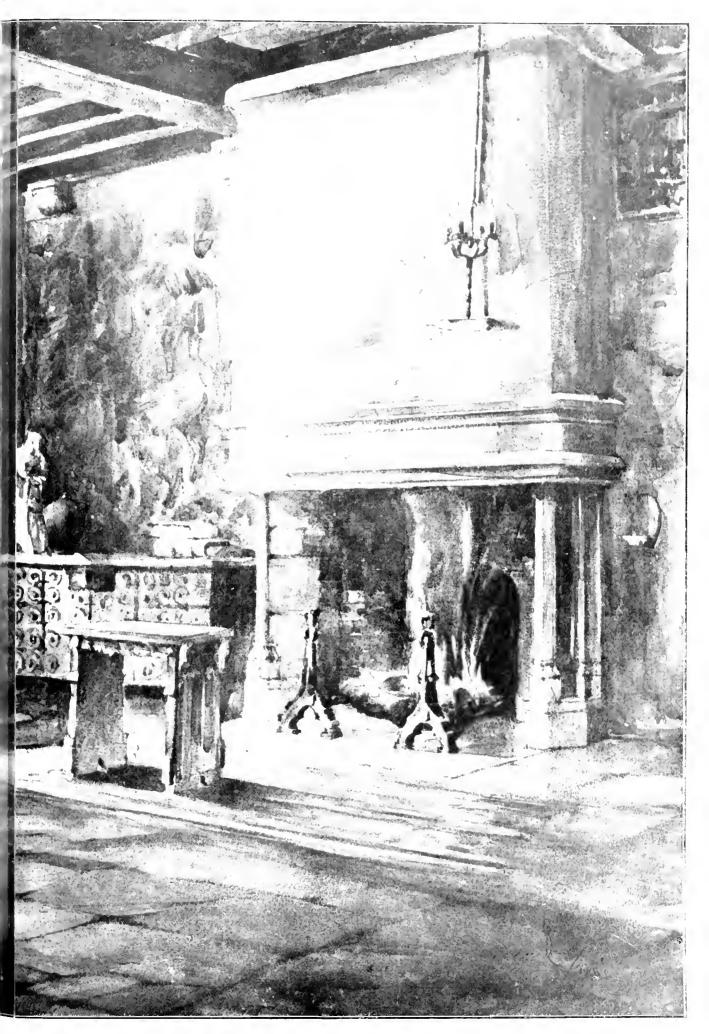
L ACADEMY EXHIBITION, 1915.—Mr. WILLIAM WARMAN, Architect.







RESTORATION OF A NIV. CENTURY BEI



ABER IN FRANCE, By Mr. Listii B. C. J.

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# PROFESSIONAL AND TRADE SOCIETIES.

Bristol. Society of Architects.—The third sessional meeting was held on Monday in last week, at Fortt's, 6, Royal Promenade, Clifton, at 5.30 p.m. The President, Mr. Graham C. Awdry, F.R.I.B.A., having taken the chair, a lecture (illustrated by lantern slides) on "Modern Cement Manufactories" was delivered by Mr. W. S. Skinner, F.R.I.B.A., who described the various types of machinery used in the manufacture of cement, and traced the materials through the various processes from their raw state to the finished product. On the conclusion of the lecture a short discussion ensued, in which various members took part. A vote of thanks to Mr. Skinner, proposed by Mr. G. C. Lawrence, A. R. I.B.A., and seconded by Mr. C. E. Thompson, Lick.I.B.A., was carried with acelamation.

LENDON AND MIDDLESEN ARCHEOLOGICAL SOCIETY.—The Lord Mayor presided at the Diamond Jubilee meeting of the London and Middlesex Archaeological Society, held in the afternoon. Mansion House, on Tuesday last week.—The president, Sir Edward W. Brabrook, F.S.A., in the course of an address on The Growth of Archaeology in London during the Past Sixty Years," remarked that the inaugural meeting of the Society was held on December 14, 1855, in Crosby Hall, and it was not the fault of the members that the ball had disappeared from the City of London. The very greatness and prosperity of London militated against the preservation of the relics of its history. Not was living of those who attended the augural meeting of the society: the oldest member was the vice-president, Mr. E. J. Barron, now in his ninetiath year, he joined he (the speaker) neco... 5. The society had been re-(the speaker) became a in 1859, while member in 1865. The society had been recognised by the Corporation and the City Companies, and it had been the means of archæological discoveries. many making notably that concerning the trade guilds of the glovers, the blacksmiths, the water-bearers, and the clothworkers, as revealed in the documents of the Commissary Court of the Bishops of London. It had also provided the memorial window, representing the minor companies of the City in the Guildhall Library. During the last sixty years there had been a marked change of public opinion in regard to the preservation of old churches and other historic buildings, but improvement was still needed. The method of is-suing faculties, he said, was a weak point in the present system, and he thought no faculty should be granted until the Chancellor of the diocese was satisfied by independent expert advice that it was not open to objection on archeological grounds. love of antiquity, he continued, was a mental and moral quality as well as an aesthetic one. and we might contrast with this the depth of infamy our enemies had incurred by the or miamy our enemies mad incurred by the destruction of the Library of Louvain, the Cloth Hall of Ypres, and the Cathedral of Rheims, all sacrificed to a brutal savagery which prided itself on rivalling that of the Huns.

Open-Air Schools Schools.—An "Open-Air Schools was delivere Saturday by Mrs. Leslie Mackenzie. delivered Edinburgh, at a meeting of the Glasgow Branch of the Educational Institute of Scotland. The meeting was held in Perry Street Special School, Glasgow, which is of the open-air type. Mr. James Knight accupied the chair. Mrs. Mackenzie said an open-air school did not mean a playground. It did not mean a shed and a playground. It was an ordinary school built on open-air principles, and these principles ought to apply to all schools. The people to be first educated were the managers and the architects. The pupils in open-air schools must have extra clothing, and both teachers and pupils in such schools re-In Edinquired and could take extra food. In Edin-burgh a beautiful school for 1,400 children had been built, and the whole of the three floors were open. Mr. D. M. Wilson, con-Committee on Special Schools vener of the under Glasgow School Board, who onened the discussion, referred to a visit which, as a member of a deputation, he made to open-air schools, and remarked that the deputation

were more struck by what mey at an Duncan Street School in Edinburgh than by anything they saw or England.

SCOTTISH SOCH IN AU ANTIOUMER. -10cfirst evening meeting of the Society of Anti quaries of Scotland for the session was held in the rooms of the Royal Society at 24. George Street, Edudurgh, on the 13th inst the Hon. John Abereromby, LLD., president, an the chair, Mr. Harry R. G. lughts, F.S.A. Scot., read a paper on "The Roads that Led to Edinburgh." The paper was illustrated by copies of manuscrip the Advocates Library and th the Advocates' Library and the British Museum, Mr. Inglis remarked that in cudeavouring to ascertain which are the earliest roads leading to Edmburgh our knowledge is very much circumscrabed by the absence of early road maps, the first of any real service being those of Adam, of 1680. The earliest known source of geographical information about Britain is a Ptolemy's Geography, but it is so confused as to be of little service as far as Scotland is concerned, while the Antonine Itinerary of 200 a.b., giving the Roman roads in Britain, mentions no roads in Scotland. In mediaval times the most interesting document dealing with the routes in Scotland is an English manuscript British Museum known as Hardyng's Chroncle, written about 1425 by a supposed spy, describing the towns and eastles, with the distances apart, and the order in which they should be taken, as well as the route the armies should follow in subjugating the country. The first survey of Scotland upon a large scale was by Timothy Pont. Aloso work of 1609 was added to by Gordon of Straloch, and the whole published in Blaeus Atlas of 1649. Among these maps the Lothians is the only sheet showing the roads, but whoever filled these into the map had no Adair fed sure knowledge of their course. lowed in 1680 with some beautifully drawn maps, which are preserved in the Advocates d these show the roads very These and Blacus maps were Library, and these show accurately. These and Blacus maps wer made use of and reproduced in small scale with some reads roughly drawn in, in Molls' Atlas of 1722. It was not till 1745 that a real survery of the country was begun, and this was completed and revised to 1755. These road maps now lie in manuscript in the British Museum, and have never published, though some maps reduced from them were issued from 1770 to 1820. A fine survey, mostly from estate plans, was issued about 1822 in Thomson's Atlas, but it was not till the publication of the ordnance survey. '356 and 1886 that we have a true between record of all the roads and paths in Scotland. Of the roads leading to Edinburgh, perhaps the most interesting is the road over the Cheviots from England. It is described in the Antonine Himerary as a Roman road as far back as the third century, v.b., but the Romans lay no claim to it as extending beyond the Northumbrian border, and it equally remarkable that the same thing applies to the Roman road on the west coast, which terminated a little beyond Carlisle. We are, therefore, faced with the question whether the Romans made any roads into Scotland, or whether they simply used the native highways as sufficiently direct for their purpose. In early times we do not know whether the roads in the South of Scotland all trend d towards Edinburgh or not, because this city seems only to have grown in im-portance as the seat of government moved outhwards, first from Perth to Dunfermline then from Dunfermline to Edinburgh. We may take it as likely that the oldest roads leading to Edinburgh would be those from Dunbac, Lander, Dumfries (vià Biggar), Lin lithgow, and Queensferry, all the others being only of local value. As to dates of construction, we have almost no records of any being actually made before 1600. Of the modern roads leading to Edinburgh. broadly speaking, the present roads were formed about 1830; if an older line is seen it would date from about 1780; and if a third and steeper line is observed, it is

the Noth Kitch at Mich yard, sa Scandinavian menunant, showing on each face the remains of a long shafted Celtic cross with a cabled border, the shaft ornamented with a carelessly drawn inartistically designed vertical step pattern. Below one limb of the cross is carved a Viking ship, which is the first example of this device found in the island, and which affords a link with the later monuments of the western isles Scotland. A runic inscript on runs up the shatt, which is interpreted. Hedin set this cross to the memory of his daughter (Hilli). Arni cut these runes. The shuis realistically treated; it is high at the provi and poop, the bulwarks low am dship; the sail is furled, and instead of the fixed rudder at the stern, there is a steering our on the starboard side. Mr. Kermode believed that the purpose of the ship was to indicate the descent of Hlif from Godoed Crovin, from whom both the kings of Man and the Lords of the Isies had derived the ship as an armorial bearing.

THE ART OF THE LEVELAN RENAISSANCE. The last of three between in this subject was given by Mrs. Webster, London, in St. Andrew's Hall, Drumsheugh Place, Edinburgh, on Tuesday in last week. Mr. R. Morley Fletcher, director of the Art College, and J. The additional defends in the The subject dealt with in this presided. The subject delecture was Venetian art. Venice, she said. was a name to conjure with. See Venice and die" was an old saying, which she took to mean see Venice before you die, which was good advice. In speaking of the distinction between Florentine and Venetian art she indicated that while the former school concerned itself with form and line, the latter had more to do with colour and character. The influences which brought about the Remaissance were late in involving owing to its insularity—the art of Venice was the last to come and the last to go of the Italian schools. The artists specially selected by Mrs. Webster for notice were the Bellini family, who had the foundation af the Vene-tian school: Titian, Carpaccio, Giorgione, and Tintoretto, and of their admired works several notable examples were shown on the lantern screen. Speaking of Titian, Mrs. Webster sand that in his time Venue was in the height of her power and the fulness of her beauty and intellection vitality. The great endowment of Titian was in painting; unlike Leonardo da Viaci, be was not e man of all round accomplishments, but in the history of art none bad used colour with such a majestic conception of its power parcio, who was one of the Belimi group. pacero, who was one or the bennin group, was an excellent artist, as his pactness of St. Frsula and St. George, still in Venice, showed. Tintoretto, another of the great Venetians, was a born painter, a great draughtsman who endersonied to combine the Plorentine line with the Turan colour. picture of his must rpiece. The Miracle of the Slave, now in the Academy at Venice, was shown and explained

The History of Art in Scotland Mr. J. Campbell Mitchell, A R.S A., of the Einburgh College of Art, addressed the members of the Eastern Brush of the Scotlish Art Teachers' Association, at Dundee, on Inosday in last week. M.ss Wingale, president of the branch, presided Mr. Campbell Mitchell, in tracing the early history of art in Scotland, said then was a popular belief that Scotland had always been at insertistic nation, an error based on ignorance of Scotlish history. Unfortunately, much of the art of earlier generations had been destroyed during the troublous times which all the flowed the death of Alexander III. and during the Retormation.

being only of local value. As to dates of construction, we have almost no records of any being actually made before 1600. Of the modern roads leading to Edinburgh, broadly speaking, the present roads were formed about 1830; if an older line is seen it would date from about 1780; and if a third and steeper line is observed, it is almost equally safe to say that it was laid down about 1755. A paper by Mr. P. M. C Kermode, F.S.A. Scot., recounted further discoveries of early cross-slabs in the 1sle of Man. The most interesting of these found

, for his paper on The Product of Water Power. A
Horizont, Value £5 3s. to Mr.
Launer. Barrister-at-Law. From the paper entitled "Law 2 to 2 Some Points of Contact." Law 2 to 2 Some Points of Contact." It is paper on "Main Roads, "Present The report of the common Lord clopted. The scrutmeers of soft a special that the following extend as members of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council set of the council se sa i opered that the following sected as members of the council of is for 191t. President, Percy Griff V. Presidents, Henry C. Adams, W. Foss, Josh W. Noble Twelvetrees; mem some result. Henry Adams, C. T. Walt, E. L. Bull, Bargard Geen, the Rt. L. M. Headay, F. H. Hunmel, T. J. Lette, B. H. M. Hewett, G. A. Becks and O. Case, Associate Member of Council con Associate Member of Council, y. Hen Secretary and Hon. D. B. Butler, Messrs, Begbie, R leaven and Cox, chartered accountants vere reappointed as auditors for the year ies of thanks to the conneil and that see 1915 and to the scrutmeers of Isis for the election of the new Agre passed unanimously.

LEGAL INTELLIGENCE. Description Tuesday and Wednesday of test appeal was heard of Elliott v. The appeal was heard of Elliott v. The first Honour Judge Woodfall in Westmaster County Court on October 25 as an expected in our issue of the 3rd of pp 52:17 Mr G A Scott and Mr. Scottare appeared for the appellant, and Mr. Elisot as Dr C Hegbert Smith for the respondent, the executive of a decreased architect. Mr T Woodbridge Biggs. Mr. Scott M: I Woodbridge Biggs, M: Scott that at action was brought some time to by M: Biggs, since deceased, for barness of certain fees as archi-for works of repair and decoration (consection Mandenhead executed in 1914) Ell-or and was decided in plaintiff's It Jone fast an action was brought by It I me tast an action was brought by the appelant as halding owner against the accuracy is executed as a larm for £257. Ed. on the ground that Mr. Bogs and regigently issued his certificate to the benades and scrondly, it was alloged that it has been according in the second another contractor a sum of these and actaelt guineas for the supply of allowing the received from another contractor a sum of these and actaelt guineas for the supply of allowing the received from another contractor as under the second acts for the received from the supply of allowing the received from the supply of allowing the received from the supply of allowing the received from the second acts for the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the defendant in the County of the chain the county of the chain the defendant in the county of the chain the defendant in the county of the decendant and additional acts the decendant and additional acts the decendant and additional countries of the lacent of the lacent of the lacent of the chain and additional acts that the property within the estate, and, therefore, it did not sto to be money or property within the the chain the decendant in the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacent of the lacen to which imming owner to be in the configuration. To the second of the claim the defendant in the County that of replied that it was of the nature test and dave notice of a special feet under the Statute 5 and 4 William mode which an action for tout against a the coset most refer to acts alleged to the coset most refer to acts alleged to the coset months of the first program within six months of the first most most be coset. This was upheld by the learned this was upfield by the learned of the day, and, counsel contended, by for although the late Mr. Biggs, does February 1 of this year, was to have been any 1 of this year, was to have been any 1 of this year, which advanced the moneys from the company 17 (1912), we the limitation A find not apply where as in this contended was advantaged with the claim, the way of the his part of the claim, the way of the his part of the claim, the way of the distribution of Jone (1915), which admittedly that reading the Mr. See this contilioned as architect. I feather and better particulars issued 21 of this year a month later, the first of the distribution of the county Court was the original particulars. learned County Court the original particulars Counbers v. Goldthorpe." Master of the Rolls and a and Romer in the Court vice preliging to the Master Backnill in a Master Backnill in the Master 1961, p. 265. Vol. in 185 at in issuing his rive to another the small vice and not be small vice and not be small vice. The County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County County The County Court t alors showed to cause of tended that inde Counts 11 R de 12 S 200 7.

plaintiff was entitled to submit such amended particulars as were sent in in this action, and that the County Court judge was bound to hear evidence as to the alleged negligence in hear evidence as to the alleged negligence in supervision and give judgment upon the facts as to the alleged "tack of supervision" in which the architect acted not as an arbitrator, but merely as a supervisor. Dr. Herbert Smith, for the respondent, argued that if the learned County Court judge gave his decision on the actual facts there could be no grounds of appeal. Any grounds of appeal could only ine based on points of law, and Judge Woodfall's decision, given in his discretion under Rule 12, related to two questions of a legal nature. First, as to the alleged tort—as to which they would have proved, if evidence had been called, that no fraind was compared to the state of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country of the country Any grounds of appeal could only mutted—the secret commission was alleged to have been received in 1912 by Mr. Biggs, who died on February 1, 1915, and the action was tried on Oct. 25, 1915, so that in neither respect was the six months' limitation, before the death of the person alleged to have received the secret commission or the bringing of the action, observed. Then the further particulars. action, observed. Then the turner parts and furnished a month after the original statement of claim was submitted, disclosed an entirely fresh cause of action, namely, negligence in supervision and not negligence in mproperly granting a certificate. He cited "Chambers v. Goldthorpo," supra, which disposed, as the learned County Court judge had held, of any claims pleaded in the original par-ticulars against Mr. Biggs. Dr. Herbert Smith further contended that the particulars of the case should have been dealt with as a set-off to Mr. Biggs's action during his lifetime and not as the appellant had done, when the appellant had lost the case brought by Mr. Biggs against him and present action was started against the executrix. In "Rogers v. James" it was held that an architect was liable for negligence in supervision, even although he had given a final certificate. In giving judgment, Mr. Justice Coleradge said he would dispose first of the Coleredge said ne woo...
point about which he thought there could be no dispute—a small claim for three and a half guineas for extra copies of specification, regarded by appellant as a fraudulent or illegal commission. This was not a tort, the proceeds or nature of which had been appropriated by the eleceased Mr. Boggs and added to his estate, and, therefore, it did not seem to him to be money or property within the purview of the Act 3 and 4 William IV., whichever we in the hands of the plaintiff. Therefore, it seemed to him not to be within the pro-visions of the Act nor to be in the nature of a tort to which the general maxim personalis moritur cum persona applied. A more difficult problem was raised by the question as to the amended statement of claim, the second portion of the appeal. It was admitted by counsel on of the appeal. It was admitted by counsel on both sides that the original particulars showing a claim for negligence in improperly granting a a claim for negligence in improperly graining a certificate to the holder did not disclose a cause of action, and would not be upheld in view of the decision in "Chambers v. Goldthorpe," for the architect, in granting such a certificate, was acting as a quasi arbitrator. But further particulars were called for and were submitted. and it was open to consideration whether these did not give a good cause for action. His lord ship was not persuaded that the learned County Court judge had his attention clearly drawn to this point, that the second set of particulars, in so far as they were merely a reiteration of the first particulars, added nothing, and that his attention was not drawn to the question his attention was not drawn to the question as to whether or not it disclosed a good cause of action. So far as he could see, the County Court judge did not apear to have quite appre-ciated that point. Under those circumstances he considered the best course to pursue would w that the action should be sent down to the be that the action should be sent down to the County Court judge for him to consider that point—if the second particulars did not show a cause of action. If they did not, there was nothing for the judge to decide. If, however, they did disclose a fresh cause of action he (the learned judge) ought to consider, whether or not it was not competent to him to try that cause of action and determine it. It would, he to use of action and determine it. It would, he thought, be better that the judge should consider that point carefully and come to a judicial conclusion about it. Mr. Justice Low con-curred, observing that it seemed to him that the question of whether or not these very confusing particulars disclosed a fresh cause of action was essentially one for the learned County Court judge to decide. His lordship would not express any opinion on this point beganse that was really for the County Court codes to decide. In answer to Dr. Herbert Smith, Mr. Justice Coloridge stated that there would be no order as to costs in this anneal.

Heavy Penalties for Restming Work.

At Newcastle on-Tyne County Court of

Thursday, John Riddell, plumber, of 285, Shields Road, Newcastle, made an unusual claim against the United Operative Plumbers' and Domestic Engineers' Association of Great Britain and Ireland, of 82, Osborne Road, Newcastle. The plaintiff was a member of this trade union. About four years ago, owing to incapacitation through physical injury, he became untilled to and was granted owing to incapacitation through physical injury, he became entitled to and was granted superannuation benefit. In March, 1915, he applied for leave to resume work, and the request was granted, but the association demanded that he should repay the superannuation money he had received, amounting to about £64. Plaintiff resumed work at his to about £64. Plaintiff resumed work at his trade, and offered to resume his contributions as a full member of the association. This was declined, and it was decided that the plaintiff, having started work, had severed his membership entirely. In consequence, his fellow-workmen refused to work alongside him. Threatened with the loss of his employment, he was compelled to rejoin the association as a trade member of the of his employment, he was compelled to rejoin the association as a trade member of the third degree, to whom benefit was restricted to strike pay. The plaintiff claimed a declaration from the Court that so long as he conformed to the rules of the association he was entitled to participate in the rights, privileges and benefits of a full member, that his exclusion from the association was invalid, and that the association should be restrained by injunction from excluding the laintiff. His Honour Judge Greenwell said the society had made a fair offer for bringing Riddell back into the society when they sug-Riddell back into the society when they suggested the repayment of the £64. If the plaintiff wished to argue further with regard to the Court imposing rules upon the society, then he was entitled to invite the Divisional Court or the High Court to do it. Judgment was given for the defendant association with costs.

### TRADE NOTES.

Boyle's latest patent "Air-Pump" ventilators have been applied to Lanark District Asylum. Hartwood

On and after the 20th inst., Mr. Percy B. Tubbs, F.R.A.B.A., will continue his practice of architect and surveyor at his new offices. No. 10, Gray's 1nn Square, W.C. The telephone number will remain the same, but the Exchange altered to Holborn, viz., Holborn 1111.

Rough-cast walls are often porous owing to their uneven surfaces, which hold the water from driving rains. We are interested to hear that ten houses in an exceptionally exposed situation at Ebbw Vale were rough-casted with Paulleul at the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control Pudloed cement over two years ago, and are still perfectly watertight. ...

The business meeting of the Royal Institute of British Architects, arranged for January 3, has been cancelled.

Mr. Henry E. A. Woods, recently Inland Revenue valuer at Chippenham, has been ap-pointed assistant valuer to the War Department (Eastern Command).

The death is announced of Mr. Thomas Bonner, who had been borough librarian at Ealing since 1883. He was the inventor of the Bonner indicator, which is in use in a number of

Mr. Charles Finch Dowsett, of Lincoln's Inn Fields, died on Friday last at the age of seventymne years. He was an authority upon ground rents, in which he transacted a large business. For many years he published "The Land Roll."

The Nantwich Rural District Council faced with a demand for payment of £6,268 16s, for pipes cast for the Audlem and district water supply scheme, which the Government has now refused to sanction. There is, how-ever a probability of the Local Government Board taking over the pipes for a Government department.

Consequent on the retirement at the end of the year of Mr. A. C. Mountain, city sur-veyor, the City Council of Melbourne, Vic-toria, has decided to combine the offices of city surveyor and city architect, and to ap-point Mr. H. E. Morton, the city architect, to the dual office under the designation of city engineer.

Mr. James Everett Bownass, A.R.I.B.A. of Princess Patricia's Canadian Light Infantry, has hitherto been reported "missing." and is officially stated to have been killed in the trenches at Bellegarde Wood, near Hooge. Belgium, so long since as May 8. He was an assistant in the office of Messrs. Darling and Pearson, Leader Lane, Toronto, and had been an Associate of the Royal Institute since 1909.

# Building Intelligence.

hall at Duncairn Brigast -The new Presbyterian Church in memory of the late Right Hon. Thomas Sinclair, D.L., was opened on the afternoon of the 10th inst. The building, designed by Messrs. Young and Mackenzie, architects, Scottish Provident Buildings, zie, architects. has cost £5,500. The central feature is large hall facing the Antrim Road. At the rear of this hall is a wide corridor lighted from above, and more than 100 feet in length. On one side of the corridor are entrances to the hall, kitchen, session room, and offices, and on the other to the ladies' room, minor hall, and two large class rooms. The contract was and two large class rooms.

and two large class rooms. The contract was carried out by Messrs. McLaughlm and Harvey, Ltd., York Road, Belfast.
EDMONTON, ALBERTA. — Commenced in May, 1914, the central unit of the University All, and the Commenced of the University All, and the Commenced of the University All, and the Commenced of the University All, and the Commence of the University All, and the Commence of the University All, and the Commence of the University All, and the Commence of the University All, and the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Commence of the Com sity of Alberta building scheme has just been completed at Edmonton by the contractors the Geo. A. Fuller Company, Limited, Mon-treal, from plans by Messrs, Nobbs and Hyde, architects, Montreal. It is known as the Arts Building, and consists of a main building. with an assembly hall at the west end together with separate structures for labora tories and power house. The style of architecture is Free Classic. The main building has four stories, and is 300 ft. long and ft, wide, while the assembly hall is 100 ft long and 60 ft. wide, and is seated for an audience of 1,000. The exterior of the main building has a base of granite, with walls of Tregillus brick and dressings of Indiana limestone. Between the third and fourth floors on the oriel windows four carved panels represent Philosophy, Music, History, and Mathematics. The basement, in red and and Mathematics. The basement, in real and grey brick, contains a stock-room, a book-receiving room, book store, a printing department, elementary physics laboratory, and a spare laboratory. There are also men's and a spare laboratory. There are also men's and women's dressing rooms, band room, storage room, and ventilation system. provides accommodation for the public activ: ties of the students. The entrance hall has walls in semi-glazed terracotta, the floors being of marble. From this hall there is a wide passage, with a barrel vault, which leads directly to the assembly hall. On this floor are the students' common-room, lecture room, and laboratory of the advanced physics department, offices of the University extension department, women's common-room, four class-rooms, and a lecture room, with offices. Other class-rooms are on the floor above. All the class and lecture rooms are constructed on the one, two. and three-unit system, which will permit of the hollow-tile curtain partitions being removed and any of the rooms enlarged to meet future requirements. are provided with the stadium throughout

style of seating. HERNHILL.—The Archbishop of Canterbury consecrated last week important additions to the parish church of Hernhill, East Kent. which have been carried out at the entire cost of Mr. William C. Dawes, of Mount Ephraim, as a monument to his father, the late Sir Edwyn Sandys Dawes, K.C.M.G. The additions comprise a chapel on the north side of the chancel, and an organ chamber on the south side. The original walls en-closed by the additions have been opened up by arches and an oak screen spans the new arch between the chapel and the choir. A new stained-glass window to the memory of Sir Edwyn is placed in the chapel, and there is also a memorial tablet of brass on marble. The work was executed under the direction of the diocesan architect, Mr. W. J. Jennings, J.P., M.S.A., of St. Margaret's Street, Canterbury.

Mr. J. C. Wilson has resigned his position as estates manager to the Bournemouth Cor-

The Bristol Docks Committee have adont The Bristol Docks Committee have adomed recommendations for the reconstruction of the craft delivery plant on the east side of the Royal Edward Dock necessitated by the extensions to the Co-operative Wholesale Society's premises at the Royal Edward Dock; also the provision of barge discharging plant between Sheds O and P at the Royal Edward Dock.

### OBITUARY.

Mr. Baldwin Brown, A.R.I.B.A., who had been for several years on the staff of the city architect for Bradford, Mr. W. Williamson, has died, after a surgical operation, in his fortieth year. He served his articles with Mr. Rhodes Calvert, of Bradford, and was afterwards in the offices of Mr. James Ledingham and of Mr. Edgar A. Parkinson. He was keenly interested in the housing problem and in town-planning, and had prepared several schemes for the replanning of the central area in Bradford preparatory to the competition recently instituted. A resolution of the City Architect's Committee has been passed, expressing sympathy with his sorrowing parents and their family, and high apprecia his sorrowing tion of his "devoted services," He became a student of the Royal Institute of British Architects in 1903, and was elected an Associate five years later.

We regret to announce the death of Mr. Samuel Elliott, of Caversham, the founder of the firm of Samuel Elliott and Sons (Reading). Ltd., which took place on December 13 last. The deceased was sevency some years of age, and was one of the early pioneers was and moulding trade, of the high-class joinery and moulding trade. with which his name was intimately connected for many years, both at Newbury and at Reading, and gained many gold medals and awards at home and on the Continent. Mr. Elliott was born at Newbury, Berks, in 1838. and commenced business in his native town and commerced dusiness in in 1859, succeeding to the building business of his grandfather. Mr. Elliott was a builder and contractor of considerable ability and emmence, and carried out several church contracts under the late Sir G. Gilbert Scott. the late Mr. G. E. Street, and for the late Mr. John F. Bentley at Westminster Cathe-dial. He also carried out considerable building work under the late Mr. Alfred Water-house, R.A., and the late Mr. Norman Shaw, R.A., notably under the latter architect. Shaw, R.A., notably under the latter architect, "Greenham Lodge," Newbury, and "Greenlands." Henley-on-Thames. While Mr. Samuel Elliott was a contractor at Newbury, he erected in Reading the Old County Court Offices, since pulled down, and the Congregational Church, Friar Street. Reading, which has been consulted by the Deadling Theorem. now occupied by the Reading Theatre, besides several houses in the Katesgrove district. He undertook the re-erection of Temple Bar in Theobalds Park, Herts, but of recent years he turned his attention to high-class joinery and mouldings, first at Newbury, and latterly at Caversham, Reading. The business at Caversham is being carried on at the The husiness present time under the name of Samuel Elliott and Sons (Reading), Limited. Mr. S. Elliott was a Freemason, belonging to the Deptford Lodge. The deceased had been suffering lately from almost total blandness, but his mental faculties were unimpaired to the last. He leaves a widow, two daughters, and three sons, two of whom are directors of the com nany. The interment was at Caversham, on Thursday, December 16. Mr. Elliott was of nanv. i most genial disposition and great energy, and invented many useful and valuable natents.

The death took place at Portland Villas Plymouth, on Sunday in last week, in his eighty-third year, of Mr. Robert Thomas Relf, a well-known contractor for considerable milway and Government works in Devon and ornwall. With his son, Mr. George Robert Relf, deceased carried out several contracts for the Great Western Railway in Cornwall, nelnding the doubling and diversion works on most of the line between Saltash and Penzance, including many new masonry via-Penzance, including many new masonry via-berts to take the place of the old wooden structures designed by Brunel before 1859, when the Royal Albert Bridge across the River Tamar was opened, the principal being those between Saltash and St. Germans, and those between Saltash and St. Germans, and it Danbuz's Moers and Carvedras, at Truro. Messrs. Relf also carried out the improvement of the Treamble I ranch of the Cornwall Minerals Railway, the Newquay station improvement, the Retew branch from Retew Mellangoose, Bodmin Station yard, and the Bohmin and Boscarne Junction Railway for the London and South-Western Co. In his last years Mr. Relf was also associated with his son in a railway no the associated with his son in a railway no the Trenance Vailey, St. Austell, now being built.

# Correspondence.

ARCHITECTURAL ASSOCIATION CHE VOLUNTARY AID DETACHMENT

To the Editor of THE BUILDING NEWS

SIR. The necessity and importance of Rod Cross work hardly need emphasis at the pre-The interest to be found in it can sent time. be attested by anyone who has undertaken it. What does require emphasis is the need of a constant supply of workers, and I venture to draw the attention of your readers to the draw the attention of your readers to the detachment now registered by the War Office as "London 43, V.A.D., Westminster Division," with headquarters at the Architectural Association, 18, Tufton Street, Westminster, S.W.

There is plenty of work to be done, and

any man who joins may be sure that his services will be used as soon as he is qualified. Classes for instruction are held as recruits counce in. The first course of first-aid lectures was given by Dr Spicer in Septem-her. Dr. Brydone, the medical officer of the detachment, continued with a course on home nursing, and has given a course on first aid for the examination at the end of this month He is now holding a third course, and another is to begin soon after Christmas. There are between sixty and seventy names on the roll, of whom between thirty and forty are already

qualified.

As this is the only men's detachment in the Westminster D. vision, they have been called amon to assist in many ways. Thus, we proupon to assist in many ways. Thus, we provide orderlies for the Officers Hospital at 24, Park Street, and for Lady Violet Brassey's Park Steet, and for Lady Violet Brassey's Officers' Hospital, and propose to do the same for the large soldiers' hospital soon to be established at 184, Queen's Gate. We have volunteered professional services in advising the Westminster Division on the various houses which may be turned into hospital than the propose to assist the pitals. Our stretcher-bearers hope to assist the London Ambulance Column in meeting the trains of wounded at the railway stations and conveying them to hospitals, and we are almost hoping for another successful air-raid, because the police have asked us to be ready to render first aid and do what we can to succour the victims. Our commandant, Mr. Ambrose W. Coffin, is constantly asked for volunteers to undertake all kinds of jobs, from conveying stray convalescents across London to lending a hand to meet a rush of clerical work at headquarters. Parades for company and stretcher drill are held under the instruction of Sergeant Daniels, of the R.A.M.C., who in quieter times is an engineer in Canada.

We make a special appeal to architects and men of kindred occupations, because through them the detachment came into being, and most of our members are drawn from these callings. But we welcome all men of goodcannigs, but we wercome an men of good-will from any station in life. The only conditions are that they should be either not eligible for military service or already attested under Lord Derby's scheme, and the only financial contributions required are a nominal entrance fee and the provision of their own uniforms. The work will increase as the war goes on and the more workers we can have to draw upon the better. It is certain that no man who undertakes the work will regret it, and the knowledge he will gain is such as every man ought to possess and as will make him more useful in every branch of life.

For further information and application forms, inquiry should be made to the Quar termaster, Mr. V. Wilkins, at 18, Tufton Street, or the Commandant can be seen there Yours faithfully. on Wednesdays at 6 p.m.—Yours fa

Hon. Sec. Architectural Association. 18 Tufton Street, S.W

# Our Office Cable.

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the apposite might be the case. All agreed with the statement that in many branches a industrial active had been fairly beaten by Germany and Austria, because the reation of art to commer that he more shownly stalled all better macristood in those countries.

A correspondent of the Times describe the recent discover es made as the result of exeavations in St. Augustine's Abbey Chinea. Canterbury. Some months ago the layer of earth which marked the level of the monks' choor at the Suppression was removed, and further exeavations revealed the circular femalations of Abbot Wulfrie's work. This consists of a building circular within and octagonal without, for which there is no paradlel in England before the Crusades, when there were the carcular Templars' churches modelled on the church of the Holy Sepulchre Within is a circle, surrounded by eight solid masonly foundations, on which stood either pillars or solid piers, and an octagonal exterior, which opened on the east into the original Abbey church, which was built as few years earlier by Ethelbert and St. Augustine. The portions of St. Gregory has been discovered, with the tombs of Laurence, Mellitas, and Justus, the second, third, and fourth Archbishops, in a row from east to west, against the north wall, just as they were described by Grocelin, a monk of Flanders, over eight lumdted years ago. North of the wall is the hole in which the mathle sarcophagus of Abbot Adram rested during the rebuilding by Abbot Scotland in 1070. The tombs were empty, as the holes had been translated, but they were just as they were left in 1091.

The annual report of the Department of Technology at the City and Guilds of London Institute gives a review of the work carried on during the session 1914-15 under the on during the session 1914-15 under the exceptional conditions due to the war. As was to be expected, the numbers of students attending classes for technical training and those presenting themselves for examination at the end of their courses of instruction have been materially reduced. Although the total number of classes registered in tech nological subjects remains practically the same, the number of students in attendance thereat has fallen from 55,996 to 47,050 this theteat has failed from 55,996 to 44,050 this year a reduction of hearly 16 per cent, on last year's figures. Correspondingly the number of candidates who have presented themselves for examination in technology from centres in the United Kingdom has falled from 25,119 to 15,623, a dicrease of there from 25.119 to 15.625, a decrease of nearly 52½ per cent. During the session, 183 names have been added to the institute's 1.235 or teachers in technological subjects. 155 persons have been approved as assistant institutors in technology or as teachers of classes in domestic subjects, and 288 appliance by the domestic subjects, and 288 appliance. ants have been provisionally recognised. can't have been provisionally recognised. The institute's cannitations for tendinates for the institute's cannitations for tendings certificates in wood work and metal work suffered severely on a cast of the war. The advisory committee clock was formed in the autumn of 1914 to asset the work of the institute by its advice on be subjects connected with the building trades has held several meetings at which the symmetries of termination in garaginary and trades has held several meetings at which the systems of examination in carpentry and pamery and in britawork have been under early and cration. At the suggestion of the institute's advisor, commutate on plumb 12 to a number of typical specimens of the resistance of typical specimens of the resistance of the specimens of the resistance and students, several London and province all firms co-operating in the status of the resistance while unit, South Kensing at the status exclusion to the unlike

of pipes for bending and jointing being reduced to 2 ins. in drameter.

Lord Joicey formally opened on Thursday an exhibition of pictures and curies relating to Oid Newcastle in the Laing Art Gallery, frigam. Place. Newcastle-on-Tyne. The paintings in oil and water colours are exhibited in galleros A and B, while the engravorded in galleries A and B, while the engrav-ings and portraits, maps, plans, objects of artistic it test from the olden days, examples it astrating Newcastle's past indus-tries, a model of the old Tyne Bridge, a model of Chollerford Bridge, and the large model of Newcastle in the sixteenth century presented by Lord Joicey and Mr. John G. Joicey, are shown on the ground floor of the autlang. The last mentioned model of the period of Queen Elizabeth gives a vivid idea of what Newcastle was like at that time. It is a permanent gift to the gallery. There are 126 water-colour pictures and 45 oil paintings and portraits, each of special local interest. In the museum section there is a fine collection of Newcastle silver plate dating from the year 1664 to 1791, lent by Mr. Thomas Taylor, and there are attractive specimens of old Newcastle pottery and many specimens of old Newcastle pottery and many other curios. A notable water-colour picture depicts the old Tyne Bridge during the great trost of 1784. The Castle appears in its original state, and the venerable Chapel of St. Thomas, with the Exchange, and the famous crow's nest on the pinnacle of its spire, is shown. H. B. Richardson's fine work descriptive of the great fire at Gateshead on October 6, 1854, is lent. Mr. F. G. Evans has presented a picture of the demolition of the New Gate, 1825, and there is a capital view of St. Nicholas's Church from the Groat Market by T. M. Richardson. Many of the old buildings in the Groat Market were removed when the Town Hall was built. "The old buildings in the Great Market were removed when the Town Hall was built. "The Middle Street, 1847," "Grainger Street, 1833," "Castle Garth, 1844," and "Old Houses which stood on the site of the present Town Hall" are all views to catch the eye. There is a water colour of the "Interior of the Chapel of St. Mary the Virgin, Westgat: Read, 1844, by John Sterey, whose sketch was made on the snot during the sketch was made on the spot during the demolition of the building in March of the year named. Another picture to attract attention is T. M. Richardson's The Postern Gate, which adjoined the Deuton or Neville Toxer, and stood at the tack of the premises of the Literary and Philosophical Society, It was from this gate that a sally was made in the reign of Edward III, against the army of King Divid of Scotland, which was encamped on the Forth. There are many other local views by Richardson, sen, and through his work we get a comprehensive pictorial history of the town as he knew it. Other artists represented in the water-colour section are R. J. S. Bertram, J. Skelton, T. H. Hair, F. R. J. S. Bertram, J. Skelton, T. H. Hair, F. Muckenzie, J. L. Bond, Birket Foster, J. Wool, S. Brownloov, Thomas Wakeman, J. Eyre, Joseph Crawhall, W. Mackay, W. J. Hepper, J. A. Stephenson, J. J. Potts, and J. Embleton. Among the oil paintings are the late R dph Hedbey's "Scottish Prisoners on the Tower of St. Nicholas's Cathedral, 1644," Wilson Hepple's "Barge Day on the Tyne," W. Bell Scott's "The Building of the Castle," James Ramsay's "The Lost Child," icst exhibited in 1825; H. P. Parker's "New-Castle. James Ramsays "The Lost Child," instructional in 1925; H. P. Parker's "Newcastle Naturalists and Other Worthies," and Wilson Hetple's "John Wesley preaching in the Sindhill.

the solution. At the suggestion of itels advisor, committee on plumb in anher or typical specimens of work over prepared for the guid specimens of work over prepared for the guid carbon. At the suggestion of the City was reported by Mr. T. F. Rider, charman of the Assessments Committee, at Timesday's moting of the Corporation at the Guidhall. The gross value of the City was growned firms cooperating in the arrangement of the Assessments Committee, at Timesday's moting of the Corporation at the Guidhall. The gross value of the City was 25.371.498, and the net rateable value of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the conference of the c

of the twenty-eight boroughs give a torn value of £9,298,000, which represents a de crease of £40,600.

A scheme for preventing disputes in the huilding trade has been decided upon at a meeting of the National Conciliation Board for Building Trades held in London. meeting was attended by representatives of builders and workmen of all trades master from every part of the country. The scheme provides for the establishment of machinery for dealing with demarcation questions which may arise from time to time, and which in the past have led to some bitter and prolonged disputes in the building trades. Local districts and national Boards of joint represen-tatives will be created to decide the demarcation problem. Of twenty-two minous affected by the proposal, eighteen have assented.

The great delay in the return of emptiis causing considerable expense inconvenience to the paint, colour, and varmshi manufacturers and their buyers. The National Federation of Associated Paint, Colour, and Varnish Manufacturers of the United Kingdom have been in communication with the Railway Executive Committee, and has sug gested that the railway companies should con sent to receive empties at all their stations sent to receive empties at all their stations in the ordinary way, say, once a week or at least four times a month, and undertake to return them to the paint producing centres as soon as possible thereafter, or not later than, say, three days after the time they receive them. On August 28, 1915, the Railway Executive Committee replied that every effort was being made by the Railway Com panies under the prevailing conditions to facilitate the working of the traffic. Little or no improvement having taken place, the Federation have again drawn the attention of the Railway Executive Committee to this im portant question, emphasising the tau that in some districts, particularly London and the South of England, it is nearly an impossibility to get back these returned empties, also pointing out that some of the statics musters were declining to accept these empties, even on the terms mentioned above. The Railway Executive Committee has been asked to cause instructions to be issued by the Railway Companies to their station masters to receive empties when presented and to despatch them with the least possible delay to the paint producing centres. It is obviously in the interests of buyers that they should competate in the movement for these returned empties and we would appeal to them to make every endeavour to assist the railway companie in dealing with this traffic, by making delivery of their empties at the stations and not wait for them to be collected. We also urge that cases of refusal by station masters to accept these empties should at once be brought the attention of either the Secretary of the National Paint Federation. Exchange Build-ings, Bowlaliey Lane, Hull: or the Railway Executive Committee. 55. Parliament Street. Westminster, London, S.W.

The Val de Travers Asphalte Paving Company issues from Hamilton House. Bishops-gate, E.C., one of the nestest and most artistic desk or wall date plaques for 1916 that has reached us. It is a Ironzed tablet about 8 by 6 ins., bearing a well-designed and executed representation of the company's men laying down asphalte in the pany's men laying down asphalte in the street. In the lower right hand corner an unobtrusive but convenient niche takes the date-cards, which are easily shifted, and which readily catch the eye without spoiling the effect of the plaque, which most of us will keep for many years.

-Mr. Edward Palk Boxev, of Brigifield, Torquay, builder and contractor who died May 10, has left \$22,159.

A curved oak clergy stall has been placed in the Ilkley Parish Church. It is made out of an oak tree that grew in the playground of the Ilkley Church schools

H.M. Chargé d'Affairs at Santa Draningo reports, under date November 5, that the construction of a concate puer, 1,130 ft in length, and Customs buildings, is projected at Puerto Plata. Tembers will be called for after the scheme has been approved by Congress.

### PARLIAMENTARY NOTES.

PARLIAMENTARY NOTES.

1. Secretally Brian In House of Committees and L. Sayingat into consideration of the Report of the Increase of Kent and Mort 2020. Interest of Mr. Long, President of the Locat Georgement Board a new claire was added to the Inches these as a proceeding moderate which would postify a mission of the measure. The test agreed that the waster rates. It was asserted that an inscrease of modified mixture is the waster secretal head aboved at non-vertal moderate and secretal head on the stater rates. It was asserted the above data non-vertal moderate stream and performed the war. Mr. Long moved as amondment of the section of the section of the read that a terrint should not be evented as long as he paul lits remained here for other moderate of the had committed waster in head ground than he had committed waster in head ground than he had committed waster in head of the conduct which was a missance of increase to neighborhaid or paired by the "andoned for the one quate not intuised to "some other paces in in his employ." In answer to Mr. Wandle and Mr. Prother is he explained that it had been impossible to provide in the Bill against open in his employ. In answer to Mr. Wandle and Mr. Prothers he explained that it had been impossible to provide in the Bill against open the subject of the Solienton General had undertaken that the matter would be very carefully considered which would preven the recurrence of such grave acts of impositive. The amendment was agreed to add at the end of the clause the flow hinds agreed to add at the end of the clause the flow had been in the seasonable that the mortrage satisfies the County Court that his security is extended in any enforcement for the annelment was agreed to add at the end of the clause the flow the sing. "The value of the more give a stickles the County Court that his securities him to call in and enforce the sing." Mr. Long, discussing a proposal that hunding sometics should not be previoued from the Bill nor permit them for raise their raise of modif vs. c. L. Blat Inc House of Com the concessions he had already made, and offered no more suggestions. The Government would carefully watch the effect of the Ball, and if it rendered the position of hadding so is the australia he would she whether unlied candidate be given. The amendment was negatived. On the metion of Mr. Long, an amendment was introduced to exclude from the Ball lodgers who introduced to evelude from the Bill lodgers who made payments in respect of beard, attendance, or use of fundance A subsession (5) was inserted in clause 2 in the following terms on the surgestion of the Solicitor-General. Where the standard rem payable in respect of any tenancy of a dwelling house is less than toot finds of the rate file value thereof, this Act Sull not apply to that rent or tenancy not to any morigage by the landlord from whom the tenatey is held of his interest in the dwell and house. "This concluded the Report stage, and the Buk was read, a third time. and the Bil, was read a third titue

Mr. H. H ward has rescended his position as diveyor to the Littlehampton Urban District bouncil.

The Vice-Chancellor of Cambridge Univer s ty announces that Sir Eustace Gurney, of Sprowston Hall, Norwich, has offered to precut to the University certain farms, producing a rental of about a bundled pounds a year, for the improvement of the theory and practice of forestry

Mr. Alick G. Hosnidt, A.R.E., member of the council of the Architectural Association, and Sorne Medallist of the Royal Institute in 1910, second heutenam in the 7th Suffolk Regi-ment, who was wounded in the left thigh on the 24th ultras, we are glad to hear, progressing tryonnably at the Eastern Military Hespital at Cambridge, and hopes to be about soon.

At a Consistenty Court held in the Manchester Coeffed permission has been given the the creation of a standed glass window in the mouth transpit of St. Martin's Charch, Costletter, to the memory of the late Lacatemant O'Neill, of Machand Grange, who was killed at the Dardanelles on Jame 10. It will be a family by women, containing as many figures. or the Dardanelles on June 10. It will be a St. Mark window, containing as many figures. St. Mark will be shown deviding his cleak with the beggar, and the other scenes depicted will be St. George's conquest of the drazeon, the death of St. Oswald, and the martyrdom of St. Alban. Messrs, Shrigley and Hunt, of Lactus er, were the artists.

### CHIPS.

are tox 413 pemis of the London Architectural Association serving Printer.

16. Axbradge Rigid District Council considering a scheme for constructing a reservoir for the Winchord and Shiph in water size v at an estimated cost of from £3,000 to

To the lendings of Delaware College, at Newark, Del., a abrary and science bundings or mount to be added from pairs by Mr Frank Mics Day, 925 Chestina Street, Phila

The bearth surveyor of Elgin, Mr. A. Threefi, has been instructed to ascertain the est of carrying out a rangements proposed by 1 in to prevent a recurrence of the flooling at the foot of Lossie Wand.

A Local Government Board reputy will be A Local Government Board in quay will be held at Beatley, near Doneaster, on Friday in next week the 51st inst. into an application of the Beatley with Arksey Urban District Coun-cil for authority to prepare a town planning scheme with reference to an area within the making desired. urban district.

The city architect of Teponty, Mr. W. The city architect of Teronto, Mr. W. W. Pearse, has not tests made of all the brick supplied by the large Frick manufacturing concerns in Toronto and the vicinity. The data and bricks are kept in a cupboard, and are available for the general public's use. The architect's department also has a cement testing machine.

my machine.

With reference to the question of a water simply for the growing parish of Mellor, the Havineld and Mellor Runal District Council have resolved that Mr. F. C. Arkwright be offered £2.5 for his private water under taking in Mellor, and that in case of dispute the Local Government Board be asked to arbitize between the parities.

The list of distinctions obtained by officers trained in the Avists Rules Officers Training Corps includes two Arctoria Crosses. If Military Crosses one C.B., one Medallh Military, who M.V.O.'s, and four Victoria models, while nine members have been mentioned in despatches. It is believed that this record is in que for any single mint in the Army.

At the meeting of the Birming's am Educa-

are que for any stagle unit in the Army,
At the meeting of the Berning'ann Educaien Committee, to be held to day Wednesday)
the School of A to Sch-Committee will report
tracts scribes for in the number of pupis at the
School of Architecture, owing to cull stments,
has made the communitie of this school indivisible, and the subscommittee have sleeded
to close it temporarily on January 31 next.
To the B hadd B. Cross Westerder Newton

To the B insh Re. Cross H spiral at Netley the Vacher memorial be read for an was added this week. It is 60 ft, by 20 ft, and is provided with a stage and scenae effects, with dissengerooms. The half was built by M. Jukes, of Scothamptor to the design of Mr. Dyke, of H.M. Office of Works, London, under the supervision of Mr. H. Beidgeman, the leaf representative of the Office of Works.

The Heme-Grown Timber Committee recently appeared by the Board of Agriculture, announce that they are prepared to penchase standing timber and to make actangements where necessary for felling, handing, and conversion. They will be grad to receive particulars of timber which find owners and others would be willing to self for Government pursess. All contramentions spould be adweam be willing to sell for Gove muent pur-poses. Alto counte magnitions is, oald the ad-diessed to the Societary. Home Grown Tinber Commutee. Craven. House, Nothin by and Avenue, W.C.

At the Past meeting of the Lamanksuire Courty Court in repeat was salimetted with organization point meeting of the Finance Committee and the Middle Ward District Committee in regard to the election of houses at Mosseud. In a letter received from the Local Mosseud. In a letter received from the Local Government Board of was explained that under the scheme the local antority would ersee 15° costinges at an estimated cost of £33,560, that are work which the Ministry f Munitions would contribute £4,70°. It was 22 end to preceded

We have a some The Montrol' Board of Control have appointed Mr. P. E. Messam late of the firm of Bruthe and Mer. cr. as cheef engineer of the city at a salary of \$2.00 per annum, and Mr. A. Martin as assist not engineer. Mr. Mercier, who has been acting chief engineer, succeeds Major Georges James, who enjoyed a silary of \$2.000 a year, till be joined the army as an engineer, and who lost his life by the senking of the Analy while crossing from France to England. The city of Montreal has been allowing Major James one-third of his salary while on active service.

### TO CORRESPONDENTS.

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NOTICE

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### EFFTIES TO ADSPETIMENTS

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Rep. to to addesting on the received at the Office Efficient House I Arindo Street Strand W.C., free of charge If to be forwarded under wover to advertises an exita charge of Signine is made. Goes Notice at bead of Structions.

Advertisements for the current week must reach the office not later than 3 p.m. on Tuesday. Front

page advertisements and alterations or stop orders for serial advertisements must reach the office by first post on Monday to secure attention.

F GOLFEN A

D. F. S. Thicks, 10

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### TO ARMS!

ON CENTRAL LONDON VOLUN THER REGIMENT THE BALLALION

THE WEEK, BY SUB-COMMAND TO STANLEY PEACH XXI Act ng Commindance

OFFICER FOR THE WILK Plant to Commander C.W. J. Corbett NEXT FOR DELY Pictons Command r. L. C. lug - Halett

### REGIMENTAL APPOINTMENTS

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Reserve.

Company Commander McLoof Yearsley to be Second in Command, No. 2 Field Company.

Plateon Commander J. R. G. Williamson to D. 5 Plateon.

Plateon Commander P. A. Bick to No. 6 Plateon, Plateon Commander W. J. A. Watkins to No. 7 Plateon, Commander W. J. A. Watkins to No. 7 CONFRM. PARADE

Saturday, Laborary L. of Chester House, 245 pend COMMITTEE MLETING.

A point Meeting of the Committees of the Architects' Corps. No. 1 Field Company) and the L.C.C. staff V.T.C. (No. 2 Field Company) will be held this (Wodnesday) exclude it Chester House, Lealeston Place, S.W., at 5.36 p.m.

### L' CIURES

Colone Sir L. Rabin - Lectures if the Institution of Cavil Engineers, Given George Street, S.W., will be continued after Christines. Dates to be admounted after

### ENTRENCHING

There will be no extremeling perade on Sunday 20th inst. Work will be recommended after the Christinas Vicencian, See Orders 31st inst.

### CHRISTMAS VACATION

The Dr. 1 Healog orders will be absold from Thursday, 201d to Func day, 30th unst, inclusive

### SOCIAL EVENING.

. Dute will be a see if Lyening at Headquarters, the set Headquarters, on the date mst. To kets may be obtained at Headquarters,

### ORDERS

The next Bartifron Orders will be published on riday, the distribut By Order.

L. R. GUTHRIE, Adjutant

### CORRESPONDENCE.

. All correspondence should be addressed to the  $\Omega(\operatorname{her})_{\Sigma}$  (from

DRILL HEADQUARTERS AND ORDERLY ROOM. Lorester House, Eccleston Piace, S.W.

### BATTALION HEADQUARTERS.

is, Tuiton Street, Westminster, S.W. December 22, 1915

It was agreed by the City Corporation on Thursday to buy Spitalfields Market under the terms of the arbitration award, when (xed the payment to Mr. Horner, the beset, or £254.96)

Later buildings are about to be added to the Colerado Insane Asylum at Pueblo, according to to thins and specifications on file at the flucts of Messes George H. Williamson, Democratic Themas P. Barber Colorado Springs, and William W. Stickney, Pueblo, joint architects

We rate W. Stickney, Pueblo, joint architects. The new clunch of St. Modan's Falkirk, was a reference of the Worship on Wednesday by the Repair Res. Dr. Paul, Moderator of the Chairch of Erizand. The church couples a rest a set at the corner of the Chasance at a create Avenue. It is built of creamment of stone in the Norman style of architecture. Accommodation is provided for 750 persons. M. P. Macgregor Chalmers. Glaszow, stee architect.

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### TENDERS.

'.' Correspondents would in all cases oblige by giving the addresses of the parties rendering—at any rate, of the accepted tender: it adds to the value of the

Bristol.—For stores, supplies, and materials, for the Bristol Dooks Committee. Accepted tenders:— Triple of nontric paper-instituted cable at the North side of Royal Albert Dook:— Siemens Brothers and Co Fang Bolts:—Prociny Bolt and Nut Co. Fish bolts:—Bayliss, Jones, and Bayles. 200 straight and curved galvanised iron sheets:— Lysaght, John, Ltd. Archangel redwood—Denty, Heber, Ltd.

CUSTLESAR. For crection of four bridges to cot-Newport R ad, for the urban district coun-

We Cormack, J. P., Thomas Street, Castlebar (accepted) .....£29/19/6

EastBothNF.—For building an aviation shed and messroom at the Crumbies, for the Eastbourne Aviation Co.:—
Peerless, Dennis, and Co., Eastbourne (accepted).

Exstanders.—For lack-up motor-houses at St. Vineral - Lodge, Silvetdale Road, for the Grand Hotel n. Etd.—

Bresch, C. (ascepted).

FORESTONE For a temporary recreation-room at York House nursing boine, Cheriton Gardens, for Miss Edden, Mr. C. D. Jenner, architect — Jenner, C., Folkestone caccepted:

Cannon and Hefford, Stanbury Road, Peckham May, J. and F., 58, Whets one Park, Lin-coln's Inn Fields Cannon, W. G., and Sons, Ltd., 107, Len-don Road

don Road ... ... ... ... ... 1.820 0 0 V. tten and Brocket. 1td. Manten Road. Southwerk ... ... ... 1.898 0 0 Brightsde Foundry and Lugineering Co., Ltd. 28. Victoria Street (accepted) ... 1.880 0 0 In hear of tender, breviously accepted and now withdraws, from T.W. Vaughan and Co., Ltd. Architect's estimate, t1.440.)

LONDON.—For the execution of temporary work at the London County Conneil's educational institutions throughout the county:—
Hobman, A. C. W., and Co., South Bermondsey, (Accepted, lowest tender received). Estimates were also obtained from Chittenden and Saminons, Lid., Mandstone; G. Neal, Blackshuw Road, Tootshur; F. G. Sheppard, Hope Wharf, Peckham; Josiah Smart and Son, 53, Victoria Street; and John Wainwright and Co., Etd., 173, Maida Vale.

LONDON, E.C. For the execution of mason and copor works during six months, for the City Cor-

peration -Mowlem, J., and Co., Etd. (accepted, subject to 10 per cent. metease on schedule prices).

LONDON, E.C. For maintaining the carriageway of south Place, Fin-bury Circus, during fifteen years, for the City Corporation:

Val. de Travers Asphalte Co., Ltd. (accepted), Ed., per yard super per annum.

St. Herens, Lanes, For erection of engine-house and of er works at the Cropper Hill power station, for the electricity committee, Mr. E. M. Hollingsworth, borough electrical engineer:

Bywater and Sons

Atlett, D. A., and Sons

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# THE BUILDING NEWS

# AND ENGINEERING JOURNAL.

### Effingham House,

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OUR $ILLISIRATIONS$	

New Premises, Regeat Street, W., in continuation of the rebunding of Oxford Circus, and including the new branch of the Linon or London and

### Strand, W.C.

Smith Bank Architect of the Lie des, Mr. Henry Tamier, F.R.L.B.A. Architect supervising the work for Meser- Dickens and Jones, Mesers Stephens and Munt. Architects to the Bank, Mesers, Dunn, Watson and Curtis Green

S Names from the Steps of St. Gjorgio Maggiore and the Church of St. Fosca, adjoining the Cathedral at Torcello, near Venice. Drawn by Mr. Fred Biebards Grom "Venice," Artists' Sketch Book Stries, by permission to Mesrs, A and C Black, Limited i

Burdocks," near Fairford, Gloneester - Working d awings, plans, elevations, and octions. Mr. L. Guy Dawber, F.R., I.B.A., Architect

VENICE FROM THE STEPS OF ST. GIORGIO MAGGIORE AND THE CHURCH OF ST. FOSCA, ADJOIN-ING THE CATHEDRAL AT TOR-CELLO, NEAR VENICE.

[WITH ILLUSTRATIONS,]

Venice, no longer the mistress of the Adriatic, is once more in jeopardy, and has ranged herself as a great naval base in the front rank of this vast European war. Whether her magnificent architecture will be spared or not time alone can determine. Already the Zeppelins of the enemy have eight or nine times bombarded the town, and amongst other damage the Austrians have rumed the beautiful ceiling by Tiepolo in the church of the Scalzi, or barefooted friars (1649-1689). This building is famous for its gorgeous display of marble work and inland decerations, but the gem of the church is the Madonna by Giovanni Bellini behind the High Altar. The municipality has been busy safeguarding the Venetian palaces, churches, and galleries of paintings. Sand-bags are piled up 30 ft. high to protect the Sansovino bronzes; the mosaics of St. Mark's are covered in, and big piers of solid brickwork in cement 3 ft. thick have been exected to shore up the marble arches of the grand portals of the great Basilica in case the fabric should be hit, and so risk a collapse. Everywhere inside the cathedral sand-bags are employed to screen the structure and its decorations, as well as save the fittings. On one pillar alone the bags form an embrasure 20 ft, in diameter to shield it from harm. The Pala d'Oro has been removed. and the façade of the Doges' Palace looks more like a fortress, being faced up with solid walling having towers built at the corners of the façade 20 ft. tall and constructed all in brickwork 3 ft, thick. The loggia is strutted up with centring supported by shores of massive timbering. The Scala dei Giganti and Cellconi on his charger, now covered by a roof, are well entrenched and substantially shrouded in sand-bags, which are likewise employed to cover the well-known pair of well-heads in the famous courtyard. The Piazza San Marco is grim and grey and black looking, while the Loggetta of the Campanile has been compared to a well-devised "dng-The palaces along the Grand Canal are vacant, the Signori having sought safer quarters.

Our illustrations to-day from Venice and its suburbs as seen in times of peace

have consequently special interest.

The cathedral at Torcello, with its massive campanile, is a five-aisled church with double aisles on either side of the nave. It was built a.D. 641, restored a.D. 864 and again about A.D. 1008, when it was practically rebuilt in the form of the earlier building. There are several curious mosaics of that date still in existence,

and these were probably by the same artist | tier of the stern ledges that sweep round as of those at Murano. Each of the aisles and the nave terminate with apses. The columns dividing the body of the church from its aisles are of veined marble with Composite caps designed partly on Corinthian lines mixed with Byzantine details. The crypt is probably a remnant of the seventh century church. A marble screen fences off the choir from the nave, and it is adorned with sulptures of lions and peacocks thought to have been brought from Aquileja. The scheme is spoken of as "the prototype of that at St. Mark's, Venice." George Edmund Street's description of it is worth quoting: - North-west of the rood screen stands the marble ambon a pulpit in two divisions, one (circular) facing south, and the other (square) facing west. This and the staircase leading to it are full of delicate and good carved work. The arrangement has an absurd likeness to many a modern English pulpit and reading pew, and there is certainly force in the observation that such an arrangement would never have been thought of unless the Gospel was to be understood by the people. Now that they do not understand it, it is no longer said from the ambon, and ambons seem to be much less useful to the Romans than road screens are to us.

This cathedral was greatly injured and its exterior completely modernised during injudicions and hasty repairs under the regime of the Austrian authorities, when the new roof was put on. The setting out of the sanctuary and high altar in the chancel is most remarkable, the seats for the choir and clergy rising in six tiers within the semi-circular form of an auditorium or theatre, and the episcopal throne stands in the centre, raised above these seats, and is approached by its own steep staircase of eleven treads. Ruskin, in his "Stones of Venice," remarks upon this apsidal contrivance thus: "There is one circumstance which we englit to remember as giving peculiar significance to the position which the episcopal throne occupies in this island church, namely, that in the minds of all Early Christians the Church itself was most frequently symbolised under the image of a ship, of which the bishop was the pilot. Consider the force which this symbol would assume in the imagination of men to whom the spiritual Church had become an ark of refuge in the midst of a destruction hardly less terrible than that from which the eight souls were saved of old, a destruction in which the wrath of man had become as broad as the earth and as merciless as the sea, and who saw the actual and literal edifice of the Church raised up, itself like an ark in the midst of the waters." The surf of the Adriatic recalled to them the storm-tossed craft on the lake of Tiberius. Let the

the altar of Torcello, and then looking. as the pilot did of old, along the marble ribs of the goodly tempieship, let him repeople its ruined deck with the shad ws of its dead mariners, and strive to feel in himself the strength of heart that was kindled within them when first, after the pillars of it had settled in the sand, and the roof of it had been closed agains; the angry sky that was still reddened by the fires of their homesteads just within the shelter of its knitted walls, amidst the marmur of the waste of waves and the leating of the wings of the sea birds r and the rock that was strange to them rose that ancient hymn, in the power of their gathered voices: 'The sea is His, and He made it; and His hands prepared the dry land.

A picturesque cloister connects the baptistery or church of St. Fosca with the cathedral. It is square on plan, with small projections on either side and a deeper one at the east, where the high alter is raised above the relics of the virgin martyr Fosca. who suffered under Decius. The square centre dome rises above simple pendentives. and the caps correspond with those in the cathedral colonnade, and at the east end outside there is some good areading. The mixture of red and buff brickwork is very The big and impressive red brick campanile, standing south-east of the choir of the cathedral, is very simple, with its areaded ton stage, from whence a singular view of vast interest can be obtained. making the trying ascent well worth the while. This tower was erected in the eleventh century, and is of the usual Lourbardic type. It stands seven miles away from Venice on the north, midst a waste of wild sea moor, so of an looking deathlike in lenden ashen grev as far as the eve can reach. The weird solemnity of this disengaged and water-bound campanile at Torcello, standing forth in its plain Lombardie simplicity, is not so evident when the point of view is screened by the cathedral or, as it appears, partly hidden by the adjacent smaller church or haptistery to which we have already referred in our present notes. Mr. Fred. Richards, of Chelsea, has lent us the accompanying pencil drawing, in which the cathedral tower necessarily takes a subordinate place in the The subject was drawn for grouping. Messrs. Adam and Charles Black's handbook on "Venice," which is one of the charming little volumes lately issued in which is one of the their "Sketch Book Series," and to which publications we called attention in our pages for October 20 and 27 last. This pair of originals, illustrated to a larger size than they appear in the book itself, have been placed at our disposal by the artist and publishers. The only note to student of the past "ascend the highest make further about this first drawing is to or was fithe cathe-

beautiful with soils May or at I the Dural the states of St. Congr. 11. districtions of the island on Continue Desire 1565-1610) was or ongst his most rivel ledinier n . . . Jurch of St. North ports of od UR 983 Jan I those build the Dogeraf Venue Characters Day, to San turny, having Constantinople to the reign of Dogs personally san 's coffin shoulder cfore the high alter for swinstam, from th ing M., Richards made poor of vow, and the garfu drawing we repro-

# HAMMERSMITH

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the public shall have the right of free access to the room on the first Monday in every month from 10 a.m. till moon. Nineteen plates are devoted to illustrations of this house, embracing some sections, plans, and details supplied by Mr. W. E. Riley, F.R.L.B.A., R.B.A., M.L.C.E., the superintending archite to the Conneil (Plates 6, 7, 11, 12, 13, and 14).

H. 12, 15, and 14.

Palingswick Manor House, Ravenscourt Park, which is leased to the borough council as a free library, is an Early Georgian building, and a good type of its period. Eleven plates illustrate the building, which retains various evidences of an older structure. The grounds of the house, now a public park, centach a lake and an avenue of elm trees, now fast decaying. Close by the house is a lotty wrought iron early eighteenth century from gate, illustrated in Plate 104

No description is given of the present church of St. Paul, which was erected

No description is given of the present church of St. Paul, which was erected 1552-91, but an illustration of the old building which preceded it will be found in Plate 25, and there are illustrations of the pulpit, which came from the demolished church of Allhallows, Thames Street, and of some of

The houses on the Upper and Lower Mail and their adjuncts naturally supply the most interesting of the other illustrations. Among the best are Kent House, the Vicarage, Sussey House, and Kelmscott House, for some years the well-remembered London home of William Morris, himself one of the original members of the London Survey Committee, and always zealous for the preservation of an ancient and historic buildings. Six plates are devoted to Morris's house, which seems to be still kept intact, as we trust it may be for generations.

Altogether, 121 plates and many illustrations in the text adequately complete this well conceived and produced volume.

### SOME ROCHDALE MUNICIPAL WORKS

- Mr. S. S. Piatt, the borough engineer and surveyor of Rochdale, has delivered a lecture on "Some Engineering Features of Municipal Work" at a meeting of the Rochdale Association of Engineers, held in the Technical School. Mr. S. B. Barnes presided. Mr. Platt's lecture was an interesting account, protusely illustrated by lantern slides, of some of the unmicipal works of Rochdale. He described the construction of the terroconcrete bridges at Mellor Street, the Butts River covering and Figures Bridge: difficults encountered in the construction of sewers; and concluded with an account of the Bochdale sewage disposal works.

in die sewage disposal works. Speaking of terro-congrete, Mr. Platt seid that concrete, a material comparatively weak when exposed to tensile strains, produced when combined with steel, a constructional erice, to deby material of great value, economic adaptability with the land usefulness. The steel being rigidly Hammon with embedded in the concrete, the concrete stiff ened the steel and the steel reinforced the ened the steel and the steel reinforced the coast countrie. An important consideration was also that once properly made, the first cost was seed the only cost—a great advantage over steel that is constructions, which, if exposed to atmostrate said the only construction. When Platt said he was seed to the first in England to adopt this collision of construction. He had a good number of the open nexts in declarate had a good number that despendents in the land many difficulties. to and had to be faced and overcome To the chief works in Rochdale in which truction were used were carried out the Henrebique system of ferro-concrete. relating experiments as to the most form of concrete for the work. Mr. pole of the difficulties which had to There of the difficulties which had to exceed one in haidging the Spodden in Street—the fact that the land was eyembed by old colliery workings. This has the result of ferroconcrete piles or sent as here a larger. After construction the last to tested with great weights, and the cut in deflection revealed was only the replication of the river covering the result of the case of the river covering the result of the tested of the river covering the centre of the town, terro-concrete elities and mainterance, and was adopted in

preference to ordinary steel construction. A saving was particularly effected by the avoidance of regular painting of the underside of the surface.

Incidentally Mr. Platt mentioned the old footbridge which crossed the river between the Walk and King Street. It used to be called "The Iron Bridge," and he always thought it was iron. When he had occasion to look at it he found it was of wood with iron railings on the top. The wood was rotten, and so was replaced by steel beams. This, of course, was done at a time when there was no thought of covering over the tiver. Mr. Platt went on to speak of the tiver. Mr. Platt went on to speak of the gridge bear width of only 13 ft, between the parapets. The new bridge measured three times the width, being 42 feet between the parapets. It was a most interesting piece of work, because the canal traffic had to be kept going as much as possible. The actual demolition of the bridge was done in Whit week, when traffic was stopped.

difficulties encountered in making sewers, notably at Moss Brook and Hartley Bridge (where compressed air plant had to be used). Other points dealt with were the taking of sewers up rivers (as up the Spodden at Spotland), taking them under canals (as at Hartley Bridge and Sudden), over rivers (as at Half Acre, in which case the pipes are provided with special expansion joints to allow for the effect of the atmosphere on the iron and under rivers (as at Hamar Lane). Mr. Platt described the sewerage works in detail, and commented on the difficulty of dealing with some of Rochdale's sewage, which was of a rather bad type, owing to its foul and greasy character—the product of fellmongering, rubber recovery, and other works. The sewage disposal works had cost £130,000, and the extensions which were held up by the Local Government Board would cost another £25,000. The Half Acre works trested the sewage from a population of 85.000 (the rest is treated at Castleton). The process was not an easy nor an economical

one, but it had to be done,
Mr. W. Stott moved, Mr. J. L. Maxim
seconded, and Mr. J. Butterworth and Mr.
W. E. Crabtree supported, a hearty vote of
thanks to Mr. Platt for his lecture.

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A new theatre and cafes, shops and snites of offices have been erected on the Havelock House site. Sunderland, for the Provincial Cinematograph Theatres, Limited. The architects were Messrs, Percy L. Brown and Glover, Newcastle, and the contractors Messrs. Vi Loughlin and Harvey, of Belfast.

The Islington Borough Council have decided to release Messrs, Win. Griffiths and Co., Ltd., from their contract for the paving of Camden Road and Parkhurst Road owing to the difficulties in a uncetion with exercising the sanction to the loan in respect of these works, consequent upon the decision of the Treasury.

The restoration of the ancient church at Sysonby, a hander of Melton Mowbray, has just been carried out, thanks to the generosity of Ald. R. Deglersh, of Asfordby Place. For some years the side walls were moving outwards, and the roof was assisting to increase the movement. Now the weight of the roof will rest upon the tie beams, and new buttresses have been built to hold the walls in position. The roof has been renewed and strengthened, and a new side chapel, with vault, has been creeted. During the building operations a twelftheentary beam was found, and a fragment of Norman work discovered.

What is thought to be the largest free area of a nerste slabs without interior supports has recently been built in San Antonio, Texas, in an addition to the Beyar County Court House. The slab measures 112 ft 6 in, by 37 ft, 6 in, in extreme dimensions, and is supported only along the edges. A ribbed system has been added, with plastered ceiling below, the ribs running across the building and carried to the wall columns by beams masked within the wall columns by beams masked within the walls of the building. The floor was designed for a maximum load of 175 lb, per square ft, including 75 lb, live load, and consists of reinforced concrete ribs with top slab, forming a series of small T-beams. The cost, including concrete, reinforcing steel, Floortyles, Hy-rib, and forms, was 45 cents per square ft, of slab area.

### BENEFITS DERIVED BY AN URBAN DISTRICT ADOPTING A TOWN PLAN NING SCHEME.\*

By Louis Carr,

Sarveyor of Ruishp-Northwood Urhan District Council.

The town-planning scheme promoted by the Ruislip-Northwood Urban District Council re ceived the approval of Parliament on September 7, 1914, and as the period of twelve months, during which all claims for compensation and betterment have to be lodged, has now elapsed, the author is able to state gener ally the benefits which have been secured to the public and the landowners, and to give some information as to the claims for compensation and betterment, which latter jects have seriously engaged the attention of councillors and officials throughout the country.

The modifications of the " General Provisions" are not dealt with in this paper, but it will be of interest to describe the altern tions in the draft scheme as shown on the 25-in, Ordnance map, which may be summed

up as follows:

### STREETS AND FOUR WAYS

The north end of a 60-ft, street, practically running north and south through the centr of the district, has been amended to obtain a better outlet across some golf links. In the original scheme a road was proposed across original scheme a road was proposed across these goli links, but, owing to heavy opposition, the council decided to drop it; the Local Government Board have, however, reverted to the original scheme. Another alteration was with regard to a new road branching from an existing road was shown to run over existing build which This was amended so as to avoid pulling down the buildings. A further alteration wa a very interesting one. An alternative line of route was shown for a new 60-ft, road, but Local Government Board decided that alternatives could not be shown, and a definite line had to be fixed. In another case two streets were indicated on the map by dotted lines, together with a single alternative roul The Board decided that the single alternative road must be omitted. In the case of a new road, which was shown as 40 ft., but hal to be increased to 50 ft., the centre line had to remain as shown on the map. A number of new footways were amended as regard their width and position, and two footways which had been shown to be diverted with omitted.

### APPROPRIATION OF LANDS

One cemetery, allotments, land for store yards, and a refuse destructor, together with certain open spaces, were acquired under the Public Health Acts during the progress of the scheme, and could not therefore be included in the approved scheme. With regard to the suggested second cemetery in the south of the district, the board considered that the time was not tipe for another cemetery to be provided in this quarter, but my own opinion is that a mistake was made in not allowing us to acquire this land, as later on, in all probability, we shall have much difficulty in securing such a suitable site as the one scheduled.

The owner of the land originally selected for the purpose of a new sewage works objected strongly to the position, but willingly gave us the option of another site about threequarters of a mile away. Unquestionably this quarters of a mile away. Conquestionally this will be a great advantage to the district, and it will enable a greater area of land to be satisfactorily developed without any nuis ance being caused when the new sewage works

are made

Differential treatment was proposed for rail way land, but after negotiations with the to come to agree companies we were able ment with regard to all their various parcels of land in the district, which are now to be treated in the same way as the property of any other landowner.

### BUILDING LINES.

The building lines shown on existing streets have been approved, except in one case, where it was reduced from 25 ft, to 15 ft. The reason for this alteration was

A paper read at the recent Annual General Meeting of the Institution of Municipal Engineers.

that the ground receded very quickly from ay, and serious difficulties have arisen with regard to coanection with sewers, aspect, etc. It would be advisable here to observe that in future schemes, it building lines are reduced under similar or cumstances on one side of the street, arrange ments should be made to set them back on

### LIMITATION OF THE NUMBER OF BUILDING 140 ACES

The first alteration was the inclusion of a turther area of land to carry from eight to twelve buildings to the acre, the reason being that this area leaf itself to more equitable development than the karl unit which had been fixed. A further alteration enables us oren nxeu. A futtler afteration enables us to secure in the future a more gradual form of development. Another small port or was shedu ed under the draft scheme as six buildings to the acre, but after the inquity, at a bill the content of the future. at which the owner put a number of tacks be fore the inspector, this limitation was altered by agreement between the council and the owner, with the result that approximately ten buildings to the acre can be erected. As the result of opposition, the Local Government Board agreed to a certain area being scheduled at eight houses to the acre instead

### CHARACTER OF BUILDINGS, 1 FC

As a result of the inquiry, certain alterations were made in the compulsory and optional shopping and factory areas

With regard to the colouring of the final map, it should be pointed out that after the money it was found necessary to amend the whole at the colouring to fit in with the new "reference" which was required. The Ruislip Northwood Urban District Council and the Watford Rural District Council have to administer this scheme in their respective areas, and a copy of the map of the final scheme, so far as it relates to the part of the area in the Wattood rural district, has to be provided by the council.

### NEW STREETS.

There are some eighty-three new streets and footways to be constructed under the scheme and in the lines and of the width indicated on the may. The words stalicised require special notice, as the Local Government Board are insistent up in this being carefully consplered when the scheme is prepared. strictly adhered to atterwards. The district will benefit greatly in future by the linking up of existing streets and main traffic routes. and also by the improved access to railway stations, and the bringing of certain entlying areas into communication with others by streets with good gradients, instead of by streets which would have a gradient of 1 in 7. For instance, when one of the streets is made a distance of about three miles will be saved in communication between certain parts of the dis-

Another great benefit, combined with economy, will be derived by the laying out of the streets on the line of the outfall sewers to the existing and new sewage works. Arrangements have also been made to take the house drainage from these new streets. A certain amount of the cost of these sewerwill be defrayed by the frontagers, but such sum is not payable until the land is used sum is not payable until the land is used for purpose other than agriculture, except by special agreement. In my opinion, many thousands of pounds will be asked to the district by thus laying out the streets to serve all purposes for which streets are gaugeable possible. generally required.

Streets shown on the map of a greater width than 40 ft, will be constructed and paid for by the council, but it is possible that as the council now have the power to make up streets with grass margins, etc., that no extra expenditure will be incurred beyond that of Thirty widen scavenging and maintenance. ings of existing streets are shown on the map: these are in sixteen streets, and affect forty

four different owners.

When any plan is submitted for a new building to be erected in any of the existing streets the council can require the street to be widered to the width shown on the map. and will hear the cost. If the council require

a street to be videned before any plan for a new bin ding a submitted, they have power to do the work after giving two months notice. The cost of carrying out widenings in such case will include compensation for any buildings required to be about demolished, or removed, while the construction of the decessary change on I to tway and foreing off the land has about a bound by the

As his already been stated, the council have pover to lay out with glass margins, or plant with trees, or by ent as gardens, any paint with trees, or try can as gardens, any part of a y street reparable by the inhabi-tants at large, and the council may ir un-turn in good order such grass margins. thees, or gardens, and after or remox the same from time to time as one instances bequire they may add to the carriageway or footway my part of such grass margins, whether pointed with trees or land out is gardens, and . may from time to time alter or rearrange the may from time to time after or rearrange the parts of any street laid out as a carriag vay or tootxay respectively, provided that the council shall not obstruct access to premises abutting on any street from the metalled or

The owners of lands abouting upon any new street shall, mill such streets shall be not a highway repairable by the inhabitants at large, maintain such street, fences, grass mangins and trees, and embankments and other works therein a good order and condition. The council may include in any private to the other works which they may constreet works any works which they sider necessary for foreing off and laying out any street, or any part thereof, with grass margins and planting the same with trees, and apportion the expenses thereof as would be done under the Private Street Works Act The permission given to the council under this Act to lay out existing streets or any new streets with grass margins, etc., is very important, and, lesides leading to much amonity in the district, will also involve less expense in construction and upkeep; while in the case of streets about to be taken over by the local authority, a reduced expenditure has to borne by the frontagers.

In shopping areas where a carriage read is intended to form the principal approach. means of access to buildings, we demand that the kirb or outer edge of the footway of the street in front of such handlings shall be set back a width of 6 ft, from the side of the carnageway, and the width of the footway shall be reduced accordingly. The interven-ing space between the new line of the kerb and the original side of the carriagew cyshalf be so constructed as to fall towards the carriageway. This requirement is be quite new, and should prove of great value, as by means of it tradesmen's 200 ds can be delivered by vehicles standing out this set-back where they will not impede the fast traffic.

Particulars of the relaxation of by 'ac-s with respect of (1) new streets (short streets).
2) as to width and construction of such streets, where land for open spines is set apart, or wale streets are provided, or where the streets are formed around quadrangles. are all set out in the "General Provisions but it may be said that with the experience already gained in the district from the construction of streets of this character. council and the owners are satisfied that they are not only unlikely to be a burden on the ratepayers, but are more economical to construct, sewer, light, and scavenge.

If at any time the council desire they can do so upon giving six months notice of their intention. Without this provision it is probable that the whole scheme the streets shown would be wrecked. Where the map shows a new street exceeding 40 ft, in width, communicating at each end with a highway repairable by the inhabitants at large, the owner of the land over which it passes may, if he wishes it to be constructed, give notice to the council, who must construct the road within six months. Before the development of any estate can now be proceeded with the conneil can require the owner to furnish plans and particulars showing generally a scheme for the development or laying out of the whole

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constant thereise than by of set 2 includes than by the cost 2 places, and on such the required by the council. It are tone, that development can pro an wher has first re

seasont Board may, on the And with reference to astraction of any of the strong or proposed widenings in ap. In the author's opinion tide so to be not be made, the strongs in the description of the map. eses to I am would have accound must of deviation between certain to 60 ft. as in the case of pro-

This scheme twenty one highways of diverted and stopped up, but not the new streats or footways have stracted to the satisfaction of the ended up for public traffic. sub proposed new streets are not offices, such portions of the hays as correspond to the portions streets which have been be directed or stopped up, pro-ned on reasonably satisfied that anyone tright of way has been public use; and, where temperary right of way must be through the portion of the proposed twitch shall have been constructed their of the said public lighway to at that time, to be diverted ted up. For the purpose of any diversion or stopping up, such tem-ight of way shall be deemed to be the remaining portion of the said the remaining portion of the said tightyay. It is estimated that by dicts has a saying of some hundreds as has been effected by avoiding the technical process of obtaining of Quarter Sessions, apart from the 1 decrease the strictly companies of the Highway Act or some cases of strictly complying

the about 155 acres of open spaces the map, of which 106 acres have a ted under agreements, and 49 acres eited as publication open spaces. The self-same of the land given to the as from £1000 to £10,000. Private thes shall be maintained in good at when required by the council, of them together by the common fenced by and it the expense of the It is my time in recover open space, forcing the ones ineglected, or a time is a may after gaing hid time in for certain the purpose same a good order and Any expenses incurred by are the tenth of the first the owner are the states.

that a personne is any even the est operate, they may not be used in which the there is even begulations to by the termination and The profession of the marges. The potential strolling private sections to be strolling private and charges of a strong private of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of t

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roding lines share

it may building has been etected, or is in course of erection, since the date of the re-solution of the council applying to the Board tor authority to prepare the scheme, nearer to a street than the building line shown on the map, the council may require the owner to pull down so much of the building as is nearer to the street than the said building line. In one case a building line of 7 ft, was shown, but an owner built in front of this very reasonable line, with the result that he will now have to pull down where he has

infringed. In streets where no building lines are shown on the map no buildings can be erected nearer to the centre of the street than 30 ft., means to the boundary of such street than 15 it. Provisions are inserted with regard to dwellings round quadrangles, but in any case there has to be a width of 60 ft. between There are also saving clauses with regard to lodges appurtenant to a dwelling house which may be built in advance of the building line, and also in the case of long frontages, say, a continual frontage of not less than 500 ft, where parts of such building may project 7 ft, in advance of the general building line, provided the projection does not exceed one-fourth of the total length of the frontige. The above building lines do not prevail in the case of shopping and business premises, the lines for which are practically set out in the "General Provision and vary according to the different widths of This is another means by which the streets. to secure the extra width of the carriageway to business premises.

Another important provision is that post, rail, or other obstruction shall be creeted in front of the forecourt of any shop ping premises; but cellarflaps are allowed. provided they do not project more than 3 ft. The building in advance of such premises. lines for buildings and projections on corner sites are specially provided for. Bay windows, chimneys and porticos are allowed to project 4 it. in advance of the building line, except in the case of a street exceeding 40 it., when they may project 5 ft., provided that these projections do not exceed threetiftlis of the total width of the buildings, and are not in any case nearer to the boundary of lands belonging to another owner than the extreme amount of such projections.

The proportion of the area of a site which may be covered by shops and other buildings is one-half of the whole area of the curtilage, with the proviso that in the case of a shop the extent of the buildings shall be measured a level of 14 ft. above the mean level the footway in front thereof. This appears of the footway in front thereof. This appears to be a reasonable provision. With regard to dwelling-houses, one-third of the whole area may be covered with buildings not exceeding one story in height and one story in the roof; but in cases of larger buildings the area covered shall not exceed one-fourth.

Certain provisions are made with regard to air space to habitable rooms. This is a most important provision, as, to a certain extent, it stops the erection of houses with kitchens tacing each other at a distunce of, say, 2 ft, or 3 it. away, which are practically always dark and have had ventilation. The clause with regard to the projection of wing build ings is another important one, the idea being to stop the addition at the rear of premises of long wing buildings, which retard the free action of the air and sunlight to the back at the premises,

LIMITATION OF NUMBER OF BUILDINGS TO THE ACRE.

In the clauses which have been fruined to buildings, regard has been had to the various ners in the district, the development of which have been commenced in a certain way. A limitation of four buildings to the acre is made to the highly residential part; six to the acre is the rate for the areas at present developing; eight and twelve to the are is also adopted in other areas for the some reason: while twelve is also adopted for the chopping and factory areas, where it - de sirable that more buildings to the acre

the shops and business premises it would not pay to erect better-class houses.

The unit of five acres has been considerably discussed, but the author cannot suggest any other scheme to carry out the limitation in a more satisfactory manner. The working of this land unit is not easy, and possibly about nine acres would be a good unit to adopt. In all areas, with the exception of land specially set apart for factories, shops, and business premises, private or professional dwelling houses, with necessary stabling, etc., can alone be erected.

No domestic building (other than flats or sets of chambers) erected in the area of twelve buildings to the acre may contain more than two stories, exclusive of any story in the

### CHARACTER OF BUILDINGS.

In selecting the areas to be restricted to buildings of the warehouse class, shops, or business premises, consideration was given to the lay of the land, the position of the railway stations, the convenience of access, and the amenity of the district. The area for factory purposes has been extended in the vicinity of the existing sewage works.

The clause relating to the height of windows in habitable rooms received considerable attention, not only by the council, but also by landowners, builders, etc., and the final form represents the utmost advance that could be made; but we believe it will be of considerable value generally to the health of the district. This provided that no bedroom or other habitable room shall contain less than 500 cub, ft., and in any dwelling one living-room at least shall be provided, which have a floor area of not less than 144 sq. ft., and contain not less than 1,132 cub. ft., and one bedroom which must have a floor area of not less than 132 sq. ft., and a cubical capacity of 1.000 cub. ft. It is hoped that considerable good will emanate from the provision which enables the council to require reasonable alterations in any building, the character of which is objectionable on account of the design, or the undue repetition of the design, or the materials to be used.

### SANITARY CONDITIONS AND AMENITY.

With regard to the vexed question of combined drains, a clause has been secured which it is hoped will solve the problem. Every providea house has under this scheme to be with a pantry or larder which shall have a window opening into the external air, and in the case of a dwelling-house adapted to the occupation of more than one family, a separate partry or larder shall be required for each. It is also provided that every family. domestic building constructed for use of more thrm one family shall be provided with senarate closet accommodation for each separate closet accommodation to.

family. To some extent these clauses will

family two families prevent houses being let for two families without proper accommodation being provided. Further provisions are desirable, but their inclusion could not be obtained.

Frequently private gardens are in such a state as to be a nuisance to neighbours, but under the Order, on the report of the surveyor that the nuisance can be abated, the council may do what is necessary, in default of the owner doing it, and can recover the cost. In the Buislip-Northwood urban district, is common with many others, a great deal of nutidiness and irregularity occurs in planting and fencing of forecourts of premises, which detracts from the general appearance of the district. To remedy this the council have power to agree with the owners r occupiers to lay out, plant and fence such forecourts, and maintain them at the expense of the council.

Advertisements are prohibited, except in the factory and shopping areas; but this prohibition does not apply to the exhibition of traders' names or notices on public buildings. Goods for sale or exhibition may be placed in front of premises, but not more than 3 ft. beyond the building line. This is a most useful provision, and will be of much assistance to the council in keeping the streets from looking untidy and irregular. Considerable criticism has been made of the clause dealing with the height of fences, but costing streets averaged a 25 ft set should be illowed both to secure artisan and clause dealing with the height of fences, but all excepting in a control instance working class buildings near the places of the cause of the council are glad to have got this cause, and they have not the

slightest difficulty in carrying it out. It is beneficial to the district to obtain solid walls or fences set back as far as possible from the

backline of any street.

A careful consideration of all the clauses. which are set out in more detail in the "General Provisions," should prove a great stimulus to local authorities to promote a town-planning scheme for the benefit of their community, for it is unquestionably a fact that the health, welfare, and general tone of that the health, we have a district would be greatly enhanced by similar provisions to those included in the Ruislip-Northwood Town Planning Order.

COMPENSATION AND BETTERMENT.
Only four claims for compensation have been received, and two of these have practic ally been disposed of. As to betterment, thirteen claims have been made, totalling some £11,000. The cost of preparing the scheme, from start to finish, was about £700. A statement of expenditure was given at the inquiry on the draft scheme, regarding the purchase of land for open spaces, cemetery, allotments, recreation ground, and destructor; but these items were struck out as they had been acquired under the various Public Health Acts during the progress of the scheme. The proposed expenditure on another cemetery site at Ruislip was dropped after the inquiry. The estimated expendi-ture for the demolition or alteration of buildings, for compensation in regard to property injuriously affected by the scheme, for roads abutting on open spaces, for making up or alteration to roads or lootways, and widenings, and for other purposes, such as fencing open spaces, etc., remains about the same we the scheme has been approved. The greater part of this expenditure, however, is not likely to be incurred for many years. The receipts estimated to be obtained from betterment claims are largely increased from what was originally anticipated.

A church school, built at a cost of about £7,000, has been formally opened at Great Harwood. The architects were Messrs. Woodhouse and Dean, of King Street, Manchester, and the contractors Messrs. John Feeitt and Sons, Ltd., of Blackburn,

The twenty-first list of members, licentiates and students of the Royal Institute of British Architects who have joined H.M. Forces for the period of the war shows a total to date of 51 Fellows, 373 Associates, 196 Licentiates. and 239 Students.

On the recommendation of the public works omnittee, the city council of Truro have on the recommendation of the public works committee, the city council of Truro have agreed to pay an honorarium of twenty-five guineas to Mr. F. A. Barnes, the city surveyor, for the care, attention, and ability shown by him in renovating the council chamber, mayor's parlour, and committee room after the recent disastrons fire. the recent disastrous fire.

At Southampton the bankruptcy adjudica-At soumampton the bankruptcy adjudica-tion has been annulled of Arthur High Roberts (formerly trading as Roberts and Co.), 14. Cranbury Place, Southampton, lately resid-ing at Bevois Hill, Southampton, estate agent and valuer, formerly anctioneer, it appearing to the Court that the debts in the bankruptcy have been paid in full with statutory interest.

have been paid in full with statutory inverses.

A special sub-committee of the corporation of Glasgow, acting on the suggestion of ILM Office of Works, recommend that consideration of the proposal to remove the Tolbooth Steeple should not be proceeded with, and that, under reservation of the rights of all parties, they should withdraw the notice of November 17, in which they adhered to their previous determination to remove the steeple. Unless the termination to remove the steeple. Unless the notice be withdrawn, the Commissioners of Public Works will issue a preservation order as to the steeple, which will remain in force for a period of six months.

At the last meeting of the At the last meeting of the Society of Anti-quaries, the president, Sir Arthur Evans, occu-pying the chair. Mr. W. R. Lethaby, F.R.I.B.A., exhibited the head and foot of a carved and painted rood of the twelfth century from South Cerney Church, near Cirencester. These fragments were, he thought, probably the earliest important pieces of wood-carving remaining in the country. The figure must remaining in the country. The figure must have been about half life-size, and the type was closely allied to the Christ of the Deposition painting at Winchester, c. 1180, and to the earliest painted crucifix at St. Albans, c. 1200. The object was discovered accidentally in 1913, walled up in the church.

### THE REPLANNING OF ATHEMS.

The students of the Liverpool University School of Civic Design, accompanied by past graduates and friends, met the other day, at the invitation of Mr. Thomas H. Mawson, Hon.A.R.L.B.A., at the head office of his firm in Lancaster, to hear a lecture on Athens and to view the plans which have been prepared for the important commission with pared for the important common which the firm have been entrusted in the replanning of that world renowned city. lecture was illustrated by a large number of lantern slides, showing both the famous remains and the modern city which has grown up around them. The working plans for the scheme occupied the entire wall space of one of the largest draughting offices.

The first plan shown dealt with the topographical position of Athens in relation to Port of Pirsens and the railway system which is shortly to be connected with the trans-continental system at Salomka. The second dealt with the traffic problems of the city and environs and showed the roads for tram routes and motor traffic in relation to the railway facilities, both passenger and goods. It also showed the arrangement of factories, warehouses, and bonded stores connection with the railway sidings and the placing of the electric generating station from which each factory and warehouse will obtain its power.

Another plan showed the areas covered with ancient remains, from which everything modern is to be cleared, and on the sheet are indicated the new residential areas in zones for the varying classes of residents. Still another shows the park, playground, and forest areas connected by boulevards and parkways, in which the pepper tree and the ilex predominate.

These led up to the general plan, which, though it is of a most unusual size, being about 10 ft. long and half as broad, is crammed with fine detail in every part, and represents the labours of as many draughtsmen as could be employed upon it at the same time through many months. It shows the relationship of all the various factors dealt with in the sectional and diagrammatic plans in their relation to the governmental and civic

These were the sections of the scheme which attracted special attention, as did also the plans for the rehousing of the working classes, which were illustrated by beautiful perspec tive drawings. In addition, there are diagrammatic drawings showing the schools and a splendid new University Campus, which occupies an area of over one hundred acres. Fire stations, hotels, and other public and semi public buildings are all illustrated in a manner which shows that town-planning in Athens is being studied in a most exhaustive manner. and this fact impressed the students consider-

At the close of the examination of the plans two questions were asked. Firstly. Athens being replanned, and secondly, how

is the work to be paid for?

Mr. Mawson, in his reply, explained that Athens is at the present time growing enor mously not only on account of the added importance which has come with the additional territory obtained after the second Balkan war, but also by the expansion of its maritime trade and the increased tourist traffic, which is alone enough to justify a town-planning

scheme of considerable magnitude. With regard to cost, Mr. Mawson explained that Greece, being at present a poor nation. could not afford to squander public money in unco-ordinated effort and temporary makeshifts, which could only be indulged in by nations like our own with money to waste. He reminded his hearers that a town plan was not a scheme for spending public money, but for saving it. It resulted from the recognition of the fact that the city would grow whether we hked it or no, and arranged in advance that it should grow in the public interest ac cording to a co-ordinated plan, which should develop on economic principles both in regard succeeded in producing a city which is, at least, potentially beautiful as well as practical, zodiac are a common sculptural motive in

# Currente Calamo.

We have heard nothing more of Mr. Howell J. Williams' indictment of the City Bridge House Estates Committee and its strict insistence of the letter of the law with regard to the large site his company took before the commencement of the war, since we announced on this page in our issue of December 15 that a deputation from the Waster Builders' Association is to wait on Mr. Asquith. In strong contrast with the action taken by the City authority, the City Press points out that the London County Conneil does not appear to be acting on like lines. In March of last year the Council granted as from the following September a ninety-nine years' lease of a plot in Aldwych. The restrictions imposed by the Treasmy preventing the prosecution of the scheme, the Conneil less agreed to postpone until March next the date at which the lease shall commence to run. That is fair and reasonable, and builders have a right to expect that the City will do the same.

We are glad to note that Mr. Hugh Watkins, quantity surveyor, of London, has arrived in Winnipeg, and that he and his two assistants have commenced their duties in connection with the New Parliament Buildings, which are being erected from the designs of Mr. F. W. Simon, F.R.I.B.A. Quantity Surveyors hitherto have been unknown in Canada, but a strong movement is on foot to insist on their employment, as in this country, for all buildings of any importance. Under the existing system in Canada an architect is engaged to prepare the necessary drawings and specifications, which are forwarded to each contractor who has signified his intention of tendering for the work. Each contractor then sets to work to prepare the necessary measurements of materials and labour to enable him to arrive at the amount of his tender. This does not apply to build ings alone. At the present moment a Canadian city is calling for tenders for a gravity filtration plant- plans and specifications to be furnished by the contractor. Thus, assuming twenty contractors tender for a job, nineteen sets of quantities are useless and waste labour. One result, of course, is that careful and accurate estimates are rare, and another that no reliable basis exists on which any extras or deductions can be arrived at.

The following, by the first living English novelist, of whom, as a member of our own calling, in earlier years, many readers have warm remembrances, appeared in the Times on Christmas Eve, and its reproduction is permitted: --

THE OXEN.

Christmas Eve, and twelve of the clock.

"Now they are off on their knees."

An elder said as we sat in a flock.

By the embers in hearthside case.

We pictured the mock mild creatures where They dwelt in their strawy pen.

Nor did it occur to one of us there

To doubt they were kneeling then.

so fair a laney few helieve In these years! Yet, I feel, If someone said on Uhristmas Eve "Come; see the oxen kneel

"in the lonely barton by yonder coomb Our childhood used to know," I should go with him in the gloom, Hoping it might be so. Thomas H.M. THOMAS HARBY.

The use of the zodiac in decoration is discussed by F. Boquet, of the to capital outlay and maintenance charges. If we proceed with this practical aim kept steadily in view we shall find that we have steadily in view we shall find that we have after which is at

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less is and occupies of business and rest dent al properties, burdons and responsibilities which should be shared by all." The Committee is fast becoming a really national organisation, for already ninety four mum epul authorities have agreed to join in the presentation of the memorial. These include the following county boroughs: Birrow in Furness, Bournemouth, Brighton, Croydon, Giteshead, Rochdale, Tynemouth, City of York. The following towns are also among those who have joined the Committee: Chat ham, Cheltenham, Kidderminster, Kirkcaldy Perth, Scarborough, Shrewsbury, and Wool wich. The Committee say that "the scheme s not only an unjust one, but it is also in expedient, because it involves a very con siderable and unnecessive waste of th country's energy and time. By the system of insuring separately each building, or it contents, a great waste of clerical work, both on the part of the Covernment officials and or the existing fire insurance companies who are acting as agents for the Government in the matter, is necessitated. This is especially the case where small property's are concerned Inasmuch as, at the present crisis in national affairs, it is important flat all available energy should be directed to the prosecution and successful issue of the war, the waste of time and energy involved in collecting premitums from individuals is obviously a serious

A memorial has been presented to the Prime Minister and other members of he Majesty's Government from the British Constitution Association, of 11, Tothill Street London, S.W., December 21, 1915, stating that the memorialists were greatly concerned by the introduction of the Increase of Rent and Mortgag - Interest Bill into Parliament and at a meeting of the Conneil and Committee of the Association to consider this measure the following resolution was passed

"That this meeting views with alarm the Increase of Rent and Mortgage Interest B'll now before Parhament as being an unnecessary violation of the principle of the sanctity or contracts upon which the private relations or citizens and the public relations of States alake depend, and desires that a communication be addressed to the members of the Government in support of this view." For the State to interfere to ke p down the rent of houses or land, the rate of wages, or the note of interest on capital, is to tax unfairly the owners of the particular property in terfored with, and, so far from being justified by a state of war, is made more unjustifiable at a time when the sufferers are least able to be a the imposition; especially must this be the cas, where one class of property is alone deast with, for instance, where landlords and mortgagoes are torbidden to raise rents and interest while the manual labourer is obtuning a large increase of wages. Now that the seeds of the State have called for a largely pressed tax upon houses as well as other property, to exclude this one kind of property to the Pone parall cases from the general rise in prices is Transport to the character of the interest

some of the more complaisant heralds of those publishers who mefer "notices" to reviews, and, not soldom, to write them themselves! It the war, which has 'it us all hardly, and killed many of us, is in any way responsible, it adds another catastrophe to the many which may prove irreme hable.

### \_\_\_\_ OBITUARY.

We regret to record the death Arthur Hughes, the last of the pre-Raphasiite painters, which took place at Eastside House, Kew Green, on Wednesday, in his eighty fourth year. Born in London on January 27 lourth year. 1832, the third and youngest son of Edward Hughes, who came from Oswestry, he was some three or four years the junior of Millais, Holman Hunt, and Dante Gabriel Rossetti. Hughes was educated at Archbishop Temson's Grammar School in Lambeth, where his precocity in drawing gained much admira-tion. At the age of fourteen he entered the School of Design at Somerset House, where he made rapid progress under the tuition of Alfred Stevens, and a year later was admitted to the Royal Academy Schools, where he was a pupil of Soames, and gained the Modal, as Millais had done a few years the Medal, as Millars had done a few years before. Hughes' first Academy picture, "Musidona," was hing when he was seven-teen, and three years later his "Ophelia" was hing with "Ophelia" and "The Hughenot" by Millars and Holman Hunt's "Hirching Shepherd." Hughes's intimate "Hireling Shepherd." Hughes's intimate association with the Brotherhood led to his executing one of the now perished frescoes,
Arthur Borne to Avalon, done under the Arthur Berne to Avalon, done under the direction of Rossetti in 1858 m the old dehating hall of the Oxford Union. By that time he was already considered by the P.R.B., and by their champion Ruskin, as an acquisition to their inner strength. His portrait appears in "The Proscribed Royalist," painted by Millars in 1853. "April Love," paratree by Millars in 1853. "April Love," exhibited at the Royal Academy, 1856, was praised by Ruskin as "exquisite in every way." and was bought by William Morris. Of his "Nativity." exhibited in the Royal Academy, (1956). bis "Nativity," exhibited in the Royal Academy of 1858, Ruskin wrote: "Quite beautiful in thought, and indicative of grander colourist's power than anything in the rooms; there no other picture so right in manner of work, the utmost value being given to every atom of tint laid on the canvas." The "Nativity," "Annunciation," and the "Long Engage-(now all the property of the Birmingham Corporation) were painted for Mr. Plint. In 1857 the Pre-Raphaelite Exhibition in London, to which Mr. Hughes was a con-London, to which Mr. Hughes was a contributor, led to a selection of pre-Raphaelite work which included his "April Love" and "Home from the Sea" being sent for exhibition to America. For thirty years Hughes contributed to the Academy, and later on also to the Grosvenor and New Galleries. The "April Love," painted in 1856, hangs in the Tate Gallery, and his "Home from the Sea" in the Ashmolean Museum at Costone. The weakly widely known in later

In Bridge Street, Warrington, there have been opened new branch premises for the Midland Bank, Ltd. The builder was Mr. Peter Edwards, of Chester, and the architecture was Mr. T. B. Whinney, F.R.L.B.A., of Old Jewry, E.C.

Mr. Temant aumonited in the House of

the Sea" in the Ashmolean Museum at Oxford Re was also widely known in later

years as an illustrator of children's and imaginative books. By his marriage in 1855 with Miss Tryphena Foord (now in her eighty-fifth year). Mr. Hughes had two sons

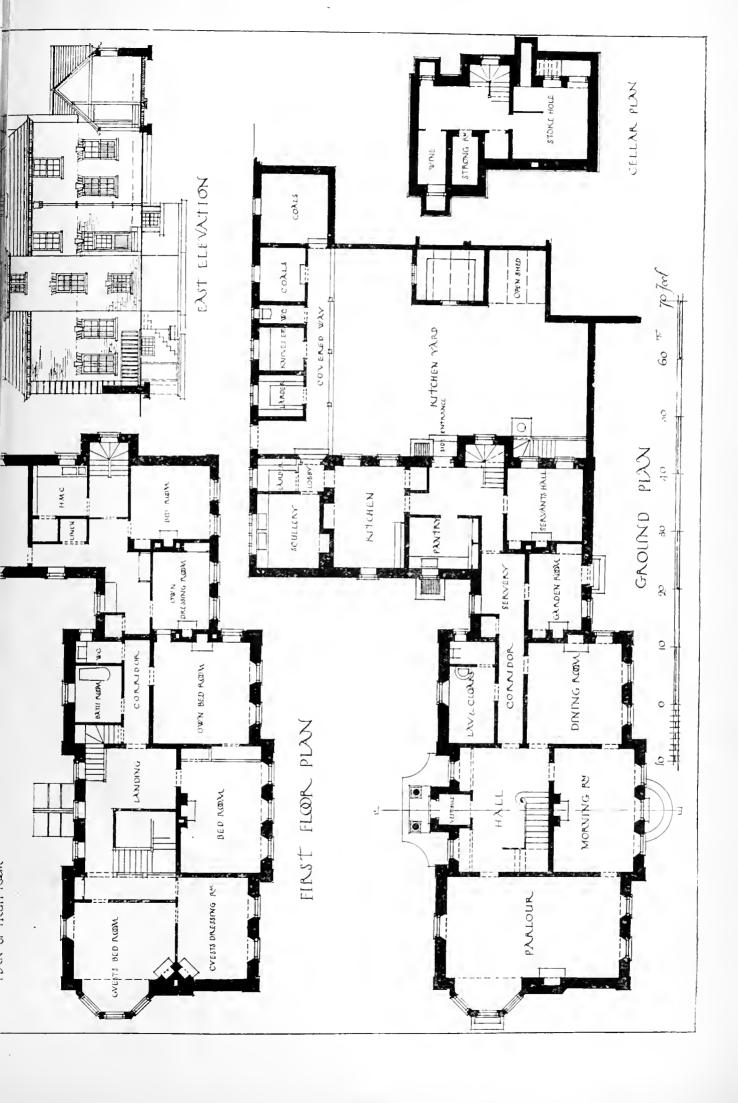
and three daughters, all of whom survive their father. Both his sons, as well as his nephew, Mr. Edward Robert Hughes, are artists. The funeral took place at Richmond

Cemetery yesterday (Tuesday) afternoon.

Mr. Tennant amounced in the House of Commons the acquisition by the authorities of the Industrial Museum, Horseferry Road, Westminster, as a rest house for the large number of men from the front and the home Commons the acquisition by the authorities of the Industrial Missenia. Horseforty Road, Westinister, as a rest house for the large number of men from the strength of the districtive and the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the strength of the

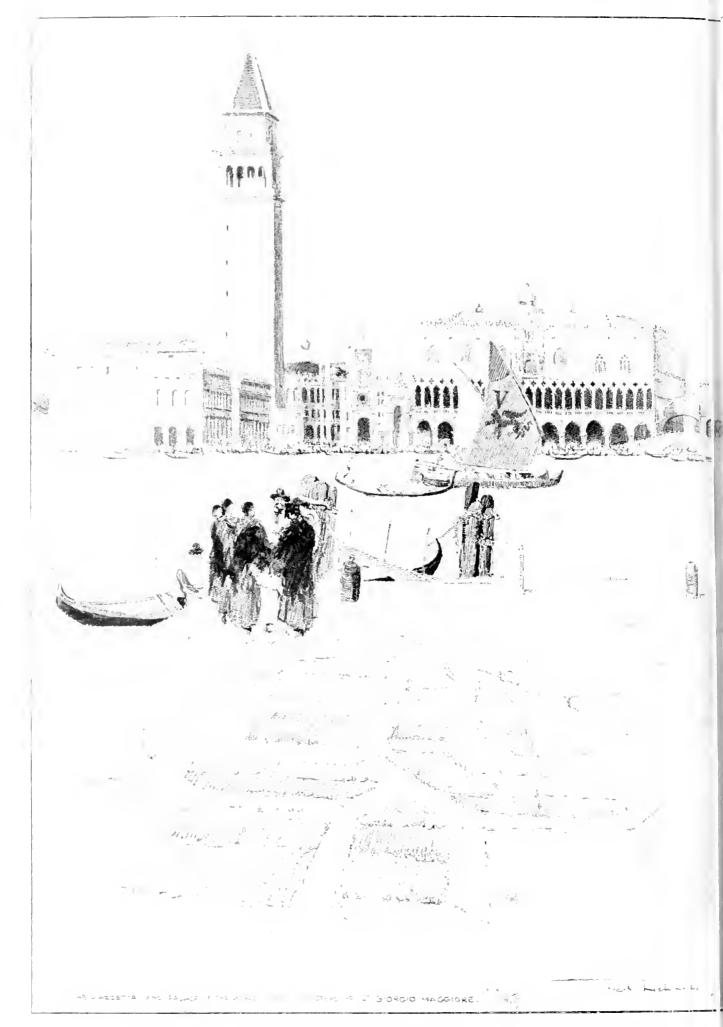
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LIBRARL GARARLIANAS GRANTON TORONTO. THE BUILDING NEWS, DECEMBER 29, 1915

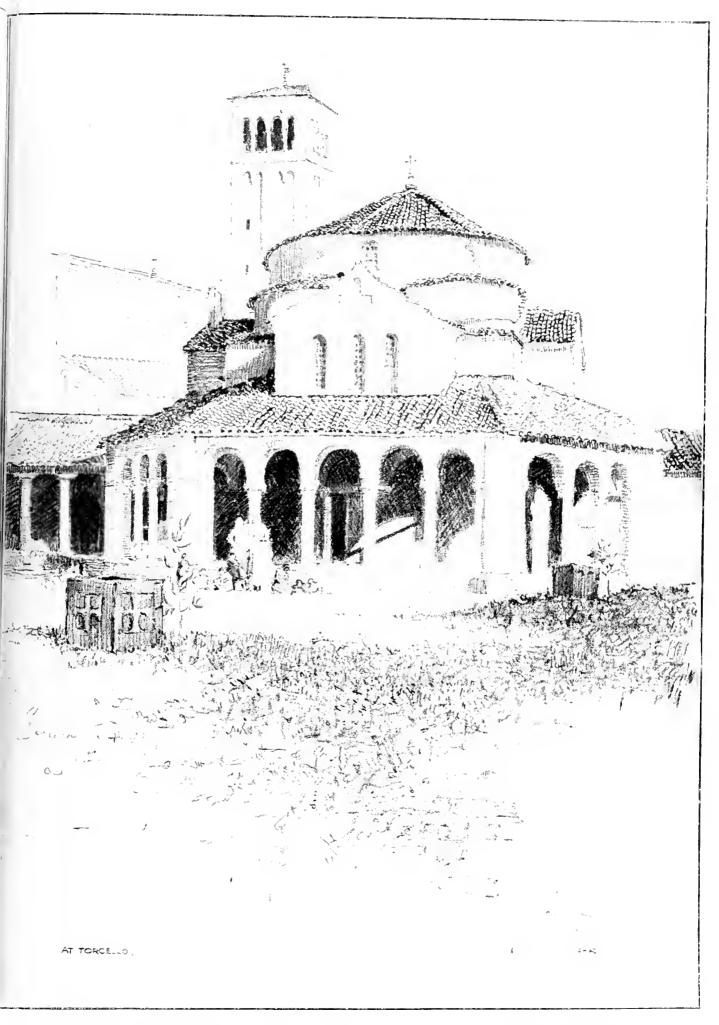




CAMPACT TORONTO.



ENICL TROM THE STEPS OF ST. GIORGIO MAGGIORE AND THE CHURC Drawn by Mr. Free Richards (fro



OF ST. FOSCA, ADJOINING THE CATHEDRAL AT TORCELLO. NEAR VENICE.

Tenice "—Artists' Sketch Book Series).

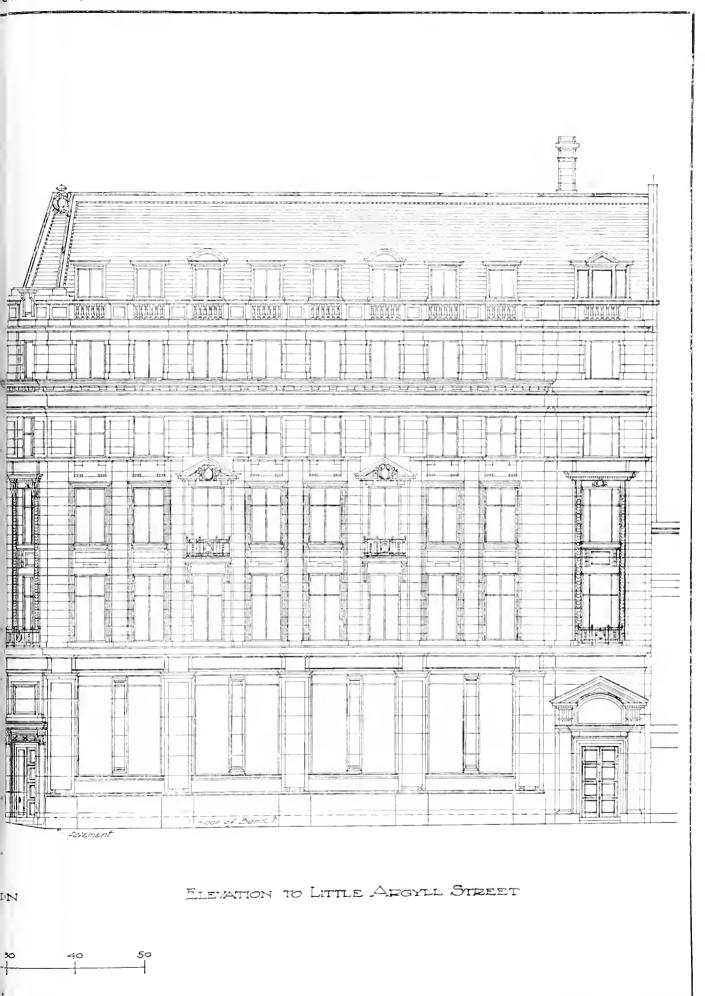
By permission of Misses A, and C. Black.

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NEW PREMISES, REGENT STREET, W., IN CONTINUATION OF THE REBUILDING O AND SMITH'S BANK, Architect of the Fagades, Mr. Henry Tinner, F.R.I.B.A. I Architects to the Bank, Messrs, D.



XFORD CIRCUS, AND INCLUDING THE NEW BRANCH OF THE UNION OF LONDON tects supervising the work for Messrs. Dickens and Jones, Messrs. Stephens and Munt.



# Our Illustrations.

VENICE, AND THE CHURCH OF ST. FOSCA, TORCELLO.

A description of this plate will be found in our first article this week.

NEW PREMISES, REGENT STREET, IN CONTINUATION OF REBUILDING OXFORD CIRCUS, AND INCLUDING NEW BRANCH OF THE UNION OF LONDON AND SMITH'S BANK.

We published a double-page view, from the Academy, in our assue for September Royal Academy, in our assic for September 13, 1912, showing the comprehensive scheme prepared for the approval of the Office of Woods and Forests by Mr. Henry Tanner, F.R.I.B.A., the architect subsequently appointed for the rebuilding of Oxford Circus and upper part of Regent Street adjoining. This work is still in progress, and the several properties are gradually developing as their leases fall in. To insure uniformity in the contiguous frontages near to this great crossing, caused by the junction of Oxford Street and Regent Street, the Crown decided that all re-crections incidental to this architectural recasting of these two great Metropolitan thoroughfares at this point Metropontal thoroughters at this point should comply with the adopted improvement scheme designed by Mr. Tanner. The illustration published herewith shows the prominent section of the undertaking situate on the eastern side of Regent Street, extendbittle Argyll Street. At this corner a branch is being built for the Union of London and Smith's Bank, which will, therefore. be located in a very splendid position and have a considerable frontage facing a south westerly aspect. The next portion of the same block of buildings will be occupied by Messrs. Dickens and Jones' drapery and cos tume emporium, which business is now, we understand, a branch of Messis. Harrols, Limited. The architects charged with the Supervision of the work generally are Messis. Stephens and Munt. of Chelsea, and in so far as the bank is concerned the execution, thus superintended, has to be done to the approval of Messrs. Dunn. Watson, and Curtis Green, of Lincoln's Lim Fields, the architects acting for the Union of London and Smith's Banking Company. This branch bank building is from their plans, and will have a handsome and spacious banking hall, directors' room, and manager's office. This work is to be in accordance with the bank architect's specifications. The entire frontages, however, are being built strict compliance with the designs of ? Henry Tanner, of Carlton Chambers, Regent Street. We hope shortly to publish some large-scale drawings of his details, and we are likewise indebted to Mr. Tanner for the loan of the elevations printed among our plates to-day. Messrs, Stephens and Munt have designed the grilles, and have fitted up their shopfronts in "Kopperoid" steel in an effective and unobtrusive way, but we found it hardly practicable to show these properly to so small a scale in our illustration of the elevations. The builder who is carrying out the contract for the structure is Mr. James Carmichael The steelwork is being made by Messrs. Moreland and Sons, who are doing the hollow-brick floorings. Messrs. Chubb will supply the strong-room iron doors, The heating and hot-water service is entrusted to Messrs. Richard Crittall and Co. The steel windows are being made by the Crittall Manufacturing Co. The façades are all in Portland stone with green West-

the designs of Mr. E. Guy Dawber E.R.I.B.A., cannot fail to be appreciated The building as most unpretentions and very The building as most unpretentions and very well arranged, but is handled with dignity and breadth of design so well in keeping with the old types of Instoric building in this dis the old types of instoric building in this district. The walls are of local stone with dressings, and the roofs are covered with stone slates from the Eybord Quarries, Stow-in-the Wold, Messes, Sells Bros., of Fairford, erected the hell of the house. We make a beautiful the data of the large of the large of the Lindse of gave a sheet of the details of the Lodge or November 24 last, and a prospective perspective appeared in our issue for June 23, 1911 from the Royal Academy of that season.

The corporation of South Smelds increase proved plans for additions to the Tynemouth Jubilee Infirmaty.

The Stomfundge Board of Guardians approved the erretion of a receiving home for children at Xoroon contage homes at a cost of

Mr. L. Adams has resigned his position as surveyor to the Mayheld Rural District Council on his appointment to a

The offices of the Read Board have been moved from Queen Anne - Chambers ac 3 : Cromwell Read (two minutes from South Ken sington Station).

A new Biptist church is to be built in Derwent Street, Blackhill, County Durham, from plans by Messrs, Davison and Pair, of New astle-on-Tyne.

The inchin district council of Saxmund bain, East Sulfolk, have appointed Mr. E. F. Wilson, of Kingsbradge, South Devon, to the post of surveyor and inspector of nuisances.

Acting upon a report from medical specialists, the Kensington Borough Council have grainted Mr A R Finch, the borough engineer and surveyor, complete treedom from daty for a period of three months.

The lighting restrictions at Dover leave had a very serious effect on the corporation electricity undertaking, the less upon which for the year ending March 31 next is now estimated by the borough electrical engineer at £2,090

The plans of Messis, Withers and Mercdith The plans of Messis, wheners and agreement of London, have been adopted for the relatild-ing of the Queen Street Wesleyan Chapet at Scarborough, which was destroyed by fire in Pebruary last. The estimated cost is £2,000.

A return issued by the Assessor of the cuty of Glasgow shows 1 total of 3,957 unoccupied dwellings in Glasgow, of winch 2,633 are houses of one apartment, 4,791 of two apartments, 766 of three epartments, 259 of four apartments, and 556 of five apartments and over. Shaps and other unoccupied premises number 5,692, making a combined rotal of 14.559.

A new home for men in connection with the Royal Institution for the Blund at Bradford has been formally opened. It is proposed to has been formally opened. It is proposed to baild a workshop on the grounds of what was once Highfield House, where they can carry on their brushnaking, basket weaving, and other industrial enterprises, and establish a centralised colony for the blind. Plans have been prepared, and the estimated cost of the building is £5,000, but the work will not proceed until after the war

At the last meeting of the urban district At the last meeting of the urban district council of Chudderton, the chrimman stated that the clerk had received from the architects, Messrs, Taylor and Smuister, a statement of the cest of the new town half. The total contracts made amounted to £14,035-15s., architects' commissions £1,141, loan for suc £1,700, making a total of £17,474. Sanct on was obtained for loans for building, etc. £15,339, site, £1,700, total £17,559. One of the things very rare in public life was that the bill came out below the estimate.

are all in Portland stone with green Westmoreland slates for the roofs, capped by ornamental lead ridges. The treatment adopted for the fenestration is primarily governed by ample lighting provision with as little obstruction as possible, and the intervening pavilions are flatly managed to avoid shadows. These pavilions lend emphasis to the lay-out of the design, and give architectural distinction to its composition.

"BURDOCKS." NEAR FAIRFORD, GLOUCESTER.

These copies of the general working drawings of this stone-built house erected in the beautiful neighbourhood of Fairford, from

# Correspondence.

MILIARY EMERGENCY HOSPITALS

To the Editor of The Bunding News Sir.—My friend Mr. Skipper has just willed Sin. My friend Mr. Skipper has jist eidled by affection to a tenort in your columns of New reto. 17, 1945, or a very interestrict leading given by Mr. J. Sayon Sach. As I have that you would not wesh more a cope of any kind to be perpetuated in your pages. I feel sure that you will allow me to stree that instead of my name that of Colonel Graffiths. Commanding Officer of the Phys. Eastern General Bespital should appear.

For many years, Cd. Graffiths has, to my kind vehicle been making release study of nospital construction. When the various continuity has no part is spital, sind with the a rate of of Mr. Sompth, these "hospitals in 51 car became sold that sold parameters for a large of yatching their development is in times per varieting their development is in times per

watching their development is in times, per laps, evaluate critics not dedesitor and co-tod. Griffiths must be given the whose credit of the conception of this type of hespital, and to Mr. Skipp of the credit of carrying out of most administration to Conflicts, ideas and plans.

wish to set this matter straight at oneas in matters of this kind it is sometimes in possible to determine who at the real init ators of a new departure, and is this assume it gives me very great pleasure to be able to in de this correction without being called sponto depreciate the work of anyone ease. I am setisfied that only in future years a 21 we realise to the full how much we eve to this new method of hispital construction, and to tol. Criffel's for his persest at advency and harliant carrying out of the open dramethod or freatment of disease and injury other than those andread by the tiberce for his. The has, I am continued solved the go at blem of hospit d treatment for insured rate ints, and although a may be some little time befor-the method comes into full yogue, there can he little doubt that, in the long run, insured patients will be brought together the these hospitals, there to be treated by their Panet doctors and by these called an thousant with

Apologising for ecopying so now valuable space with what at first sight appears to be, but really is not, a person in ofter. 1 am, yours faithfully,

C SINS W MICH AD

Pathological Lahoratory,
New Medical Schools, Cambrid,
"We regget the Lipse, Mr. I. Seven Sner-himself promptly called attentive to it in his letter which we inserted or 1, 634 of our issue of December 1, -En [143]."

### THE REST AND MORTGAST BILL

Sun. Allow me to call to arte thereof your readers to the memorial who the Be tish Constitution Association has cosed of to the Government against the Lorens of Reit and Mortgage Interest Bill. The commonly SINS

"For the State to interfere to the rent of houses or land, the rate of will so or the rate of interest on cipits. So tax unfairly the owners of the partie or in e-perty interfered with, and, so for from being justified by a state of war, a made less justified at a time when the sufferers are least able to bear the imposting especially must this be the case where one class of perty is alone dealt with, for instance landlords and mortgagees the full identification raise routs and interest who the name labourer is obtaining a large in mass of Wages.

"Now that the needs of the State Lave called for a kingely increased tax to an loases as well as other property, to exclude this one as wear as come property, to exclude this one kind of property in all cases from the general tise in prioss is alwiously arbitrary agriculture in the interest of one class, and your memori-alists frust that the measure will not be passed into law." into law.

Unfortunately, the opposition to the measure is not likely to be successful, but surely even as a measure only intended to be in force during the communance of the war it should be l am, y ars

MILL H JIEGE.

AM SEPVEE FORM for operation of the War Ser that the War Ser Under the War Ser Under a traders may be an a factor of the response that says the forms already that the considerably expected to make the arrangement of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of

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ALAN E MUMBY.
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State of British Architects.
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# PROFESSIONAL AND TRADE

SOCIETIES.
(RISTAL PAINE SCHOOL OF ENGINEERING. Mr. P. Griffith, President of the Society of Engineers, in distributing certificates to the students at the Crystal Palace School of Practical Engineering on Wednesday, said the future of this and of every country lay in the hands of the engineer. In many respects in commerce, trade, and science we had been taking things too easily and letting our rivals get ahoad. Now, under the stimulus of the war, the nation was waking up, and it was our duty to keep awake, make a fresh start the world's race, and maintain the which our ancestors won. Mr. H. J. Buckland, on behalf of the Crystal Palace Trustees, said the members of that body had both collectively and individually, worked extremely hard to obtain outside assistance in order to carry on the school, but had failed to obtain financial help.— Unfortunately, the loss in connection with the school for 1915 ran into four figures, and, the Trustees having no money to meet the deficiency, felt they could not carry on the school, and their responshilling for it ended with the close of the present torm. However, the Principal and his brother had decided to carry on the school, and during the next term would find more suitable and up-to-date premises for the pursuitable and up-to-date premises for the purpose. Daring its forty-two years of existence the school had turned out something like 1,200 engineers, who now occupied important posts in all parts of the world. Mr. J. W. Wilson, the Principal, amounced that the school's roll of honour included nearly 200 past and present students engaged in the country's service. The school, he said, had always paid its way until the war, although it had never had any private assistance, and it was not going to close. On January 5 they intended to start again, and zo on as before.

ROMAN TILES IN LANCASHIRE, - At the December meeting of the Antiquarian Society, held at Chetham's Hospital, Manchester, Major Less, J.P., of Egetton Villa, Heywood, read a short communication on some Roman tiles found at Castleshaw in 1907. One bore an inscription, two had graffiti markings upon them, and another, evidently a roofing tile, had been pierced with a hole which still retuned the iron nail once used for fixing it to woodwork. The inscribed tile was of unusual interest, for it hore the name of a cohort of Roman troops. Tiles having a similar im-press had been frequently found at the neighbearing Roman rout at Slack, near Hudders-neld, distinctly bearing the mark COH IIII BRE, indicating, in all probability, the fourth cohort of the Breucores from Pannonia, and known to have been in Britain. The Castleshow tile stamp closely resembled those found at Slack, but unfortunate abrasions or decay had rendered the lettering somewhat uncer all that remains clearly visible being HII BR with an indication of a final tan: all E. A tile fragment bearing the first portion of a very similar type of impress was found in Manchester early in the nineteenth century.

THE URIGIN OF THE NEOLITHIC CELT. -A paper on this subject was read by Mr. Reginald Smith before the Society of Anti-quaries at their last meeting, held at Burlington House, S.r Arthur Evans, the President. occupying the chair. The lecturer, who exhibited many specimens and lantern slides. traced one important class of flint weapon trom the side scraper or "point" of Le Worstier. The gap was in his opinion hrdged by several intermediate forms recently hredged by several intermediate forms recently femiliar at Grime's Graves, Norfolk. The date of that industry was not an essential factor in the argument, and he claimed that there existed a curious connection in form between Grime's Graves specimens and palaeoliths of late type, from brick earth and possibly other deposits in the Thames Valley. The small platform often seen at one angle of the base of the triangular hand axe seemed to represent the hilt of percussion or thickening on a side scraper or "point" from Le Moustier; and it's disappearance marked a change of function, the apex becoming the butt of the celt, and the butt of the hind axe turning into the curting edge of the celt. Granted that form a ane was no criterion of date.

form-essociations were the basis of prehistoric research, just as plant-associations were the mainspring of ecology. He argued that there was no great difference in time or civilisation between the flint-workers of Grime's Graves and the early cave-dwellers of France.

### COMPETITIONS.

Govan Secondary School.—Govan School Board, at their monthly meeting on Wednesday night, adopted plans for a new secondary school which is to be erected in the Hillhead district of Glasgow. The successful architect was Mr. Matthew Adam. Lic.R.I.B.A., 169, Hope Street, Glasgow.

### LEGAL INTELLIGENCE.

What is Public User of a Road?—Wilding v. Billington.—In this action, tried in the Laneashire Chancery Court, the Vice-Chancellor, Mr. Stewart Smith, K.C., has given judgment. The plaintiffs, Messrs, S. B. Wilding and Sois, contractors and decorators, Preston, are the owners and occupiers of land through which runs a narrow road with outlets in Lune Street and Hill Street. The plaintiffs claimed that the road was a private way, and they sought an injunction against the defendants, who are owners of adjoining property and whose case was that the road was a public thoroughfare between the two streets. It appeared that at one period there were gates set up which had decayed, and in 1913 the plaintiffs put up other gates. These were removed by the defendants in March, 1914, in the assertion of what they deemed a public right, as little damage being caused WHAT IS PUBLIC USER OF A ROAD?-WILDING 1914, in the assertion of what they deemed a public right, as little damage being caused as possible.—The Vice-Chancellor said course public right, as little damage being caused as possible.—The Vice-Chancellor said counsel for the defendants, exercising a wise discretion, had abandoned a claim to a private right, and the only question that remained was whether there was any and what public right of way over this land. The disputed road, which formed a continuous passage between the two treats was tortugus and national processing the continuous passage between the two treats was tortugus and national continuous passage. tween the two streets, was tortuous and narrow, and in some places two carts could not pass. The claim of the plaintiffs was founded entirely on user. For the defendants it was said that as far, at any rate, as foot passengers were concerned, the user had extended gers were concerned, the user had extended for many years. There was also evidence that wehicles and sheep and cattle had used the road. At one time in its history a suggestion was made to the corporation of Preston that they should take over the road and keep it in repair, the owners being willing to give up their rights, but the corporation did not assent. On the evidence as presented he found no intention to make a dedication, and, in his opinion, the user, where it had not been by persons who had business there or passed through under some private right, had been by persons who had business there or passed through under some private right, had been by members of the public who were either tolerated or unobserved by the owners. He came to the conclusion, therefore, that the plaintiffs were entitled to the injunction they asked, and he fixed the damages at 10s, the defendants to bear the costs of the litigation. In his opinion, the defendants had acted with In his opinion, the defendants had acted with the single purpose of establishing a public right which, in good faith, they believed existed. The rights of the parties being once determined, it would seem that the convenience of those who desired to attend St. Wilfred's Church. Preston, or to pass over the land for legitimate purposes might be the subject of arrangement to which the plaintiffs might see their way to agree, while still preserving their own rights.—Mr. Glover, plaintiffs' coursel, said he would convey his honour's suggestion to his clients.

### ENGINEERING NOTES.

# Building Intelligence.

EDINBURGH.—The "Sandeman Memor, 1 Halls," as the new building erected in Ashley Court, High Street, Edinburgh, behind Moray-Knox Church, in connection with the work of the Moray-Knox and St. An drew's United Free Churches' Mission Board, has been named, were opened last week. The old tenements in the court have been removed, and a completely equipped mission centre erected, comprising a large hall, seat ing about 400 persons, two large clubrooms .committee-rooms, service kitchen, office, and committee rooms, service kitchen, omee, and caretaker's house. In the external design an effort has been made by the architects.

Messrs. J. N. Scott and Lorne Campbell, to render the new building in keeping with the characteristics of the Old Town architecture, and the change in the old court is in the nature of a city improvement. The cost has been £2,000, exclusive of the purchase of the site and the laying out of the court.

QUEBEC .- The new Union Station, which is being built from the designs of Mr. H. E. Prindle, is a comparatively low building in the style of the chateaux on the Loire. The build ing is located on the property bounded by St. Paul, Henderson, and St. Roche Streets. which has been entirely re-arranged, with new tracks, coach storage yard, express yard, freight sheds, and freight office. The roof of the central block rises 90 ft., the roofs of the wings being 50 ft. high. The exterior walls are faced with a dark brick, laid in Flemish bond in white mortar, with deepraked joints with stone facings and gramte base. The roofs are of copper. The entire building rests upon a system of concrete piles; the floor and part of roof construction are of reinforced concrete, the sloping surfaces of roofs are of gypsam block, the frame throughout is of steel encased in concrete, and the walls are of masonry. There are 450 concrete pedestal piles, contaming 400 tons of structural steel. The building will be electrically illuminated. The trainsheds will be of low umbrella type.

The station proper will cost approximately \$300,000 when completed. The operations are being carried out entirely under the direction of Mr. D. H. Mapes, engineer of buildings, Canadian Pacific Railway, Windsor Station, Montreal. The general contractors are the Downing-Cook Company, of Montreal.

Glasgow. - Operations are practically completed by which the building of the Glasgow Royal Exchange in Queen Street has been reconstructed. Externally it has always been one of the most striking structures in the city, with its dignified walls and massive columns. It was the residence of Mr. William Cunningham, of Lainsbaw, one of the most successful of Glasgow's "tobacco lords," who succession of Giasgow's Totacco fords, who built it in 1778. It came into the possession of a committee formed to institute a new Exchange in the city in 1827, and two years later was opened as the Royal Exchange. The entire building has been remodelled internally, under the advice and guidance of Mr. Colin Menzies, architect, Glasgow. There are three floors. On the ground floor is the main room of the Exchange—a lotty apartment, decorated in red, white, and gold the massive columns dividing the floor space along the north and south sides. A considerable quantity of the gold used in the previous decoration was again utilisel in the present scheme, in which are two large elec-troliers bearing fifty lamps on each New entrances have been made, and a fresh staircase, all of which afford increased floor space amounting to nearly 300 square feet. Two additional fluted monoliths have been introduced, thereby retaining the proper propertion of the columns to the general design. On the first floor are the underwriters' rooms and the secretary's office, together with a suite or other offices. The corridors are firms, nearly all of whom are associated with the Exchange. A feature of this nortion of the building is the dome, which was part of the original mausion. The plaster decoration to the cantrol of the original mausion. The plaster decoration to the cantrol of the original mausion. The plaster decoration to the cantrol of the original mausion. The plaster decoration to the cantrol of the original mausion. The plaster decoration to the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cantrol of the cant finished in white and green tiles, with a dado

remains practically the same as in the divis. Several new stategies have here in troduced, as has also been a lift to all tre-floors. This upper portion was formerly coupled by the Nitherial Telephone C in pany, but it has been transformed into a series of apartments. The basement was formerly also in the occupancy of the Telephone Company, who vacated the premises when the Government took over control of the telephone service. This has ment has been reconstructed to provide premises for a restau-

# Trade Nelus.

### WAGES MOVEMENTS.

SHEITHED.-The operative painters of this SHITHED.—The operative painters of this city have received an advance in wages of a halfpenny per hour (from 82d, to 9d,) under the award of Mr. E. A. Greer, K.C., who was appointed by the Board of Trade to act as arbitrator between masters and men. The application on behalf of the Sheffield branch Society of Operative Painters was for an increase of 1d, per hom.

### TRADE NOTES.

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Boyle's Inest patent "air-pump" venulator has been applied to Tovil School, Maidstone, Mr. George Reavell, A.R.I.B.A., of Alawick, is taking into partnership Mr. W. Ardhur Tebbs, who has been for thirteen years his chief assistant. The irrn will continue the practice at the old address, Lloyds Bank Chambers, Aliwick, and at the branch office at 51, Bridge Street, Morpeth.

### ---WATER SUPPLY AND SANITARY MATTERS.

WATER SUPPLY AND SANITARY

MATTERS.

THE SEWERING OF BENTLEY, NEAR DONCYSTER — Mr. A. G. Druny, D.Sc.,
M. Inst.C. E., held a Local Gov rument Board
inquiry at the Bentley Council Schools, on
Thursday, into the application of the Bentleywith-Arksey Urban Council for power to
borrow an additional £2,030 for sewerage and
sewige disposal works. The Clerk to the
Council (Mr. Pys) mentioned that in 1881 the
population of the parish was 1,484, in 1901
it was 2,405, and in 1911 it was 6,497, while
the estimated population now was 7,300. The
tateable value of the purish is £65,542 2s. 64.,
and the assessable value £54,521 11s. 5d. The
isalance on outstanding loans is £34,028, exclusive of loans under the Housing of the
Working Classes Act. The present application arose chiefly out of a contract for sewerage works entered into in 1915, and the excessof expenditure over estimates was accounted age works entered into in 1915, and the excess of expenditure ever estimates was accounted for by the nature of the ground—the running s in 1 and water—and the bad ground generally in the Boutley Toll Bar district, which necessi-tated the timber being left in the trenches. A bad state of ground was also met with it the new pumping station in Bentley village, and necessitated an expenditure for exceeding It the new pumping station in Bentley village, and necessitated an expenditure for exceeding the estimate. The original estimate for the work was £11,936, but the contract was let for £12,458. A representative of the engineers (Messis, Balfour and Sons) gave details of the cost of various portions of the work, and in reply to the Inspector, said the whole system now worked effectually. Dr. Wilson (representing the West Riding County Council) said he did not object to the application, but colliery villages had a way of increasing very rapidly, and in all probability the time would soon come when the scheme would have to be enlarged, and it was necessary to look ahead.

### STAINED GLASS.

Newcastle-on-Tyne.— A three-light stained-glass window, erected to the memory of the late Mrs. W. B. Reid, of Cross House, was inveiled on Monday in St. Luke's Church, Newcastle. The subject is "Faith, Hope, and Charity." The figure of Faith is represented helding in one hand a cross and in the other a Bible. Hope is portrayed habling in has hand a Bible. Hope is portrayed holding in her hand an anchor, and is looking up to Heaven. Charity is represented by a female figure mothering and succouring two orpolishers. In the centre light there an angel introduced into the car

# Our Office Cable.

Fre. I Marshat Sir John French on his Fig. 4 Marshal Sur. John Frisch on his departure from France pand a striking tribute to the Artists Rifles. O.T.C., which furnished his guard of honour. He said: "Officers and men,—It is singularly appropriate and nothing could give me greater riate and nothing could give me gassess cleasure than that your regiment, the Artists Rifles, should be the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of the last British of th beasure croops that I shall see in France. You have dene wonderful work since you came out; you have furnished some of the finest leaders of the Army from your ranks, and in doing so you have suffered perhaps greater losses than any other regiment out here. You have done great work, and I have no doubt that you will continue to do so till the end of the or will some the folial solution the end of the campaign. I am very pleased that the guard of homour on my leaving France should be supplied by the Artasts Rifles. I wish you goodbye and good luck."

Some antiquities of Buiton Abbey have been presented to the Burton Club by its vice chairman. Mr. S. Eriggs, J.P., the executor of the life Colonel J. A. Bindley, to whom the relies belonged. Colonel Bindby lived at the residence known as Burton Abbay, which occupied the site and formed a portion of the old Benedictine monastery on the north bank of the Trent at Burton). and this a few years ago was taken over by the Barton Club as their new quarters. The gifts include a plaster cast of the conventual seal of the abbey of the twelfth or thirteenth century, and a cast of the seal of the first abbot, William de Melburne (1197-1210), used in compaction with that of the monastery. These are framed in wood, 300 years old, taken from St. Werburgh's Church, Derby. On one side of each seal there is engrossed on vellum a brief history of the abbey and a complete list of the abbots (thirty five in number) from 1026 to 1534. The history states that the abbey was dismantled at the dissolution of the monasteries, and its possessions handed over by King Henry VIII, to his secretary, Sir (atter-wards Lord) William Paget, ancestor of the present Marquis of Anglescy.

Writing with reference to the recent dis writing with reference to the recent dis-covery of the foundations of Wulfrie's round church at St. Augustine's Abbey, Canterbury, mentioned last week, Mr. G. McN. Rush-forth, F.S.A. points out that the main in-terest of the important discovery is that it adds another to a list of English round or polygonal churches which covers the whole of the Anglo Saxon period and extends up to They are all the beginning of the Crusades. They are all of Continental and ultimately Roman origin and inspirition. It was about 680 that Wilfrid built a round church of St. Mary at Hexham. Some time between 959 and 975 the abbey church of Abingdon was rebuilt in the same form. About 1080 Robert of Lorraine, Bishop of Hereford re-erected his cathedral, as William of Malmesbury tells us, after the pattern of the most famous building of his native land. Charlemagne's round church at Aix la Chapelle. And now we find, says Mr. Rushforth, that, some twenty years earlier. Abbot Wulfrie had built a round church at Canterbury; and the plan suggests that it too may have been derived from that of Charlemagne's Chapel Royal, or possibly from that magne's Chaper Royal, or possibly from that of the not much later rotunda at Fulda. In discussing these buildings in his "Lom bardie Architecture." Comm. Rivoira has well pointed out that all these circular plans are derived directly or indirectly from Roman models; and that, in choosing this form for the Church of the Holy Sepulchre itself, Constantine was only following the pattern of a typical Roman mausoleum on the grand scale.

At a meeting of the Midlaud Association of Local Government Officers in Birmingham last Monday week, Mr. Henry E. Stilgoe, city engineer and surveyor, gave an address on "Destruction of Macadam Streets," from notes supplied by Mr. Thomas Arnall, of the Birmingham Public Works Department, who was prevented from being present to speak on the subject. Mr. Stilgoe dealt generally with the chief causes of destruction, Set of the emplaced that I have its pronouncement from the Lorder may be them to the association of experts with tegar I to the ment of the inverse mest in pertant matter, and the most given a health of erman e.

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### PARLIAMENTARY NOTES

RESTRICTION ON INCREASE OF RENT.—In the House of Lords on Tuesday in last week, the Marquess of Lansdowne moved the second read Marquess of Lansdowne moved the second reading and explained the purposes of the Increase of Rent and Mortgage Interest (War Restrictions) Bill, a measure which had already passed through the House of Commons. The noble Marquess said that while the Bill restricted increase of rents of working-class houses, it was quite impracticable to legislate for the purpose of vestivety rate of warms. A wegen it desired of restricting rates of wages. A general demand for an all-round merease in wages would be disastrous, but the Government had by other legislation done something to discourage such a demand. Earl St. Aldwyn said the Bill could only be justified by the fact that the country was at war, and hoped it would not be taken a a precedent for legislation in the future. He could not understand why, if the Bill were intended only to apidy to the working classes, the limit of rent should have been fixed as high as \$26 a year in rural areas, which brought persons of a much higher social status. Committee he proposed to move an amendment to reduce the rental in rural areas. The Bill was read a second time. On Wednesday the was read a second time. On Wednesday the measure passed through Committee and all the measure passed through Committee and all the remaining stages. In Committee several Government amendments were agreed to on Clause 1. Viscount Midleton mayed an amendment which Earl Sr. Aldwyn had put down to Clause 2 providing that in rural sanitary districts the Bill should apply to house up to the value of £12 instead of £26 a year. He argued that in rural districts the figure at present in the Bul would not be consistent with the intentions of and promoters of the measure. The Marquis of Landouna institut the rental limit in the and promoters of the mersure. The Marquis of Lansdowne justified the rental limit in the Bill on the ground that there were many areas to which the Bill must apply which, whilst tech-nically rural, were really urban in character It seemed better on the whole to include a certain number of persons not strictly entitled to protection than to execude some who had claims upon the relief given by the Bill. During the discussion Earl St. Aldwyn came into the House and said that he recognised the difficulties of the position, and therefore withdrew the amend-mant. The ones is The measure received the Royal Assent on Thursday.

DETERIORATION IN GAS.-Dr. Add son. Secretary to the Ministry of Munitions, replying in the Parliamentary Papers to Mr. W. Thorne's inquiry whether the Minister of Munitions was aware that the loss in the illuminating and heat ing power of gas caused by beazed, toland, and xylol being extracted could be made good to: Ayior being extracted could be made good to; the use of oil and cannet coal, says that the cost and difficulty of obtaining the materials required restrict the possibility of adopting the processes required, and the determination in the quality of the gas supplied to customers is hardly appreciable.

Mr. Frank Bailey Passmore, aged 70, of Alexandra House, West Cliff, Herne Bay, and of Suffolk House, Laurence Pointney Hill, E.C., civil engineer, left not personality £14,230 and gross £14,230.

At the last meeting of the Wolverhampton Town Council Mr. Charles Owen Silvers, Wolverhampton was appointed general man-ager and engineer of the Wolverhampton Cor-poration Tramways, in succession to the late Mr. W. A. Luutley, at a commencing salary of £350 per annum.

Fires in Dundee during the past year can damage to the extent of almost £50,000. The fire brigade received 207 calls during the year fire brigade received and the damage at which the outbreaks reaches \$10 and over amounted to £48,715 while the attended at outbreaks in the county at which the damages were estimated at £5.150. The most serious outbreaks occurred at the harbour; indeed, the total damage done by fires at the riverside amounted to £37.635.

A cross has been presented to Bordes Par Church, East Suffolk, and dedicated by the Bishop of St. Asaph. It is inscribed; "Given by the officers and non-commission d officers and men of the Shropshire R.H.A. Denbigh Hussars Veomany, Headquarter Staff, Signal Troop, R.A.M.C., and A.S.C., of the 1st Welsh Border Mounted Brigade, who were quartered at Beccles during the European War, 1914-1915. is three feet high, in the English style of 1480-1520, and consists of an enriched Latin cross, supported on a plain hexagonal and stem. At the end of each of the four arms is an embossed silver plaque worked into the symbols of the four evangelists, and in the centre of the cross is a fifth silver plaque of the Lamb with the banner of the Resurrection.

### TO CORRESPONDENTS:

We do not hold ourselves responsible for the opinioas of our correspondents. All communications should be drawn up as briefly as possible, as there are many claimants upon the space allotted to espondents

It is particularly requested that all drawings and all communications respecting illustrations or literary matter, books for review, etc., should be addressed to the Editor of the Building News, Effingham House, I, Arundel Street, Strand, W.C., and not to members of the staff by name. Delay is not infrequently otherwise caused. All drawings and other communications are sent at contributors' risks, and the Editor will not undertake to pay for, or be liable for, unsought contributions.

"Drawings of selected competition designs, important public and private buildings, details of old and new work, and good sketches are always well-come, and for such no charge is made for insertion of more commonplace subjects, small churches, chapels, houses, etc.—we have usually far more sent than we can insert, but are glad to do so when space permits, on mutually advantageous terms, which may be ascertained on application. It is particularly requested that all drawings

When favouring is with drawings or photographs, architects are asked kindly to state how long the building has been creeted. It does neither them nor as much good to din-trate buildings which have been some time executed, except under special circum stances.

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Telegrams: "Timeserver, Lstrand, London."

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### MEETINGS FOR THE ENSUING WEEK.

Webbist v. Jon a Institute of reinlary Presidential Nodes Carlon Hall, Westminster, 735 juin.

M W o H o only engineer of Carand sudents as their president

Sa in Cavine-to Methodist Chapel at PwPholi, with a was burned down some months since by the normber y, has been rebuilt at a once by me need by y, has been rebuilt at a cost of £0, and was respected last week. We R. Leyd Jones of Camaryon, was the first town of Dolydd, the architect, and M. Evan Jones, of Dolydd, the

The Sandenan Memorial Halls, birth in Added Court High Street, Edinburgh, behind the Moore Knox Courch, have been formally opened. The architects were Messry, J. N. opened The architects were Messrs, J. Scott and Lone Campbell, F.R.L.B.A. Castle Street, Edinburgh, and the cost £12.600

At a meeting on Monday of St. Helen's District Commit. Isle of Wight, a letter was read from the scaverging contractor, terminating his contract at the end of the year on the ground that he was put to such great expense in boying poison to keep down the rats that it was not worth doing.

The foundation stone of a new church at New Rossington, near Doneaster, has been formally laid. Lind has been reserved for a torurally land. Land has been reserved for a parsonage house, and church institute. The plans of the church are by Lieutenant F. N. D. Masters, M. V., L.R.I.B.A., of Bank Chambers, Doneaster, and the cost will be £3,250.

The city conneil of Wakefield are seeking powers to modify then waterworks scheme. Under the new proposal, two comparatively small dams and gauge basins will be substituted for the Both Dean Reservoir originally contemplated, at an estimated cost of £20,000 as against £50,600 for the original project.

At the last meeting of the urban district council for Heanor, the proposal to build a school for the teaching of technical engineering was again under consideration, and resolved there the Heamor Education Committee testived near the Deanor Education Committee by requested to submit plans for the creetion of an engineering workshop, and that the Derbyshire Education Committee be asked to consent to Mr. G. H. Widdows, F.R.L.B.A., making the plans.

The death has occurred at Jarrow of Mr. Thomas Brown, aged 42 years, manager and surveyor for Mr. Thomas Lumsden, contractor, surveyor for Mr. Thomas Lumsden, contractor, Jarrow. Mr. Brown had been in the service of the firm for twenty-four years, and until a few days ago was fellowing his employment. The cause of death was menumona. The day row mays ago was rehowing ins employment. The cause of death was innouncement. The decreased was the second son of Mr. George Brown, traffic manager for Messis. Bowes and Partners. Mr. Brown was actively associated with many England, including contracts in the North of England, including the Pelaw Cooperative Stores and the extension of the Armstrong Col-lege. He was an artifete, and in later years was secretary and afterwards captain of the Jarrow Golf Club.

Mr. William Henry Lyon, R.H.A., of Inn-yard, near Fethard, Co. Wexford, and of Bel-fast, late of the Queen's University, Dublin, and of Belfast Cathedra', and President of fast, late of the Queen's University, Publim, and of Bo'fast Cithecha' and President of the Royal Institute of Arenteets of Ire'and, 1335 to 1739, who shed at September 12, aged 35, son of Leintenair Henry Lynn, R.X., left personal estate in the United Kingdom valued at £53,504. He cft £5,009 London and North Western Rankay ordinary stock for the completion of St. Ann's Cathedral Church, Belfast £5,000 Belfast Harbour Consolidated stock fast: £3,000 Belfast Harbour Consolidated stock thas: \$25,000 Reliast Harbour Consolidated stock to the Royal Victoria Hospital for the endowment of beds there, and \$2500 Relfast Harbour Consolidated stock for the Sustenation Fund of the Parish of Fethard, if the residue of his estate shall exceed \$250,000, any balance above that som is left if a distribution ameng Belfast local charities.

### LATEST PRICES.

N.B.-All prices must be regarded as Userely approximate for the present, as our sual sources of information are in many

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Salt Glazed. Buff, Cream, Other Second Colours.

Stretchers—
### \$12 7 6 ## \$11 7 6 ## \$13 17 6 ## \$17 17 6 ## \$12 17 6 ## \$11 17 6 ## \$10 17 6 ## \$13 17 6 ## \$17 7 6 ## \$12 7 6 \$12 7 6 ## \$17 17 6 ## \$15 17 6 14 17 6 ## \$17 17 6 ## \$17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 7 6 ## \$18 17 15 17 6 14 Double Stretchers 17 17 6 16 15 17 6 14 17 6 17 17 6 21 7 6 16 7 6
Double Stretchers—
17 17 6 16 17 6 20 17 6 24 7 6 18 7 6
Double Headers—
14 17 6 15 17 6 17 17 6 21 7 6 15 7 6
One side and two ends, square—
18 17 6 17 17 6 21 17 6 26 7 6 19 7 6
Two sides and one end, square—
19 17 6 18 17 6 22 17 6 26 17 6 20 7 6
Splays and Squints—
17 7 6 16 7 6 21 17 6 24 17 6 17 17 6
Piinth and Hollow Bricks, Stretchers and Headers—
5d. each 4d. each 6d. each 6d. each 5d. each
Double Bullnose, Round Ends, Bullnose Stops—
51. each 4d. each 6d. each 6d. each 5d. each
Rounded Internal Angles—
4d. each 3d. each 5d. each 5d. each

each 5d.each 5 MOULDED BRICKS. Stretchers and Headers—
Stretchers and Headers—
Sd. each 8d. each 8d. each 8d. each Stretchers and Headers—
8d each 8d. each 8d. each
Internal and External Angles—
1/2 each 1/2 each 1/2 each
Sill Bullnose, Stretchers, and Headers—
5d. each 4d. each 6d each 6d. each
Majolica or Soft Glazed Stretchers and 1/2 each 1/2 each

5d. each 4d. each 6d each 6d. each 5d. each Majolica or Soft Glazed Stretchers and Fer 1,000 Headers Quoins and Bullinose... 27 17 6

" Quoins and Bullinose... 27 17 6

Compass bricks, circular and arch bricks of Single radius £6 per 1,000 over above list for their respective kinds and colours... Camber arch bricks, any kind or colour, by ½ in. Stretchers cut for Closers and Nicked Double Headers, £1 per 1,000 extra... These prices are carriage paid in full truck loads to London Stations. s. d.

Thames Sand 7 6 per yard, delivered. Pit Sand 7 0 " "

Thames Ballast 6 0 " "

Best Portland Cement 36 0 to 41 0 delivered. Ground Blue Lias Lime 21 0 per ton, delivered. Exclusive of charge for sacks.

S. d. s. d. Per yard, Grey Stone Lime 13 6 to 14 0 delivered. Stourbridge Fireclay in sacks 27s. 0d. per ton at railway station.

STONE.\*

Red Mansfield, in blocks per foot cube	£0	2	4
Darley Dale, ditto	0	2	
Red Corsehill, ditto	0	2	
Closeburn Red Freestone, ditto ,,	0	2	2
Ancaster, ditto	0	1	11
Greenshill, ditto	0	2	
Beer, dittn	0	1	7
Chilmark, ditto (in truck at	_		
Nine Elms)	0		10)
Hard York, ditto	0	2	0
Do. do. 6 in. sawn both sides,	_	_	_
landings, random sizes per foot sup.	0	2	8
De. do. Sin. slah sawn two			
sides, random sizes	0	1	5
* All F.O.R. London.			

	_		_
Bath Stone-Delivered in rail-	£	s.	d.
way trucks at Westbourne			
Park, Paddington (G.W.R.),			
or South Lambeth (G.W.R.) per foot cuba	0	1	73
Delivered in railway trucks			_
at Nine Elms (L. & S. W.R.)	0	1	
Delivered on road waggons			
at Nina Elms Depot	0	1	91
Portland Stone-Brown Whit-			
bed in random blocks of 20 ft.			
average, delivered in railway			
trucks at Westbourne Park			
(G.W.R.), South Lambeth			
(G.W.R.), or Nine Elms			
(L, & S.W.R.)	0	2	53
Delivered on road waggons at			
Pimlico Wharf or Nine Elms			
Depot,	0	2	63
White Basebed-2d, per foot cube extra.			
TILES			

# 11.E.31				
	g.	d.	1	lvrd.at
Plain red roofing tiles	42	0 per	1,000	ry. sn.
Hip and Valley tiles	3	7 per		
	50	0 per	1.000	
Ornamental tiles	52	6		
Hip and Valley tiles	4	0 per	doz.	11
Ruabon red, brown, or briadled		· F		,,
ditto (Edwards)	57	6 per	1.000	11
Ornamental ditto	60	0	.,	**
Hip tiles	4	0 per	doz.	11
Valley tiles	3	0 201	ave.	
Selected "Perfecta" roofing	-	v	*1	19
tiles: Plain tilea (Peake's)	46	0 per	1 000	
Ornamental ditto	48	6	1,000	19
Hip tiles	3	10åper	404	19
Valley tiles	3	43		19
"Rosemary" brand plain tiles .	48	0 per	1 2000	17
Ornamental tiles	50	O Per	1,000	17
Hip tiles	4	0 per	don	29
Valley tiles	3	8 Per		19
Staffordshire (Hanley) Reds or	3	0	*1	**
brindled tiles	42	6 200	1 000	
Hand-made sand-faced		6 per	1,000	19
	45		400	11-
Hip tiles	4	0 per	uoz.	19
Vallay tiles	٥	6	11	11
"Hartshill" brand plain tiles,	4.5	0	1 000	
sand-faced	45	0 per	1,000	91
Pressed	42	6	11	**
Ornamental ditto	47	6		11
Hip tiles	4		doz.	19
Valley tiles	3	6	7.1	11
OH.S.				

# 

# GLASS (IN CRATES).

VARNISHES, Etc.	Per gallon.		
Fine Pale Oak Varnish	£0	8	6
Pale Copal Oak	0	10	0
Omnilac Copal Oak	0	10	0
Superfine Pa a Elastic Oak	0	12	0
Fine Extra Hard Church Oak		10	0
Superfine Hard-drying Oak, for seate	of		
churches		14	6
Fine Elastic Carriage		12	0
Superfina Pale Elastic Carriage	0		6
Fine Pale Maple	0		0
Finest Pale Durable Copal	0	18	6
Extra Fine French Oil	1	1	9
Eggshell Flatting Varnish	0	18	0
White Copal Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	9
Oak and Mahogany Stain	0	9	9
Brunswick Black	0		0
Berlin Black			0
Knotting	0	10	0
French and Brush Polish	0	10	0

Sir George Buchanan, M.Inst.C.E., chairman of the Rangoon Port Trust, who had charge of the great works recently completed on the Rangoon river, has been placed on special duty for dredging operations in Mesopotamia.

A stained-glass window has been erected in the parish church of Hinton St. George, by Earl Poulett, in memory of the late Mr. Charles Irish, whom a brass tablet describes as "the trusted and faithful Poulett family for 58 years."

