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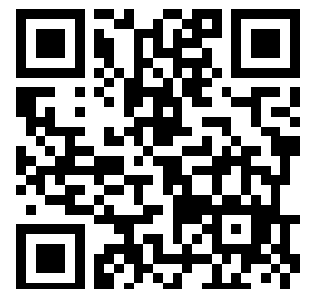
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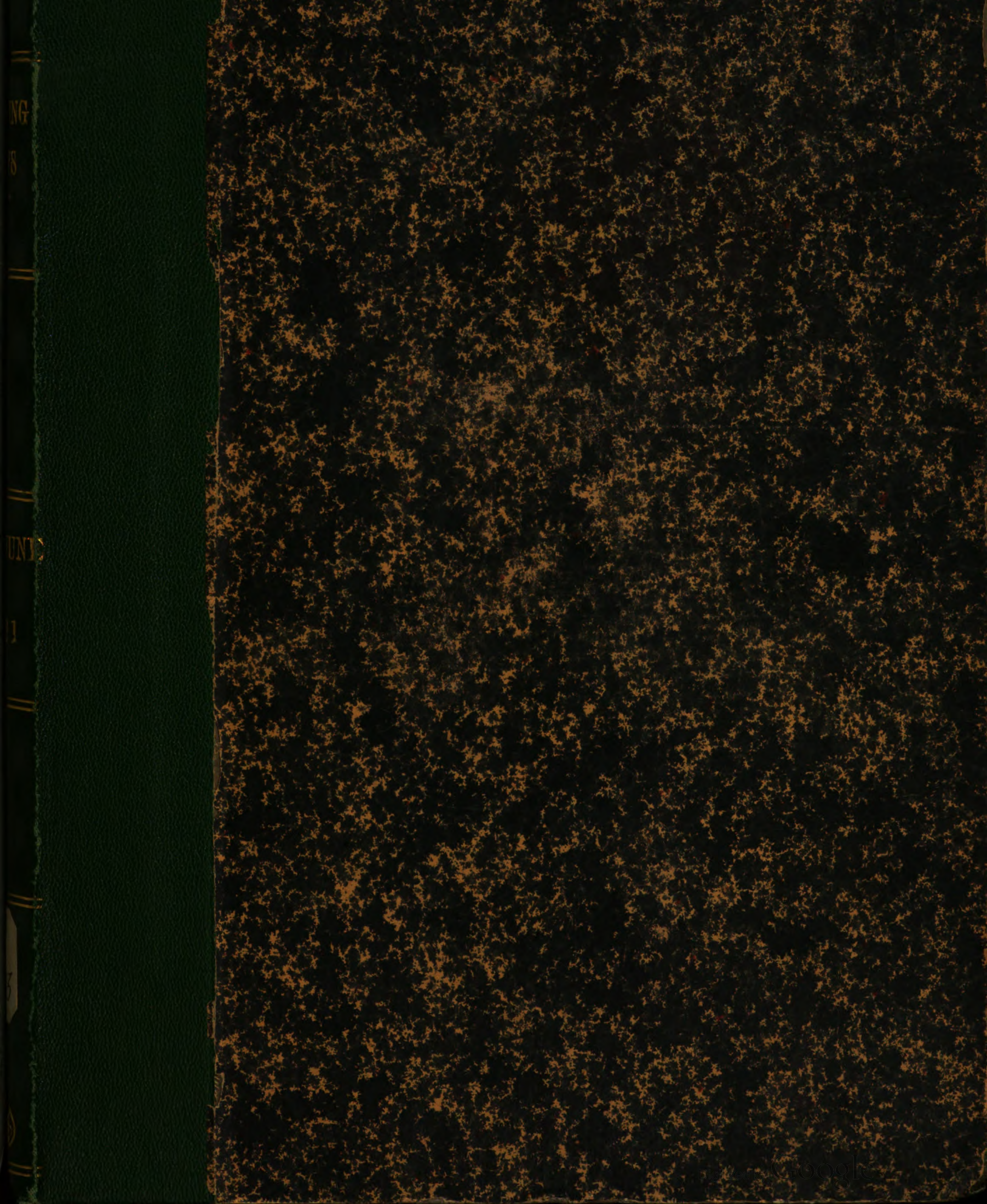
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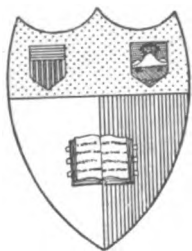
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THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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Cardiff Castle Frieze Decorations, illustrating Fairy-Tale Figure subjects. Executed for the Marquis of Bute by the late H. W. Lonsdale (1846-1917) Autograph drawings

OUR ILLUSTRATIONS.
House, Corton Road, Lowestoft, Suffolk. View of elevation and two plans. Mr. R. Scott Cockrill, Architect

Borough of Lowestoft Housing Scheme. Lowestoft concrete building system and direct labour houses. Mr. S. W. Mobbs, A.R.I.B.A., A.M.I.M., and Cy.E., Borough Surveyor, Architect. View and plans.

Currente Calamo.

The sooner the different Government Departments cease to make the taxpayers defray the cost of the Publicity Agents who flood us every week with communiqués which are seldom removed from the envelopes, but which must cost a good deal of money, and needlessly burden the Post Office with extra work, the better. Some of these effusions are really grotesque. We have just been invited to publish or comment on a translation from a Bolshevik newspaper showing up the bad housing conditions of Moscow. It tells us that 14,448 houses have the water system out of order, and that in 9,153 houses the water-closets are useless. The suggestion is that this is the sort of thing that Bolshevism leads to. That need not be disputed, but why in the name of common sense should we taxpayers have to bear the cost of translators, typists, and clerks engaged in preparing this sort of journalistic pap? The newspapers don't want it, and it serves no public purpose. The sooner these amateur penny-a-liners are added to the unemployed the sooner we shall all believe in the protestations of Ministers that they desire "economy."

We do not presume to traverse the recommendation of the Minister of Transport to the local authorities of a standardised system of road direction-posts and danger-signs. That these should be legible and capable of being easily recognised by all users of the roads goes without saying; but we see no reason for the suggestion that, while, as is admitted, in connection with village and place-name signs it would be a great convenience to the travelling public if notices were erected on the main approaches to towns and villages, giving the names of such towns or villages, "standard name-plates" should be compulsory. The recent *Daily Mail* exhibition of such signs evoked a pleasing variety of design, and in many cases of fitness, which facilitated recognition of the places indicated. It is true several were rather of the nature of problems; and possibly some reasonable control might be advisable; but a cast-iron sort of uniformity throughout the country hardly seems necessary or desirable.

The annual report of the National Free Labour Association points out that trade unionism, by its aggressive and dishonest methods, has exacted from the Government, who truckled to organised labour for votes, privileges over Free Labour which could only be obtained through the grossest political jobbery and corruption. During the four years of the war this privileged class lost over eighteen million days' labour by unnecessary strikes. The Trades Disputes Act, which struck a deadly blow at industrial democracy and delivered the trade unions into the hands of revolutionary oligarchies, who want to be free to commit violence, attack their fellow men, stop industries, and destroy property in the name of Labour, is only one example of the crooked acts of party politicians eager to remain in office by any device, however corrupt. Discussing the inquiry into the work of the Unemployment Exchanges, the report says: The Government dare not close these exchanges, and have pitted the trade unions and friendly societies against each other for the set purpose of bolstering up a ghastly and costly failure, and perpetuating that horrible and daily increasing curse—the outrageous multitude of Government officials—a disgrace to any Government whatever its profession. With regard to unemployment and the offer of the Government to the building trades for absorbing 50,000 unemployed ex-service men, the report says: The National Free Labour Association will accept the Government's offer, and challenge the Cabinet to assert the inherent right of the ex-service workman to exercise his faculties in any lawful employment without let or hindrance. The Executive Council will at once proceed to mobilise and train ex-service men specially for the building trades, on two conditions: (1) That lodgings are provided for the men; (2) that they receive adequate protection.

"Official muddle and waste" are the reasons given for his resignation from the position of Director of Housing Production by Mr. Stephen Easton, of Newcastle, President of the Federation of Building Trade Employers. "The adoption by the Ministry of the ill-advised, blundering, and wasteful scheme of guild subsidies was the last straw," says Mr. Easton. Here are a few of his facts. The employer's contract exacts a penalty if he exceeds his estimate,

and allows him a small added profit if he works below it. That makes for economy. The guild contract guarantees workers a five per cent. profit, no matter if their estimated cost be doubled in working. There is no penalty. On the other hand, if the guilds save £100 on a house they lose money. If they estimate £1,000 and build for that they get a profit of £50. If they save £200, say, on this estimate they only receive £40 profit. If the house costs £1,500 they make £75. That makes for waste, surely. The employer is forbidden to offer any other inducement to workers than the usual standard rates of the district. He must not pay for time lost owing to the weather, sickness, etc. The guild contract allows them to pay for lost time, sickness, or any other special inducement they can devise. This means that the workers naturally all stampede from the ordinary contractor to the guilds and their wasteful system. Here is another instance of muddle. The Government, in their offer to building unions regarding employment of ex-service men, agree to 50 per cent. payment for lost time. The Ministry of Health lavishly offers under the guild system 100 per cent. Employers who from the first have pledged themselves to do all in their power to forward housing production are penalised, and building trade unions, who flatly declined to help in any way, are subsidised. All this extravagant muddling has been done in the face of repeated warnings from the Ministry's own expert advisers.

The cost of building and furnishing a house to-day is irresistibly tempting the man of small means, on the one hand, and the well-to-do who cannot get or will not be bothered with servants, on the other, to build bungalows. Not seldom disappointment follows, because, trim and compact as their exterior may seem, the planning of a one-storey house is by no means a simple matter. Many arrangements satisfactory looking on paper give neither the compactness nor the conveniences hoped for when built, or are not suited to our capricious climate. In this, as in most things, experience is the best guide, and "The Book of Bungalows," by R. Randal Phillips (London, *Country Life* Office, 20, Tavistock Street, Covent Garden, W.C.2. 8s. 6d.), with its excellent illustrations and descriptions of many of the best English examples actually built and comfort-

ably lived in, will advantageously help all who want their little houses to embody the most convenient and economical arrangements, and at the same time to present a definite architectural character, and not the vulgar appearance so many bungalows display. It goes without saying, though many do not realise the fact, that a bungalow, however well planned and built on general lines, must be suited to its surroundings; and that one meeting all needs on a pleasant sheltered countryside or in an inland village may be anything but a success by the river or at the seaside. Mr. Randal Phillips gives illustrations that meet all needs either of locality or the pocket, designed by architects of deserved reputation, and easy of access in various parts of the country by those who wisely prefer to see for themselves what they want.

More than ever the new edition of "Kelly's Directory of the Building Trades," just to hand, is very welcome. So many changes have taken place since 1914, when the last was published, as many of us know too well, that it will prove indispensable to all. It extends to 2,482 pages, and shows a considerable increase over the last edition of 1914, containing complete lists of all the various trades and occupations connected with the building and its industries. It is divided into country and London sections; in the country section the names appear under headings of counties and towns, and there is also a general classified list of names under the headings of the various trades carried on. In the London section the names are arranged under their trades. There are also separate sections for Scotland, Wales, Ireland, and the Channel Islands, and the Isle of Man. At the commencement of the book are full indices to the names of places and also to the various trades mentioned in the book. That there is sufficient work to keep the building industry engaged for many years is admitted. Apart from the great house shortage, building schemes all over the country are now being postponed on account of the prohibitive cost and the unsettled state of the trade, but sooner or later this work must be carried out, if the material progress of the country is to be continued. To expedite that, as the editor remarks, it must first be realised that demand for building work can easily be overtaken by supply if prices continue to rise because of higher and higher wages and the scarcity and higher and higher cost of materials. There must be a limit to these increases; that limit has already been reached or passed, and the time has arrived for the widest dissemination of this fact and the fullest recognition of the further fact that, unless some means can be found to increase production in order to balance increased cost, there must be a serious decline in the activity of the industry leading to unemployment and stagnation.

"A Description of the Ordnance Survey Large Scale Maps," published at 6d. by the Director-General at the Ordnance Survey Office, Southampton, is

a marvel of absolutely necessary information to every architect and surveyor, and reflects the highest credit on all concerned in its production. It contains an interesting record of the work of the Ordnance Survey from its inception in 1824; a statement of its purpose and work; a list of scales, symbols, and characteristics, abbreviations, altitudes, index diagrams, and sheet numbers, incidence of sheets and numbering, 6-in. maps, indexes and catalogues, 25-in. maps, 50-in. enlargements from 25-in. maps, hints on the conversion of decimal parts of an acre into roods and perches, and a list of agents for the sale of Ordnance Survey Maps. We may remind all concerned that for general town-planning the 6-in. is a useful scale, and all schemes must by law be exhibited on this scale. The 25-in. scale is greatly used for property sales.

SHORT TIME—WHAT DOES IT MEAN?

For the first time there is, we ungrudgingly admit, some sense in the proposal by the Government to establish short time in its own workshops, and its invitation to all private employers to do the same. There is, of course, nothing new in the idea. The practice has prevailed for years in the textile and bootmaking trades, and to some extent in one or two others, where, from ordinary causes, work has ceased to be forthcoming for the number of workpeople taken on in busier and better times. There is, therefore, neither sense nor reason in such criticism as that of Mr. Clynes, who protests that trades which are fully employed cannot be expected to admit the unemployed of other trades; or in the characteristic abuse of the *Herald*, which has done much to stir up the strife between employer and employed which has resulted in very much of the present unemployment. Some trade unions which are already heavily feeling the drain on their funds due to the discharges of workmen, simply because the customers of hundreds of firms are limiting their orders, must know better than to believe that the employer is going to benefit by short time and the dilution of his staff by at least a good many less skilled workmen. If we are mistaken, and the Government's suggestion is to be met by a demand by the workers that the shorter hours of work shall carry with them a higher hourly rate of wage, with "wet time" allowances, and the rest of the helps to "ca-canny," then further talk will be futile, for any fresh additions to the cost of labour in any industry will simply increase unemployment, the chief present cause of which is that prices of everything are too high. The daily increasing stagnation is due solely to higher wages and higher prices which the buyer cannot and will not pay. He has tried to pay them during the past two years where he could pass them on to the actual consumer, and the present frenzied appeals of the drapers to come to their sales and buy at less than half-prices are perhaps at the moment the most noticeable consequences, only rather more urgently advertised than others!

There are difficulties in connection with the Government's proposition—perhaps there are alternatives, but no good end will be reached if all concerned do not honestly and fearlessly discuss things. We fear ourselves that anything like universal extension of the scheme will be impossible. In not a few trades success in manufacture or out-turn depends on continuous work.

In others differing conditions are hostile. A big shop, for instance, that put the shutters up two days a week would probably find on the days it opened that its customers—especially of the working classes—had transferred their favours to the more obliging tradesman who took advantage of his more conscientious rivals. The alternatives certainly seem few, and of doubtful advantage when examined. There is one that is under consideration by a large firm in Birmingham. Under the necessity of reducing the establishment of the firm, instead of discharging a hundred or two hundred men and thinking no more about the matter, called the shop stewards into consultation and asked if they would care to make any suggestion as to the best method of dealing with the emergency. In this case the shop stewards did not favour short time. At the same time they recognised that the only alternative was discharging a number of men, since there was not sufficient work to go round. They therefore proposed that the discharges should take place, and that those who remained at work should levy themselves to help to support the unfortunates, the firm also making a contribution to the fund. The scheme thus suggested has not yet developed, and we shall wait, with some apprehension, for its announcement. Such levies hitherto—as in the printing trade—have been made by the unions themselves, and they may possibly still think that course their right and business.

Again, it is hard to think that the idea will solve the troubles in the building trades, with which, naturally, we are most concerned. The answer sent last week by the Executive Councils affiliated to the National Federation of Building Trades' Operatives was precisely what we anticipated in our last issue it would be. Because no guarantee against unemployment was offered by the Government, and because "wet time" was only offered to the trades diluted, the matter was referred back to the unions. Mr. Macnamara was told this, and has written asking for "a definite and final reply" at the latest by to-day. We hope a reply will have been forthcoming, and that it may prove a reasonable one. Mr. Macnamara's demand is perhaps a somewhat urgent one; but if further delay is followed by more obduracy on the part of the building trades unions when one of the most urgent needs of the moment is the provision of more houses, which can only be met by a reinforcement of the admitted shortage of labour in the industries concerned, then we greatly fear that we are indeed on the eve of a struggle as "Titanic" as Mr. Ben Tillet predicts. And this, to the delight of our enemies, when the brain and sinew of the Empire should have been united in the determination to reopen the world's markets and restore activity in every industry, instead of frittering away our energies on the quarrels of other peoples and races, and the suicidal struggles of faction-prompted and misled citizens at home!

CANADIAN BUILDERS EXPECT REDUCTIONS IN WAGES IN 1921.

Action intended to lead to a reduction of building costs and to a stimulation of construction has recently been taken by the Toronto Builders' Exchange and Construction Industries, the directorate of which feels that a tremendous amount of building is being held up awaiting signs of a recession in prices. The Toronto Building Trades Council has formulated a blanket agreement in which a 25 per cent. average increase in wages will be demanded after the first of the coming year. The proposal was presented to the Builders' Exchange for consideration, and

at a meeting of the Board of Directors, held on Thursday, November 4, it was unanimously decided that no action would be taken along the lines suggested by the Building Trades Council. Their reasons were expressed in a letter addressed to the Council as follows:—

"The general public is looking to the Toronto Builders' Exchange and Construction Industries to bring about, if possible, a reduction in the high building costs which prevail to-day, and in this connection we wish to point out the serious effect on the building industry brought about by the several interviews which have been given to the Press intimating to the public at large the possibility of increases in labour rates, whereas, it is obvious to both parties to this question that such proposed increases would be ridiculous, bearing in mind the fact that all over the American continent the tendency has been towards dropping prices in both materials and cost of living.

"We would point out the serious effect on the building trade which affects both employers and employees, brought about by such propaganda getting into the public Press. There is an inconceivable amount of deferred building which has been held in abeyance for several years, and is still being held up owing to just such agitation. The industry must be stabilised, and it is certainly up to the unions and ourselves to co-operate to that end.

"It would be a great deal more beneficial to both parties if your Council would assist in educating the public to the fact that there will be no further increases in the cost of building, and that the industry is becoming more stable every day.

"It is our intention to advise the public that we are expecting a reduction in rates for 1921, and would ask the Joint Industrial Council to use its offices to the settling of difficulties as soon as possible, and to stop the present propaganda of some of the union officials that is so detrimental to the building industry."

Further emphasis on the impossible nature of the union's demands is voiced by Mr. D. J. Davidge, secretary of the Toronto Builders' Exchange, who states:

"From time to time reports of interviews with labour union officials have been appearing in the local Press to the effect that wage increases would be expected in the various building trades in the coming year. Propaganda of this nature is having a very serious effect on the building industry generally. As you are, no doubt, aware, a tremendous amount of building in Toronto, and in fact throughout Canada, has been held up owing to excessive cost, and it has been the endeavour of our organisation to do our utmost to reduce costs wherever possible and stabilise the industry. From our point of view there is absolutely nothing to warrant wage increases of any kind during the coming year, living costs are slowly but surely coming down, and to our mind the action of labour in this instance in endeavouring to secure any increase is preposterous in the face of existing conditions in the building and construction industry."

In last Saturday's Honours List it was announced that a knighthood had been conferred on "Edwin Saville," without any clue to his identity. It appears that the new knight is Mr. Edwin Savill, of the firm of Alfred Savill and Sons, surveyors, Lincoln's Inn Fields.

Belfast builders to the number of about 1,000 came out on strike on Monday against a notice of the employers that from January 1 working hours would be increased from 44 to 46 per week, with a reduction in pay per hour. The men affected include carpenters, bricklayers, stonemasons, and plasterers. Shipyard joiners are not affected.

ENGINEERING AND CONSTRUCTION ORGANISATION FOR RAPID WORK.

By I. W. McCONNELL.*

Every engineering enterprise in its development goes through some process resembling the following:

1. The conception or vision of the need.
2. The preliminary study to develop the general facts, including rough estimates of cost.
3. The business consideration as to feasibility ending in rejection, or in postponement, or in decision to proceed with the enterprise, or to investigate more thoroughly.
4. The decision to proceed having been reached, construction is ordered.

Once the construction decision is made, it is usually economical to push the construction work at the highest rate which physical limitations will permit. The value of speed may be gauged roughly from savings or gains to be made on three factors, to wit:

1. Carrying charges on the preliminary investment, which preliminary investment frequently may be deferred, either wholly or in part, to a later date if it is known that the construction period can be shortened. This investment will consist of real estate, franchises, permits, etc. In certain types of enterprise this portion of the investment may be as much as half the total cost, and the saving may be proportionate.

2. Carrying charges on funds required for construction. This may be assumed for convenience as the interest on the construction cost for one-half the construction period at the rate paid for the money.

3. Operating revenue arising from the use of the facility will presumably start as soon as the construction work is completed. In some cases operating revenue begins partially prior to total completion; that is, as soon as usable portions are finished, as in the case of storage warehouses or office buildings. By whatever time any predetermined construction programme can be shortened the corresponding operating revenue can be counted as clear gain.

SAVINGS FROM SPEED.

Of these gains the first one is the least tangible, and is not determinable in a definite way for the purposes of this discussion. Each case will be a law unto itself in this respect. It is real, however, and should not be regarded purely as a theoretical advantage.

The second gain is tangible and susceptible of accurate determination, e.g., a construction programme requiring normally two years for completion and utilising 6 per cent. money would save in interest about 3 per cent. on the construction cost if the construction could be shortened to one year.

The third gain from operating revenue is the most tangible and usually the largest in amount.

Concrete examples may be cited. A great city office building is planned to cost \$10,000,000. The real estate may cost \$2,000,000, clearing the site \$500,000, the structure \$7,500,000. The building may have 600,000 square feet of office space rentable as soon as completed at \$2.50 per square foot per year. The money for the investment may be worth 6 per cent. interest and a normal period for preparation of plans and completion of construction may be two years. If the work can be done in eighteen months there will be a gain as follows:

Carrying charge for real estate, clearing, etc., \$2,500,000—6 months at 6 per cent. per annum	\$75,000
Interest on construction fund—\$7,500,000 at 6 per cent.—½ year...	112,500
Operating revenue—600,000 sq. ft. at \$2.50 per year for 6 months	750,000

Gross gain	\$937,500
Less operating expenses	250,000

Net gain

Of course, it must be recognised that no saving under item 1 can be counted on real estate purchases which must be made years in

* Vice-president, Dwight P. Robinson and Co., Inc. This article is based on one of the Aldred lectures delivered at the John Hopkins University.

advance and held until the propitious time for building. Also if any actual gain in rentals is to be realised time gained on office buildings must bring completion at the local moving time.

Again we may look into the case of a steam power station to be built to supply a growing load and to replace less efficient capacity in older plants. The capacity of the new plant may be 50,000 kw., its cost estimated at \$6,000,000. Its annual output may be 240,000,000 kw. h. per year, of which 100,000,000 kw. h. may be load taken off the older machinery at a net saving in generating cost of three-quarters of a mill per kw. h. and the balance may represent the growth in load sold at a net profit to the station of one-half cent per kw. h. The time for preparing plans and building such a station under ordinary routine might be 24 months. If the time from the date of the appropriation of money can be reduced to fifteen months the savings may be considered as follows:

1. Carrying charge on real estate, franchise, etc.—Intangible.	
2. Interest on construction funds—\$6,000,000 at 6 per cent. for 4½ months	\$135,000
3. Production in nine months—75,000,000 kw. h. ¾ mills.....	56,250
105,000,000 kw. h. 5 mills.....	525,000
Total gain	\$716,250

CO-ORDINATION TO ENSURE CONTINUITY OF OPERATIONS.

One of the most important elements in any construction programme is that of co-ordinating the various portions to give logical progress, without breaks in the continuity of operation or undue interference by the later items of the work with earlier ones. This implies control from start to finish of the supply of material and equipment to be built into the structures and of the labour and equipment necessary for the construction work at its various stages. The old-fashioned axiom of "a place for everything and everything in its place" is as good a general statement of the ideal as any other. Now all the elements tend to go astray under any kind of speed programmes, but they are more difficult to control under fast schedules than under slow ones.

Every city dweller knows the confusion and delay which follow an interruption to traffic at a busy street intersection. The same kind of confusion follows a break in a stream of production by the displacement of any of its elements. On construction work such a displacement might be the failure of gravel, sand or cement to arrive for the cement gang; or the breakdown of a derrick or industrial railway; or the necessity to unload and store machinery which arrives ahead of its proper sequence and before a place is ready for it. The gangs immediately concerned are thrown out of step, so to speak, and their discomfiture affects contiguous gangs, frequently extending over the entire job.

In manufacturing establishments which turn out the same or similar products day after day there is an opportunity to control the flow of materials to a high degree. There is also a perfect opportunity to train workers in a repetition of the same task under identical conditions. This opportunity rarely exists to such a degree in construction work. Each job is a new problem, and in the main the personnel of the workers will change from job to job and on the same job. Notwithstanding such disadvantages, many opportunities exist for control, and sound methods of procedure can be perpetuated and passed on from job to job by retaining as permanent associates the men who carry the principal engineering and construction responsibilities.

COST OF SPEED.

In discussing, therefore, the so-called excess cost of fast work, a clear distinction should be drawn between failure to co-ordinate work properly as distinguished from the cost of speed. "Failure to co-ordinate" not covered by failures due to causes beyond control becomes poor management. "Cost of speed" should be clearly foreseen and understood as a price payable for quicker

results. It may be due to premiums for expedited manufacture of material or to higher wages for overtime; or for night work; or for quick deliveries of lower-priced materials. There is a legitimate cost for speed, but the desire for speed should not be made a cloak for all the vagaries and misfortunes of the job.

METHOD OF INITIATING CONSTRUCTION.

The routine method of initiating construction on a new facility is somewhat as follows:

1. Preliminary engineering studies are made as a basis for estimates of cost and for the necessary decisions as to final lay-out.

2. Complete engineering plans are prepared.

3. Tenders for the work are invited from contractors.

4. Contractors' proposals are received and examined, frequently resulting in changes in plan to meet necessary economies or to incorporate expanding ideas as to requirements. These changes may make it necessary to re-submit the plans to contractors for new bids.

5. The contract or contracts are let under plans and specifications which require the contractor to perform certain definite tasks at fixed prices and in fixed times.

This is the time-honoured method, and the only one in a general way open to public officials to carry on their work. For this class of work it is perhaps as generally suitable as any other plan irrespective of suitability; it is the plan which must usually be followed until statutory requirements to that effect are changed.

The most significant date in a construction programme is the date when construction work actually begins, for it marks the start from which all procedure must be laid down. Under the older method of contracting construction work the start cannot be safely made until the contractor is securely tied in a binding contract based upon a complete set of plans and specifications covering the generalities and the details of the work. Thus under this method the time to produce the needed facility divides itself normally into two periods, namely, the period of design and the period of construction, each of which for proper execution requires a reasonable amount of time, and neither of which can be cut much below a rational minimum without paying some penalty which may be too serious to contemplate. A frequent penalty of such attempts to reduce the time factor is failure to accomplish the end sought after paying a long price to get it. The construction end is, perhaps, more responsive to rush methods than the design, but even on that end of the work there will be some factor which will present an irreducible minimum which fixes the length of the job from the date when construction starts.

Now, any claim of savings based upon unusual speed in the construction end alone must depend for its realisation upon ability to select a contractor who can beat customary records, or upon ability to get together a new organisation which can do it. The latter alternative has been tried so frequently, without success, that the effort is fairly well established as risky business. The former alternative has more promise of success, but is still a questionable device, quite as likely to bring disappointment as satisfaction.

PLANS DEVELOPED SIMULTANEOUSLY WITH PROGRESS OF WORK.

The real opportunity to gain time lies in the simultaneous development of plans along with progress in construction. Let us illustrate by an example and set up a comparison of times under each of two methods.

The example cited will be that of a manufacturing plant on a new site opening up for the industry a new section of the country. The owner knows the profits of his business and judges the locality to be favourable as to raw material, factory workers and markets for the manufactured product. He decides to proceed. His new plant will consist of separate buildings—power stations, office building, main factory building, storage sheds and buildings for raw material, storage for manufactured products, trackage, roads, pavements and housing facilities for workmen. The owner has no careful estimate of

the cost, but he knows in a general way what similar facilities have cost, and he judges that it will require an outlay of \$3,000,000 and that his net operating income from the plant will be \$50,000 per month. It must be practically all finished before operation can begin.

THE OWNER'S REQUIREMENTS.

The owner requires:

1. A careful estimate of cost based upon sketch plans and inspection of the site.

2. Detail plans for construction.

3. Construction of the plant.

Let us assume that his own organisation is busy and that he recognises the advantage of employing specialists for special purposes. He knows competent engineers and contractors. He has many methods of procedure open, but one of two is commonly used.

Let us designate as Method No. 1 the method known as fixed price contract. Under it the owner has all plans prepared and approved, after which contracts are let upon the plans as prepared. Let us designate as Method No. 2 the method of carrying on the development of plans as the progress of construction work requires them. The following tabulation will show a comparison of the time elements entering into various phases of this work under a relatively high-speed programme in the two cases:

Items.	Method No. 1.		Method No. 2.	
	Time.	Accum.	Time.	Accum.
	Required.	Total	Required.	Total
	Weeks.	Time.	Weeks.	Time.
	2	2	2	2
Estimate of cost				
Preparations of				
Plans	12	14	No time loss	0
Request for bids	2	16	—	—
Consideration				
of Proposals..	2	18	2	4
Signature of				
Contracts....	2	20	—	—
Construction ..	50	70	50	54

The result will be the following gains:—
Interest on Construction cost—
\$3,000,000 at 6% for 2 months \$ 30,000
Operating revenue—
\$50,000 per month for 4 months \$200,000

Total..... \$230,000

The indication of sixteen weeks' gain is not fictitious, for no time need be lost waiting for plans after the decision to proceed is reached except that necessary to select a contractor. Neither does the gain imply undue haste on plans or on construction. It does imply careful co-ordination, which in turn implies experienced and capable men. There will be no spare time for experiments or to break in new men. If a contractor can be had who can also prepare the plans there will be that additional concentration of responsibility which is desirable. Necessarily such a programme must be carried on under some "cost plus" form of contract, which implies that the owner and his organisation will co-operate in every possible way to expedite the work.

Once a contractor is selected he can begin at once to move his outfit to the job, to make provision for bunk houses and commissary if needed, to place contracts for construction equipment, material and supplies, to lay out roads, build tracks, shops, warehouses, and sheds, and in general to get ready for the actual erection of structures. Working plans of the plant to be built are not necessary at this stage.

By the time the construction force is ready for foundation plans the plans can be ready, and thereafter—step by step—as the work advances the plans for further work can come out ahead of the construction need. On such a programme plans will not be fully complete much ahead of the date of operation of the plant. Close co-ordination between designers and contractors must be maintained to preserve an orderly and logical progress without breaks in the continuity.

When such a job is secured the first thing done is to assign the principal men to the various tasks involved. A general conference on requirements gives each principal man the cue as to how to proceed. One man is made sponsor for the engineering end, and to him falls the task of laying out the production schedule for plan, of keeping in touch with all phases of the design and taking such

steps as may be necessary to bring up lagging sections, to straighten out conflicts, and in general to keep the development of the design end in logical order. Another man goes to the field with full authority as construction superintendent and takes up the preliminary tasks connected with his office work, engineering layouts, construction equipment, transportation, labour, accommodations for workmen, sanitary requirements, police regulations, flood protection, and the thousand and one details which enter into such work. Responsibility for purchases must be located and clearly understood. It is a sign of bad luck to come to the day to begin to build concrete forms and find, for example, that no one has bought wire for wiring them and that there is none to be had for two weeks. Purchases must be expedited, failure to perform must be forestalled, shifts and expeditors must be invented to get out of tight holes, and all the time the plan for the future must be closely studied. Somehow or other human affairs appear never to run ahead of schedule except on the destructive side. I have never known a constructive effort to start spontaneously or to keep going at schedule rates unless it is pushed vigorously all the time.

Engineering construction is a business which is best done by those who give it study and long practice. Because no two jobs are ever exactly alike, it calls for constant and active ingenuity and energy. Since many of its problems require only common sense and executive ability, many people assume that the technical side is of small consequence and plunge into it to the detriment of themselves and all their clients. Like every other business in the world, it is handled best by those who work persistently and capably at it, and keep an experienced competent force in the organisation.

OBITUARY.

The death is announced, at the age of 71, of Mr. William Hampden Sugden, of Keighley, a member of the firm of Messrs. W. H. and A. Sugden, architects. Having served his articles with his uncle's firm, Messrs. William Sugden and Co., architects, Leek, Staffordshire, he began to practise about 1882, taking, in 1893, in partnership with him his younger brother, Mr. Arthur Sugden. Among the works carried out by this firm were Morecambe Tower, Kildgrove Church, Steeton Manor, St. Barnabas Church, Keighley, and the Keighley Hall at Poix-du-Nord, France. In open competition his designs were selected for Newcastle-under-Lyme Town Hall and Hanley Chapel.

The tender of Messrs. F. A. Norris and Co., 11 and 12, St. Andrew's Hill, for the erection of an outside iron staircase at the Elizabethan School and Almshouses, Fulham, has been accepted by the London County Council.

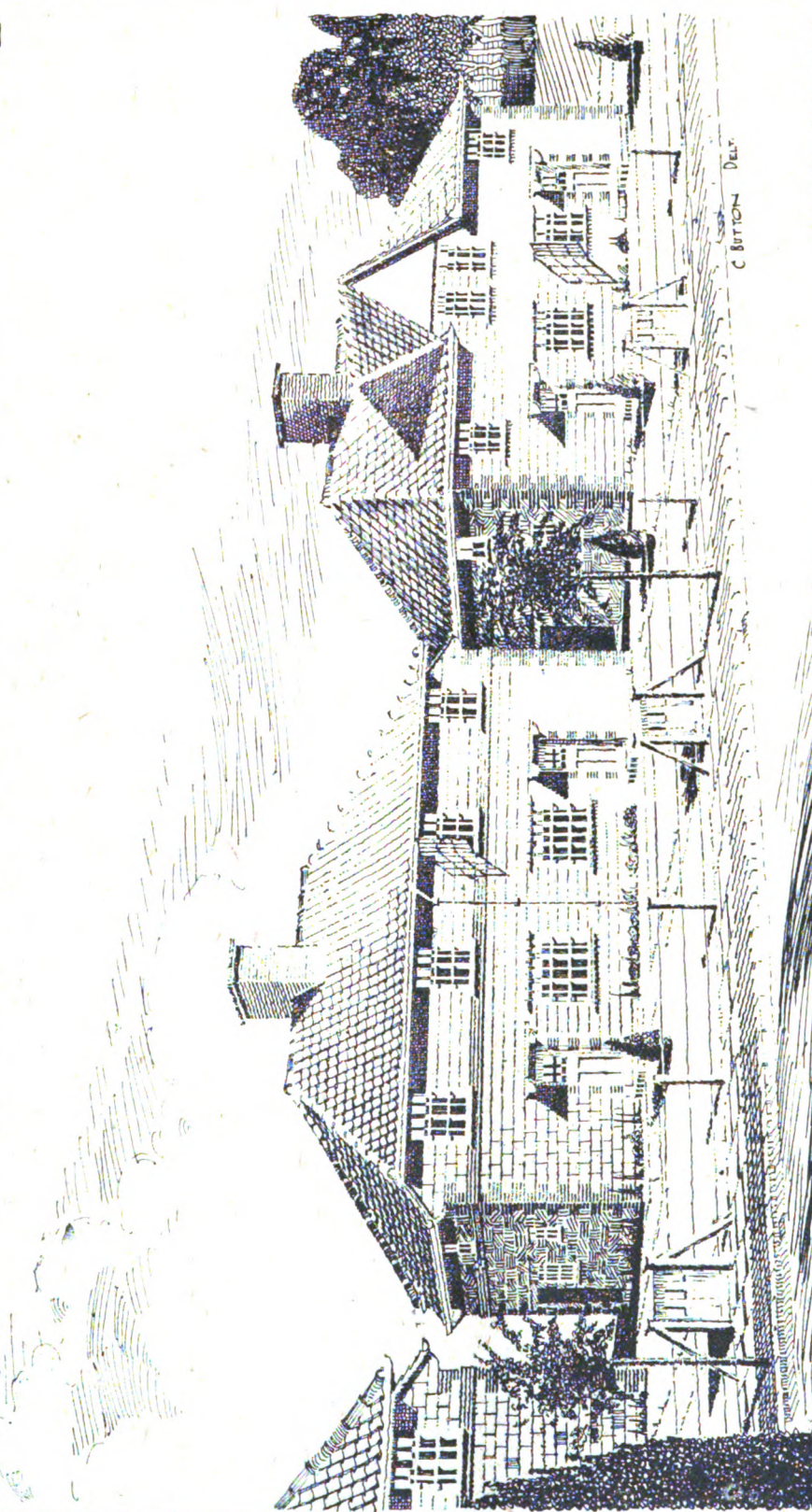
The Art for Schools Association, which has carried on its excellent work for thirty-seven years, ceased to exist with the old year, mainly in consequence of the decline in the annual subscription list from £300 to about £60.

The Glasgow Corporation Committee on Housing and General Town Improvements has approved of a recommendation to acquire, subject to the approval of the Board of Health, two brickworks at Dalry, Ayrshire. The output of the two brickworks in question is about 5,000,000 bricks per annum. In the event of the Corporation agreeing to purchase, the bricks will be used in connection with the various Corporation housing schemes.

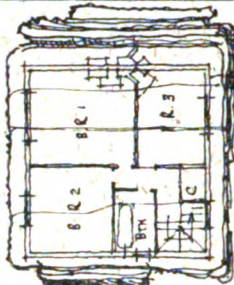
By the courtesy of the Court, members of the Society of Architects will have an opportunity of seeing the Hall of the Painters' Company on the afternoon of Saturday, January, 29, 1921. The party will meet at Painters' Hall, 9, Little Trinity Lane, E.C., at three o'clock, where they will be received by the Master, Mr. Albert E. Pridmore, P.P.S.A. The Assistant Clerk, Mr. Englefield, will give a short address on the history of the company. Members may bring ladies with them, and in order that proper arrangements may be made, those who propose to attend should notify the Secretary of the Society at 28, Bedford Square, W.C.1, as early as possible, and not later than January 24.

THE BUILDING NEWS, JANUARY 7, 1921.

BOROUGH OF LOWESTOFT HOUSING SCHEME

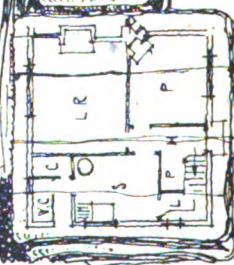


C. BURTON Desg.



LOWESTOFT CONCRETE BUILDING SYSTEM DIRECT LABOUR HOUSES NTH ASPECT

J. W. MOSS, A.R.I.B.A., A.M.I.M.C.E., BOROUGH SURVEYOR

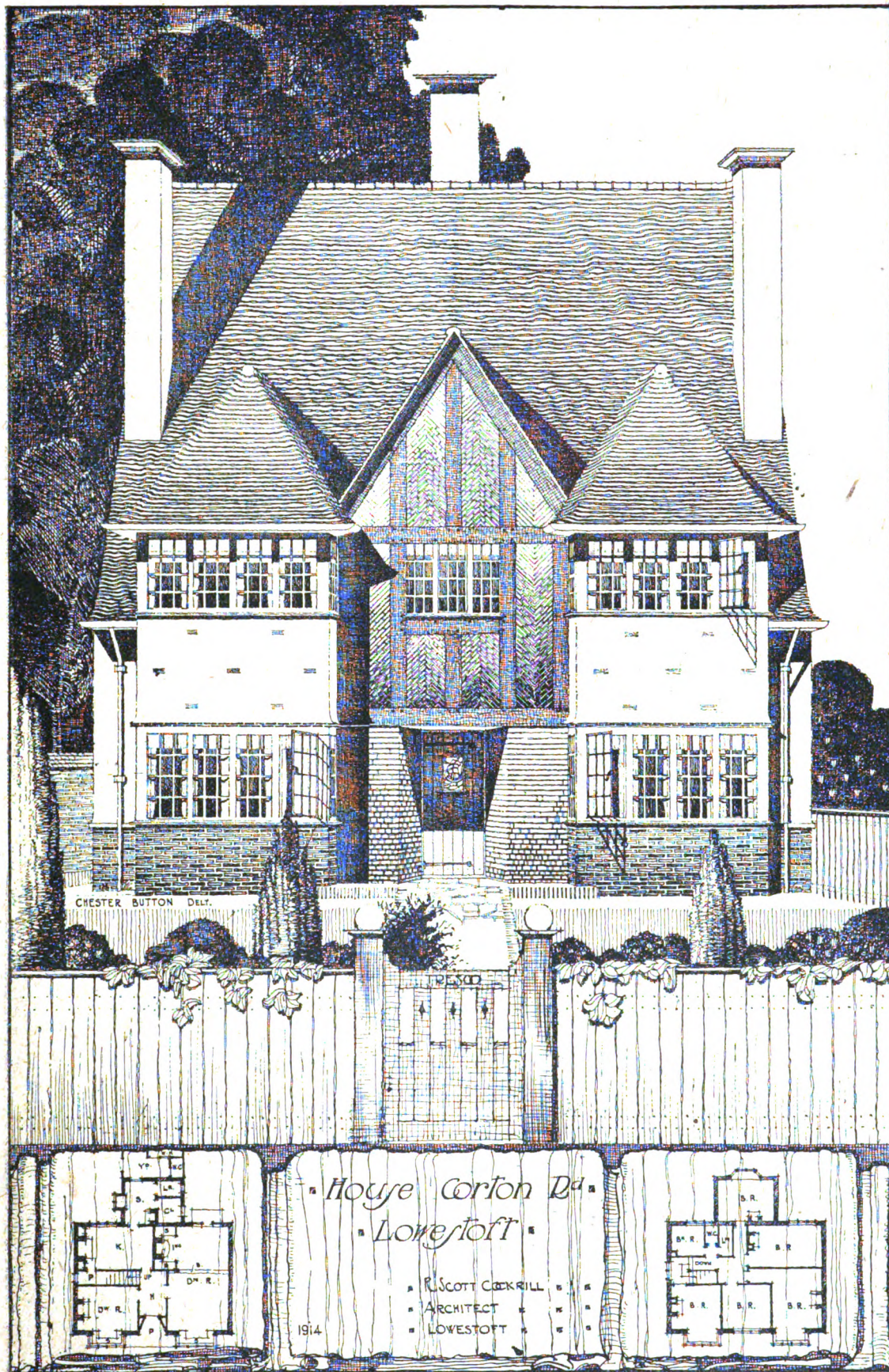




CARDIFF CASTLE FRIEZE DECORATIONS, ILLUSTRATING FAIRY T
Designed and Painted by the late H. W. LONSDALE



THE FIGURE SUBJECTS, EXECUTED FOR THE MARQUESS OF BUTE.
(1846-1919). WILLIAM BURGESS, A.R.A., Architect (1827-1881).



HOUSE, CORTON ROAD, LOWESTOFT, SUFFOLK.
Mr. R. SCOTT COCKRILL, Architect.

Our Illustrations.

CARDIFF CASTLE FRIEZE DECORATIONS, ILLUSTRATING FAIRY TALE FIGURE SUBJECTS.

To a very large extent the late William Burges, A.R.A., rebuilt this famous Welsh Castle in the eighties, and till the end of his life continued to carry out for the Marquess of Bute various extensions and a comprehensive scheme for decorating the building. In this latter work, Burges was assisted by H. W. Lonsdale, who, subsequent to the death of his master in 1881, was engaged by Lord Bute on further parts of his scheme. The autograph drawings given to-day illustrate the style of mediæval conceptions preserved throughout the Castle. Other illustrations will be found in THE BUILDING NEWS for October 31, November 7, 14, and 21, and December 19, 1919. Also on January 2 and February 13, 1920. The present plate concludes our series from the photographs and drawings lent us by his executors.

LOWESTOFT HOUSING SCHEME.—CONCRETE BUILDING SYSTEM CARRIED OUT BY DIRECT LABOUR.

At an early date we shall give some details and plans of the houses now being built by the borough on the Lowestoft Concrete Building System. To-day we publish a view and plans of some of these buildings now in progress, from the designs and under the supervision of the borough surveyor, Mr. S. W. Mobbs, A.R.I.B.A., A.M.I.M. and C.E., who has the layout of the scheme in hand. Mr. F. R. Hipperson, builder, of Norwich, obtained the first contract at an average price of £850 per house. The new streets and sewers are being done by direct administration through the borough surveyor's department, under the personal direction of Mr. Chester Button, M.S.A., chief assistant to this department. He likewise is responsible for the supervision of Mr. Hipperson's contract, carried out also by direct labour. The work started last April, and good progress has been made. We reserve the general description of the work till our further illustrations appear. Mr. S. I. Wearing, A.R.I.B.A., of Norwich, designed 67 houses, and Mr. E. C. Allerton, M.S.A. (both architects in private practice), of Lowestoft, designed 29 more. Mr. W. Church, of the same town, is builder of both these last-named sections of the work.

HOUSE, CORTON ROAD, LOWESTOFT, SUFFOLK.

The plans given below the elevational view of this house show that its main feature consists of the large dining-room with an interesting ingle nook situated at the rear end of the apartment, where there is a garden doorway. The central hall is conveniently wide, and the staircase is well out of the view from the entrance. There are six bedrooms on the first floor, and the plan is compact and economical. The work was carried out at an estimated cost of £600 immediately prior to the war, from the plans and under the superintendence of Mr. R. Scott Cockrill, Surrey Street, Lowestoft.

The revised estimates for the Birkenhead Welsh water scheme show an increase of £106,664 over those prepared a year ago.

Out of a large number of applicants, Mr. Harold W. Boardman (21), assistant surveyor, Minehead, Somerset, has been appointed surveyor and inspector of nuisances to the Barnmouth Urban District Council. Last week he was awarded the bronze medal of the Institution of Sanitary Engineers.

Correspondence.

THE ARCHITECTS' BENEVOLENT SOCIETY.

To the Editor of THE BUILDING NEWS.

Sir,—During the war the Council of the Architects' Benevolent Society were able to meet the many claims made upon the Society by acting in co-operation with the Architects' War Committee and other temporary organisations. This assistance has now ceased, and the Society has to depend upon its inadequate resources and the generosity of the architectural profession.

During the last few years subscriptions have been falling off. During the past year, for instance, the annual subscriptions amounted to less than £450, and these were received from only 280 out of the many thousands of architects practising in the United Kingdom. At least five times this amount is required annually if the Council of the Society are successfully to carry on this very important work. You would be shocked at the really tragic cases of hardship which come before the Council at nearly every meeting, many of which can only be inadequately dealt with owing to lack of funds.

The increased cost of living has doubled the hardships of pensioners and deserving applicants. It has also caused an unprecedented drain on our scanty funds.

We therefore desire to remind all that the Society, which has been in existence for seventy years, is the *only* organisation in our profession established solely for the object of affording much-needed assistance to those in necessitous circumstances who have been engaged as architects or architects' assistants, and, where necessary, to their widows and children.

We require at least 1,000 additional annual subscriptions of £1 ls. each, and we earnestly appeal to all to allow us to include their names as annual subscribers of this amount.

Subscriptions will be gratefully acknowledged officially as well as in periodic lists in the Press, and we are confident that it is only necessary to call attention to the needs of this Society to find a ready response.

We are, etc.,

JOHN W. SIMPSON,
President of the Royal Institute of
British Architects.
President of the Architects'
Benevolent Society.

CHARLES J. RUTHEN,
President of the Society of Architects.
G. GILBERT SCOTT,
President of the Architectural
Association.

The Architects' Benevolent Society,
9, Conduit Street, W.1.

LEICESTER AND ITS BUILDING BY-LAWS.

Sir,—The enlightened (?) Corporation of the City of Leicester are promoting a Bill in Parliament this session, and I think it is my duty to point out one of the sections in this lovely Bill. Section 99 reads as under:—

"It shall be lawful for the Corporation, when approving at any time after the passing of this Act any plans relating to the laying out of lands for building purposes, to require as a condition of such approval that before selling or granting a lease of any such lands the owner thereof shall, in addition to sewerage any streets or roads shown on such plans, construct and make up such roads to the satisfaction of the surveyor. If any person shall neglect to comply with any such requirement he shall be liable on summary con-

viction to a penalty not exceeding £10 and to a daily penalty not exceeding £5."

Owing to stupid by-laws and regulations and other stupidity it has taken me six years to get four or five roads made, and what work has been carried out has not been approved by the Corporation.

The City Clerk attended a meeting of the Rotarians some time ago, and said that every facility would be offered to people to come to Leicester to develop new industries and new land developments. This section shows the type of help which might be expected if they were venture-some enough to come.

I shall be glad if you will give this section all the publicity it is possible to give it.—I am, etc.,

W. H. SIMPSON, C.E.
94, New Walk, and 1, Upper Nelson
Street, Leicester,
December 31, 1920.

PROFESSIONAL AND TRADE SOCIETIES.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.—The fifth general meeting of the Birmingham Architectural Association was held last Friday evening. The President, Mr. H. T. Buckland, presided.—Professor F. C. Lea read a paper entitled "Reinforced Concrete," in which he said we were living in an age when labour and material were expensive, and one of the problems of the day was how to maintain economy of expenditure in buildings, not only with the highest degree of suitability to the particular purpose for which they were to be used, but also to obtain the best and most pleasing architectural effects. Reinforced concrete could no doubt be used to satisfy those aims, and architects, working with those who understood the constructive and scientific possibilities of this material, might use it to produce worthy structures.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.—On Christmas Eve the President of the Royal Institute of British Architects sent the following telegram to His Majesty the King:—"To His Majesty the King, Sandringham.—Royal Institute of British Architects submit humble duty to His Majesty their Gracious Patron and offer very sincere wishes for Happy Christmas.—Simpson (President)." The following gracious reply was received the same evening:—"Sandringham.—President, Royal Institute of British Architects, High Holborn.—The King sincerely thanks the Royal Institute of British Architects for their Christmas greetings, which His Majesty heartily reciprocates.—Private Secretary."

The next ordinary general meeting of the Surveyors' Institution will be held in the Lecture Hall of the Institution on Monday, January 10, 1921, when a paper will be read entitled "The Streets of London before the Great Fire," by Mr. W. W. Jenkinson (Fellow). The chair will be taken at eight o'clock.

Land value duties, of course, produced nothing in the quarter's Revenue returns ending December 31, and for the nine months there is only £20,000 to set against £352,000 under the same head last year. House duty shows no variation, having produced £350,000 in the nine months both this year and last.

Mr. Howard Martin, official arbitrator under the Acquisition of Land (Assessment of Compensation) Act, 1919, has ordered a payment of £3,105 to be made by the Barnes Urban District Council to the Fitzgerald Trustees (Mr. Edmund Royds and Mr. J. F. G. Gilliat) for 8½ acres of freehold land for housing purposes, for which the trustees submitted a valuation of £5,494.

A memorial fountain erected on the roadway opposite Woodbank, Pitfodols, in memory of Major James Maston Reid, Royal Engineers, son of Mr. Walter A. Reid, C.A., has been handed over to the Aberdeen District Committee, and accepted by Major Smythe, chairman of that committee. The memorial was designed by Dr. William Kelly, A.R.S.A., architect, and executed with finely-dressed white Kemnay granite by Sir James Taggart, granite merchant, ex-Lord Provost of Aberdeen.

Our Office Table.

A new edition of one of the most popular and useful books on metal work ever published, "The Tin, Sheet-Iron, and Copper-Plate Worker," by Leroy J. Blinn (London: Hodder and Stoughton, Limited, 17, Warwick Square, E.C.4, 16s. net), is embraced in the excellent series of Oxford technical publications. With it no craftsman need be at a loss to describe a pattern, to solve a point in practical geometry, to know the right varnish or cement to use, or the strength of any material. The new edition has been thoroughly revised to date, and enlarged by the addition of many new patterns, dealing more especially with triangulation and modern skylight work. Another good feature is the space devoted to the treatment of alloys and solders, and there are also numerous tables and recipes of all sorts. The volume comprises 334 pages, and is copiously illustrated, and reference is made easy by an excellent index.

Far more interesting and useful to our readers, especially those interested in housing, than most of the "Sales" catalogues with which our wives and sisters are being flooded by the drapers will be found the well illustrated and informatively descriptive catalogue just issued by Messrs. T. Bath and Co., Ltd., the well-known contractors, of 18, Savoy Street, Strand, W.C.2, of their big clearance sale of a quarter of a million's worth of goods, reduced from fifteen to fifty per cent. off usual prices, including every sort of new wood and iron buildings, huts, contractors' offices, garden buildings, motor-car garages, bicycle houses, stables, canteens, bungalows, cricket, football, tennis, and golf pavilions, poultry houses, and the thousand and one fittings and furnishings that appertain to each. Some of the bargains offered, especially on page 8, where bungalows of substantial design, and likely to outlast a

good many of the workmen's dwellings now being rushed up, are offered at from fifty pounds complete to £700, should prove infinitely better investments than the houses, of a sort, bought by speculators for the rise, which we see advertised day after day in the daily papers.

Part VI. of "Building Construction Drawing," by Richard B. Eaton (London: E. and F. N. Spon, Ltd., 57, Haymarket, S.W.1, 3s. 6d.), dealing with joinery drawings, specifications and measurements, consists, like the others, of large-scale detail drawings, each provided with a specification. These drawings are of a very practical nature. The matter given is not only essential to the artisan and mechanic, but the method in which this and the illustrations are presented is practically in the same form actually employed by the contractor during the erection of buildings. The salient features include fittings for small houses, skirtings, picture and chair rails, architraves, mouldings, panelling, kitchen dressers, bookcases, and sideboards. Exterior work is represented by pivot-hung sashes, skylights, porches, and hoods to front doors.

Ilford Urban District Council have under consideration a scheme for an open-air swimming bath, estimated to cost £8,000.

The demolition of the old Star and Garter at Richmond is nearly finished, and a start has been made in building the new home, which is expected to be completed in three years.

We much regret to hear of the death of Professor C. W. O'D. Alexander, Professor of Civil Engineering in University College, Cork. He was a son of Mr. Joseph Alexander, J.P., Imlick, Co. Donegal, and was born in 1879. He graduated in the Royal University in 1901, and in Birmingham University in 1905. He became Dean of Faculty in University College, Cork, in 1909. Since his connection with Cork College he did much to improve the status of the Engineering School and to raise the standard of the teaching there.

CHIPS.

The London School of Tropical Medicine has decided to send out an expedition to British Guiana to investigate the disease known as elephantiasis, and to adopt eradication measures.

Sir Charles T. Ruthen (President of the Society of Architects) has accepted the positions of Vice-President and Honorary Consulting Architect to the Welsh National Exhibition, to be held at Cardiff in 1922.

Mr. John C. Shaw, a partner in the limestone quarrying firm of Bowne and Shaw, Wirksworth, Derbyshire, has sold his interests to the Stanton Iron Works Co., Ltd. The first quarry was opened in 1789 by James Shaw, grandfather of Mr. J. C. Shaw.

The President of the Liverpool Architectural Society (Mr. T. Taliesin Rees) sends us his greetings, and hopes that we may be busy, prosperous, and happy during the year 1921. They are heartily reciprocated to himself and the Society over which he so ably presides.

The Ghent International Architecture Exhibition, organised under the auspices of the Belgian Government, will be opened on April 30. The scope of the exhibition will be very wide; it will include interior decoration, furnishing, heating, lighting, and every kind of modern housefitting.

Mr. J. S. Corbett, former Director-General of the Agricultural Organisation Society and Chairman of the Wiltshire Farmers, Ltd., has been appointed Secretary of the English Forestry Association, and will welcome inquiries from landowners and others at the offices of the Association, 17, Victoria Street, S.W.1.

There has been diversity of opinion as to what form the war memorial should take, but most people are in favour of a monument of some sort being erected at Lerwick; and a well-known Edinburgh architect is at present engaged in preparing sketches which will be duly submitted for the consideration of the committee which has been appointed to carry the matter through. It is expected that a sum of at least £2,500 will be forthcoming for the memorial.

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THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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OUR ILLUSTRATIONS.

"A Mourner." Cartoon for a draped figure. Royal Academy Silver Medal Prize, 1920. By Miss Agnes Clara Tatham.	
"Angel of Peace." Salem Chapel Memorial Window, Higher Broughton, Manchester. Designed by Mr. Herbert Hendrie.	

Strand, W.C.2.

Borough of Cheltenham Housing Scheme, view, elevations, and plans, with the lay-out plan of site facing Gloucester Road. Messrs. Chatters, Smithson, and Rainger, architects. Mr. J. S. Pickering. M.Inst.C.E., borough surveyor.	
Historic Furniture, Newsgate Abbey, Nottingham: a Flemish armoire and Tudor oak bedstead, the property of Lieut.-General Sir Herbert Chermiside, G.C.M.G., C.B. Sold this week by Messrs. Knight, Frank and Rutley.	

Currente Calamo.

The delicate and workmanlike set of sixteen sketches by the late Gerald Horsley now on view at the Architectural Association can by no means be seen properly in the dark ground-floor vestibule where they are hung. The artificial lighting indeed is so bad that the aid of a match is needed to read their titles. The working drawings also exhibited in illustration of the admirable designs of the late Temple Moore in the same lobby are equally disadvantaged. If no other place is available for these periodical gatherings, at least the electric light might be reasonably adapted, even if switches for economy's sake were provided for the use of visitors in this passage way, where the noise, increased by the telephone bell and call box, adds much to their discomfort. Horsley's subjects are all strictly architectural—faithfully delineated without meretricious attempts at theatrical effects. The transept arcade at Hereford, the choir and nave drawings in Bayeux, the Portal details from Amiens, as well as the double baptistery exterior at Sienna, deserve special mention; all of them are in pure pencil. The Lombardic lion at the base of the doorway column at Bergamo is heightened by soft colouring. The pulpits from Venice and Italy and the famous projecting wall tomb at Verona are equally admirable and quite worthy of a pupil of Norman Shaw. Temple Moore is represented by some of his less-known designs, by photographs, or by working drawings not before shown. In every case his capability as an architect is fully commemorated by the small collection presented. The rood screen, Winterington, in line elevation, and the reredos hanging next to this are from All Saints', Basingstoke, though only minor specimens of his thoroughness. The set of contract plans of Uplands Church, near Stroud, with its broached and tile-covered spire, and St. Augustine's, Gillingham, are equally rural in kind, quite typically in character with Kentish traditions. The fine photos of St. Mary's, Sledmere, built for Sir Tatton Sykes, show more costly work carried out with reserve and much dignity well worthy of any period. His

famous church of St. Wilfred's, Harrogate, and details of his All Saints', Middlesbrough, tower, are included in the show, as well as the chapel of the Bishop's Hostel, Lincoln. The exhibition closes on the 19th inst.

The very interesting paper on "The Streets of London Before the Great Fire," read before the Surveyors' Institution last Monday evening by Mr. W. W. Jenkinson, is a continuation of that read by him seven years ago on the same subject, but is based as far as possible on references in contemporary literature. It is too long for us to reproduce, but is full of quotations from the authors of the times, embracing descriptions of and allusions to almost every street and building within the confines of London, reaching from the easternmost boundaries of the City to Charing Cross. Many of the references illustrate very lucidly the vicissitudes and migrations of the various trades carried on in Old London. St. Paul's Churchyard, for instance, as is pointed out, was in the seventeenth century the principal headquarters of the booksellers and publishers, who seem to have been the butts of the ridicule or resentment of the authors whose wares they made money out of. "Those rascally pedlars at the worst end of Paul's," one anonymous tract-writer dubs them. And another declares: "It is no wonder that Paul's has been so often struck by thunder. 'Twas aimed at those shops in which there lies such a confused world of trumpery." Some of the booksellers seem to have been allowed to build in actual contiguity to the old Cathedral, there being no Building Act or district surveyor in those days. Posters seem to have been the chief means adopted by the vendors of books at the time, anticipating the methods of the newspaper distributors of to-day. In one old play, the "Returne from Parnassus," we find one of the billposters declaring "In faith, I have been posted to every post in Paul's Churchyard, *cum gratio et privilegio.*"

About the most pertinent remarks made by a number of artists who have taken part in the interesting discussion in the *Morning Post* on "Art in England" are those by Mr. Gilbert Bayes in last

Friday's issue. "Look," he says, "at the galleries where our exhibitions are held. I speak particularly of their architectural proportions. The New Gallery was a charming little place. It pleased you, put you in a good temper. But most of our galleries to-day, while they may be well lighted, do not impress you in this fashion. Continental artists have greater advantages in the matter of satisfactory buildings for exhibition purposes. Go into almost any one of them, and you at once feel in the right spirit. The lack of this influence in England affects not only the critic but the general public and the artist. Then for many years our exhibitions have been too closely hung to show each man's work fairly, with the result that artists are inclined to paint their pictures to tell in an exhibition, and this striving for recognition in a large gallery produces effects too restless for a private house. Consequently the public does not buy, nor is it encouraged to patronise art by the sudden swing of the pendulum either to pure realism or to the madness of Excessive schools. The public never knows where it is. The ordinary purchaser wants something not hopelessly beyond him, but something fresh that will stimulate his imagination." Mr. Bayes thinks Government might at least help, if not in purchasing pictures and statuary, at least in supplying suitable buildings for the display of art, which is in England sufficiently national to be worth encouraging to this extent.

We think so too, but we hope such help would not be artfully diverted as is the case with the subsidies for housing. It was surely understood that those subsidies were to help the thrifty man of small means anxious to invest his savings in that best of all securities—his own little home! It is being diverted to the profit of those buying villas costing from £1,750 to £2,500. We know of one case in which a row of some eighteen or twenty of these is being completed. The houses are alternately detached and semi-detached, and one of the former, with a big garden, is being bought by a London tradesman, who has obtained the subsidy of £250 at the rate of £100 per house. His fellow-taxpayers. His neighbours are a little sore about it, and one suggests that the title for the new road shall be "Charity Avenue." Charity, it is true, begins at home; and it is perhaps right that we should all be sweated to

make up to the working man the absence of houses mainly caused by Mr. Lloyd George's plundering and blundering Finance Acts of 1909-10. But the suspicion will gain ground if the housing subsidies are extended to the comparatively rich who have somehow combined to ingratiate themselves with Dr. Addison or his satellites in a fashion which may be perfectly legitimate, but if too liberally followed, will send a good many of the rest of us to the workhouse—we beg pardon, the Institution—or into the ranks of the "unemployed," with free cigarettes and other pleasant emoluments.

The members of the Labour Party Executive and Trade Union Congress Parliamentary Committee, meeting on January 6, resolved to boycott the proposed Government Committee on Unemployment. We think people who are being solicited to contribute to the maintenance of the unemployed—and the unemployable—will remember this, and that the country has endured worse periods in the past and has come through them. In 1910, for instance, the highest percentage of unemployment in trades unions from which returns are recorded reached 6.8; and the mean figure for the year was 4.7. In 1912 the highest figure (during the progress of a coal strike) was 11.3, and the mean figure 3.2. In 1914 a percentage of 7.1 was reached. Beside these percentages the latest available returns—5.3 per cent. in October, while the miners were on strike, and 3.7 per cent. in November—are not alarming; and though, no doubt, the position is now worse and worsening, it is still very far from being as bad as much loose talk and looser writing would suggest. The worst features are in the first place we have now among us a large number of men and women who are disposed to demand more of life than life can give them, upon any terms, and who meet misfortune with resentment; in the second the principal known cause of the depression—the inability of foreign buyers to pay the prices now demanded for British goods—is obviously a cause incapable of rapid removal; in the third we have to reckon with the influence of an enlarged revolutionary faction, encouraged by the course of events upon the Continent, which exploits, magnifies, and assists in creating distress, for the furtherance of its own political purposes. The last-mentioned class will intercept and benefit by all funds cozened from the charitable.

The Index to Vol. CXIX., which contains 27 instead of the usual 26 issues, is published with this issue, and care should be taken to detach it at once and send it with the 27 numbers to the binder. No charge is made for the Index, which cannot be supplied separately, and only afterwards by purchase of the number containing it, which soon runs out of print. With this number we publish a few extra illustrations. The continued high printers' charges and heavy cost of paper still hinder production, the cost of which could only be met by passing it on to our subscribers, by charging more for the paper and increasing rates to adver-

tisers, a policy which benefits nobody, and is much on a par with the "increase of product" so loudly demanded by some who seem to fail to understand that reckless increase of product beyond demand is only followed by results such as have brought about the slump felt by speculators for the rise in some other industries.

THE NATIONAL PORTRAIT SOCIETY.

There is plenty to see for the money at the Grafton Galleries in the tenth annual exhibition of the National Portrait Society, thanks to the fertility of some of the contributors, and a fair sprinkling of loans of works most of us have seen before; though whether a good many of the things shown as "portraits" might with profit have been withheld from the 294 exhibits shown is another matter.

Mr. Augustus John, Mr. Ambrose McEvoy, Mr. Gerald F. Kelly, and Miss Laura Knight divide the honours as far as quantity goes. Mr. John sends no fewer than seventeen of his own pictures and six "Works by an Unknown Victorian Artist." The best of his own are "Sir Robert Woods" (48A), "The White Mantilla" (51), "Sir Archibald Sinclair, Bart." (52), and "The Lady Tredegar" (53). His works of "An Unknown Victorian Artist" are the sole contribution this time to the "fun of the fair": unless, indeed, the artist died young and missed his chance of fame as the early apostle of Futurism. They will, anyhow, tempt the visitor to extend his peregrinations down to the furthest end of the refuge of all sorts—the End Gallery—and perhaps raise a little mild speculation in regard to the "Portraits of Six Gentlemen with side whiskers" (198), which we are told is a "Biblical subject." "The Portrait of an Army" (199) is a somewhat novel way of describing the serried ranks of warriors shown. The "Portrait of the Rev. Rowland Hill and Highwaymen" (201) will doubtless commend itself to any surviving adherents of that notable seceder from the Church, and should be bought as a manifestation of thanksgiving for the pastor's providential escape from the truculent knights of the road, who, perhaps, were converted by his eloquence. The "Portrait of Three Ladies and a Child (Moses in the bulrushes)" (202) should certainly find a place in the collection of some discerning and liberal member of the Jewish persuasion. Who were the "three ladies"? Princesses of the Far East, possibly. Could Lord Reading be induced to take it out to India, with him, on the chance of recognition by some of the descendants of the adventurous sultanas whose homage to the future lawgiver is more or less appositely commemorated?

Mr. Alfred McEvoy is more or less successful with the portraits in the Octagonal and Long Galleries. "Denise" (26), lent by Capt. Romer Williams, is one of the best. "The Hon. Lois Sturt" (30), "Mrs. Romer Williams" (31), and Mrs. Redmond McGrath (66) are good, but we have seen better in the past. The eleven water-colours in the End Gallery are of the nature of studies, all showing the recognised ability of their author, but occupying a good deal of space, of which perhaps there was a good deal to spare, and certainly better than a good deal else that is there.

We are not greatly taken with Miss Laura Knight's "Study of a Woman" (19), in the Octagonal Gallery, but she has an attractive portrait in oil of "Mrs. Arnold Palmer" (184) in the End Gallery, and several good drawings in chalk and pen and pencil, including two of "Madame Pavlova" (180) and (188).

Mr. Gerald F. Kelley also sends a portrait of "The Hon. Lois Sturt" (47), which, with "The Black Mantilla" (64), are the best of his nine. In the End Gallery his two "Burmese Dancers" (189) and (191) are attractive.

Mr. William Nicholson has two good portraits, "Miss Jekyll" (3) and "Midshipman John Somers" (68). Mr. Glyn W. Philpot, A.R.A., exhibits "Lady Sybil Grant" (9), lent by Lord Rosebery, and two vigorous sketches in oil of "Ali ben Amor ben M'rad" (8 and 10), both excellent, our preference being for the second one, without the headgear. Mr. Charles Sims, R.A., has a portrait of "Mrs. John MacWhirter" (11), and another of "Mrs. Harold Phillips" (73), both well up to his usual high level. The only contribution of Sir John Lavery, A.R.A., is "Cardinal Logue" (17). Sir William Orpen, A.R.A., is singly represented by his portrait of "George S. Yuill, Esq." (43), lent by the Countess of Portarlington. Mr. John Sargent, R.A., has a "Portrait of Mrs. Ricketts" (39), lent by her, and a water-colour sketch, "The Fisherman" (220). Mr. William Strang, A.R.A., is to the fore with one of the best portraits shown, "Lucien Pissarro, Esq." (35). His other three are "Peggy Dallas" (54), "Miss Dormelle" (55), and "The Lady with the Shawl" (76).

Among others which deserve notice are Mr. Jacques Blanche's portrait of "Thomas Hardy, Esq., O.M." (3), well deserving its prominence in the Octagonal Gallery; the three by Mr. A. J. Munnings, A.R.A., especially "Young Penderennis" (41) and "Hugh Vivian Smith, Esq." (62); Mr. Walter W. Russell's "Hon. Mr. Justice Hill" (93), and the four sent by Mr. Philip Connard, A.R.A., of which the "Girl's Head" (1) is assigned the premier position next the entrance to the exhibition.

Two interesting subjects of the past are "A Portrait of Miss Mallory" (74), by William Etty, R.A. (1787-1849), lent by the Hon. Mrs. Mallory, and "Her Majesty Queen Alexandra" (77), by X. Winterhalter, lent by Queen Alexandra, reviving the enthusiastic admiration of all who remember her in the early days of her marriage, which has deepened year by year through two generations.

The funeral took place on Thursday week at St. Margaret's Church and Lynn Cemetery of Mr. J. J. Gudgeon, who died on the previous Monday at the age of 76. He was for many years a postal official at Lynn, but was chiefly known for his clever wood-carving, specimens of which are to be found in many of the churches and halls around Lynn, including Sandringham House and Houghton Hall. One of his latest products was the carved oak memorial tablet erected in Lynn Post Office to the members of the staff who fell in the war.

The Council of the National Trust for Places of Historic Interest or Natural Beauty has arranged for a course of six public lectures in the lecture room of the Department of Botany, University College, Gower Street. Among the lecturers are Mr. John Bailey, Dr. Chalmers Mitchell, Professor Oliver, and Mr. H. Rowland Brown; while the Speaker, Viscount Grey, Viscount Bryce, and Sir Aston Webb are among those who will take the chair. The lectures will be given on Wednesdays at 5 p.m. from the 19th inst. to February 23. No charge for admission, but cards should be obtained from the Secretary, the National Trust, 25, Victoria Street, S.W.1.

THE SOCIETY OF ARCHITECTS.

The Society of Architects' Victory Scholarship Competition was instituted in 1919 by the Council of the Society to commemorate the services of members of the Society in the war 1914-18, and to perpetuate the memory of those who fell. It is open to any British subject under the age of 35 years. The first "en loge" twelve-hour esquisse was held at the Society's Atelier, 28, Bedford Square, London, W.C.1, on Saturday, May 1, 1920, the subject being "The Great Doorway of a National Pantheon." The object of this programme was to ascertain the ability of the competitors to study the proportions and attributes of monumental architecture, and to impart correct expression to the subject. Twenty-five candidates competed, and the Jury of the Royal Academy Ateliers, Messrs. Robert Atkinson, F.R.I.B.A., Professor Richardson, F.R.I.B.A., and Mr. Arthur Davis, F.R.I.B.A., nominated by the Council of the Society as assessors, selected ten of the candidates to sit for the final competition on June 5. This consisted of a twelve-hour esquisse, the subject being "A National Manufactory for the Production of Porcelain," the finished design to be completed within six weeks. Nine out of the ten candidates competed in the esquisse, but only two of them completed their designs, the others being prevented from doing so owing to unforeseen circumstances arising over which the Society had no control. The Council therefore decided, in agreement with the competitors, to divide the 1920 final competition and the prize of £100, to duplicate the medal, and hold another esquisse and competition on October 9, with a different programme, open to all candidates who took part in the final competition on June 5. The subject of the additional competition was "A Lecture Amphitheatre Forming Part of a Group of Buildings Housing Scientific Institutions." There were four competitors, and their designs had to be submitted by December 13. The Jury assessed the whole of the drawings submitted in both competitions, and awarded the prizes as follows:—

Competition A (Porcelain Factory), design No. 5, Trenwith Wills, A.R.I.B.A., 24a, Yeoman's Row, Brompton Road, S.W.3; Competition B (Lecture Amphitheatre), design No. 8, F. P. M. Woodhouse, A.R.I.B.A., Southmead, Wimbledon Park, S.W. The prize money (which by the terms of the competition is to be utilised for educational purposes) and the gold medals were handed to the winners by the President of the Society, Sir Charles T. Ruthen, O.B.E., F.R.I.B.A., at the annual general meeting on January 13, 1921, when the whole of the drawings were on exhibition, and the members of the Jury attended and gave a criticism of the designs.

The annual report states that, after allowing for deaths, resignations and other cessors of membership, and for transfers, the following is the strength of the Society on October 31, 1920, the previous year's figures being added for comparison:—

	1919.	1920.
Fellows	—	93
Members	1,102	1,146
Honorary Members ...	26	24
Retired Members	35	39
Licentiates	—	37
Graduates	12	—
Students	94	102
Total ...	1,269	1,441

DEATHS.—The Committee report with great regret the deaths of the following:—

Members—Charles Crosier (London), W. G. Hadley (Pontardawe), Edwin T. Howard (Wellington, Som.), Henry Shaw (London), James Thompson (Alderley Edge), H. T. Wakelam (London).

RESIGNATIONS.—The resignations of the following have been accepted:—

Members—P. M. Balsara (Bombay), R. H. Boyd (London), D. J. Campkin (Hartley), W. G. Couldrey (Paignton), J. W. H. Farrow (South Africa), A. D. Greatorex (West Bromwich), Frank Hearne (Oldham), A. N. W. Hodgson (Windermere), E. B. Jory (Cardiff), G. G. King (Belfast), P. S. Parris (Crowborough), T. Spencer (London), N. C. Spratt (Surbiton).

Students—L. Cavanagh (London), D. B. Corrie (Birmingham), V. C. A. Monckton (Wimborne), C. O. Pugh-Jones (Cardiff), F. W. Tapping (Aylesbury), J. Whitaker (Burnley).

RETIRED LIST.—The following have been transferred from the active list:—

Fellow—Col. F. S. Leslie, R.E. (Ret.), London (1891-1920).

Members—S. T. T. James (London) (1896-1920), J. S. McDonald (London) (1903-1919), G. T. Misselbrook (Sheerness) (1896-1920), R. P. Sharp (Bradford) (1888-1920), T. Winder (Kingsbridge) (1890-1919).

REINSTATEMENTS.—The following have been reinstated to membership:—

L. W. Barnard, F.R.I.B.A. (Cheltenham), H. Dan (Hove), T. S. Lello (Chadwell Heath), A. W. Street (Corsham), J. A. Wilson (Glasgow).

NEW MEMBERSHIP CERTIFICATES.—New forms of certificate for Fellowship, Membership, and Licentiatehip have been approved by the Council and issued to all members in these classes elected since July 15, 1920. Members elected before that date who desire to exchange their original certificate for a new one may do so by returning the original to the Society and paying the cost, 5s., of the preparation of a new certificate.

Full statements of the various activities of the Society are given in the Report.

FINANCE.—In making any comparisons with other years, or in criticising the items generally in the revenue account and balance-sheet, it must be remembered that the expenditure incurred by the Society in any one financial year must depend upon its activities during that period. During the past year the Society has had to meet out of a pre-war income the greatly increased costs in every department and the additional expenses inevitably attending one of its busiest years. The net result is a debit balance of £1,198 for the year.

It will be noted that every item of income that was capable of variation has been increased, and that, after allowing for a deficit on the year of £1,198, there is an increase in the total receipts of nearly £1,000. The balance sheet shows an increase of £650 in sundry creditors, chiefly subscriptions, etc., in advance. The premises have appreciated by nearly £800, and a most encouraging feature is the very considerable reduction in outstanding subscriptions, etc., which are some £400 less than in 1919. A less satisfactory item is the depreciation of investments. The cash on deposit and current account at the bank is £814, as against £125. Briefly, the financial result of the year's working shows that even with continued growth and expansion and economy in administration the Society cannot, with rising costs, make both ends meet on a pre-war income, and the deficit is a justification of the Council's action in raising the subscriptions.

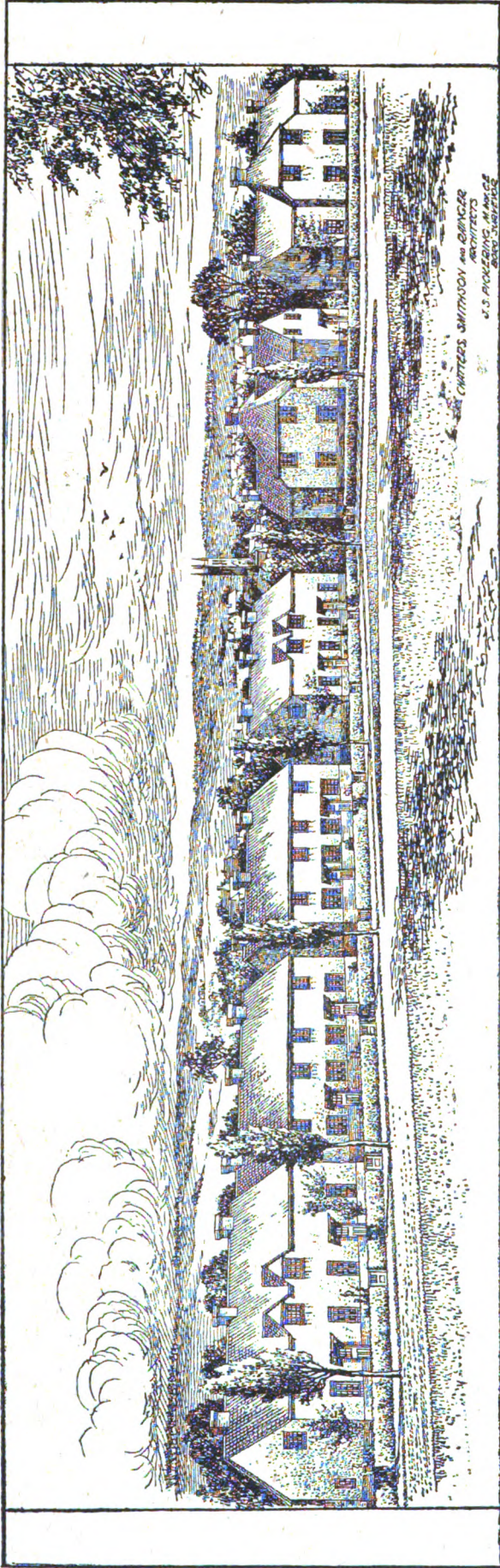
OBITUARY.

We regret to record the death of Mr. Henry Thomas Hare, a Past-President of the R.I.B.A., who died last Monday at his residence at Farnham Common. A native of Scarborough, he was educated privately at Sheffield and Harrogate, and after being articled in 1876, studied at the Ecole des Beaux Arts, Paris. He became Aeshpital Prizeman in 1886, an Associate of the Royal Institute of British Architects in 1887, Fellow in 1898, Vice-President 1904-8, Hon. Secretary 1909-13, and President 1917-19. In spite of indifferant health, Mr. Hare went out to France during the war and did good service in connection with the billeting of the troops, and was often able to preserve from damage some of the old chateaux and other historic buildings. The following illustrations of his work have appeared in our pages:—His premiated design for Sheffield Municipal Buildings (erected by E. W. Mountford), July 4, 1890; second premiated design, Bury Municipal Buildings (erected by A. N. Bromley), September 18, 1891; selected design for the Oxford Municipal Buildings (Mr. T. E. Colcutt, referee), July 8 and 15, 1892, and photograph May 14, 1897; Stafford Municipal Buildings, view and plans, November 27, 1896; House at Stafford, May, 1896; Theological College, Cambridge, July 30 and August 6, 1897; selected design, Wolverhampton Library, March 25, 1898, and May 11, 1900; Taunton Town Hall (third premiated design), July 15, 1898; "Old White House," Oxford, December 30, 1898; Shore-ditch Library (in connection with the Public Baths and Washhouses, Messrs Spalding and Cross, architects), view and plans, January 13, 1899; Henley Town Hall (chosen in limited competition), May 5, 1899; Tunbridge Wells Technical School, May 4, 1900, March 13, 1918; Teddsley Park, Staffordshire, August 3, 1900; Public Offices, Hendon, February 16, 1900; Library and County Buildings, Stafford, August 3, 1901; a Private House, Oxford, May 2, 1902; Crewe Public Buildings, view and plans, May 8, 1903, and January 9, 1918; Harrogate Municipal Buildings (selected design view), July 10, 1903; Hammersmith Public Library, August 28, 1903; Pontypridd Town Hall and Public Buildings, June 3, 1904, and March 6, 1918, with plans; Glamorgan County Hall, Cardiff, third premiated design, January 29, 1909; University College, North Wales, Bangor, May 14, 1909; United Kingdom Temperance and General Provident Institution Offices, Strand, W.C., May 4, 1906, and August 20, 1909; the Richard Jones Hall, Bangor University, April 29, 1910; Lees Rest Houses, Hull, July 26, 1912; Frances Holland School for Girls, Park Road, N.W., October 16, 1914. Among his more recent works were a Residence and Golf Club House at Cammock Chase; Houses at Wolverhampton; Memorial Public Building, Oxford; and Science Buildings and War Memorial row in course of erection for the University College, Bangor, one of his last commissions. Mr. Hare competed last year for the Marylebone Housing Scheme, which was won by Messrs. Ashley and Newman. Mr. Hare some little time back took into partnership Mr. Bertram Lisle, by whom the business will be continued in conjunction with Mr. Frederick C. Hare.

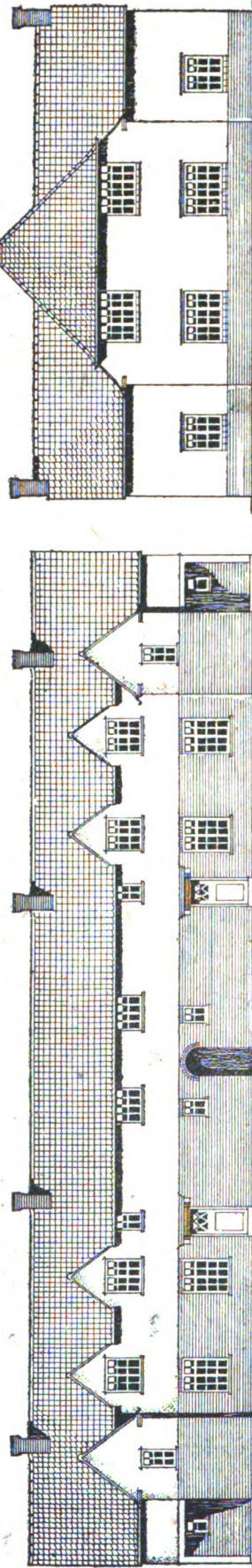
Mr. John Grantham Cole, of 3, Hawthorn Terrace, Newcastle-on-Tyne, decorator, a member of the City Council for fourteen years and a late Sheriff of the city, has left £14,361.

The Executive Committee of the Scottish Typographical Association are proposing to institute a system of continuous unemployment pay at the rate of £2 per week, and for a period of six months an additional levy upon all members who are employed is proposed, at the high rate of 1s. 4d. per week. Other societies in the printing trade are reported to be considering similar proposals.

Millom ratepayers have refused to sanction the District Council's proposed scheme to spend £47,000 on the construction of a new reservoir. Messrs. Docker, Sheldon, Mills, and Knox, speaking as ratepayers at a town's meeting held on Wednesday week, objected strongly to the expenditure at the present time. The meeting decided by 37 votes against 33 that the scheme remain in abeyance.



BOROUGH OF CHELTENHAM HOUSING SCHEME



Architectural floor plans and elevations for the housing scheme. The plans are labeled as follows:

- FRONT ELEVATION**: Shows the exterior facade of the houses.
- GROUND FLOOR PLAN**: Shows the layout of the ground floor, including rooms such as Living Room, Scullery, Kitchen, and Landing.
- FIRST FLOOR PLAN**: Shows the layout of the first floor, including multiple Bedrooms, Bath, and a Terrace.
- GROUND FLOOR**: A smaller version of the ground floor plan.
- FIRST FLOOR**: A smaller version of the first floor plan.

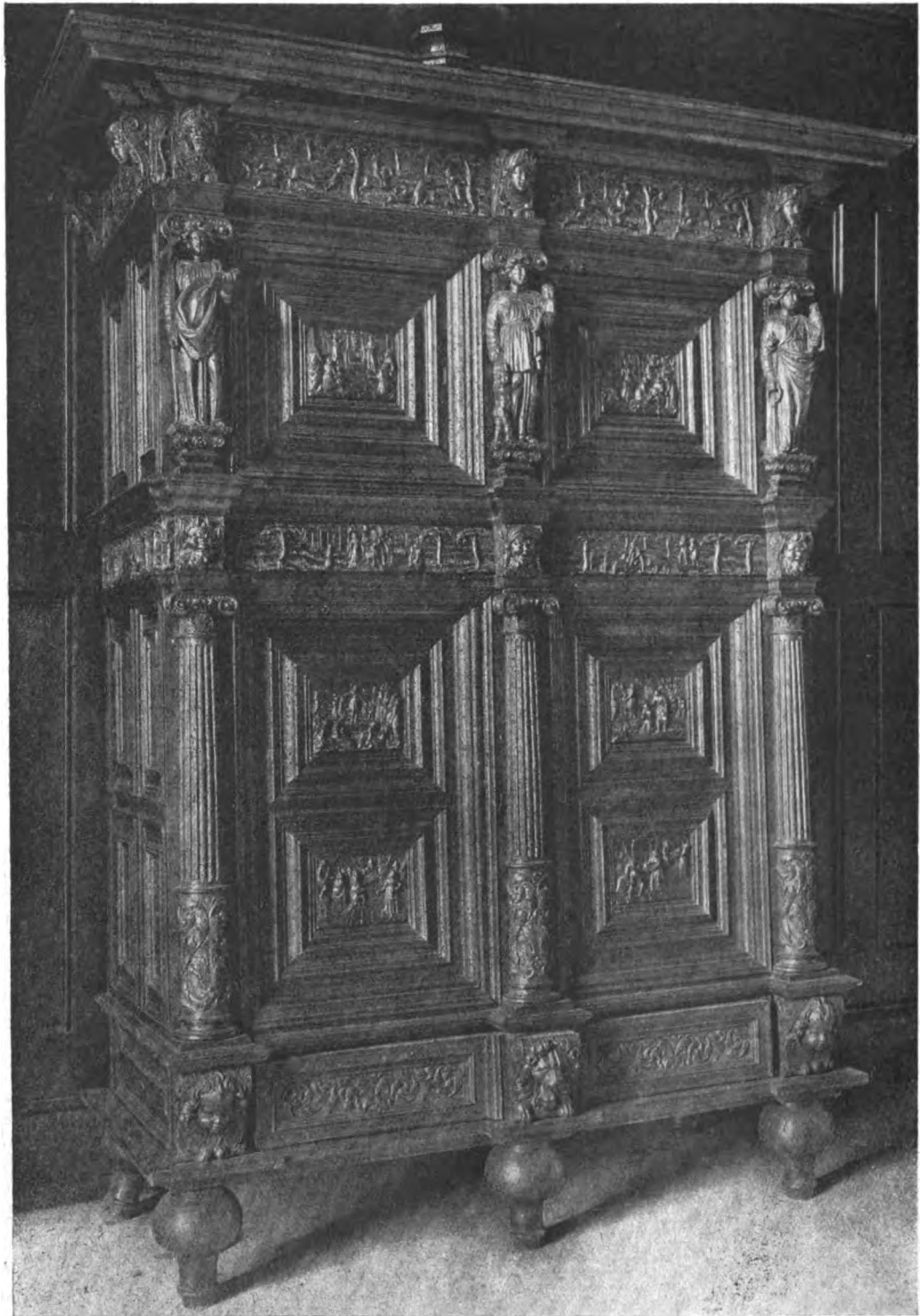
Messrs. CHATTERS, SMITHSON & RAINGER, Architects. Mr. J. S. PICKERING, M.Inst.C.E., Borough Surveyor.



"A MOURNER" (CARTOON OF A DRAPED FIGURE).

Royal Academy Silver Medal Prize, 1920.

By Miss AGNES CLARA TATHAM.



FLEMISH ARMOIRE, NEWSTEAD ABBEY, NOTTINGHAM.

Sold this week by Messrs. KNIGHT, FRANK & RUTLEY.



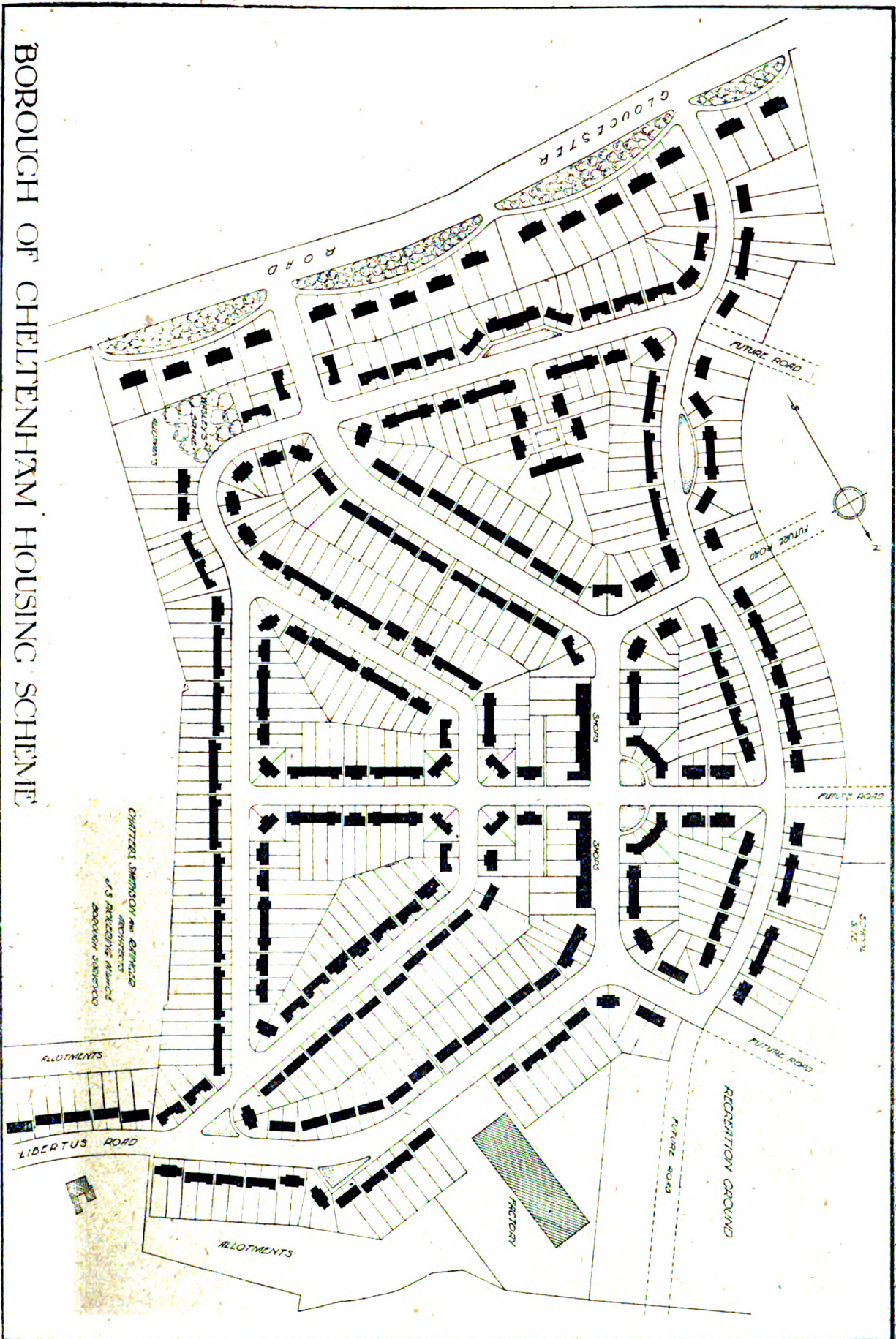
TUDOR OAK BEDSTEAD, NEWSTEAD ABBEY, NOTTS.

Sold this week by Messrs. KNIGHT, FRANK & RUTLEY.



ANGEL OF PEACE, SALEM CHAPEL MEMORIAL WINDOW,
HIGHER BROUGHTON, MANCHESTER.

Designed by Mr. HERBERT HENDRIE.



BOROUGH OF CHELTENHAM HOUSING SCHEME

LAY-OUT BLOCK PLAN, GLOUCESTER ROAD SITE. MESSRS. CHATTERS, SMITHSON & RAINGER, Architects.

Mr. J. S. PICKERING, M.Inst.C.E., Borough Surveyor.

Our Illustrations.

"A MOURNER."

ROYAL ACADEMY SILVER MEDAL PRIZE
CARTOON FOR A DRAPED FIGURE.

This is the winning cartoon chosen by the Council of the Royal Academy in the recent competition by students in the schools at Burlington House, and Miss Agnes C. Tatham, of Elsham Road, W., was awarded the silver medal and £25 for her design. The drawing represents a seated figure, with bent head and arms crossed on the breast. The dress is a loose Eastern costume from Arabia. The cartoon was done by gaslight partly from a lay figure and partly from a model. We reviewed the designs submitted for all the medals and prizes this winter (when they were on view at the Royal Victoria and Albert Museum, South Kensington, last month) in our issue for December 17.

CARTOON OF THE ANGEL OF PEACE, HIGHER BROUGHTON, MANCHESTER.

This figure from the window recently erected in Salem Chapel, Higher Broughton, bears the sheathed sword and forms part of a stained glass scheme dedicated to the memory of fallen soldiers who were members of this congregation near Manchester. Behind the angel is shown a rainbow signifying Hope, and on either side are distant crosses in a battlefield cemetery. At the base are spring flowers emblematic of life. The five feet high full-size cartoon, reproduced herewith, was drawn by the artist who designed this window, Mr. Herbert Hendrie, of Sidney Street, Chelsea, S.W.

CHELTHENHAM HOUSING SCHEME.

This scheme includes a total of 520 houses. The site is an excellent one, consisting of 118 acres of land, of which about 70 acres are being used for the present scheme, including recreation ground, allotments, etc., the remainder being retained for future development. Up to the present 120 houses have been put in hand, of which the majority are approaching completion and a number are ready for occupation. Another forty houses are just about to be commenced, and it is hoped that contracts for a further 150 will be let very shortly. The lay-out has been carefully studied with a view to making the best use of some charming vistas of the Cotswold Hills, etc. The houses facing on to the main Gloucester Road are set back behind ornamental shrubberies, this being one of the principal approaches to the town. The contractors for the houses now in course of erection are: Messrs. Collins and Godfrey, of Tewkesbury; Messrs. Billings and Sons, and Mr. W. Drew, of Cheltenham; and Messrs. W. H. Nicholls and Co., of Gloucester. Messrs. Chatters, Smithson, and Rainger, architects, of Cheltenham, and Mr. J. S. Pickering, the Borough Surveyor, are jointly responsible for the whole scheme. We give a view of a typical portion of the housings with elevations of some others and the lay-out plan of site.

HISTORIC FURNITURE, NEWSTEAD ABBEY, NOTTINGHAMSHIRE.

The contents of this mansion have been sold by the direction of Lieut.-General Sir Herbert Chermiside, G.C.M.G., C.B., Messrs. Knight, Frank, and Rutley being the auctioneers. The proceedings began on Monday last, when the notable collection of old furniture was dispersed, the auction being held at the house, which stands about a mile from Newstead Railway Station, on the Midland line. To-day

we give a pair of photographs of two typical pieces. The first is a Flemish armoire, made in pearwood, elaborately carved with scriptural subjects, also hunting scenes in panels. Caryatids, masks, and foliations are added. The pair of doors enclose cupboards fitted with shelves. Below these is a long shallow drawer. The piece is 7 feet 9 inches high by 6 feet 3 inches wide. Our second choice illustrates a Tudor oak bedstead, with a canopy top and posts, ornamented with bulbous contours and carved enrichments. The head piece is panelled, and has carved figures freely introduced in a florid way. The cornice of the tester has Elizabethan blockings, which in woodwork of this kind are not common. The figured hangings or valance with cretonne linings set off the piece and its crimson velvet curtains. A Jacobean oak bedstead in the same sale was formerly the property of Oliver Cromwell, and is somewhat less ornate. We also noted a refined pair of Georgian mahogany bookcases, with glazed doors, owned at one time by Lord Byron.

Our Office Table.

The wood of the mangrove tree, which flourishes in French Guiana, is being exploited in France as a wood which will not rot. At least, it has withstood all exposure and efforts to break down its fibre in four years of experiment by the officials of the French railway service. Every one of the many samples, which were subjected to all the known processes of inducing decay, behaved faultlessly, and it would seem that the wood is rot-proof. The grain of the wood is so close as practically to exclude moisture. Its density, indeed, is placed at 110, as against 40 in fir and 70 in oak. In addition to this closeness of fibre, the mangrove has an unusually large amount of tanning in its composition. This protects it from invasion by insects. It also prevents the multiplication of various germs, and is a specific against such wood maladies as mould, damp, and the like. While it is not brittle, it presents twice the resistance to flexion that oak does. It has about the same potency against crushing or twisting.

Between the joiner, alternately wetting and drying a board to bend it to the desired shape, and the house chimney, grotesquely leaning toward the east, some say there is similarity. The leaning chimney is a subject on which even experts disagree, but the theory referred to seems plausible. Chimneys lean toward the east. A little observation anywhere will prove this. Even the best-built affair of brick and mortar, acquiring age, often begins to lean. Various theories are advanced, but the explanation of alternate wetting and drying seems the best. Chimney walls collect more or less moisture during the night, on all sides. Now if the broad side of the chimney is toward the east, and if the sun strikes that part of the chimney first, as it will, that side dries out much quicker than the north or south side or the western side. In time of rainfall the east side ordinarily is dried the quickest. This general condition has the effect of pulling the chimney toward the east.

Two important building schemes are in progress among the Freemasons of Croydon and East Lancashire. The Croydon Freemasons, of whom, it is said, there are some 1,600 living in the borough, have formed a limited liability company to erect a Masonic hall and temple to accommodate thirteen lodges and seven chapters, which have their headquarters in the neighbourhood. An option has been secured on a central property. The East Lancashire brethren have secured the site of the former Queen's Theatre at Manchester, which contains about 2,000 yards of freehold land. On this will be built, when the restrictions are removed, a Masonic hall, which will be the official

headquarters of the East Lancashire province, offices for the East Lancashire Masonic Benevolent Institution, and suitable rooms for the meetings of the various Masonic bodies. No fewer than seventy craft lodges, thirteen Royal Arch Chapters, four Mark lodges, three Chapters of the Antient and Accepted Rite, and three Knights Templar Preceptories, in addition to other Masonic bodies, have their headquarters in Manchester, where the present accommodation is very restricted. The scheme will involve an outlay of £150,000.

In spite of well-reasoned opposition by Councillor P. H. Black, Alderman Saint, and others, a proposal to defer further consideration for twelve months of the borrowing of £553,000 to build a new Town Hall for Islington was defeated on Monday night, and the council will apply to the London County Council for sanction to borrow £550,000 for the building. We hope it will not be granted. There will be a wholesale exodus from Islington ere long of traders and residents if the rates rise further. We have before us the latest increase on a small flat of the rates, which adds £11 to the rent, which, including rates, was £56 per annum in 1916, and is now £104 18s.

The net profits of the London County Westminster and Parr's Bank, Limited, for the past year, after providing for bad and doubtful debts and all expenses, amount to £2,915,708. This sum, added to £414,226 brought forward from 1919, leaves available the sum of £3,329,934. The dividend of 10 per cent. paid in August last on the £20 shares, and 6½ per cent. on the £1 shares, absorbs £557,651. A further dividend of 10 per cent. is now declared in respect of the £20 shares, making 20 per cent. for the year; and a further dividend of 6½ per cent. on the £1 shares will be paid, making the maximum of 12½ per cent. for the year. £1,300,000 has been set aside for investment depreciation, £200,000 transferred to premises account, and £253,718 to reserve, bringing the reserve up to £9,003,718, leaving a balance of £460,714 to be carried forward.

PROFESSIONAL AND TRADE SOCIETIES.

BUILDING SURVEYORS' AND INSPECTORS' ASSOCIATION.—A special general meeting of the above association was held at the Corn Market Hotel, 1, Old Ropery, Fenwick Street, Liverpool, on Saturday last at 5.30 p.m. A draft of by-laws, objects, and standing orders was submitted to the members, and several other items of importance were considered. Eligible candidates intending to join are cordially invited. In the case of towns where the staff or a considerable number of the staff have joined, or intend to join, it is suggested that a meeting be called amongst themselves.

R.I.B.A. COUNCIL PROCEEDINGS.—January 3, 1921.—The Council approved of proposals laid before them by the Bristol Society of Architects for the reorganisation of the Society and the widening of the scope of its activities. The Council agreed to co-operate with the Council of the Surveyors' Institution in negotiating with the Ministry of Health in regard to the agreed scale of fees for housing work. The following Fellows were transferred to the Retired Fellowship Class: C. Lohr (A. 1878, F. 1906), G. D. Oliver (A. 1877, F. 1892), Edwin Seward (A. 1876, F. 1889), John Wynne (A. 1875, F. 1878). Mr. W. A. Gagnon was reinstated as a Licentiate. It was decided to hold the annual dinner of the Royal Institute early in the year, and a committee, consisting of Sir Banister Fletcher, Mr. Wm. Woodward, and Mr. Arthur Keen (hon. secretary), was appointed for the purpose of making the necessary arrangements. The Council have decided to re-submit to the general body the scheme for the foundation of a Professional Defence Union, which was laid before a special general meeting on June 15, 1914.

Mr. William Best, of 37, Sefton Terrace, Beeston Hill, Leeds, builder, has left net personalty £1,427, gross £14,445.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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Strand, W.C.2.

Mr. James Gardner, A.R.C.A. (London). Exhibited by the Royal College of Art Club, 1920, at South Kensington.	
Borough of Lowestoft Housing Scheme, carried out by direct labour with special concrete construction in Beeches road. Elevations and plans of typical blocks with northern frontages. Types A and B and M.A. Mr. S. W. Mobbs, A.R.I.B.A., Borough Surveyor, Architect.	

Currente Calamo.

Dr. Addison has appointed another Committee—this time “to inquire and report as to the reasons for the present high cost of building working-class dwellings and to make recommendations as to any practicable measures for reducing the price”: Mr. J. Stanley Holmes, M.P. (Chairman); Sir Thomas Robinson, M.P., Colonel J. Ward, M.P., Sir James Carmichael, Mr. Thomas Barron, Mr. A. G. Cross, F.S.I.; Mr. F. G. Gayer, F.I.O.B.; Mr. James Gibson, F.R.I.B.A., Mr. A. W. Jenkinson, Mr. W. H. Nicholls, Mr. E. H. Selby, Mr. J. Walker Smith, and Mr. S. Stranks. Mr. T. H. Sheepshanks (Ministry of Health) will act as Secretary, and communications should be addressed to him at the Ministry of Health, Whitehall, S.W.1. We shall be glad presently to see the Committee’s Report. We may, at any rate, look for facts from Mr. Gibson and Sir James Carmichael, who know what the course of events has been, of which the present delay and general muddle is the deplorable result. Dr. Addison should certainly have included in his Committee Mr. Stephen Easton, the President of the Builders’ Federation, who recently resigned the Directorship of Production in Housing, and who again last Wednesday week, at a general meeting of Northern builders at Newcastle-on-Tyne, repeated his charges of muddling, waste, and squabbling by the Ministry of Health, and warned his hearers that while he was not going to advise the builders to fight the Government and the Trade Unions, they must fight for their own hands. The time would come when they would have to see that they were getting a reasonable amount of work for the money paid, and give the men a bonus for output.

Some critics of Dr. Addison’s shortcomings seem to have mixed up the Annual Report of the Registrar-General of Births, Deaths, and Marriages in England and Wales for 1919 with a declaration that if the increase of population at the next census has been correctly calculated “it would only require (apart from replacement of defective houses) a net addition of 140,000 for the whole period 1911-1919 to maintain the 1911 average,” and, presumably, have fancied Mr. Lloyd George was

only piling up the agony on the opening day of the autumn session of 1920 when he said: “It is estimated that the country requires 100,000 new houses each year. We are therefore faced with the shortage of at least 500,000 houses in addition to the shortage of building labour.” Any misunderstanding is doubtless due to the inveterate practice of the Ministry of Health to keep things dark. In 1919, the local authorities were instructed by the Ministry of Health to make a full survey of the housing conditions in their areas and submit a statement of the number of houses actually needed. For some reason the full detailed figures of these replies have not yet been published, and although the Ministry of Health has been challenged to do so, it still refrains. Too probably because they would only increase the many proofs that not even the colossal waste during the war was more reckless, or the solution of its administrators more unwise, than the mismanagement of Housing, of which exasperating proofs from all parts of the kingdom are revealed daily in almost every newspaper.

The methods revealed in the Attorney-General v. the Wilts United Dairies, Limited, on which the *Times* commented last Friday, are not peculiar to the Food Controller. On December 22, as the *Times* reminds us, Mr. Murray Macdonald asked the Minister of Health whether the firms engaged in the light castings trade had received instructions from the Department of Building Supplies and Materials to add an additional 2½ per cent. to the agreed prices for castings, and to hand over the produce of this addition to the Department to cover their establishment charges; if so, whether he would explain the reason for this attempt to maintain a Government Department by taxation imposed by itself, which did not come under review by the House of Commons, but was, in fact, concealed from the House and from the taxpayers; and whether the same instructions had been issued to firms engaged in the supply of other building materials, such as bricks, timber, etc. Dr. Addison said that the percentage addition to which Mr. Murray Macdonald referred was not payable to the supplying firms, but was a charge made by the Department to the local authorities and others to whom the materials were sold in accordance with

the conditions on which the money was voted by Parliament. The sale price must include a percentage sufficient to cover interest on capital and also overhead charges. Dr. Addison was pressed for further explanations on this question, and his replies were made in so soft a voice as to evoke from members the ejaculations, “Speak up!” “We can hardly hear a word you say.” His answers did not seem to give much satisfaction to members, one of whom afterwards declared in the Lobby that the action of the Department surpassed anything in the way of arbitrary taxation since the imposition of ship money. One of the most serious aspects of this practice is that, in addition to the expenditure accounted for in the Estimates, more than one Department has been raising and spending money on its own account without the knowledge of Parliament or of the public.

Dr. Addison, who apparently is not going to the House of Lords just yet as Lord Bungalow (Bungle-O?), told his hearers at Smethwick on Tuesday he was sorry to hear that the building trade unions meant to refuse the Government’s generous dilution proposals. If necessary, they must accept the challenge in the interests of those who fought in the war. He denied that he had received any instruction from the Treasury to stop housing. He had been considering with the Treasury steps to prevent the shocking cost of building. They would have to say that they could no longer sanction any contract above a sufficient figure.

All who live by building must be affected by the development of the Rent Act, 1920, in regard to dwelling-houses and business premises. As to this latter class of property, Section 13, Sub-section 1 c, gives as a ground upon which a landlord can claim possession, without proving that the tenant can find alternative and suitable accommodation, that “The premises are *bonâ fide* required for the purpose of a scheme of reconstruction or improvement which appears to the Court to be desirable in the public interest.” In the recent case of “Mitchell v. Townend and Co.” an ingenious attempt was made to apply this clause to the private reconstruction of premises which would enlarge their utility. The landlords had applied for possession of a warehouse and stable under the old Small Tenements Act, 1838.

The defence was the new Rent Act, 1920. No alternative accommodation could be made out by the owners, and they relied upon their evidence that they had a scheme of reconstruction by which they would convert the old premises into a new training-school for girls who would be employed in their factories, thus finding fresh work for fifty persons, which was in the public interest. The magistrates found that this plan brought the case within the above clause, and gave the landlords possession. On tenants' appeal to the High Court, Justices Coleridge and Avory now reversed this ruling. They held that the Act only applied to schemes of a public character, and not to private plans, even though these might benefit many other persons. The tenants were protected by the Act, and the owners' proposal to reconstruct the old premises and so increase employment in the public interest was not a good ground on which to claim possession. The landlord's property must therefore continue undeveloped.

Judgment was given yesterday week in the Correctional Court at Paris in the action instituted by the Government against the heads of the General Confederation of Labour on the ground of its being an unauthorised association. By this judgment MM. Jouhaux, Laurent, Lapierre, Dumoulin, and Calvayrach were sentenced to pay a joint fine of 100 francs and all the expenses of the trial. At the same time the Confederation was dissolved. It will be remembered that M. Millerand when Premier ordered these proceedings to be started as a result of the attitude of the General Confederation of Labour in connection with the last railway strike. The judgment emphasises the fact that while the State had delayed putting the law into operation, that involved neither the application of the statute of limitations nor an amnesty, for no Government based on national will could permit the existence side by side with it of another Government which, under the pretence of trade unionism, was established by a minority of agitators. It was all the more necessary to take this warning measure, as the C.G.T. had shown that it could do both good and evil according as it followed the path laid down by the law or strayed from the path to follow the mirage of a terrible revolution. Some such wholesome warning is needed here if the insidious tactics of the revolutionists, who, masking their real aims with the connivance of trade unionist leaders who are out for political place and personal advantage, are to be frustrated.

Messrs. Carøe and Passmore, the architects to the Ecclesiastical Commissioners, declare that "much of the present unemployment is due to the action of a large proportion of the workers themselves." We should say at least nine-tenths of it, at any rate in the building trades. There is also, as they say, a "growing disinclination on the part of the artisan to accept work in country districts remote from the attractions afforded by the

towns." The compulsory forty-four hours' week leaves him so much leisure that he does not know what to do with it, and is consequently disinclined to stray far away from the cinema and other urban attractions. Consequently building and repairing work is seriously delayed, and while there may be less employment in the towns, work is going begging in the country. Unemployment pay under these circumstances is demoralising to the recipient, an inducement to fraud, as reports in almost every day's paper prove, and unfair to the public, who cannot get work done that is waiting, and are taxed and over-rated to keep idlers.

The National Federation of Building Trade Operatives have called a national conference for February 3, from which their definite reply to the Government's proposals will be communicated. The Federation are considering an alternative scheme for linking up with the building guilds in order to challenge the Government to provide all the houses needed without dilution. A conference on this subject is to be held next week.

R.I.B.A. PRIZES AND STUDENT-SHIPS, 1921.

On Monday last this exhibition was opened. The Soane Medallion and £150 for travel and the Pugin Travelling Studentships are both held over till next year. The chief event for 1921 is the Tite prize, with £100 for travel in Italy, the subject being an Italian villa inspired by Pliny's description in his letter to Gallus, but not to be treated "as an archaeological exercise." Eleven sets of plans were submitted, and necessarily the various schemes partake of an eminently grandiose character with patterned gardens, terraces, formal lawns, water pools, fountains, temples, cascades, and an elaborated foreshore on the banks of the Mare Tyrrpenum.

Mr. Gordon Holt, of Hampstead, wins the Studentship with his masterly scheme marked "Zut! C'est pas du Futurisme," shown by a forcefully chromatic set of very capable drawings, set off by a huge plan showing a broad forecourt approached from the sea and protected by a natural-formed harbour composed of rocks rising abruptly from the Mare Tyrrpenum, as depicted graphically by the coloured bird-eye view showing a bastion wall having encircling stairways rising from the stone-built platform dock below. An apsidal verandah encloses the main triclinium opening on to the transverse antechamber leading to the open peristyle with its middle-placed pool and fountain. Beyond is situate the circular-ended atrium, elaborated by a pair of basins for fish and water-plants, niched mural fountains being set on the diagonal chords radiating from the central point of both apses. The outer atrium leads to the garden terrace, to the left of which is the stable block, which has a circular courtyard. To the right the detached studio and garden building is set overlooking the main. A palatial corridor, planned at right angles with the centre line of the peristyle, extends a considerable distance to the right, leading to the frigidarium, attached to which are minor baths and a complete equipment provided on the lines from Pliny in historic style. The garden buildings are cleverly linked up with the main palatial corridor by pergolas amidst formal gardens laid out

broadly without needless elaboration and in excellent taste. The Italian architecture of this design is villa-like, and the low-pitched corrugated red tiles of the roofs are well in scale with the structure, which relies on low extending lines. The decorations in Pompeian fashion are richly coloured with scholarly knowledge. The block plan is a masterpiece resulting from careful study helped by intuitive taste. The general drawings to eighth-of-inch scale make big sheets, and the conception thus set off is impressive.

A certificate of merit is accorded to "Giagan," the motto adopted by Mr. A. G. Puton, of Glasgow, who relies very much for effect on the silhouette methods adopted in his delineations, showing the pine trees and surroundings in almost a black green put in solid, and also by using very dark groundings round the plans. There are only three sheets of drawings, in contrast with the efforts of the other competitors. His villa is set out on quadrangular lines with a vast *cavædium* in the centre surrounded by open colonnades. The approach is from a semi-circular vestibulum, the arcade in front of which opens on to the atrium. The apartments of the villa are contrived on much more modest ideas, and look less distinguished than in the prize plan. Mr. Puton distinguishes his proposal by a constrained sense of design, and makes his composition attractive by a good skyline, due to a pair of telling towers, which add much to the effect as seen from afar in his diagrammatic perspective set out on a conventional arrangement with big premises in the forefront of the picture.

The device of a red disc marks the work of a capable hand working with a decided touch of originality in the disposition of his façades. These, perhaps, resemble an ordinary dwelling too nearly for such a contest, as they keep clear of the grandiose, though the plan is not so restrained. The view lacks force, but the detail possesses the charm of refined taste, and shows the value of broad spacing.

"Isobel," the next design, is deficient in his appreciation of proportion between solids and voids, and approaches the commonplace in architecture.

"Arc," on the same wall, has a straggling plan without distinction, and the elevation is marred by a piled-up effect culminating in a central tower.

The last design space allows us to mention is "Condola," which fails to convince, notwithstanding a striking set of drawings which show industry and include a well-drawn detail. The detached buildings set right and left of the villa suggest a secondary class notion of a first-class undertaking in which cost is of no moment.

THE MEASURED DRAWINGS. SILVER MEDAL AND £50.

This competition is uncommonly well contested by four notable sets of good drawings of classical subjects. The most distinguished contribution, by reason of the display of big delineations excellently executed and hung in the post of honour, is "Ralph Allen's" representation of Prior Park, the well-known stone mansion near Bath, designed by John Wood the elder, who carried out the building between 1755 and 1743. Henry Goodridge restored the place in 1843. The subject has been well illustrated in standard books on the style, and is much admired by the advocates of "Late English Renaissance," standing as it does on an eminent site commanding an extended view over the park, built to further the use of Bath stone. The main block of the house is very palatial, the monumental central portico being set off by the low wing buildings devoted to the

"refectory" and "museum," both faced by cloisters rising above the terraced, balustraded walls. There are seven sheets, the biggest strainer of the series being occupied by the main façade drawn out at length to eight feet to the inch. A clearly-drawn plan adds much to the value of these excellent drawings, which include a half-inch scale detail of the portico, with full sizes on another sheet, also a useful detail of the covered way and florid doors of the Library of the mansion.

St. Mary Woolnoth, Lombard Street, the most satisfactory work in London by Nicholas Hawksmore, built in 1713, is represented by six capital drawings submitted by "Triangle," who illustrates the church by quarter-inch scale elevations and plan, the former being in thin outline. The section is executed in a sympathetic manner, well worked out, including the tower and internal woodwork. The mouldings, pilasters and so on are typical of its date, but the entire composition is in many ways unique. The architect's drawings are preserved in the British Museum among the George III. collection. The plan is practically a square cleverly used. Wm. Butterfield removed the galleries in 1875-6 when he re-arranged the interior. Fortunately, their fronts were preserved by being placed round the walls. The re-decorations in 1900 were supervised by Sir A. R. Stenning after the Tube railway station had been constructed in place of St. Mary's crypt. The present drawings are restricted to the fabric of the church itself above the floor level.

King Charles Block of Greenwich Hospital is the subject chosen by "Ajax" for his seven strainers of measured drawings. Inigo Jones (or John Webb) carried out this beautiful structure in 1665, and Sir Christopher Wren added the attic storeys to Inigo Jones's fine façades in 1696. The elevations are in bare outline, correctly done, without pretension, resulting in an effective general appearance. The figure sculptures in the larger details have a hard line, and some may think this work indifferently delineated. The full sizes of moulded and other features are well shown, and the subject is well chosen. The Council has awarded the medal to Mr. J. H. Odom, A.R.I.B.A., of Sheffield, for this set.

The Hon. Mention is given to Mr. C. Leckenbry for the drawings of the Temple of Bacchus, or the lesser Temple at Baalbec, which furnishes so entirely different a subject to either of the former that any comparison is difficult to relatively determine, besides which the draughtsmanship is very scholarly and completely executed on the spot, arranged in five unpretentious sheets during 1919 marked "Sapper." He has extremely well represented the relined carvings of the peristyle cap and entablature, and likewise the ceiling. The cella is also capably shown with uniform skill to one-eighth full size in elevation. Another excellent sheet is devoted to the great doorway, giving a half-inch scale detail. The plan completes this monograph. The author's draughtsmanship is feelingly rendered without any tricks or academic projection of washed shadows. This structure is larger than any of the Roman peristeral temples, being 117 ft. by 227 ft., or rather exceeding the dimensions of the Parthenon at Athens, and its portico is wider and higher than that of the Parthenon at Rome. It is the most graceful Roman portico of its class.

The Grissell Gold Medal and £50 attracted only one competitor, the subject being a Kinema Theatre to seat 1,000 persons. We have not, of course, had a lengthened opportunity to investigate the constructional details of the scheme sent in, but it does seem unfortunate that so

excellent an attempt to solve a difficult and complex problem was not accorded some reward. The plan has much to recommend it, and the previous awards for this medal, though given to engineering adventures such as concrete tanks and the like, have not approached the needs of such a structure as this. We can only suppose that the judges found some fatal fault not evident to an ordinary reviewer. The medal is not awarded.

The Institute Silver Medal for an essay, with 25 guineas, was not awarded either, and no designs were submitted for the Henry Saxon Snell prize of £50.

The Godwin Bursary and Wimperis Bequest, a silver medal and £130, were given to Mr. Charles B. Pearson, F.R.I.B.A., of Lancaster, whose folios of various designs, which we looked over recently, are not on view. The work of Mr. H. Austin Hall, F.R.I.B.A., as Godwin Bursar, 1919, while travelling in America, was approved, and Mr. H. S. I. Harrison's studies in the West of England as Pugin Student, 1920, were also considered satisfactory.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

A meeting of the Royal Institute of British Architects was held at No. 9, Conduit Street, London, W., on Monday last, at which Mr. H. Chalton Bradshaw, A.R.I.B.A., read a paper entitled "Præneste: A Study for its Restoration," and at which also the announcement was made of the award of the Institute's certificates and prizes. Mr. John W. Simpson (President) was in the chair.

THE DEATH OF MR. HENRY T. HARE.

The first business of the meeting was the announcement by the Secretary (Mr. Arthur T. Keen) of the death of Mr. Henry T. Hare. He said: Mr. Henry T. Hare's death on Monday last we have to report with the greatest sorrow and regret. With his work and his personality still fresh in your minds, it seems superfluous to say very much, but I think we should all wish to place on record our sense of indebtedness to him for all that he did, and it was very much on behalf of this Institute. Overburdened as he was at all times with the weight of his own private work, he gave us freely of his best in devoting his time, his experience and his knowledge of affairs to promote the interests of his fellow-members here and the interests of the architectural profession at large. As Member of Council here, as Vice-Chairman of Committees, as Honorary Secretary and as President, and before all this as President of the Architectural Association, he worked for us unsparingly; and the sense of what we have lost must, I think, remain with all of us as something very real and lasting. His buildings were strongly handled, well composed and original in treatment; he used the features of classic design in a sound and capable way, with a great deal of freedom but with a constant tendency towards greater purity of style. At the same time, I think that everyone will admit that his Bangor University building, which I regard as his finest work, shows full realisation of the capabilities of Gothic. I speak of it as Gothic, although in detail, as you probably know very well, it was not really Gothic. But it was essentially a Gothic building. There was nothing idealistic, nothing eclectic, in Hare's work at all. He was essentially modern, intellectual, practical and fearless. I think that a considered judgment of all the vast number of buildings that he produced leaves

us feeling that he did nothing that was perfunctory, mean, or commonplace; his standard was the best that he knew, and he never satisfied himself with less.

The Chairman: It is quite unnecessary for me to add anything to what Mr. Keen has said. We all feel the loss of Mr. Hare very, very deeply, and I hold in my hand a letter from a very old friend of his, Mr. William A. Pite, which says one or two things which I think you might like to hear: "I quite hoped to have been present at the meeting on Monday, but it is impossible, as I have to preside at a meeting elsewhere. I should have liked to have the privilege of adding a few words, though halting, to what has been said as a tribute to the memory of our late President. The memory of Henry T. Hare cannot but be lasting, and his works will survive him. It seems to me clearly appropriate that this announcement should be made on the evening when the aspirations of so many young men present will be stimulated and quickened. Hare's lifework and influence should be an inspiration to all. Not by instinct alone, but by assiduous labour and indefatigable industry, he built up a lasting body of knowledge and character, which stood him in good stead and never failed him in after life."

The Secretary: I have had put into my hands this formal resolution: "That the Royal Institute of British Architects desires to express its very great sorrow for the loss it has sustained by the death of its Vice-President, Mr. Henry T. Hare, and that there be placed on record in the minutes of this meeting an expression of the Institute's admiration of his work as an architect, and its appreciation of, and gratitude for, his inestimable services to the Institute and profession. Further, that a message of the deepest sympathy and condolence be conveyed to his widow and family." I move that that resolution be adopted.

The resolution was passed unanimously in silence, all standing.

The Secretary: I have also to announce, and I do so with very great regret, that we have lost since our last meeting Lt.-Col. William Cooper, O.B.E., elected a Fellow in 1906.

ANCIENT PRÆNESTE.

The Chairman then introduced the lecturer of the evening to the meeting. He said that the Institute had good right to be proud of Mr. Bradshaw's appearance there that night, not only because he was a member whose great ability brought additional distinction to the ranks of their Associates, but he was a man who had made good in the war and wore as a decoration the Italian Military Cross. Mr. Bradshaw was the brilliant winner of the most important prize open to architectural students—the Royal Institute had initiated the scheme under which that prize had been founded and its members now had the satisfaction and pleasure of seeing the result. As long ago as 1907 he (the Chairman) had urged the need of some institution, preferably in Central Italy, for the assistance of British travelling students. The idea had been taken up and had led to the formation of a special school at Rome, where there was already existing a British School of Archaeology, whose council had expressed the wish to be associated with the new venture. He (the Chairman) had been elected as a sort of liaison officer, with a view to bringing the two bodies into line with regard to their future action, and had acted in this capacity for some years. During this period he had visited Rome, and had sought and obtained the co-operation and

support of some kindred institutions. The result of those visits had been embodied in two reports to the R.I.B.A. Committee, which reports contained an outline scheme for combining the work abroad of all the British Schools of archaeology, painting, architecture, and sculpture pretty much as was now established. At the time finance had blocked the way to the realisation of this idea, but one fortunate day the very energetic secretary of the Royal Commission for the Exhibition of 1851, Mr. Evelyn Shaw, had called on the Institute's Secretary, Mr. McAlister, with reference to the desire of the Chairman of the Commission, Lord Esher, to devote some portion of the funds at their disposal to help in bringing forward any important project for the advancement of artistic education which the Institute might have on hand. As the result the School had become an accomplished fact. He thought it right to record this piece of history, because it was the fashion in some quarters now to disparage the Royal Institute as rather a slow-going and effete old body, lacking in initiative. The Royal Institute of British Architects did not advertise its doing so much as some other societies—perhaps not so much as it ought to do; but it was well to remember that its Council and Committees were ceaselessly working for the benefit of the profession, and that their achievements were too often exploited as matters of course, without thought of the long but inconspicuous effort they had required to bring them about.

Mr. Bradshaw's paper followed: He said that Præneste (Modern Palestrina) lay about twenty-three miles from Rome on a spur of the Apennines, the town facing nearly due south towards the Alban Hills. Its climate was healthy and cool, and in Imperial times it had been a favourite resort of those who wished to escape from the heat of the Roman summer. Its origin was quite unknown, but finds of ivory and bronze in the Necropolis proved that as early as the 8th or 7th centuries B.C. it had dealings not only with Etruria but with Phœnicia and the East.

Sketching the history of the town in mediæval times, Mr. Bradshaw stated that in 1297 and again in 1437 it had been razed to the ground, being each time rebuilt. After the second rebuilding (1447-1455) it had gradually taken on its modern aspect. To-day, he said, it was a dirty, picturesque place with winding streets that broke at intervals into flights of steps. Built into the walls of the many mediæval houses that remained could be seen pieces of cornices, friezes and architraves, while broken column drums and other fragments were to be found in most of the gardens.

Mr. Bradshaw said that the literary notices of the Temple of Fortune and its oracle at Præneste were very scanty, but among those he quoted was one from Pliny that it contained a heavily gilded statue of Fortune. Pliny also, in talking about various kinds of paving, mentioned that called "lithostroton," stating that the pavement of this kind given by Sulla to the Temple of Fortune at Præneste remained in his day. This gift of Sulla had been thought by many to be the mosaics with marine and Egyptian subjects, the former of which was still *in situ*, while the latter, the famous Nile mosaic, had been removed and restored, and was now in the Palazzo Barberini at the top of the town.

Having detailed the bibliography of his subject, Mr. Bradshaw said that

Præneste had been since the Renaissance the subject of several restorations. These attempts showed two main faults. Firstly, temple buildings, colonnades, and open spaces, all connected with the sanctuary, had been made to cover the whole slope of the hill; secondly, a perfect balance had been shown throughout. Discoveries and excavations which had recently been made on the site, though not on any large scale, sufficed to disprove these restorations, in all of which imagination had played a large part. Of his own attempt he said that the date chosen was the end of the first century A.D., at which time the site of the ancient town had been partly covered by the sanctuary as rebuilt by Sulla, who founded a new Roman colony at the foot of the hill. Here had been the forum with new public buildings, which later included libraries, amphitheatre, and a school for gladiators. Houses and public buildings must, however, have existed in the more ancient part of the town, for there was no warrant for supposing that this contained temple buildings only. Before the time of Sulla there had obviously been no attempt at symmetry in the planning of the town, but in the reconstruction which had followed Sulla an axis had been taken passing through the centre of a space between two grottes, and terraces were made at right angles to this line. The town had begun to assume a symmetrical appearance, but there was far from being a perfect balance between the two sides.

Mr. Bradshaw then gave a detailed description of the walls, the main roads and gates, the roads within the walls, the ancient Forum, the lower Temple and adjoining buildings, etc., giving particulars of what he considered the ancient city was probably like, and illustrating his points—as indeed he did throughout—with lantern slides. The most ancient building of Palestrina, he said, was now part of the modern Cathedral of St. Agapito. It was of *opus quadratum*. The east and west walls had been pierced with arches and made to form the piers of the nave. The north wall had been destroyed, except in the crypt, where a fragment was to be seen, and the south wall was visible only from the balcony over the modern entrance. Sufficient still existed, however, to give the exact size of the rectangle. The excavation, still open in the Piazza Regina Margherita, showed that this building stood on a podium with steps leading down to the street and forum on the east side. In 1884 Professor Marucchi had discovered traces of a Solarium mentioned by Varro on the south wall. A colonnade surrounding these walls, shown on practically all restorations, was therefore proved impossible. It was probable that this building was restored and embellished in the time of Sulla, as it was the centre of his whole scheme. There was a doubt about its identification, but the general belief was that it was the Curia, or Senate House, of pre-Sultan Præneste.

Mr. Bradshaw mentioned also other buildings and reservoirs. Of the private houses he said that the type of house had been assumed to be rather that of Ostia than that of Pompeii. The Pompeian type would not have been so adaptable because of the restrictions of space imposed by the terraces. The Ostian house, unlike the Pompeian "domus," with its atrium and horizontal development, depended for light on a façade with windows, and developed vertically after the fashion of a modern house. Thus it was much more fitted for places where for any reason the land available for building

was limited, as must have been the case on the hill at Præneste. (Applause.)

Professor J. S. Reid moved the vote of thanks, and said he seemed to be realising part of a dream which used to hover in the minds of the earliest of those who founded the British School at Rome. That was the day of small things, but the founders had always looked forward to some such expansion of the school as had latterly taken place, and had hoped that the school would receive students representing all the subjects which could be profitably studied in Rome.

Professor Ernest Gardner seconded the resolution, congratulating Mr. Bradshaw on his admirable drawings. Mr. John Slater said he had visited Palestrina. Anyone who had seen how the remains of the old temples were overlaid now with earth, rubbish, and modern buildings, could only be struck with wonder and admiration at the patience and skill with which Mr. Bradshaw had restored many of the features of what must have been one of the most striking temples in the neighbourhood of Rome. Sir Charles Walston, Professor H. E. Butler, and Mr. H. H. Statham also supported the vote of thanks, which was unanimously recorded and briefly responded to.

THE PRIZE AWARDS.

The following prizes and studentships were announced:—

Measured Drawings (the Institute's Silver Medal and £50).—Mr. J. H. Odum, Sheffield, for drawings of the King Charles Block at Greenwich Hospital; certificate and honourable mention, Mr. C. Leckenby, York, for drawings of the Temple of Bacchus at Baalbec.

The Prize (Certificate and £100) for the Best Design for an Italian Villa.—Mr. Gordon H. G. Holt, Hampstead Way, London; certificate and honourable mention, Mr. A. G. Puton, Glasgow.

The Godwin Bursary and Wimperis Bequest (a Silver Medal and £150).—Mr. Charles B. Pearson, Lancaster.

No design was submitted for the Saxon Snell Prize and £50. The Grissell Gold Medal was not awarded (one competitor). The R.I.B.A. Silver Medal for essay was not awarded (two competitors).

The Waterford Builders' Association has given notice to the men that the present wages being too high, they will reduce them on March 28 next.

Dr. Robert Munro, Largs, N.B., Scottish archaeologist and anthropologist, author of "Scottish Lake Dwellings," secretary of Society of Antiquaries of Scotland, has left £38,959.

Lleyn Promontory Council have decided to abandon their housing scheme unless the Ministry of Health would expedite matters. Mr. Hughes Parry said the Housing Committee was "fed up" with the Ministry's red tape.

On Wednesday week, in the Crowland Abbey Church Memorial, a bronze tablet, "To the men of Crowland who gave their lives in the War, 1914-1918, R.I.P.," designed by Mr. W. Bond, Grantham, the abbey architect, was unveiled by the Earl of Normanton, patron of the living of Crowland Abbey.

At a meeting of the Carmarthen Town Council recently attention was called to the fact that Mr. Lloyd George had accepted an offer of the freedom of the borough two years ago, but had not yet fixed a date for the ceremony. Councillor Martin said the casket was getting rusty. If the Prime Minister would not come for the presentation they had better sell the casket and hand the proceeds to discharged soldiers.

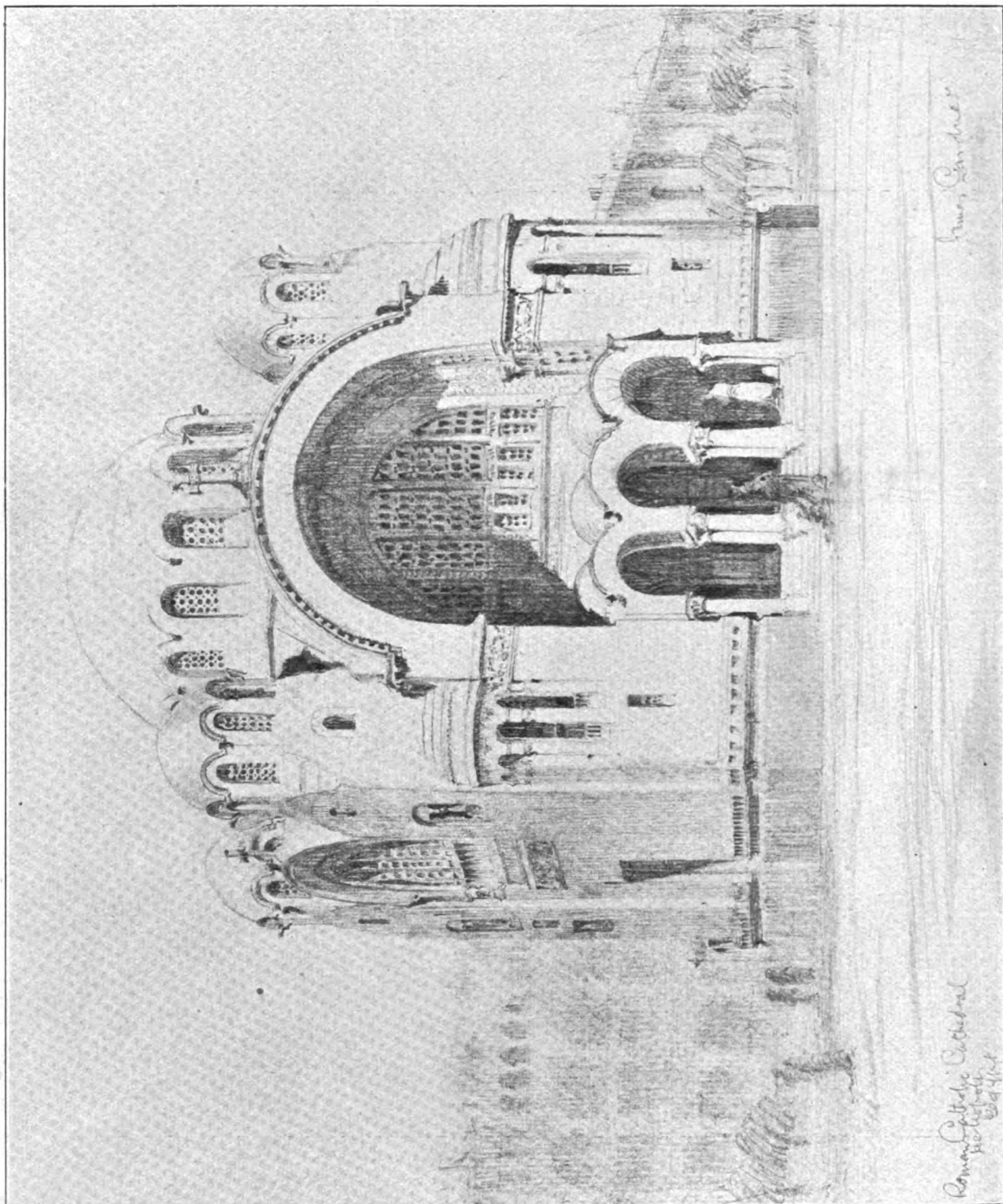
A proposal of the Bradford City Council to place in the Cartwright Memorial Hall a stately group, "Humanity Overcoming War," has aroused controversy. The Art Gallery Committee approved a design by Mr. F. Derwent Wood, A.R.A., which represents Humanity, personified by a woman, gripping by the throat the Goddess of War, who lies on the ground. The Bishop of Bradford, clergymen, and ministers of various denominations, basing their opinions on a photograph, have variously described it as un-Christian, horrible, repellent, crude, rude, brutal, an insult to womanhood, and as not being good art.

The architectural drawing set includes the following components:

- FRONT ELEVATION NO 5 BLOCK:** Shows the front facade with a gabled roof, multiple windows, and a central entrance. Labels include 'LEAD PIPES AT BASE OF WALLS' and 'BACK QUARTERS'.
- FRONT ELEVATION NO 3 BLOCK:** Shows a side elevation with a gabled roof and a chimney.
- FRONT ELEVATION NO 1 BLOCK:** Shows another side elevation with a gabled roof and a chimney.
- SECTION A.A:** A vertical cross-section showing the internal structure, including the roof, floor joists, and staircase.
- GROUND FLOOR PLAN:** Shows the layout of the ground floor with rooms labeled 'LIVING R.', 'PARLOUR', 'KITCHEN', 'BATH', 'W.C.', and 'DRAIN & ABSORBING NOISE'.
- FIRST FLOOR PLAN:** Shows the first floor layout with rooms labeled 'BEDROOM 1', 'BEDROOM 2', 'BEDROOM 3', 'DRESSING', and 'BATH'.
- SIDE ELEVATION:** Shows a side view of the building with a gabled roof and a chimney.
- BACK ELEVATION:** Shows the rear facade of the building.
- NOTE:** 'NOTE: WINDOWS TO BE MARKED WITH X'.
- HOUSING NO 36 OCTOBER 1919:** A small box in the bottom left corner.
- 3 W MOBS AREA TOWN HALL LOWESTOFT:** A small box in the bottom right corner.
- ADDRESS:** 'BOROUGH OF LOWESTOFT, BLOCK OF TWO, BECCLES ROAD, NORTH ASPECT, TYPE M/A'.

Mr. S. W. Mobbs, A.R.I.B.A., Borough Surveyor, Architect.
 Being Erected on the Lowestoft Concrete Building System.

THE BUILDING NEWS, JANUARY 21, 1921.



THE ROMAN CATHOLIC CATHEDRAL, HELIOPOLIS, CAIRO, EGYPT.
Mons. MARCEL, Paris, Architect. Sketch by Mr. JAMES GARDNER, A.R.C.A.



CHIMNEY FRIEZE AND OPEN FIREPLACE IN A SMALL HOUSE IN KENT.
Lately Designed and Executed by Mr. PHILIP TILDEN, Architect.

THE INCORPORATED CLERKS OF WORKS ASSOCIATION.

The thirty-seventh annual dinner of the Incorporated Clerks of Works Association of Great Britain was held on Saturday evening last in the King's Hall at the Holborn Restaurant, over four hundred members and guests being present, with Mr. John W. Simpson, the President of the Royal Institute of British Architects, in the chair.

The toast of "The Architects and Surveyors," the first on the list after that of "The King," was proposed by Mr. Schofield, M.I.C.W.A., and responded to by Mr. E. C. P. Monson, F.R.I.B.A., and Mr. William Woodward, F.R.I.B.A., F.S.I.

Mr. Monson assured his hearers of his high appreciation of the Clerks of Works Association, and his conviction that its members well deserved the sometimes none too liberal payment they received for their indispensable services. He himself had paid five guineas, seven guineas, and even nine guineas to clerks of works engaged by him, and in every case the money was well earned.

Mr. William Woodward agreed that clerks of works well earned their money. He had paid one fifty guineas and another seventy-five guineas, and that knocked Mr. Monson into a cocked hat. At such figures he saw no reason why architects should not be clerks of works, and he seriously thought of joining the Association himself, for with the present prospects of architecture he was damned if he knew where he should be. His hearers might think that the President of the R.I.B.A., who was there that night, represented wealth and opulence; and that, personally, he had not the appearance of poverty. But that was all camouflage! They should ask the Architects' Benevolent Society what were the present conditions of life under which architects had to exist. For himself he had no doubt that next year the toast would be "The Architects' Incorporated Consolidated Bureau," responded to by Dr. Addison, Minister of Health. For if Dr. Addison and his Department lasted another twelve months it would be all up with architects.

The toast of "The Worshipful Company of Carpenters," proposed by Mr. W. C. Demy, Sec., I.C.W.A., who gracefully acknowledged the obligations the Association was under to the Company for its constant encouragement and support, was responded to by Mr. Alfred Blackburn, in the unavoidable absence of the Master, who assured all present that the Carpenters' Company would be glad at all times to extend facilities to the Association.

The toast of "The Builders" was proposed by Mr. A. T. Dorrey, P.P.I.C.W.A., and responded to by Major Shingleton, who declared that builders would continue to avail themselves of the well-appreciated assistance and good offices of clerks of works as long as they were allowed to work, and till, as appeared likely, their responsibilities were transferred to H.M. Office of Works.

THE TOAST OF THE EVENING,

that of "The Incorporated Clerks of Works Association," was proposed by the Chairman, Mr. John W. Simpson, P.R.I.B.A., whose rising to speak was greeted with loud and loudly-repeated cheers.

Mr. Simpson said that, following many distinguished occupants of the chair he filled that evening, he and they met in the still unsettled times that had followed the war, all might be pardoned the un-

easiness and alarm which prevailed. It was impossible to ignore the fact that so many others besides themselves were equally concerned in the portentous increase in the number of the unemployed. The Labour question was too wide and too perplexing to deal fully with that night. Hopes had been raised by politicians only to be followed by disappointment. The "New Heaven and the New Earth" had not yet materialised. The many hundreds of thousands who had, so many of them, at the cost of their lives, sacrificed so much in defence of the Empire, had returned, only to find themselves the first to suffer under the still perplexing conditions that had followed peace. Even a dog tied up for five years might surely be allowed a refreshing leap through the grass, and doubtless some of the unrest was simply the rebound from the restraint to which the men who had fought for us had so largely submitted for the sake of those at home.

Of the remedies for present evils there was, first, coalition and Government control, and, secondly, discipline. Others contended that the only alternative was a Labour Government. Perhaps the successive strikes and threats of direct action had scared many even of those who believed the last would reward hard work by liberal pensions and safeguards against unemployment. Patience was, at any rate, the common duty of all, and the disposition to recognise the many changes all round. The old-time system had in most industries passed. The present employer was a different man from the employer of umpteen years ago. If, on the one hand, the master brought capital, the workman also brought the capital of his own hard work. Of all vexed questions, the present system of payment was surely the most unsound. Surely it was detrimental to all good work that any man should be paid for the time he took to do the work instead of the goodness of the work he did?

His concern, however, that evening was with the clerks of works. There was within his knowledge and experience no calling where so much depended on character and effort as that of the clerk of works. If reliable and trusted by the employer he was the most valuable aid to the architect, the building owner, and to the builder. If incapable and untrustworthy he was just the reverse. In fact, he was inclined to define the character and position of the clerk of works in much the same words as those of the little girl quoted from the old song, who, "when she was good she was very, very good, and when she was bad she was horrid!"

He gathered that clerks of works were not altogether satisfied with their present position, and in his opinion they ought not to be. If he were asked to join the Clerks of Works Association he should ask himself why should he join it. Clerks of works would doubtless like to have an assured status and position like those of members of the Royal Institute of British Architects. Human nature never wanted what it could easily get. The more difficult the entrance the more anxiety to get it, because it gave assured position only to those who got in, and that meant those who got in by examination. He suggested that the Clerks of Works Association should approach the Carpenters' Company and ask it to establish a definite qualification for a clerk of works as the basis of an examination, the passing of which should give full membership to a first-class man if accompanied by a testimonial of successful employ in work of the value of £100,000; a second-class qualification in due course would pass candidates into

the first stratum. Then, he thought, the ranks of the Association would be full, and the recognised standard of the position of the clerk of works would always entitle him to the confidence he should receive and the control which he would be empowered to exercise. (Loud applause.)

The remaining toasts were those of "The Visitors," proposed by Mr. H. W. Page, M.I.C.W.A., and "The Chairman," proposed by Mr. J. Lawson, President I.C.W.A., and cordially acknowledged by Mr. J. W. Simpson.

COMPETITIONS.

ROYAL ENGINEERS' WAR MEMORIAL.—The Assessor's answers to questions raised by competitors are:—1. In the event of a joint design by an architect and sculptor being submitted, the names of both sculptor and architect should be sent in by the competitors, and they will be treated by the committee, both in regard to premiums and in regard to the execution of the work, should it proceed, as one partnership, in which the partners will make their own arrangements between themselves as to terms. 2. If a sculptor wins the competition, he must make his own arrangements with an architect, and pay the architect's fees. 3. Drawings as laid down in the conditions must be submitted; they may be accompanied by a model, if desired. Drawings need not be mounted, and may be finished in pencil. 4. The memorial will be approached by the existing broad straight roadway from the south-west and the north-east, and will be equally conspicuous from either side. 5. The memorial may be placed on the axis line of the Crimean Arch and the South African Arch, but if so placed free access must be left both to the Crimean and South African Arches of width at least sufficient to take men in fours or vehicles (not less than 12 feet). The site of the memorial is War Department land, and permission to erect the memorial has been obtained. The road is open to the public, but no right of way exists. 6. There is no objection to the use of bronze in conjunction with stone, which must be hard Portland. Competitors must include in their estimate the cost of all metal required in their designs. 7. The existing surface of the roadway and ground between the Crimean and South African Arches is sufficient for traffic purposes. 8. The cost of excavating for foundations, levelling, and turfing need not be included in the estimate, but competitors must include in estimate the cost of all foundations and footings. If found necessary for the design, minor alterations may be made in the turfed spaces on either side of the Crimean Arch. 9. An equestrian statue of Lord Kitchener is not necessary. 10. Should the successful competitor be unable to superintend the execution of his design, he must make his own arrangements (financial and otherwise) for the efficient superintendence of the work, such arrangements to be submitted to the committee for their approval. 11. The wording of inscriptions is left to the discretion of the competitor, subject to approval by the committee and any alteration they may wish, provided such alteration does not necessitate a change in the general design. 12. The attention of competitors is called to the fact that it has been decided to remove the two Boer statues on the south-east and north-east angles, and the tablets behind them.

Mr. Wilfred Nicholson, the Father of the Painter-Stainers' Company, died, we regret to learn, on Sunday week, in his hundredth year. He was the founder of the business of Jenson and Nicholson, Ltd., varnish manufacturers.

Messrs. C. W. Reeves and Son, architects and surveyors, 3, Gray's Inn Square, W.C.1, have admitted into partnership Mr. Alfred R. Rason, who has been associated with the firm for many years. The style of the firm will in future be C. W. Reeves, Son, and Rason.

Not quite as bad as here, perhaps; still, American bricklayers in 1919 received 55 cents an hour and laid 1,100 bricks a day; in 1916 they were paid 65 cents an hour and laid 200 bricks a day; in 1918 80 cents an hour and 614 bricks a day; and last year 100 cents an hour and 537 bricks a day.

Our Illustrations.

CHIMNEY-PIECE, FRIEZE, AND OPEN FIREPLACE IN A SMALL HOUSE IN KENT.

This photograph shows an open fireplace with the frieze painted in "Tempera," by Mr. Philip Tilden, who designed and executed the work himself for the Right Hon. Sir Louis Mallet, G.C.M.G., of Otham. The house has changed hands recently.

ROMAN CATHOLIC CATHEDRAL, HELIOPOLIS, EGYPT.

This sketch, made on the spot by Mr. James Gardner, A.R.C.A., London, was recently exhibited at the Royal College of Art Sketch Club Show of Prize Work, though this study was not submitted for any competitive medal. The drawing happened to be almost the only strictly architectural one in the collection, and certainly the subject is extremely interesting. We are indebted to Mr. Maurice Lyon, A.R.I.B.A., of Cairo, for several notes about this unique building, which was structurally carried out in reinforced concrete from the designs of Mons. Marcel, of Paris, the architect of the Palace Hotel, Heliopolis. The King of the Belgians opened the church some few years ago. The walls are of local white sand bricks, and not in stone, as might be presumed, the whole of the fabric being finished inside and out in plaster composed of sand and hydraulic lime, baked under steam pressure. The dome is in reinforced concrete of rather less than 6 ins. average thickness, supported on a "belt" of the same material of channel section with the open side outwards. After fixing this was closed in by brickwork and plaster. The pendentives consist of three raking supports of reinforced concrete resting on a belt as before-named, and carrying the weight down to the four main piers. Between these at intervals horizontal struts of concrete occur. The whole weight of the cupola is thus brought down through the pendentives to the piers. The main arches of the square under the dome are consequently merely fillings in. These are of brickwork built hollow and filled in with concrete. We received some of this information from Mr. H. A. Beeston, A.R.I.B.A., of Cairo.

CONCRETE-CONSTRUCTED DWELLINGS, LOWESTOFT HOUSING SCHEME.

We have already given a perspective view and plans of some of the houses in our issue for January 7. We now give plans and elevations of other houses with lay-out plan of the property. The lay-out accommodates 290 houses, ten to the acre, grouped in pairs or fours, with a 50-foot road running east and west and from the town to relieve the present heavy traffic of Beccles Road and Rotterdam Road. The first series of twenty-two brick houses designed by Mr. S. W. Mobbs, A.R.I.B.A., A.M.I.M. and Cy.E., were put out to contract in November, 1919, and obtained by Mr. F. R. Hipperson, builder and contractor, of Norwich, at a cost on an average of £850 per house. These houses, generally speaking, are of the "B" type, consisting of living room, parlour, scullery, bathroom (downstairs), larder, coals, w.c., and three bedrooms, with ample cupboard accommodation. Owing to the close proximity of the bath and sink "Ewarts" hot-water heaters have been fitted to save the additional expense of installing a hot-water system from the kitchen range. Electric lighting is used throughout. As much variety as

possible has been introduced in the elevations, and a specially designed type has been adopted for the corner sites. Local materials have been used, and in the case of Block No. 6 the East Coast traditional walling, consisting of red brick quoins, beach pebbles and brick headers, has been introduced. During the early part of 1920, owing to the shortage of bricks and the proposals of the Standardisation and Construction Committee of the Ministry of Health to consider new methods of construction, a scheme was devised by Mr. Mobbs, the Borough Surveyor, of building by direct labour and the substitution of L-shaped concrete blocks for bricks. Steel moulds were designed and made at the Corporation Yard, and the making of the various blocks was carried out by unskilled labour. The position to-day is that two houses built by this method, known as the Lowestoft Concrete Building system, are occupied, eight nearing completion, and a further sixteen in course of erection. The same type of house has been adopted as previously described, with the exception of the bathroom, which is situated upstairs, and a hot water system heated from an "Interoven" boiler in the living room. The elevations are just sufficiently treated with red facing bricks to give the necessary relief that is required with concrete buildings. The cost of the first pair of concrete cottages worked out at £873 per house, but it is anticipated this will be reduced in the further houses, as the men are now used to the system. In March last two outside architects were appointed by the Housing Committee, and a further instalment of sixty-seven houses was allotted to Mr. S. J. Wearing, A.R.I.B.A., of Norwich, and twenty-nine to Mr. E. C. Allerton, M.S.A., of Lowestoft. Both these contracts were obtained by Mr. W. Church, builder, of Lowestoft, at an average cost of £900 per house. Work was commenced the following April, and good progress has been made, at the present date four houses are occupied, fourteen roofed in, and a further twenty-three in course of erection. Here, again, we have the parlour type with three and four bedrooms, the various plans being designed by Mr. Wearing to suit the aspect of the house. The construction is 11 ins. hollow external walls throughout, partition walls being partly in brick and partly in breeze. The roofs are covered with pantiles. All internal walls and ceilings are plastered and dis-tempered with the exception of scullery, which is pointed and lime-washed. The internal joinery, excepting windows, is stained with "Solignum," and the windows painted white. Kitchen ranges with back boilers are fixed in the living room, the hot-water cylinders being in the bathroom. The whole of the work in connection with the design and construction of new streets and sewers is being carried out by direct administration through the Borough Surveyor's Department, under the direction of Mr. Chester Button, M.S.A., chief assistant to the Borough Surveyor, who is also responsible for the supervision of the houses under Mr. Hipperson's contract and those erected by direct labour. Next week we propose to publish details of the concrete construction and a lay-out plan of the property.

A significant fall in the price for building houses was reported at this week's meeting of the Northampton Town Council, when a tender was received for 118 houses of the three bedroom type at £1,544 a pair. This price is £498 a pair less than is being paid for similar houses now in course of construction on one of the other housing estates in the town, and £362 and £342 a pair lower than is being paid on the two other estates.

PROFESSIONAL AND TRADE SOCIETIES.

THE ABBEYS OF SOUTHERN FRANCE.—At the sixth general meeting of the Birmingham Architectural Association, held last Friday evening, Dr. Douglas Stanley (Birmingham) read a paper entitled "Continental Buildings." He confined himself almost entirely to the Romanesque abbeys of Southern France, which he described graphically and in great detail. These abbeys and monasteries of the eleventh and twelfth centuries, he said, displayed an abundance of fine stone work, among which, perhaps, the caps of the columns of the cloister of St. Lizier were the most beautiful. Other abbeys mentioned were those of Moissac, Elue Arles, and St. Bertrand de Comminges, all of which bore witness to the high standard of architecture reached in France in the eleventh and twelfth centuries.

THE SURVEYORS' INSTITUTION.—The arrangements for the ordinary general meetings during the remainder of the session have now been completed, and the following papers will be read and discussed on the dates mentioned:—February 7, "The Acquisition of Land for Public Purposes in Egypt," by Mr. Arthur H. Davies, Fellow, late Captain, R.E., E.E.F.; March 7, "The Report of the Select Committee on Business Premises," by Mr. A. B. D. Lang, Fellow; April 11, "The Forestry Commission in France," by Mr. Leslie S. Wood, Fellow, late Major R.E., B.E.F.; May 9, "The Valuation of Mineral Properties, with Special Reference to Post-War Conditions," by Mr. T. A. O'Donahue, Fellow; May 30, the annual general meeting. Report of council for year 1920-21. It was decided, on the invitation of the Camb. Hunts, Norfolk, and Suffolk Branch, to hold the annual country meeting at Norwich, at a date to be fixed later, in June or July. The annual dinner of the Institution will be held at the Crompton Rooms on Tuesday, February 8 (Shrove Tuesday) At the request of the Minister of Health, the council suggested the names of surveyors qualified to act upon the committee which is being set up to inquire into the present high cost of building. Mr. Ernest H. Selby, member of the Quantity Surveyors' Committee, has been appointed by the Minister.

BUILDING SURVEYORS' AND INSPECTORS' ASSOCIATION.—A special general meeting of the above Association was held in Liverpool on Saturday, the 15th instant. Representatives from a large number of towns were present. The Hon. Sec. reported nineteen new members since the last meeting, and a considerable number of enquiries from all parts. The Chairman reported his attendance at the Joint Consultative Committee of the National Whitley Council, also his attendance at a Sub-Committee of the above relating to the National Grading Salary Scheme for Sectional and Technical Officers. The work of the Sub-Committee is that of co-ordinating the various scales, and the result of the last meeting was a grouping in four divisions of allied Associations. These four groups will meet strictly to consider their scales with a view to forming one scale for each allied group. This Association will be in the group of Associations with and allied to the Engineers and Surveyors as represented by the Municipal and County Engineers' Association. This grouping has considerable merit, and is looked upon as the means of a national scale being formed for all technical branches of the public service for submission to the National Whitley Council. Routine business comprised the approval and confirmation of by-laws, objects and standing orders; the educational policy, including qualifications and examinations, was discussed at considerable length and referred to the Executive Committee for further detailed reports and information.

The Hon. and Rev. James Adderley, Rector of St. Paul's, Covent Garden, is raising £1,000 in order to provide a suitable memorial to the late Rev. Edward Moss, the former Rector, who lost his life during one of the air-raids. This, it is proposed, will take the form of an entrance to the church under the great portico near the market. Formerly a doorway existed here, but it was later sealed up.

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ILLUSTRATIONS.

War Memorial, Friern Barnet, Middlesex. Mr. Arthur Keen, F.R.I.B.A., architect.

Strand, W.C.2.

Cottages at Whitehall, Kingswalsden-Bury, Hertfordshire. Mr. H. S. Goodhart-Rendel, architect.
Housing Scheme, Borough of Lowestoft, Suffolk. Lay-out plan, Crown Meadow site, and details of walling for houses erected by direct labour in concrete construction, with "Pisé de Terre" filling. Mr. S. W. Mobbs, A.R.I.B.A., Borough Surveyor, architect.

Currente Calamo.

The National Housing Association of 105, East 22nd Street, New York City, U.S.A., has published a very fair and informative Report, by its secretary, Mr. Lawrence Veiller, entitled "How England is Meeting the House Shortage," which, we hope, may save America from repeating Dr. Addison's blunders, and should be read by all interested this side, for they will find a good many bits of knowledge they have not yet assimilated, so true it is that "lookers-on see most of the game." Mr. Veiller's conclusions are precisely those we have from time to time arrived at. He affirms with perfect truth that the whole scheme is on an unsound basis; that the likelihood of getting the working man to pay an economic rent seven years from now, at a time when wages will be considerably less, is quite problematic. He tells the English taxpayers, as they already know too well, that they are having heavy burdens heaped on their shoulders in order to benefit a favoured class, Labour, already becoming pauperised under such treatment. On the other hand, as he declares, Labour objects to the type of house being erected, and, we may add, will object more and more as he more and more starves down the accommodation provided. He notes that the Government policy of trying to drive labour from other forms of building work, so called "luxury building," instead of attracting it into housing, has not been successful, which is true enough. Well digested particulars of many details are given *inter alia*, notably of the various new systems and materials that we are buying, of the "unemployment nightmare," the so-called "Guild system," the fate of the private builder, the Rent Act, etc. The Report, which covers 106 pages, is ably written, and we hope it will be as widely circulated and read here as in the United States.

Messrs. May and Rowden, of 17, Maddox Street, W.1, in a very sensible letter to the *Times* of last Friday, share our own satisfaction that, at any rate, men of sound knowledge and business experience have been included in Dr. Addison's last new Committee of Inquiry, go on to express doubts as to whether the

present housing scheme was even necessary at all, excepting to a very limited extent, and insist, as we have done time after time, that such want would have been rapidly filled had the individual builder been called on to erect such houses. The main point is that before the war, when wages were normal, there were always a large number of houses empty, and, in our experience, many were of a character which could, with very minor alterations, have been converted into dwellings for the poorer classes. Minor alterations, as a rule, are generally converted into large ones by the interference of local councils and so-called "authorities," who put every restriction upon a moderate expenditure and load up each job with numerous costs and burdens which eventually fall upon the unfortunate owner. It would be found on inquiry that before the war most cottagers took in lodgers, and the widows a married couple. Since the latter have received high pensions, and the former wages out of all proportion to anything they have ever had before, they have simply required all the accommodation for themselves. Now wages are about to fall, lodgers will be required again, and it is well known that in a certain area near London, where large blocks of houses are in the course of erection, the contractors are, or have been, advertising for "hands," stating "plenty of cheap lodgings to let in the district." "If," Messrs. May and Rowden conclude, "the new committee really wants to do some good, it has only one small duty to perform, and that is to set about scrapping the Housing Bill." And so say all except the sole beneficiaries, so far, who have been shovelled into snug berths, with plenty to get and little to do except to raise obstacles, to the delight of the rest of their kin, the Dillys and Dallys!

Builders and others interested in the development of property with a view to creating more dwelling space may sometimes find it good business to take over even short terms at reasonable prices. The new Rents Act, 1920, in section 8, deals with the restriction of premiums with a view to the protection of tenants, and, in so doing, runs the risk of hampering the free transfer of premises and hindering their improvement. The recent case

of "Mason, Herring and Brooks v. Harris and Another," is a good example of what we mean. In form, this was an action by plaintiffs to recover from defendants £80 odd due on their dishonoured cheque. In fact, and in law, it raised the question of the legality of a premium paid upon the assignment of the residue of four years of the lease of a flat at St. John's Wood. The defendants had stopped their cheque and now argued that they were not liable on it because it included £75 which, as a premium for the transfer, was an illegal payment under Section 8 of the Rents Act, 1920. The defendants, after getting their assignment from a lady who had herself paid the same premium, now repudiated the transaction. Mr. Justice Shearman held that the transfer of this short term was not a "grant" within the meaning of the words "grant, renewal or continuance" as used in the section, and gave judgment for the plaintiffs, with costs. The Court, in effect, hold that the Act does not apply to an assignment of the residue of an existing lease. It follows, therefore, that such a premium is not illegal, and so such business can be safely done.

Addressing members of the Primrose League at Putney last Friday, Mr. Samuel Samuel, M.P., related how a scheme to erect houses at £600 each—as against the current cost of £1,100—was frustrated by the trade unions. The manager of a company who had retired from business, he said, returned from California a little while ago and purchased an estate in Hampshire, where he built two houses on the Californian plan. These had five rooms and a bathroom, and cost £590 each. They were constructed in concrete without skilled labour. He received the £230 bonus on each house from the Government, so that the net cost was £360. At this price it was possible to let these houses at an economic rent. Mr. Samuel said he had put the facts of the case before Dr. Addison, and obtained an interview for his friend at the Ministry of Health. The contractors expressed their willingness to erect 100,000 similar houses at £600 per house, as against £1,100, which is the lowest price at which a house can be built nowadays in the ordinary way. Mr. Samuel had subsequently pressed the Ministry of Health to adopt this system, but, after consultation with

the Ministry of Labour, Dr. Addison's Department had to take into consultation the trade union leaders. In reply to representations, the union leaders said that if any attempt was made to build houses under such conditions, the whole of the building trade would "down tools." Consequently the Ministry of Health had been unable to adopt the scheme. The matter, however, is not entirely dropped, as the London members are taking it up earnestly.

The architects and builders of the Province of Quebec are making a spirited protest against the clause in the Civil Code which makes them responsible for ten years for buildings designed or erected by them. We wish them success. They point out, as we have had more than one occasion to do, that the best protection a building owner can have at present against an unqualified architect or an unscrupulous builder is a proper code of civic by-laws, justly enforced. As the law stands, it favours the employment of poor architects and irresponsible contractors by certain owners who only look out for cheap costs regardless of quality. This places the honest and responsible engineer, architect, and contractor at a disadvantage, and, on the other hand, gives poor value to the owner. The injustice to the architect is even more flagrant than to the contractor. In not a few cases architects are required by the owner to accept the lowest tender, possibly, as often happens, got from some small contractor friend of the owner, regarding whose capabilities or inclinations the architect knows nothing, but, nevertheless, has to be responsible for the work. Again, the percentage of failures in buildings where architects have been employed is a very small one, and in most cases due to the overloading of the buildings by the owner far in excess of the maximum ever calculated and provided for. The real guarantee of safety is the legislation architects, surveyors, and civil engineers are calling for, which shall penalise the employment of the unqualified; and even when we get that, any extension of liability should clearly distinguish the difference in its onus on the architect or engineer and on the contractor, and in no case should exceed two years.

The Danish Consul-General in London suggests British colliers conveying coal to Denmark should return with bricks. While English bricks vary from 74s. to 94s. per thousand, the best Danish bricks at present freights would cost about 118s. in England. He believes the difference can be decreased by the readjustment of freights. Several sample shipments of both bricks and tiles have already been sent to England, and negotiations are proceeding.

At last week's meeting of Rugby Urban Council a letter was read from the Housing Commissioner at Birmingham stating that the Ministry of Health had decided to sanction the building of 236 houses only under the supervision of the Office of Works, and not 332 as originally arranged. Mr. Yates moved that an emphatic protest be lodged against this change of policy by the Ministry, and also that they be asked for an explanation. At least 500 houses were required for the town. The resolution was agreed to, two Councillors alone dissenting.

THE INTERNAL PROTECTION OF BUILDINGS FROM DAMPNES.

RISEING DAMPNES THROUGH FLOORS.

While building regulations and the endeavours of local authorities tend to make the greater part of a building secure and habitable in the best sense of the words, they have a very moderate amount of beneficial influence upon its weakest point—the most vulnerable spot in its constructional armour—or, in plain language, its surface or site concrete. This is an extremely vital part of the work on all ordinary soils, and more especially so on clay or in low-lying and water-logged neighbourhoods, where any deficiency in the composition of the concrete is likely to cause endless trouble from the results of rising damp.

Damp exhalations under buildings lead eventually to all sorts of evils, such as humid rooms, the introduction of marsh-gas and disease into the building, and—that dread of architect and builder—wet-rot. There are also comparatively minor

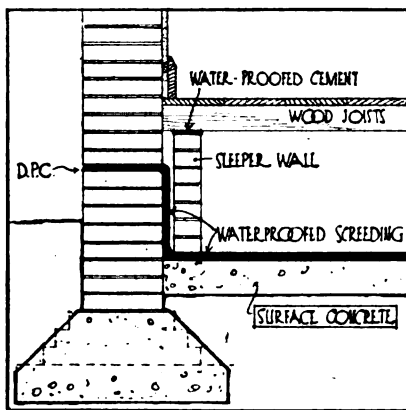


Fig. 1.—14-in brick wall, showing damp-coursing, etc., to suit joisted floors on wet sites.

troubles entailed, such as fungoid growths, swelled woodwork, crumbling brick and plaster, and rusted metal, while efflorescence and scum on brick and tile surfaces may appear both within the structure and externally.

It is common knowledge that in old buildings, though probably soundly built constructionally, the surface concrete is very often non-existent, unless later occupants have found to their cost how essential such a precaution really is. In all modern building work concrete is placed under the ground floors to prevent rising dampness and the other troubles mentioned, except when, as in the recent notorious case at Silvertown, the work is done to the instructions of a Government Department, and is accordingly above the very necessary bye-laws which control the ordinary architect and builder. But even in good current work, when the 4-in. layer of concrete stipulated by the bye-laws is provided, it frequently fails wholly or in part unless a few simple precautions are observed. These safeguards have only become possible in recent years, but they are so obvious and reasonable that, for the credit of those responsible, as well as for the well-being of the present inhabitants and the coming race, it would be folly not to give them serious consideration.

We will take first a few instances typical of new work and modern practice. Fig. 1 shows the section of a normal floor and wall with the site fairly level. Incidentally, the sketch shows what is in some cases an economy, the ordinary brick offsets (as dotted) being omitted in favour of a roughly splayed bed of concrete under the wall. Naturally, the level of the surface concrete in relation to the main

foundation must vary according to the circumstances, as it is desirable that all the top-soil or vegetable earth should be removed and a 4-in. layer of well-rammed hard-core substituted. On this the surface concrete is spread and spade-levelled in the ordinary manner. Whether the usual surface concrete will prove entirely damp-resistant will partly depend upon its quality, but more particularly upon the question as to whether the sub-soil is of an impervious nature—such as clay—and also whether the site is low-lying and liable to hold rain-water.

In such cases, and in all sites from which vapours are seen to arise, the addition of a waterproofing powder to the concrete is advisable. The powder is mixed with cement, and after the sand has been added in the usual way the mixture is applied as a one-coat rendering about 1 in. thick. This is best done while the concrete is still "green" and damp, and when well smoothed with a steel trowel the impervious qualities of the material will be considerably enhanced. This rendering should be continued up the vertical surface to the damp-course level as shown, the joints being raked out in order to give it a key. The angles between the vertical and horizontal coats, and also the vertical internal angles, should be roughly covered, as they would otherwise be the weakest places in the work and might to some extent neutralise the good effects of the rendering on the floor concrete.

Where a decided pressure of water is known to exist, it would be preferable, instead of rendering the concrete layer, to treat the bulk concrete with a good waterproofing powder.

It will be noticed that the floor joists in Fig. 1 are bedded on waterproofed cement mortar, laid directly upon the ordinary sleeper-wall, thus saving the fir wall plates more often employed. With a couple of strands of hoop iron embedded in the fillet this makes an excellent job. If the dampcourse can be kept a course or two below the joists so much the better, but the dampcourse should in any case be not less than 9 in. above the surrounding finished ground level. With the construction here advocated any dampcourse to the sleeper walls is unnecessary (although for clearness it is shown on the sketch No. 1).

Although the air-space under such a floor will be perfectly dry, it will, of course, need ventilating with air grates in the walls in the usual manner in order to prevent dry rot.

Once it has been decided to employ a cement waterproofing material on new work, it is worth while to adopt it also for the dampcoursing portion of the work. It should be again mixed with sand and cement and used about $\frac{3}{4}$ in. thick, the result being permanently satisfactory, and comparing very favourably with alternative materials such as slate, asphalt, etc., in cost. Unlike some of the cheapest of these dampcourses, the efficiency of a cement waterproofer such as the Pudlo brand waterproofer remains unimpaired during the whole life of any building, as it will neither squeeze out nor perish.

(To be continued.)

At the Chapel Royal, Savoy, last Sunday evening the chaplain, the Rev. Hugh B. Chapman, in a startling but very timely sermon on "The Wages of Sin is Death," said his personal opinion was that the demands of labour would ruin the country. We were all suffering under tyranny in that respect. Splendid firms, not at all profiteering, were having to close down, but wages went up and up, and so, of course, did the cost of living.

LIGHTING A WOODWORKS. A REMARKABLE INSTALLATION AT BUTE SAWMILLS.



Fig. 1.—BUTE SAWMILLS.

General view of Main Shop and Balcony. Photograph taken entirely by the light of the Mazdalux units, consisting of intensive type reflectors and 100-watt Mazda gasfilled lamps.

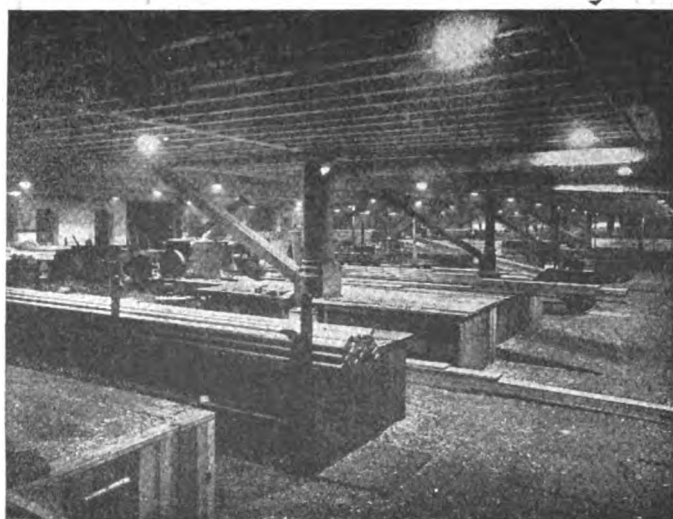


Fig. 2.—BUTE SAWMILLS.

This photograph is taken on the 1st floor, which forms a balcony to the main shop. Mazdalux intensive type reflectors and 100-watt Mazda gasfilled lamps are used throughout.

LIGHTING A WOODWORKS.

REMARKABLE INSTALLATION AT BUTE SAWMILLS.

Good artificial lighting is necessary in any workshop or factory, and especially so in places, such as sawmills, which employ fast-moving and potentially-dangerous machinery. In a wood-working plant it is not possible to provide absolute mechanical safeguards; and it is, therefore, all the more important that

first of these qualities is, of course, relative, since the amount of light necessary in any works will naturally depend to a large extent upon the character of the work and the colour of the materials worked upon. Uniformity and glarelessness are absolute qualities.

These characteristics are abundantly evident in the lighting system recently installed in the Bute Sawmills, Luton, of which photographs are reproduced. It

walls and ceiling and woodwork, coupled with the high efficiency of the Mazdalux reflectors and Mazda gas-filled lamps, it

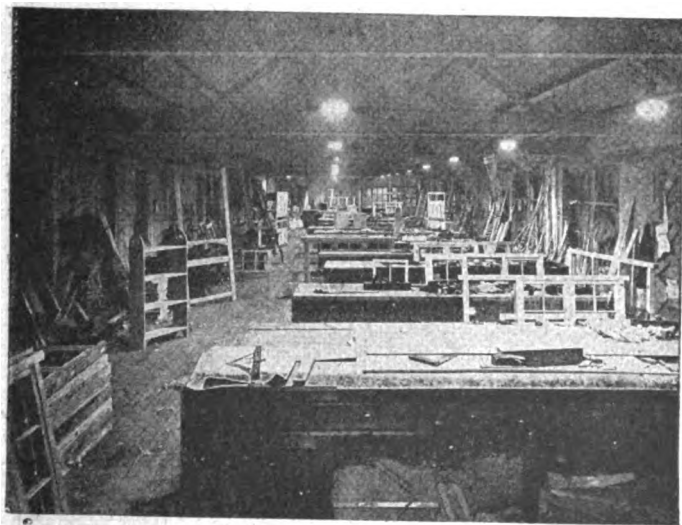


Fig. 4.—BUTE SAWMILLS.

Carpenters' shop lighted by Mazdalux units, consisting of intensive type reflectors and 100-watt Mazda gasfilled lamps.

the artificial illumination, by reason of its poverty or bad arrangement, should give no excuse for those errors of hand or eye which lead to spoilage and personal injury.

From the production aspect, good lighting is, of course, as advantageous in a sawmills as in any other sort of workshop.

Adequacy, comparative uniformity, and absence of glare are essential qualities in any scheme of industrial lighting. The

was decided that six foot-candles represented a desirable standard of average intensity, and, accordingly, the installation was planned to secure this result. The accuracy with which such values may be pre-determined by the use of scientific methods is well demonstrated in the lighting of the Bute Sawmills, where subsequent tests showed an average illumination intensity precisely equal to the value planned. Incidentally, it may be said that, on account of the light-coloured

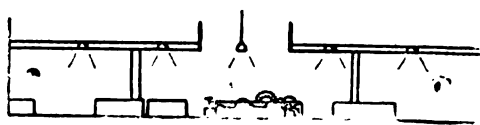
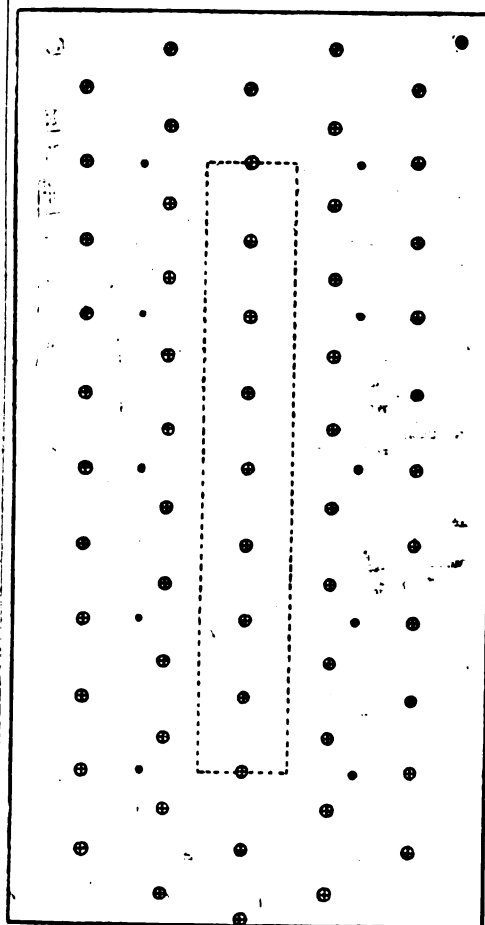


Fig. 3.—BUTE SAWMILLS.

Lay-out of Mazdalux units in main shop. The black dots represent the pillars supporting the ceiling. The lower diagram shows detailed arrangement of units with relation to ceiling beams.

was possible to achieve this relatively high intensity at the low energy expenditure of about 0.7 watts per square foot.

THE MAIN SHOP.

In the main shop, where many circular saws, bandsaws, and planing machines are in operation, the lighting equipment consists of fifty-eight intensive Mazdalux reflectors and a similar number of 100-watt Mazda gas-filled lamps. This shop measures 125 feet by 66 feet, and the lighting units are spaced uniformly over this area. The ceiling is 10 feet high, and the reflectors are fixed between the beams in such a manner that the mouths of the former are level with the lower surface of the latter. This not only permits of the reflectors being mounted at the proper height, but has the further advantage of preserving the units, to some extent, from the mechanical damage to which they would otherwise be especially liable in a place where long planks and beams, etc., have to be manoeuvred.

There is a rectangular opening down the middle of the ceiling in the main shop. The first floor is, in effect, a balcony to the ground floor. It will be noticed that a somewhat unusual, although essentially reasonable, arrangement has been adopted in the placing of the light units over this opening. As a rule, in such cases the units would be suspended at the same height as those on the balcony or upper floor. Of course, it is easier to do this, but, from the lighting point of view, such a procedure is obviously illogical, since the area which needs to be illuminated is at the bottom of the well. At the Bute Sawmills, the lights in the opening are fixed on a level with the ground floor ceiling, with the beneficial consequence that the illumination in the middle of the main shop is equal to that at the sides.

THE CARPENTERS' SHOP.

In the carpenters' shop the Mazdalux system of lighting is also employed. This shop measures 141 ft. by 26 ft. 6 in., and is equipped with twenty-four intensive Mazdalux reflectors and Mazda gas-filled lamps. The same illumination intensity was aimed at here as in the main shop, namely, six foot-candles. In the present case, however, this degree of illumination was secured with an even lower expenditure of energy, only 0.65 watts per square foot being required to produce the desired result.

The illustrations, which are reproduced from untouched photographs, and taken entirely by the light of the Mazdalux units, indicate an unusually high standard of artificial illumination. Not only is the lighting amply sufficient for the most delicate and minute operations, but it is also free from glare and harsh shadows. The Mazdalux reflectors are deep, and completely conceal the lamps from normal view. As a matter of fact, they can only be seen by looking vertically upwards at them.

It is hardly necessary at this stage in the development of scientific illumination to dilate upon the efficiency of the Mazdalux reflector. As is generally known, the composition and shape of the reflecting surface of a Mazdalux reflector have been determined by scientific methods, with a view to reducing or eliminating the light absorption which is inevitable with the older forms of equipment and imparting a definite spread and direction to the resultant light flux.

INCOMPARABLY GOOD.

It is impossible to make any sort of comparison between the new lighting and the old at the Bute Sawmills, because batwing gas-burners were used before and until the Mazdalux units were in-

stalled. Needless to say, the change of equipment effected a complete transformation in the lighting, which has already exerted a beneficial influence on the productivity and comfort of the workers.

Further particulars of this remarkable installation may be obtained from the Illuminating Engineer's Department of the British Thomson-Houston Company, Ltd., 77, Upper Thames Street, London, E.C.4. The activities of this department are chiefly of an investigatory and advisory nature, and its expert assistance is, we understand, at the free disposal of any factory owner, manager, or engineer who is interested in the subject of efficient lighting.

THE SOCIETY OF ARCHITECTS.

NOTES FROM THE MINUTES.

Unification.—It was reported that a further meeting of the Sub-Committee would shortly be held to complete the draft proposals for amalgamation and federation for consideration by the main Committee.

Scale of Charges.—It was decided to approach the R.I.B.A. and the Surveyors' Institution with a view to joint action being taken to bring into line the scale of fees relating to the negotiations for purchase, there being a discrepancy between the surveyors' and the architects' scale.

Membership.—Thirty-nine applications were dealt with, of which seventeen were passed on for announcement. Two ex-members were reinstated, two resignations were accepted, and one death was recorded.

Professional Etiquette.—A case of an alleged infringement, by a member, of one of the Society's regulations was referred to a committee of inquiry.

R.I.B.A. Model Conditions for Housing Competitions.—The Council decided to approve the conditions subject to the deletion of Clause II., which suggested that candidates should be guided by the Ministry of Health Manual.

Competition Regulations.—It was decided to take further action in pursuing the proposals of the Secretary for a scheme of joint action to unify procedure in all architectural competitions.

Royal Academy Ateliers.—The Society's representative reported progress in regard to the proposal for a permanent *en loup* building on which the patrons of the recognised ateliers were preparing a report for the consultation of the R.A. Atelier Council.

Country Meetings.—The Council have adopted in principle a proposal to hold periodical meetings of the Society in other districts than London, and a further announcement is to be made in due course.

Mr. Frederick Rowland Pullan, of 25, Lidgett Park Road, Roundhay, Leeds, builder and plumber, has left £17,529.

The King's Lynn war memorial—a Portland stone cross, designed by Messrs. O. P. Milne and Paul Phipps, architects, of London—was unveiled on Wednesday by Princess Mary.

Messrs. Holland, Hannen and Cubitt, the present owners of Devonshire House, state with reference to the report that the building is to be pulled down, that negotiations concerning the house are now being carried on with another party, and until these negotiations are concluded nothing definite as to its future can be stated.

The President of the R.I.B.A., Mr. John W. Simpson, entertained the Secretary and the senior members of the Institute staff to dinner at the Devonshire Club, St. James's, on Wednesday, the 12th inst. The guests included also Mr. Maxwell Ayrton, F.R.I.B.A., Mr. Simpson's partner, and Mr. Henry W. Barrett, who has been with Mr. Simpson for twenty-two years as Secretary.

Our Illustrations.

WAR MEMORIAL, FRIERN BARNET, MIDDLESEX.

This subject so well befits its object that no description is needed, the whole thing being self-explanatory. The names of the chief battles in which those to whom the memorial is erected were engaged figure on the piers of the wing walls, which are occupied by the roll of honour. The architect is Mr. Arthur Keen, F.R.I.B.A., hon. sec. of the Institute. The drawing was shown at the Royal Academy.

PAIR OF COTTAGES, WHITEHALL, KINGSWALDEN-BURY, HERTFORDSHIRE.

This pair of estate cottages has been erected at Whitehall, Kingswolden-Bury, for Major J. F. Harrison, D.S.O. They are of purple-grey Luton bricks, roofed with bright sand-faced pantiles. The view is of the north-west front, with entrances from road. On the opposite (garden) front, from which direction they are more usually seen, porches give access to sculleries and barns. The work was carried out mainly by Mr. Walter Jeeves, of Hitchin (since retired), and completed by Mr. Newton, of the same town. The perspective here reproduced was shown last summer at the Royal Academy. The architect is Mr. H. S. Goodhart-Rendel, of Tufton Street, Westminster.

BOROUGH OF LOWESTOFT HOUSING SCHEME DIRECT LABOUR AND CONCRETE COTTAGES.

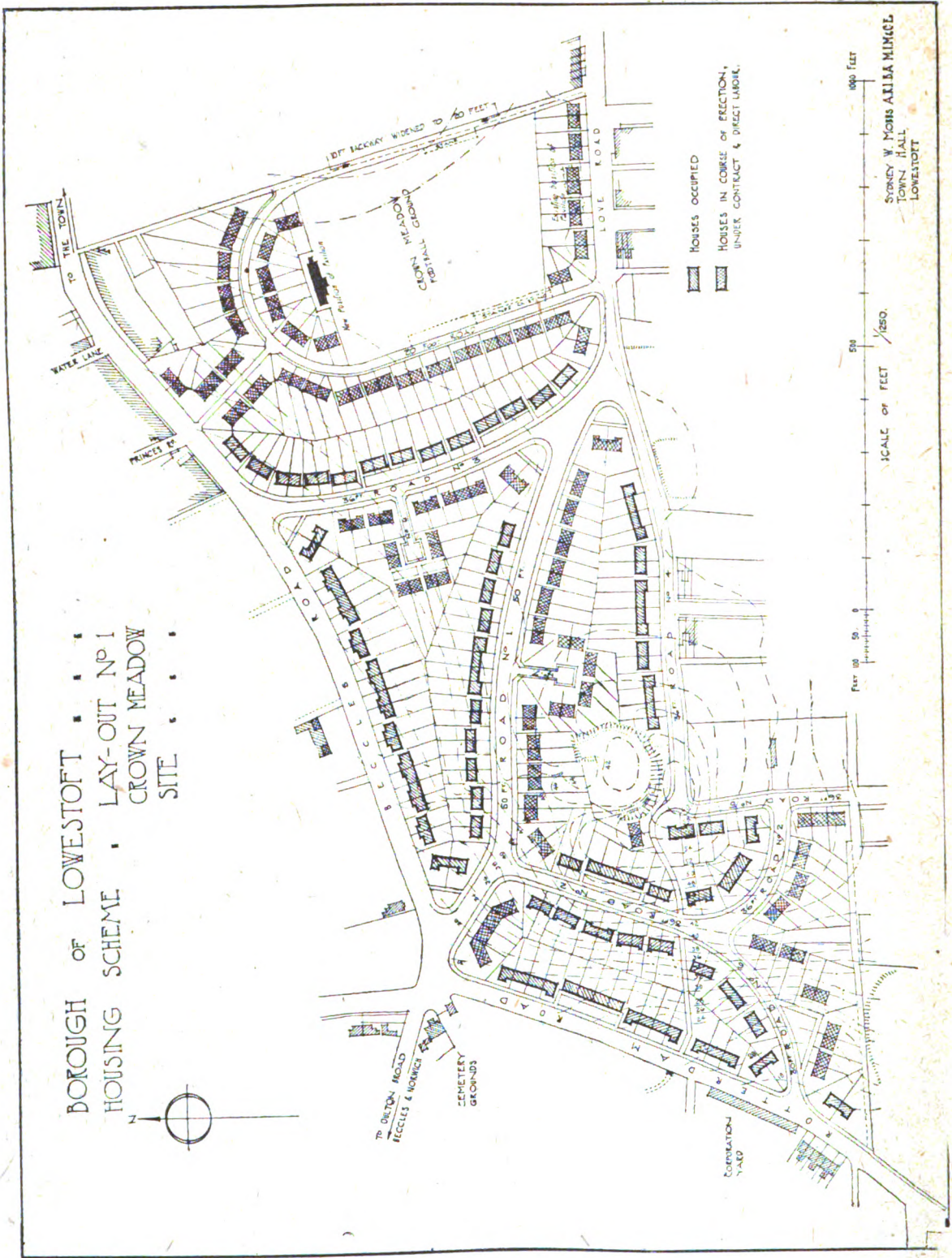
In our issue of January 7 we gave a view, with some elevations and plans, of the dwellings designed by Mr. S. W. Mobbs, A.R.I.B.A., borough surveyor, architect for this housing scheme, and the work is now in progress. Last Friday we printed some descriptive particulars and reproduced some of the general working drawings. To-day we publish the Crown Meadow site lay-out plan, together with a sheet of details to a good big scale, illustrating the Lowestoft special method of building the main walls with concrete blocks or angle-wise slabs filled in with coarse stuff or with "Pisé de terre." The drawing includes sections of heads with lintels over window openings, likewise eills and skirtings.

COMPETITIONS.

DESIGNS FOR GUARDS' MEMORIAL.—Several meetings of the committee of the Guards' Memorial have been held. Sir Thomas Brock, R.A., and Sir Reginald Blomfield, R.A., have been nominated as assessors by the Council of the Royal Academy; and invitations to submit designs for the memorial to be erected on the west side of the Horse Guards Parade have been sent to a limited number of sculptors. It now only remains for the exact limitations of the site to be determined for a date to be fixed for the submission of designs.

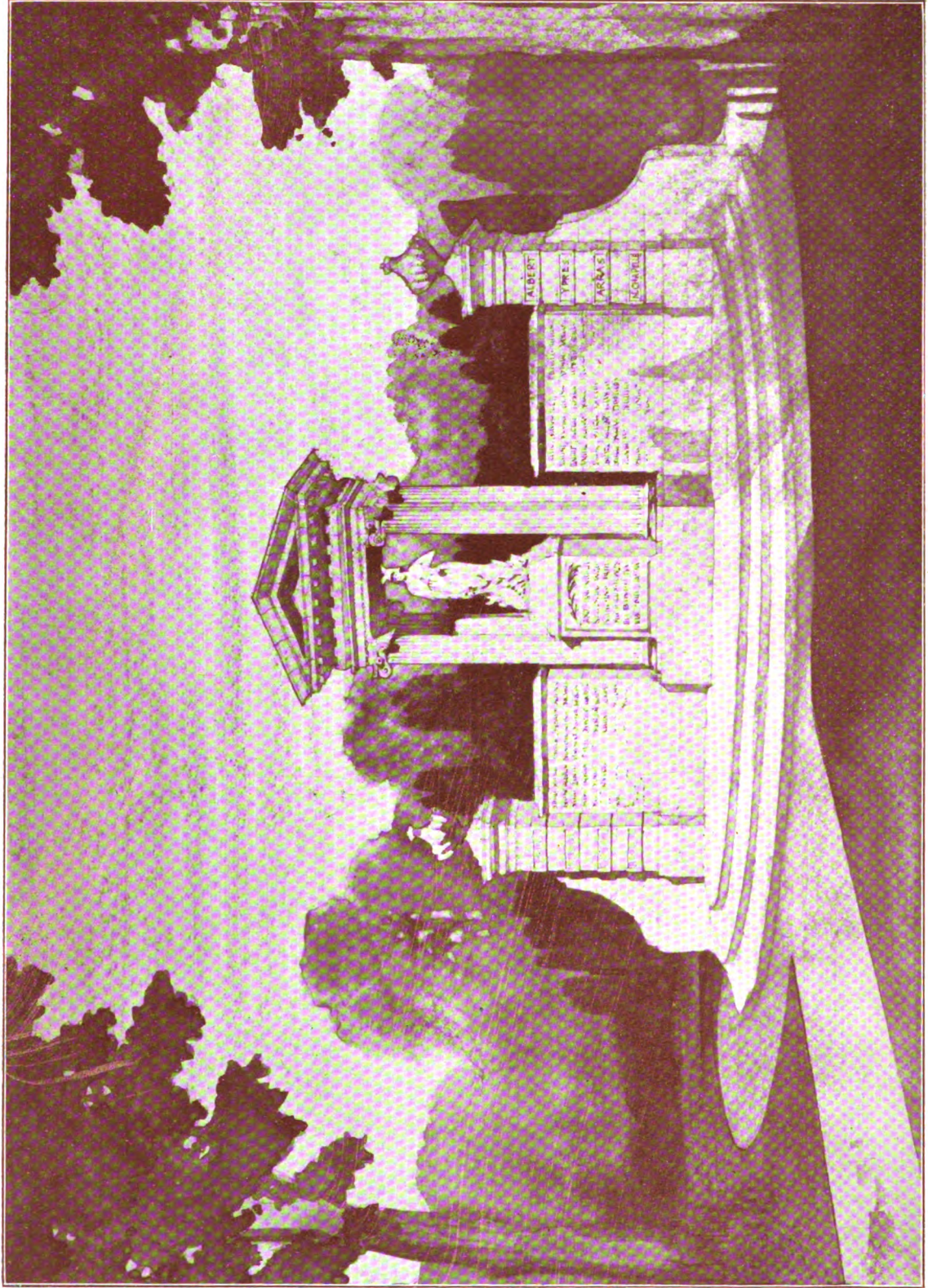
LLANDUDNO WAR MEMORIAL.—The Llandudno War Memorial Committee have, on the award of Mr. G. A. Humphreys, the assessor, selected the design of Mr. S. Colwyn Foulkes, of Colwyn Bay, for the cenotaph in memory of the local men who fell during the war. Over fifty drawings were sent in for competition from all parts of the kingdom. A second prize of £15 was awarded to Mr. H. S. Davies, son of Councillor David Davies. The winning design is of a cenotaph to be placed on a raised level space or platform approached on the four sides by half-a-dozen steps, occupying the centre of the site at its broader end, and Mr. Colwyn Foulkes has also sent in a plan for the general lay-out of the site.

THE BUILDING NEWS, JANUARY 28, 1921.

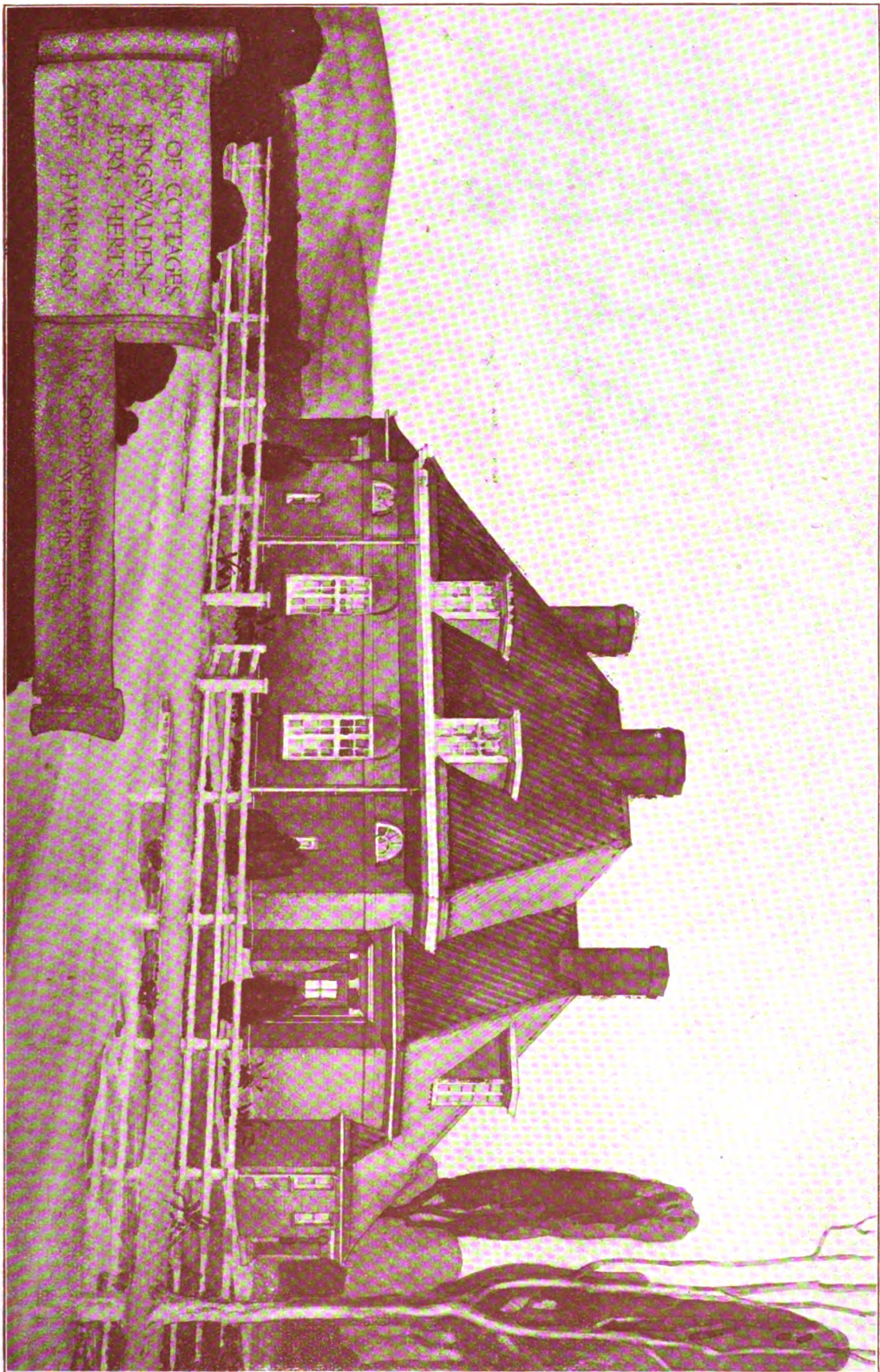


HOUSING SCHEME, BOROUGH OF LOWESTOFT, SUFFOLK LAY-OUT PLAN,
Mr. S. W. MOBBS, A.R.I.B.A., Borough Surveyor, Architect

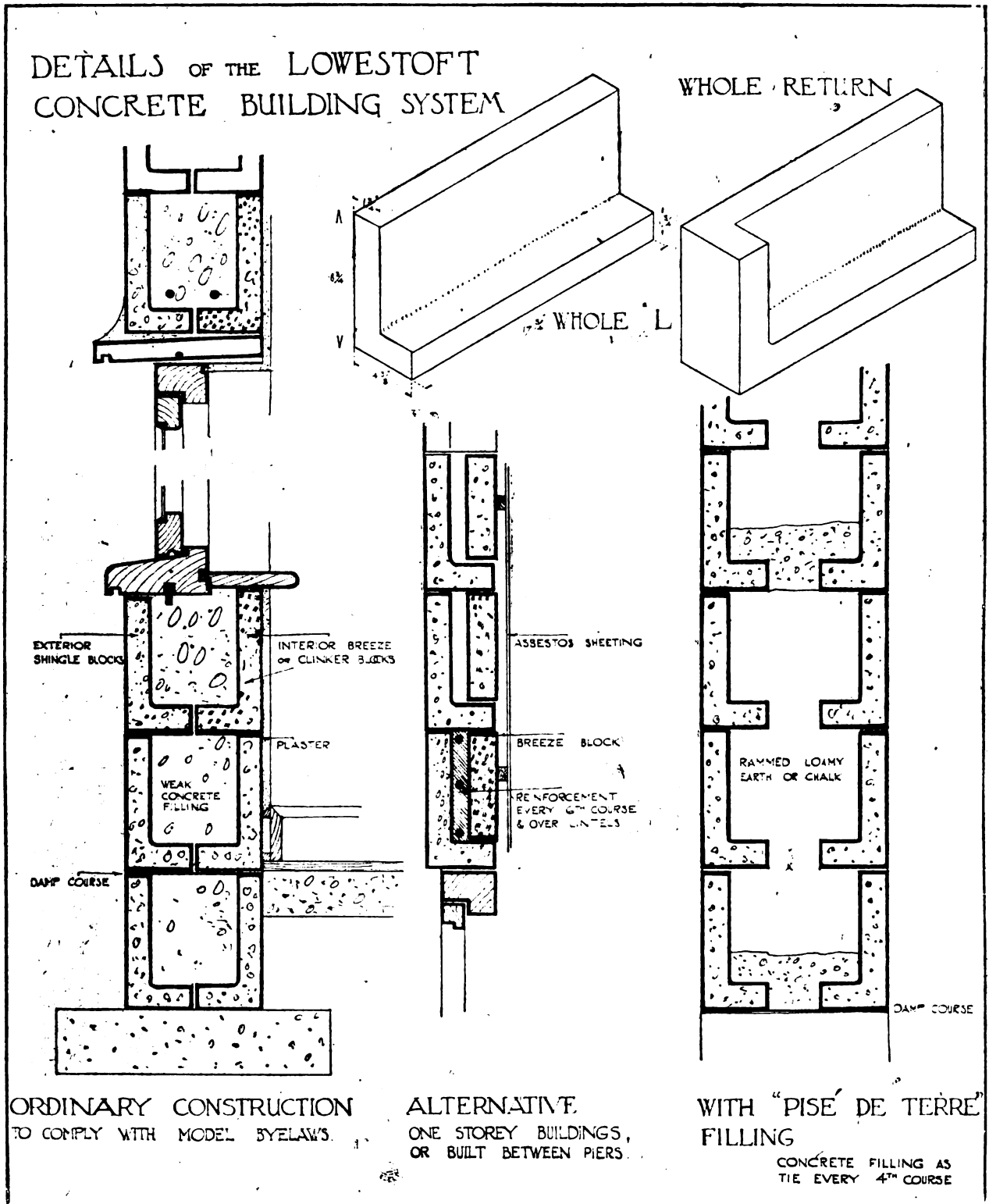
THE BUILDING NEWS, JANUARY 28, 1921.



WAR MEMORIAL, FRIERN BARNET, MIDDLESEX.
Mr. ARTHUR KEEN, F.R.I.B.A., Architect.



COTTAGES AT WHITEHALL, KINGSWALDEN-BURY, HERTFORDSHIRE.
Mr. H. S. Goodhart-Rendel, Architect.



DETAILS OF WALLING FOR HOUSES ON THE CROWN MEADOW, LOWESTOFT.

Mr. S. W. MOBBS, A.R.I.B.A., Borough Surveyor, Architect.

Correspondence.

COST OF LIVING MIS-STATEMENTS.

To the Editor of THE BUILDING NEWS.

Sir,—I deliberately state that the *Board of Trade Labour Gazette* figures for December are grossly exaggerated. Some of the effects of this are to alarm the genuine worker, to contribute to the ruinous inflation of Government and local expenditure, and to play into the hands of trade union agitators, who are amongst the greatest curses of our country at the present time.

My statements are based on my knowledge as a householder and a merchant of many years' standing dealing with world trade.

I have very carefully tabulated every expense of an ordinary household such as mine—from the actual figures in 1914 and to-day—and the increased cost of living to-day over 1914 is less than 100 per cent.

To business men I need only point out that wholesale prices in many instances have dropped by a half or more in the past twelve months, and the great majority of men engaged in trade will agree that when Government control of some of the chief essentials of life, such as bread, sugar, bacon, etc., is abolished, the prices to the public would drop considerably further in the near future. A huge quantity of sugar is offered to-day at under 3d. a lb. wholesale; delivered to Continental ports.

I know what I have stated, and I know I know; therefore I offer to pay to the first twenty whose income is less than £5 a week any excess over 100 per cent. for two weeks that they can show in their increased cost of living for the period stated. They would have to purchase all necessities at the price I could supply them at, or they could be obtained at where I indicated, and would necessarily be on the same scale of living as pre-war.

I am not a retail trader, and do not want to be, but I am prepared to make good my statements, which are backed up by a very wide experience of trade and dealing with commodities, especially food-stuffs.—I am, etc.,

H. J. WHITE.

Cromwell House,
High Holborn, W.C.1.

ORGANISED EXTORTION OF HIGH PAY AND ORGANISED LAZINESS.

Sir,—The outspoken statements in your "Currente Calamo" and elsewhere are, to my mind, greatly to be admired, and I do not know where their equal is to be found. The pity of it is that they are not more before the eye of the general public than circumstances allow.

The reasons given in your No. 3446 by Messrs. Carö and Passmore for the present unemployment are, no doubt, quite correct, but I think they are results only of the main causes—viz., the organised extortion of impossibly high rates of pay and organised laziness, the result of which is that job after job tendered for comes out at too much money to be proceeded with; and estimators are made aware of this every week of their lives. Every site so left vacant, every old building so left standing, should be placarded: "A new building would stand here, but the cost is too much," as an object lesson to all.

The aforesaid rates and laziness are forced into existence by the agitators attached to the unions to maintain the comparatively new and certainly successful calling of agitator, for, as everyone can see, they cannot allow of rest and contentment, or their occupation is gone. All the talk and rubbish will probably go

on until it is clearly seen that the Government and other meddlers are only interfering for their own ends, and when the waste and misery are beyond further endurance even the workmen themselves will see that they are on the wrong side of the hedge. Then, brushing aside their agitators and the wretched twaddle they talk, and telling the Government to mind their own business, if they have any, they will, I believe, once more rally to the firms whose personnel have spent their lives in pursuing the proper conduct of their trade.—I am, etc.,

TRUTH WILL PREVAIL.

NATIONAL FEDERATION OF BUILDING TRADES EMPLOYERS.

The annual general meeting of the National Federation of Building Trades Employers of Great Britain and Ireland was held on Wednesday at the Connaught Rooms, Great Queen Street, W.C., the President of the Federation, Councillor S. Easton (Newcastle-on-Tyne), being in the chair. A lengthy agenda was disposed of. Among other matters that came before the meeting was that of the Government's restrictive powers of building. Mr. W. Moffatt (Birmingham) said that the present position of affairs called for a new view entirely from that of fifteen months ago, when the 1919 Additional Powers Act was passed. The Ministry had now definitely promised to bring in, as soon as the session opened, a short amending Bill to put the subsidy scheme in form. That would give an opportunity to repeal the clauses of the 1919 Act.

A resolution calling on the Government to repeal the prohibitory powers was agreed to.

A matter which led to some energetic protests was the action of the Office of Works in undertaking contracts for housing. Charges were made that the Office of Works forced itself upon unwilling local authorities, and that its methods of competition were unfair. Mr. Howarth (Rochdale) said that in his district builders had had the Guild movement up against them and latterly the Office of Works as well. Mr. E. J. Brown (London) said he had recently spent two hours with the President of the R.I.B.A. The latter organisation was preparing its big guns for as soon as the House of Commons should be sitting again. Numerous other speakers took part in this discussion, and an appeal was made to members to supply undeniable facts that could be used in preparing the master builders' case—such as definite data as to things that were increasing the cost of building. The following resolution was passed:—"That this meeting protests against the Office of Works undertaking any contracts in regard to building schemes, but that where contracts have been entered into the National Federation be requested to take such steps through Parliament or otherwise, as they may deem advisable for the purpose of ascertaining the cost of housing by the Office of Works, and whether the cost of superintendence, administration, and other overhead charges are borne by the local authorities."

A garden city for workers employed at the naval base at Rosyth is to be built. At present 4,000 men travel to Edinburgh daily, at a cost to the Admiralty of £50,000 per annum.

The Glasgow Corporation Sub-Committee on Air Purification have recommended that in future any case of emission of dense smoke for two minutes during observation should be reported for prosecution. They also decided to report that, in their opinion, the penalties authorised to be imposed on conviction for such offences are inadequate.

"OUR PRESENT ILLS."

More sensible talk is wanted of the sort given in an instructive address to the Manchester Rotary Club on January 20 by Mr. Austin Hopkinson, M.P., who denounced the attitude of mind which attributed to the State the responsibility for social reform. It was plain, he said, that the reason why politics had so bad an effect on industry was that politicians believed in this social reform. Such reform was based on the fallacy that people might erect a fetish known as the State, endow it with all the virtues, and then imagine it could do the work that could only be done by the individual. The course of political life had shown how great a fallacy that was. The only way to relieve the hungry was to relieve them oneself.

It all came down to one thing: that the makers of goods could not produce them at such a price as people were willing and able to pay, and the responsibility for this disaster was the politicians', and not the manual workers'. The inevitable consequence was that the standard of living of everybody must go down below the pre-war standard. No Labour devices, no political or industrial devices, would ever get round that fact. It was not easy to accomplish because the people's minds had been debauched by politicians. Parliament could pass Acts till all turned blue, and it would make no difference to industry.

Parliament had proposed foreign credits, but that only meant pawning the same old pair of ragged trousers in two shops simultaneously, because every pound of credit abroad meant a pound less at home. If short-time was to be ordered it only meant that efficiency of production would be reduced, and at the best, though short time might remove symptoms, it could never cure the disease. Efficiency in production was, indeed, the only thing that could effect a cure. Money given to unemployed people only increased unemployment. Government action and trade union action had also increased the trouble. There was only one class left to get the country out of the morass, and that was the employing and business class. It was the responsibility of that class.

Makers could not sell their goods mainly because wages were too high. Therefore, wages must drop, and the first step to be taken was to convince workers that a certain amount of suffering was necessary, but that nobody else was going to get the benefit of it. The situation was bad, but he did not believe it was yet at its worst. It must be cleared, losses must be cut, and they had to do these things without getting the working classes into the hopeless slough of revolution. It was essential also that employers should reduce their own standard of living to the lowest possible point—"That is essential," he added, "to that class which does the saving for the community. We have on our shoulders the responsibility of saving profits which will be the foundations of future prosperity."

The manufacture of Portland cement on a large scale is contemplated in Brazil. It is proposed to use waterfalls for power and charcoal as fuel.

The death of Mr. D. M. Jenkins, borough and waterworks engineer and surveyor of Neath, occurred on January 15. Mr. Jenkins, who was fifty-eight years of age, was the son of Mr. Thomas Jenkins, of Neath. He was articled to Mr. William Whittington, a surveyor and engineer in private practice, and engineer to the Neath Corporation, upon whose death in 1886 Mr. Jenkins was appointed borough engineer and surveyor, a post which he held until his death.

PROFESSIONAL AND TRADE SOCIETIES.

LIVERPOOL ARCHITECTURAL SOCIETY.—Mr. A. J. Davis, in a lecture on "Architectural Composition and the Training of Architectural Students," before the Liverpool Architectural Society, last Tuesday evening, supported a suggestion that the cinematograph might be of service in keeping architectural students in touch with constructional developments. He said there were signs that the period of chaos which existed during the last quarter of a century was coming to an end, and he believed the day was not far distant when British architecture would once more hold the high place it occupied during the seventeenth and eighteenth centuries. In England the pupilage system had of late fallen into disrepute, the probable reason being that the practising architect of to-day, owing to the many intricate and complex duties he had to undertake, was unable to give sufficient personal attention to his apprentices. The suggestion now under consideration in France that the cinematograph should be used in the School of Architecture to illustrate a complete course of building construction was an excellent one, and might with advantage be considered by our English schools. The cinematograph had already been used by the medical profession to illustrate delicate operations at which only a certain number of students could attend, and a carefully prepared selection of moving pictures, supplementing visits to buildings in course of construction, might serve a valuable purpose in the education of the architect.

READING SOCIETY OF ARCHITECTS.—The first annual meeting of the Reading Society of Architects was held in the Chamber of Commerce Meeting Room on the 19th instant, when twenty-four members were present, including Mr. Chas. Steward Smith, in the chair, Mr. W. Galt Millar, Mr. W. Roland Howell, Mr. H. Whiteman Rising, Mr. E. P. Morgan, Mr. H. Goodman, Mr. H. Hutt, Mr. C. B. Willcocks, Mr. F. Sainsbury, Mr. E. E. Watkinson, Mr. A. Dee, Mr. S. E. Burrett, and Mr. H. Allen, etc. The Chairman, addressing the meeting, said that this was the first annual meeting of the newly-formed Reading Society of Architects, and that already they had thirty-five members, which was a very promising start. The society should be of considerable value to the profession, especially to the younger members, for whom competitions and visits to works in course of erection would be arranged. The formation of a Berks, Bucks, and Oxon Architectural Association was being considered, and it was expected would be organised shortly. Mr. H. Whiteman Rising gave an interesting description of the library which is to be formed, and which should be very useful to the members of the society. Mr. Rising said that it was proposed to form both a reference and a loan library of books on architecture, and that he would be glad to hear from all members who would lend or give books to the society. The Council for the coming year were elected as follows:—President, Mr. Chas. Steward Smith, F.R.I.B.A.; Vice-Presidents, Mr. W. Galt Millar, F.S.I., and Mr. W. Roland Howell, F.R.I.B.A.; Treasurer, Mr. J. H. Goodman; Librarian, Mr. H. Whiteman Rising, F.R.I.B.A.; Secretary, Mr. C. B. Willcocks, F.R.I.B.A.; Members, Mr. F. G. Sainsbury, M.S.A., Mr. W. J. Freeman, A.R.I.B.A., and Mr. H. E. Watkinson, F.S.I. Mr. W. K. Norris, Licentiate R.I.B.A., and Mr. S. Cox, M.S.A., were elected Honorary Auditors. The following gentlemen were elected honorary members of the society:—The Mayor (Councillor Denys Eginton), Lt.-Col. Leslie Wilson, M.P., Mr. Chas. E. Keyser, Rev. P. W. Ditchfield, Mr. Leonard Sutton, Dr. Jamieson B. Hurry, and Mr. H. M. Wallis.

The Moler Fireproof Brick and Partition Co., Ltd., have been favoured with a large contract from the Ministry of Health for their No. 6A Partition Slabs to be used in connection with State-aided housing schemes. The quantity ordered amounts to 24 millions, and already they have despatched the first two consignments of some 500 tons to Leith and Aberdeen.

Our Office Table.

"A sort of Gilbert and Sullivan situation," was Mr. Justice Astbury's description of a case heard by him in the Chancery Division on January 20. It concerned the use of a staircase of premises in Dever Street, Piccadilly, where Messrs. Bassano are lessees of the second, third, and fourth floors. On the first floor Mr. H. S. Abrahamson has offices, and there is a landing or passage from one staircase to another, but no one except Mr. Abrahamson has a right to use that passage. Messrs. Bassano were, therefore, unable to make use of the staircase to gain access to the upper floors, and they sought an injunction to restrain Mr. Abrahamson from obstructing them in the free use of the premises. Mr. Justice Astbury asked what is the use of the staircase if they cannot get to it? The whole thing is ridiculous—a sort of Gilbert and Sullivan situation. Counsel for Mr. Abrahamson said it was not the only means of access. No, said the Judge, they can take off the roof and get to the place by aeroplane. The case ended in a compromise, Messrs. Bassano being allowed to take their cameras, etc., up the staircase, but not to use it further pending trial of the action.

"Domestic Fuel Consumption," by A. H. Barker (London: Constable and Co., Ltd., 14s. net), is a re-edition of a series of lectures delivered on the subject by the author, the main effort being to convey to the ordinary householder the scientific facts of the phenomena of domestic heating in such language as he can understand, so far as they may be briefly explained.

Mr. Howard Martin, Official Arbitrator under the Acquisition of Land (Assessment of Compensation) Act, 1919, has issued his award in a claim by the trustees of the late Sir Charles Seely against the Minister of Health, in respect of the compulsory acquisition of nearly forty-three acres of freehold building land on the Furzedown Estate, Wandsworth, S.W., for housing purposes, as follows: "That the acquiring authority is to pay the claimants the sum of £30,908, and I order both parties to pay their own costs." At the hearing of the claim, Mr. A. L. Ryde, surveyor, Westminster, on behalf of the claimants, submitted a valuation amounting to £53,157. On behalf of the Minister of Health, Mr. F. E. Sargant, district valuer of the Inland Revenue, submitted a valuation of £24,264.

The Secretary for Scotland, as President of the Scottish Board of Health, has appointed a Committee to advise the Board on the question of the supply of building materials to State-aided housing schemes in Scotland. The members of the Committee are:—Sir John R. Findlay, K.B.E. (Chairman); Mr. J. G. Stein, President of the Scottish Employers' Council for the Clay Industries; Mr. William Forrest, Quarrymasters' Association of Scotland; Mr. Peter Fyfe, Director of Housing, Glasgow; Mr. A. Horsburgh Campbell, Director of Housing, Edinburgh; Mr. James Thomson, city architect, Dundee; Mr. W. E. Whyte, G.B.E., clerk to the Middle Ward District of Lanarkshire; and Mr. Allan Stevenson, architect, Ayr.

A new patent has been taken out in Austria by Dr. Rudolph Ditar, of Graz, for a building material designed to relieve the shortage of dwellings. The inventor begins by placing two sheets of wire netting parallel to each other at a suitable distance and binding them together with wire. The receptacle thus formed is then filled with gravel sufficiently coarse not to pass through the mesh of the wire. The outer side of the netting is then covered with thick concrete which penetrates the meshes of the wire and unites with the gravel immediately in contact therewith, to form a layer in which the wire netting becomes embedded. After these outer slabs of concrete have hardened the gravel in the middle can be poured out and the space which it occupied filled by asphalt, tar, paraffin, or any other desired filler. The inventor claims several advantages, including

cheapness, the saving of more valuable material, and the readiness with which the hollow concrete slabs can be shipped to places difficult of access. Furthermore, houses thus built can readily be "wrecked" without the use of explosives. They also provide an easy means of insulating the systems of pipes which supply the building and furnish excellent protection against extremes of cold and heat. He claims, too, that there is no sweating of the concrete.

The Westminster City Council and the City of Westminster Union are about to let for building the site of the Poland Street Workhouse. It has an area of 47,830 feet, with frontages to two streets, and is placed a little north of Piccadilly Circus, within two hundred yards of Regent Street and Oxford Street. The cloth market and the soft goods trade have made their homes in this district. Many firms have migrated here from the City to bring their stocks and samples closer to their West End customers. Office and showroom accommodation is notoriously deficient in this quarter, and capital will easily flow in the direction of sound investment for which a mammoth store or a big trade block would return satisfactory interest. The letting will be by auction on a term for eighty years, and will take place on March 31 at Knight, Frank and Rutley's rooms in Hanover Square.

LIST OF TENDERS OPEN.

COMPETITIONS.

Feb. 25, 1921.—For Designs for General Hospital in Shrewsbury Road, East Ham, to cost £40,000. The author of the selected design will be appointed Architect, and Premiums of £75 and £50 will be awarded to the authors of designs placed second and third. Mr. George Hubbard, F.S.A., F.R.I.B.A., Assessor, whose award will be final. Site plan, conditions and instructions on application to the Hon. Sec., Mr. G. Ernest Richardson, "Montfitchet," 296, Katherine Road, Forest Gate, E.7.

March 17.—For a Design for a War Memorial at Chatham to the Royal Engineers of all ranks who fell in the war. Sir Reginald Blomfield, Assessor. Conditions and particulars of the Secretary of the R.E. Memorial Committee, R.E. Institute, Chatham.

April 15, 1921.—For best Designs of a "Temple of Memory" for the Trustees of the Alexander Thomson Travelling Studentship of £75, with a possible Second Prize of £25. Open to all students resident in the United Kingdom between 19 and 34 years of age. Conditions obtainable from C. J. Maclean, 21, West George Street, Glasgow.

July 15, 1921.—For Designs for the proposed Council Chamber in Calcutta, for the Legislative Council of Bengal. Three premiums of £500, £250, and £100 Assessor, Mr. Henry Crouch, F.R.I.B.A., Consulting Architect to the Government of Bengal. Architect placed first to be employed to carry out the work. Conditions on application, with payment of two guineas, returnable to the Secretary, Public Works Department, India Office, Whitehall, or Rs. 25 to the Secretary to the Government of Bengal, Public Works Department, Writers' Buildings, Calcutta.

BUILDINGS.

Jan. 31.—For pavilion at tuberculosis sanatorium, Pelsall Hall.—For the Walsall Corporation.—Tenders to H. Lee, town clerk, Council House, Walsall.

Jan. 31.—For 42 houses, Bourne End site, Woburn.—For the Wycombe Rural District Council.—Architect, C. H. Wright, A.R.I.B.A., 5, Cranley Street, High Wycombe. Tenders to the architect.

Jan. 31.—For 116 houses, Retford Road site, Workop.—For the Workop Urban District Council.—Architect, B. D. Thompson, 73, Bridge Street, Workop. Tenders to the architect.

Feb. 1.—For extension of Ministry of Pensions Training Centre, Woodcote Park, Epsom.—For the Commissioners of H.M. Works.—Tenders to the Secretary, H.M. Office of Works, Storey's Gate, Westminster, London, S.W.1.

Feb. 1.—For alterations and new lavatories at Girls' Grammar School, Maidstone Road, Rochester, Kent.—Architects, Messrs. George E. Bond, 384, High Street, Rochester. Tenders to B. Tuff, The Precinct, Rochester, Kent.

Feb. 4.—For six houses at Eastington, four at Foggothorpe, and four at Kneadlington.—For the Howden Rural District Council.—Architect, S. Piper, Market Place, Howden. Tenders to H. Green, clerk, Howden.

Feb. 4.—For 154 houses (brick and concrete types), Walker housing estate, Newcastle-on-Tyne.—For the Newcastle-on-Tyne Housing Committee.—Tenders to the Housing Architect, 18, Cloth Market, Newcastle-on-Tyne.

(Continued on p. riii.)

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

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	<p>List of Tenders Open 66</p> <p>Tenders viii.</p> <p>To Correspondents viii.</p> <p>Latest Prices X.</p> <p>Chips X.</p> <p style="text-align: center;"><i>OUR ILLUSTRATIONS.</i></p> <p>Housing experiments at Walsall.</p>	

Currente Calamo.

Mr. J. W. Simpson's Presidential advice to budding architects at the R.I.B.A. on Monday night was as timely as it was, as usual, excellently phrased. His hints to future competitors were as pertinent as they are priceless, especially his reminder that, at any rate in public buildings, simplicity of plan was essential, so that strangers might find their way about the building without embarrassment. That it is perfectly true, as he also said, that half the difficulties of design arise from the mind being obsessed by some pet architectural feature around which, perhaps quite unconsciously, the designer tries to build up the whole conception is the preferable conclusion not seldom arrived at by those of us whose duty it is to review competition designs to the less worthy one that some of these "pet features" are introduced to catch the eye of assessors with whom their use has become second nature, and secure their favour for the ingeniously hopeful disciple. Let us all be thankful, anyhow, if, as Mr. Simpson said, "competition injured a man to the Divine habit of work. Work and dreams; high hopes for the future! There was nothing better than that combination. When trouble and distress befell, it was to work that they should turn as to a familiar consoling friend. It should bring oblivion of pain and peaceful good sleep, heartening them to face their sorrows. The curse of Adam concealed the greatest blessing mankind had ever known." Let us all remember that with a record like his own, every hearer knew it was no homily of the "Do as I say and not as I do" sort, which we have to listen to from some of our mentors; and that from every real worker such stimulating counsel is the need of the time, not merely for architects and architects' assistants, but for every man and woman who wants to wade through the depths down to which the slackers of all sorts have dragged us.

The President's announcement that the Council had decided to submit to the King the name of Sir Edwin Landseer Lutyens as a fit recipient of this year's Royal Gold Medal in Architecture was received with evident opinion, which all

readers will share, that the selection is a most fitting one, and indeed that no other was possible, so emphatically has Sir Edwin established his position as the leading author of the best of the Domestic Architecture of our time. Sir Edwin Lutyens was born in London in 1869. In the opinion of many authorities Sir Edwin's best work will be the Government House, New Delhi. There are other admirers of the monumental simplicity of his model for the Great War Stone to be erected by the Imperial War Graves Commission in British and Dominion cemeteries. Sir Edwin, apparently, is known to the ordinary public chiefly by the Cenotaph in Whitehall, of which one Sunday morning paper last Sunday, which gave his portrait, said he was the sculptor, and that the Royal Gold Medal was first given by Queen Victoria to be awarded to sculptors, and had been so given ever since by her and her successors. Yet another injustice to architects! Sir Edwin was elected a Royal Academician in March, 1920.

After a long delay the building trades operatives have decided on their reply to the Government proposals with regard to dilution. Disappointing as the answer is, it was not unexpected. Dilution is said to be unnecessary, a fallacious argument being built up on the total figures of unemployment in the building trades, no regard being paid to the fact that any lack of work is among the joiners, carpenters, and slaters, who cannot get to work until the bricklayers have completed their jobs. The real truth is that the unions thought they could browbeat the Government into giving a guarantee against the unemployment of any member of the trades for years, and that they are determined no ex-Service man shall get a job while their own men can play ca'canny at unreasonably high wages.

A very interesting outline of a paper read by Mr. Charles Hopwood, F.S.A., on "The Tower District of London," is given in the January number of the *Journal of the London Society*, which is well worth perusal. He reminded his hearers of the fact that the river frontage of the Tower Wharf, now that it is cleared of obstructions, forms a magnificent promenade 1,100 ft. in length, and went on to say that after the Great Fire Sir

Christopher Wren proposed to continue the open quaying of the river from the Tower to Blackfriars, and it was partly carried out, but the frontagers did as we can see being done now at Bankside; first they put a crane and then a shed, and so on, and later replaced them by larger buildings. That this has happened can be traced in all the wharves between the Tower and London Bridge. The only open quays left of Wren's scheme are at the Custom House and Fishmongers' Hall Wharf. We are glad to note that another good paper is to be read on February 11 before the London Society, which is sure to be an attractive one. Mr. Wilson, who is the resident architect in charge of the whole of the Houses of Parliament, under the Office of Works, has unrivalled opportunities for access to the materials available for illustration and information, and those who have been favoured with his guidance to the many features of interest in the building seldom accessible to the ordinary visitor, and never with the certainty of such accurate and entertaining information about them, will do well not to miss the opportunity.

Is a slump in town halls beginning? There was some display of feeling at an auction sale at Portmadoc last Friday of the Tremadoc estate, comprising 3,000 acres of land and the principal buildings in the towns of Portmadoc and Tremadoc. When the lease of the Portmadoc Town Hall was put up, the leaseholders, the Portmadoc Town Council, offered £450. Mr. Robert Longmate, iron merchant, Beddgelert, bid briskly against the Council until the sum reached £670, when the councillors at the sale decided to ask the ratepayers present whether the Council should buy at a higher figure, and all hands were put up in favour of this course. Mr. Ellis Jones, chairman of the Council, said that Mr. Longmate should take some interest in the welfare of the town. Mr. Longmate said he was determined to bid higher than the Council, as they outbid him the previous day, when he wanted some offices. The Council bid £700, intimating that they could go no further, as the Town Hall had proved to be a "white elephant" in the past. Mr. Longmate immediately added £25, and the property was knocked down to him for £725.

We are glad to note that the Cremation Society of England, whose office has recently been removed, owing to the rebuilding of Upper Regent Street, to more commodious premises at 52, New Cavendish Street, W., facing Welbeck Street, has, with the New Year, inaugurated a scheme of free registration enabling those who prefer cremation to record their wish during lifetime for this method of disposal at death, and already a large number of applications for enrolment have been received. At present, only a small proportion of those who are known to have expressed themselves in favour during lifetime are actually cremated upon decease, as it more frequently happens that their bodies are buried in the usual way when no directions are left or merely inserted in the will without notice to executor or relatives. Every year public opinion is steadily growing in favour of cremation in preference to burial, and the acute shortage of land accommodation for the dead—as well as for the living—in proximity to all populous centres will force this question into greater prominence in the immediate future. During the past year eighteen hundred cremations were carried out at the fourteen crematoria established in different parts of the country. At Golder's Green and Woking alone upwards of 15,000 bodies have been reverently and expeditiously reduced to innocuous dust without danger or offence to the living; preserving by this means a large area of valuable land for the use and enjoyment of mankind. In no single instance has there been any reason to doubt the cause or the fact of death, so efficient is the working of the precautions laid down by the Act passed by Parliament for this purpose, which should relieve the minds of many who are in fear of premature disposal by burial or cremation. The Cremation Society, whose vice-presidents include the Duke of Bedford, the Earl of Mayo, Lord Farrer, Sir Anderson Critchett, Sir John Tweedy and Sir William Cowan, M.P., has carried on its work for nearly half a century, overcoming opposition and prejudice by practically demonstrating its objects, without aid from the State or by imposing any burden upon local rates, mainly with funds provided in the first instance by a few influential supporters. By enlisting the co-operation of a wider circle of living adherents, who need only express their preference for cremation in writing, the society will, we trust, secure the abolition of burial in the ground, which is not only dangerously insanitary in large centres of population, but also very extravagant and wasteful when compared with cremation. Forms and particulars will be sent free of charge on application to the secretary.

The dispute as to whether plumbers or engineers should lay the pipes for those Manchester municipal houses which are to be provided with a central hot-water system is still unsettled, and has spread to all the schemes under the charge of the Corporation. The manager of the scheme for 100 houses says that since the last meeting of the Housing Committee he had discharged thirteen men owing to the plumbers' strike, and that soon he would have to dispense with the services of others.

THE INTERNAL PROTECTION OF BUILDINGS FROM DAMPNESS.—II.

ECONOMIES IN HOLLOW WALLS.

The war having increased the cost of building so very considerably, it is more than ever necessary to consider the combination of economy with efficiency, and in this connection the use of hollow walls

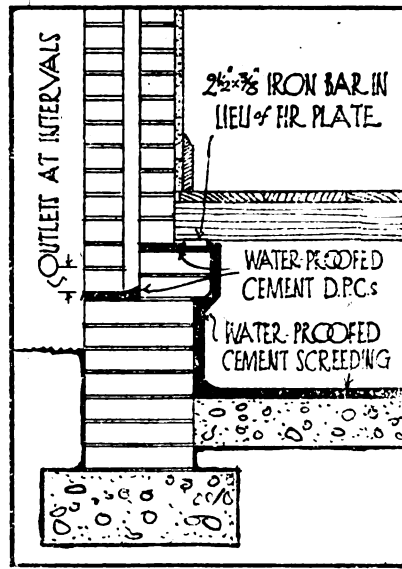


FIG. 1.—11½ in. cavity wall on 14 in. solid base, showing damp-coursing for wet sites.

is well worth considering for the smaller classes of work; they have numerous advantages, with which it is not the present purpose to deal. Their foundations can be arranged very economically for a joisted floor, as illustrated in Fig. 1. The damp-course should be stepped as indicated, so that any moisture which may accumulate in the lower portion of the cavity will only affect the inner portion of the wall below its damp-course. The outlets in the external face need only be ½ in. spaces between the bricks, let at about 3 ft. intervals round the structure. The damp-course at the bottom of the cavity should be splayed outwards as

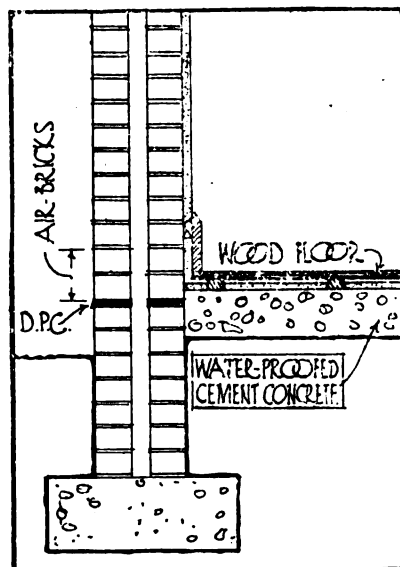


FIG. 2.—11½ in. cavity wall. Boarded floor fixed direct on waterproofed concrete.

indicated. Where the by-laws permit, it is quite unnecessary to provide brick footings for this class of work, providing that the concrete is made adequately larger than the width of the wall.

The same principle can be carried further for small work, and that precious

commodity timber very much economised by the adoption of the system explained by sketch Fig. 2. Here the cavity wall is taken right down to the concrete foundation (or top of footings if these are employed), without any projection for the joists on the inside, and a solid ground

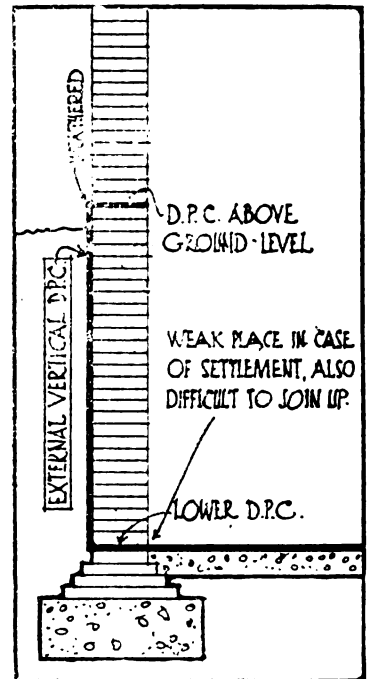


FIG. 3.—New basement wall with vertical and two horizontal damp-courses.

floor of wood or cement is laid upon, say, 4 in. to 6 in. of concrete. With careful handling this gives excellent results. About 7 in. of top soil is excavated, and the ground made up with well rammed hard-core or other dry filling. Where much filling is necessary, it will in some cases be advisable to provide an outlet from the lowest point, with agricultural pipes leading to a ditch, surface-water drain, or soak-away pit. If a wood floor is required, it can be treated with a good preservative and nailed down to a thin layer of breeze concrete, or, preferably, to

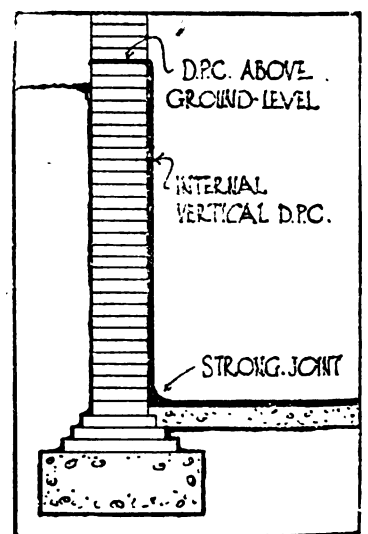


FIG. 4.

small dovetail-shaped battens 1 ft. 6 in. apart, bedded in a waterproofed cement screeding, which is rendered on the concrete, as shown in Fig. 2.

Floors of this type have been much used in cottage work and with narrow maple boards in motor workshops. A horizontal damp-course will be necessary. It should

be approximately level with the waterproofed cement screeding of the floor, and where for any reason this is below the ground level, an internal vertical damp-course of the same mortar which is used for the floor screeding should be taken up on the inner face to well above the ground. This forms a sort of impervious tank round and under the buried portion of the whole structure. It is preferable to render the interior of the wall, because of the more perfect jointing of the horizontal layer on the floor with the vertical rendering on the wall. When the exterior of a wall is rendered (see Fig. 3), the joint at the horizontal damp-course cannot be so substantial as when made on the interior of the wall, where it can be well covered. (See Fig. 4.) If, however, the only bricks available are of a very porous character, as is sometimes the case, the method shown in Fig. 3 would be the better to follow, as it would protect the wall itself, as well as the interior of the house.

Unlike the horizontal waterproofed cement damp-course (which is laid in one coat), all vertical cement damp-courses should be applied in thin coats, not more than $\frac{3}{8}$ in. per coat. The horizontal damp-course should be $\frac{3}{8}$ in. thick and mixed: three parts of clean washed sand to one part of cement.

The waterproofing powder, such as the "Pudlo" brand, is added to the cement only. The vertical damp-course should be mixed similarly to a thickness of 1 in. to $1\frac{1}{4}$ in. The bricks should be hacked or punched, and the joints raked to receive it.

(To be concluded.)

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE ROYAL GOLD MEDAL.

On Monday the members and friends of the Royal Institute of British Architects assembled at No. 9, Conduit Street, London, W., for the annual distribution of prizes, the list of which we gave in our issue of January 21, and, as usual, the occasion was taken by the President (Mr. John W. Simpson) to deliver from the chair an address to the students.

Previously to this the formal business of the meeting was conducted, and the President announced that the Council proposed to submit to His Majesty the King the name of Sir Edwin Lutyens, R.A., as a fit recipient of this year's gold medal in architecture. (Applause.)

Coming to his address, having quoted Bacon, "The invention of young men is more lively than that of old; and imaginations stream into their minds better and, as it were, more divinely," the President stated the circumstances which had led him to rely for this address on things learned in forty years of practical experience rather than on books, and continued: I saw myself, not in 1881 when I was taken into partnership by an older man—continuing my work at the Royal Academy schools in the evening—but, some three years later, when that arrangement had terminated. A life-belt is a useful contrivance, but it hampers the movements of a swimmer. Being both hopeful and shortsighted, I had cast mine away, and was now in deep water; to be more exact, in a tiny office of my own, with no very clear prospects and a rental liability about my neck of some twenty pounds a year. Here I spread out some papers and drawings to suggest pressure of business, and hung perspective views upon the wall: mendacious indications of vast experience in the erection of buildings. I digress for a moment on the subject of the architect's office—that, at any rate, in which you receive your patrons. Like everything else

you create, it will be, in some sort, a portrait of yourself. See that it be a pleasing one. For the most part it resembles a second-rate solicitor involved in building speculations. Your office should have its distinctive atmosphere, congenial to a cultured client; I would hardly commend perspective views for decorative purposes, or even for advertisement. Hang rather a few fine photographs of the great buildings of all time, which he can discuss with interest; little of your own work, and that carefully selected of your very best. If you bear this in mind the latter will be pretty frequently changed. We have many lady-students now, how many I do not know; a young gentleman of whom I sought information replied, "Oh, crowds." By reason of their sex they must needs possess that most valuable attribute of the architect, "a tidy mind"; and when their influence begins to be felt we may hope to find an improvement in our surroundings. To revert to my own installation. Its arrangement was of no great importance, for no one called to see me but friends as impecunious as myself, who filled the room with smoke, heedless of the possible visit of a fastidious client. The postman was infrequent—I often regret that time—and the circular he brought was perused with grateful interest. I consoled myself with the reflection of the great Dr. Morin, "Those who come to see me, do me honour; those who stay away, do me a favour." Those entering upon the practice of our profession have one great, one unique advantage. While in other callings even those with talent, assiduity, and other qualities which should command success may have to await for years an occasion for their employment, the architect's opportunity is available at once. He can always keep his equipment bright by constant use, for most of the great prizes of his profession are thrown open to competition by all. He has, from the outset, the chance of showing what he can do; success depends, with unusual directness, upon his technical ability; and the capital demanded for his enterprise is represented by a few sheets of drawing paper and some wooden strainers. To this opening I naturally turned my attention, and was rewarded with success; it was not long before I had plenty of work.

Giving then some advice on the subject of competitions, the President said that as a means of practical education the study of a given subject, for the purposes of a building to be erected at a definite cost under the responsible supervision of the designer, was invaluable—provided it was followed (in the case of non-success) by honest comparison with the winning design to find the cause of failure. When evolving the design the competitor must bear in mind that a mere solution of the problem offered would not suffice. He must never rest until satisfied that his solution was absolutely the best that he could find. A single shortcoming might be the only difference between the first placed and the second. Should he seem at a standstill, he should continue drawing nevertheless; for there was no surer way of evoking new ideas. While the design was proceeding it should be always in his thoughts, for unconscious cerebration produced astonishing results. Most competitions were for public buildings; for these simplicity of plan was essential, so that strangers might find their way about the building without embarrassment. The young architect must mistrust ingenious and complex solutions of problems, and should strive to disentangle these until his plan appeared so obvious an arrangement that he wondered why any one should disapprove it otherwise. Pet architectural fea-

tures should not be allowed to obsess the mind; half the difficulties of design arose from this cause. Conditions should be read continually as the design proceeded, every point being tested by reference to the text, in which "answers to questions" should be inserted at the proper places. In most cases competitors were desired to estimate the cost of their design by stating its contents in cubic feet, and the rate per foot cube at which they valued it; and they should bear in mind that these figures would be checked by the assessor, and that under-statements in either respect might influence him adversely. Estimates and descriptive reports should be prepared very carefully, *pari passu* with the drawings, the cube being calculated at every stage in order to control extravagance in plan and section. The practice of showing alternative treatments by means of hinged riders was to be strongly condemned.

The President stated his own method of judging a competition: First of all, I make a cursory survey of all the designs, and determine a system of marking. Next—with the conditions before me—I examine them *seriatim*, and make a sketch of each plan, for I find that this gives me a better insight of the author's meaning than I obtain from mere notes, and is very convenient for reference; it also shows me at once if staircases are impracticable, walls unsupported, or construction defective. I then read the reports, and give a first marking to every design. Having thus made myself generally familiar with the work submitted, I eliminate those sets which are plainly inferior, and re-mark the remainder, adding or deducting marks as necessary. The reason for this second marking is that, in the course of examining a large number of drawings for the first time, one is apt to vary the standard of values; a good design coming after a poor one is likely to be over marked, and *vice versa*. By the time the first round is ended the standard has fixed itself pretty definitely. After the second marking the best designs stand out clearly above the mass. These are taken up for searching analysis, their reports again read, and the cubic calculations and estimates checked and tabulated. As a general rule there is little doubt about which design is to be placed first.

Sir Amhurst Selby Bigge moved a vote of thanks to the President for his address, saying that he was glad his own efforts in the days of his youth had not been submitted to such severe and searching scrutiny as apparently was the fate of those of the young architect. Had those efforts been submitted to anyone who pursued methods like the President's he would not have gained even the single prize—one for dictation—which he obtained in the course of his student career. The profession of an architect required a quite unusual amount of courage. In the case of a civil servant, if he made mistakes his Minister took the blame, and if he did particularly well his Minister took the credit; but for the architect there was no escape at all. He got the credit for his good deeds, but he had to take the responsibility for his bad ones; and there was no room for repentance. When he had once executed his work there it was on the face of the earth, and nothing could remove it except fire or earthquake. He (the speaker) had noticed that the architect displayed a certain modesty. You might walk round London or any other great town and say to yourself, "I wonder who did that?"—either in admiration or with another feeling predominant—but you could not find out. He did not know whether it would be more advantageous to the architect to re-

main permanently anonymous, or to be obliged to put a signature upon his works. Of course, he was perfectly well aware that the architect was very often in the difficult position of having to do not what he liked but what the patron required.

Lady Banister Fletcher seconded the vote of thanks. She said the President had quoted Bacon in praise of young men, but had not continued the quotation. Bacon went on to say: "Young men are fitter for invention than to judge, they are fitter for execution than for counsel, they are fitter for new projects than for settled business." Those who had listened that night to the President's considered judgments and wise counsel could not fail to realise how much the students owed to him. The address had been a finger-post pointing along the way to success, it had also been a danger signal warning against pitfalls. Above all, the President had himself trodden the path to success, and to that settled business to which Bacon referred. The President had gone on to give advice for use in competitions. The competitor was to evolve a design, secure simplicity of plan, reject non-essentials, comply with conditions, estimate the cost, control extravagance, state the contents in cubic feet, and give the value per cubic foot. Competitors who succeeded in giving the correct password to each of these seven dragons guarding the doorway were rewarded with the assurance that their work would be judged on its merits. That was a distinctly hopeful note, especially to women, because they only asked a fair field and no favour. In architecture this was now granted, and her seconding this vote of thanks was an outward and visible sign of the welcome accorded to women students in architectural schools.

The vote of thanks was carried with acclamation, and the President replied.

THE REVIEW OF THE WORKS SUBMITTED FOR PRIZES.

Mr. H. P. Burke-Downing then proceeded to review the work submitted by students. He said the Soane medallion for design and the Pugin travelling studentship had not fallen to be competed for this year, and, further, the Owen Jones travelling studentship and the Henry Saxon Snell prize had not attracted any competitors. Unfortunately also the number of entries for some of the other prizes had been small. The Godwin bursary for the study of modern architecture abroad had been awarded to the single competitor, Mr. C. B. Pearson, for a collection of drawings showing that he had done much good work in the practice of his profession since he obtained the medal of merit in the Tite competition in 1906. There had also been only two entrants for the Essay prize, and only one for the Grissell medal; neither of these had been awarded. For the Institute's silver medal there had been four competitors, and for the Tite prize eleven. If these numbers were to be taken as showing a falling off in the keenness of the younger members of the profession, that fact would have to be regretted, for it was hardly possible to exaggerate the stimulating effect of such competitions. They gave to students the opportunity to put forth their full powers in carrying to completion a difficult and definite piece of work; and that effort might reveal the possession of powers which, untried, might have lain dormant. It was also good for the schools that the products of their training should be subjected to these external tests. But he thought the paucity of numbers was to be accounted for by the fact that the peaceful arts had suffered a long interruption, and that it had not

been easy to take up again the trend of studies laid aside. Some general impressions were necessarily borne in upon him when examining the exhibition of work as a whole. In bulk it was a small exhibition as compared with those of other years. Recalling the exhibitions of from twenty to twenty-five years ago, he observed very clearly the increasing influence of the architectural schools. Through this influence there seemed some danger of restraint of individuality, but the schools had undoubtedly brought about a raising of the general level of work. There was less inequality of performance and very little absolutely poor work. Nevertheless one missed, especially in the draughtsmanship, a certain freedom of individual method which had been a product of the time before the academic influence had become so strong. While drawing was obviously taught with excellent results, it was a little unexpected that one should find few students desirous of competing for the only prize offered for construction, a subject not necessarily less suitable to engage the attention of the schools. Excellence of draughtsmanship could be no substitute for knowledge of construction; true design could not proceed from the one without the other. The Grissell gold medal was the unique competition in a constructional subject, and unfortunately it had not been possible for this prize to be awarded, though the sole competitor had sent in a good set of drawings. His structural diagrams were inaccurate. Constructional problems should be of absorbing interest, and, with modern needs and modern methods, it was daily more necessary that students should be taught to master structural mechanics, and not leave these to the engineer. No award had been made of the Essay medal; the two competitors had rather failed to appreciate what was wanted. In the case of Measured Drawings there were only four competitors. The competition had been close, and each competitor had produced a valuable record of some building of Classic or Renaissance architecture. The medal went to Mr. J. H. Odom, while honourable mention was made of Mr. Leckenby. For the Tite prize the subject was an Italian villa inspired by Pliny's description in a letter to Gallus. This subject had brought designs of great merit, which had hardly been surpassed by brilliant imagination in this competition for many years. The schemes of some of the competitors were too ambitious in character, showing zeal and industry, but evidencing recourse to text-books and not enough individuality and power of design. The design of the winner of the competition was by universal consent the finest piece of work of the year, and sufficient of itself to make the year a notable one had it stood alone. This successful competitor was Mr. Gordon Holt, and it was clear that he had felt to the full the inspiration of Pliny's description. He had taken us right back to the first century, but had not allowed himself to be merely instructed. The conception was his own and marked by his own personality. It was a piece of singular good fortune that those present had now the opportunity of seeing side by side upon the walls Mr. Holt's ideal conception and Mr. Bradshaw's reconstruction of Pre-neste. Great artistic ability was shown in Mr. Holt's drawings; a high tribute was due to the school where he had been trained.

The President proposed a very hearty vote of thanks to Mr. Burke-Downing. It was, he said, some satisfaction to an unsuccessful student to know that his designs had been really studied by the

Council and the Committees of the Board of Education who had to deal with them.

Mr. Burke-Downing briefly acknowledged the vote of thanks, and the prizes were then distributed.

The formal announcement of the meeting to be held on February 14 next terminated the proceedings.

COMPETITIONS.

BURTON-ON-TRENT.—The award of Mr. Herbert T. Buckland, F.R.I.B.A., the assessor, in this competition for a new High School for Girls at Burton-on-Trent is as follows:—First (250 guineas), Messrs. W. and T. R. Milburn, F.R.I.B.A., 20, Fawcett Street, Sunderland; second (150 guineas), Messrs. Rees and Holt, Liverpool; third (100 guineas), Mr. Edward T. Allcock, A.R.I.B.A., 12, Baxter Gate, Loughborough. The seventy-six designs submitted will be exhibited at the Burton-on-Trent Town Hall on February 14 and 15 between 1 p.m. and 8 p.m.

DESIGN FOR GUARDS' MEMORIAL.—Following our note on page 42 of our last issue, we understand that Mr. Robert Colton, R.A., Mr. John Tweed, Mr. George Wade, Mr. Gilbert Ledward, and Mr. C. S. Jagger, all sculptors, have been invited to compete for the Guards' Memorial to be erected on the Guards' Parade. Mr. Ledward and Mr. Jagger are young men who won the British School at Rome Travelling Scholarship in 1913 and 1914 respectively.

Lord Robert Cecil, M.P., a member of the Bishop of London's Commission, will give an address on "The Problem of the City Churches" at the church of St. Alban, Wood Street, on Wednesday, February 25.

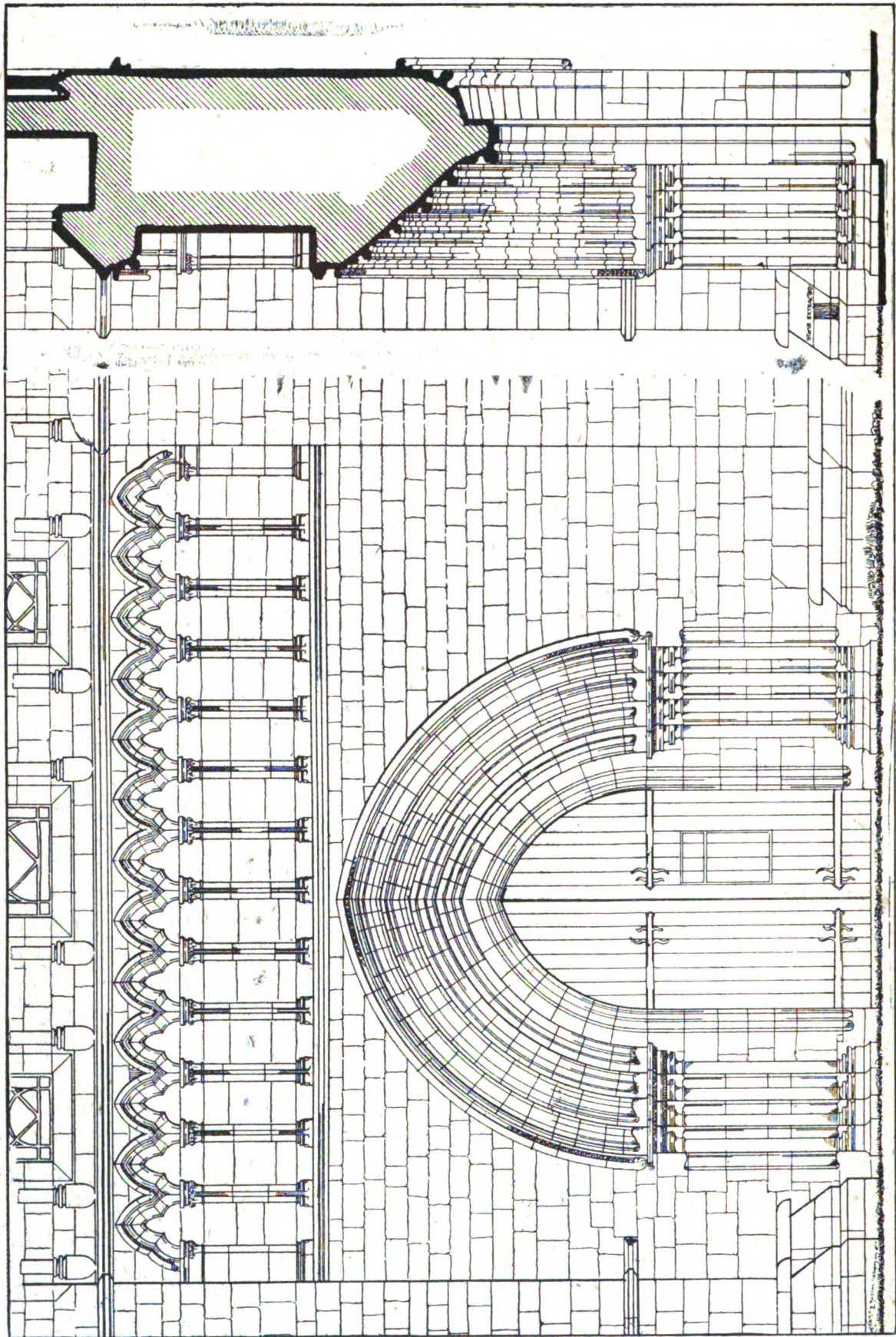
The total estimated cost of the new London County Council Hall will be £4,344,000, exclusive of furniture, so the L.C.C. was informed last Tuesday. The following figures show how, in thirteen years, the various estimates for the building have risen:—1903, £370,000; April, 1919, £1,620,000; January, 1920, £2,000,000; July, 1920, £3,500,000; November, 1920, £4,344,000.

In the grounds of the All-India Victoria Memorial, Calcutta, the Duke of Connaught last Monday unveiled the memorial of King Edward, which takes the form of an arch of white marble. A bronze equestrian statue of the late King-Emperor, executed by Mr. Bertram MacKenna, surmounts the arch, on the sides of which are four sculptured figures, representing Commerce and Industry, Justice, Husbandry, and Unity and Concord.

House property can be bought at 25 per cent. less than a year ago, the head of a large building firm told a "Daily Chronicle" correspondent on Monday, and there are few buyers at the reduced prices. One reason for this is the action of the building societies, who refuse to advance as much as they did on houses. A few months ago the firm could not get building materials; now travellers come round and offer bricks, cement, and other things in any quantity at reduced prices.

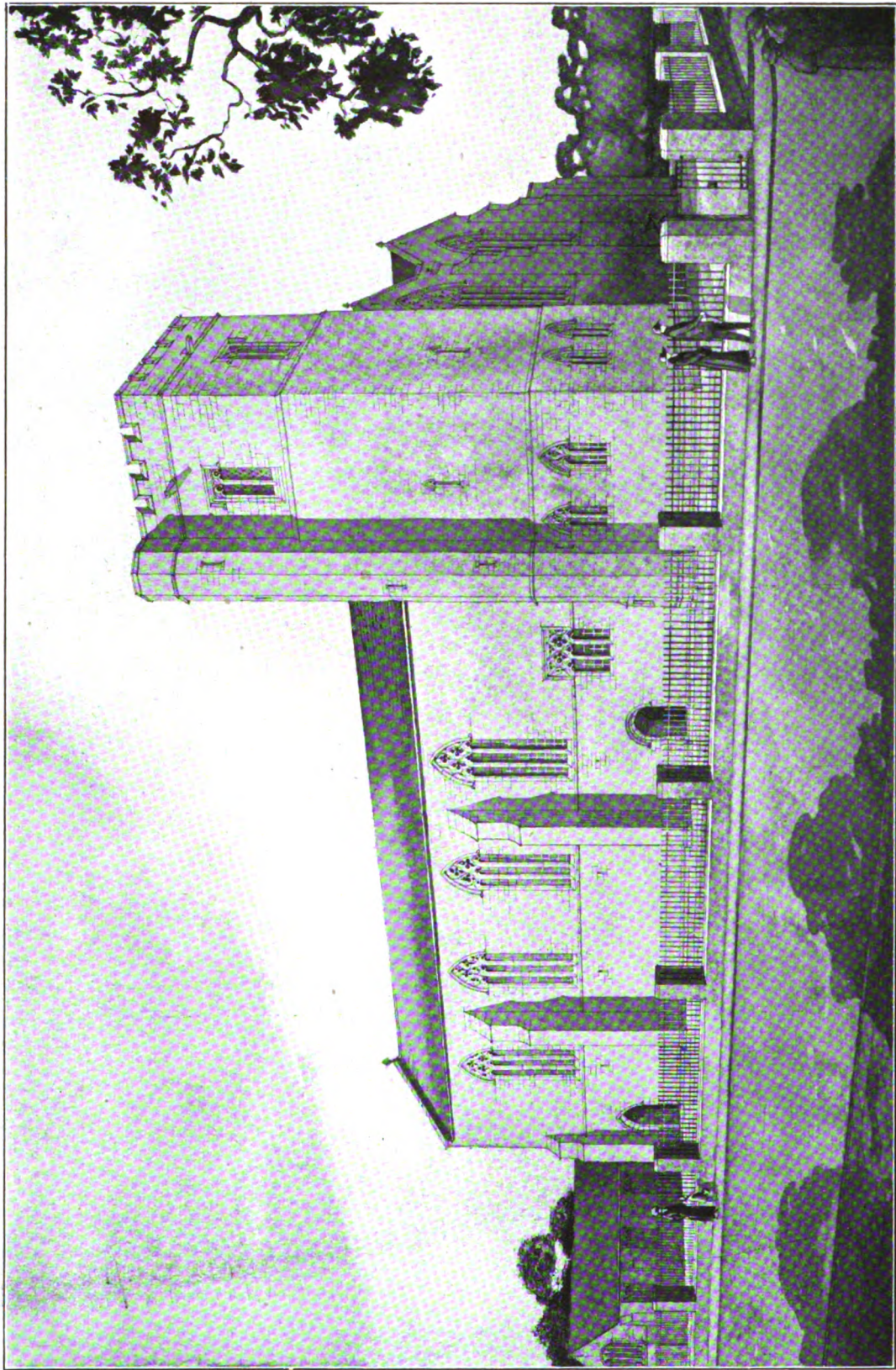
The highest price ever paid at auction—70,000 dollars (nominally £17,000, but actually about £18,500)—for a small panel of Old English stained glass was realised at the galleries of the American Art Association, New York, last Friday afternoon, at the dispersal of Mr. Henry Lawrence's collection of Gothic and other ancient art. The panel dates from the 15th century, is rectangular, and is 30½ in. high by 31½ in. wide. It represents a portion of a Jesse tree, with Christ seen to half-length, with purple face and yellow crown, wearing a white and purple robe and yellow mantle.

Persons who have paid any of the repealed duties are only entitled to reclaim them within six months of the passing of the Finance Act, 1920; that is, up to the evening of yesterday, February 3. Legal personal representatives may claim on behalf of persons deceased. The duties in question are the Increment Value Duty (including annual increment value duty), reversion duty, and undeveloped land duty. Many individuals, probably not aware of their right to reclaim, or of the limitations of time within which they must make application to the Commissioners of Inland Revenue at Somerset House, should note this.

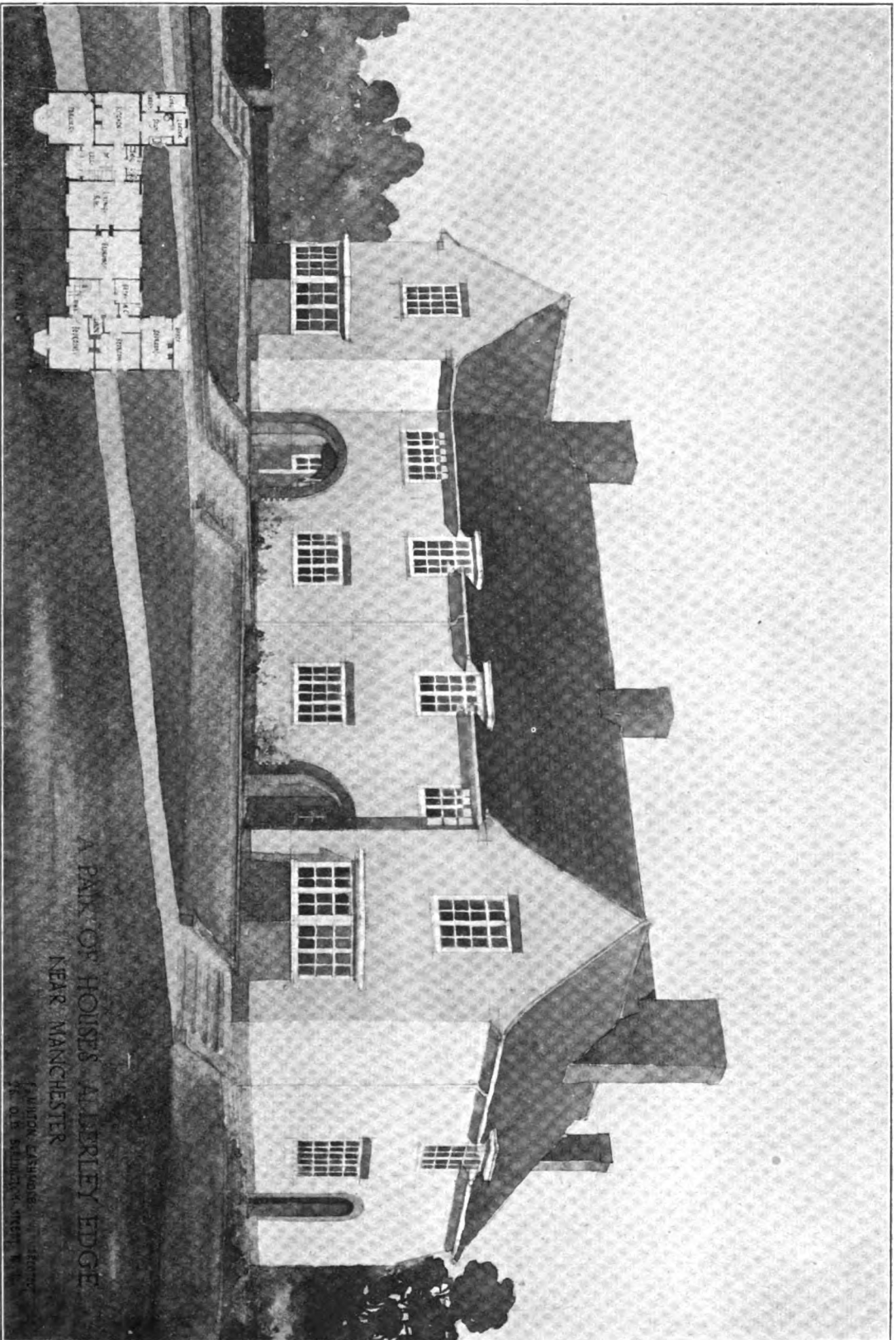


WEST DOOR, LANERCOST PRIORY CHURCH, CUMBERLAND, ABOUT 1216 A.D.
Measured and Drawn by Mr. H. LIDBETTER, A.R.I.B.A.

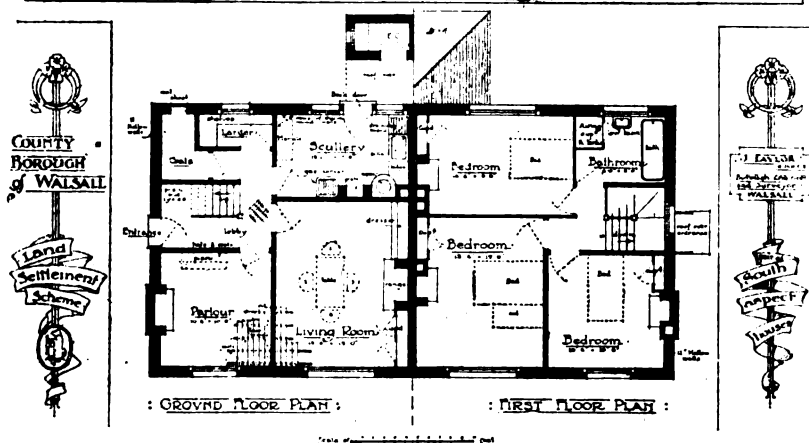
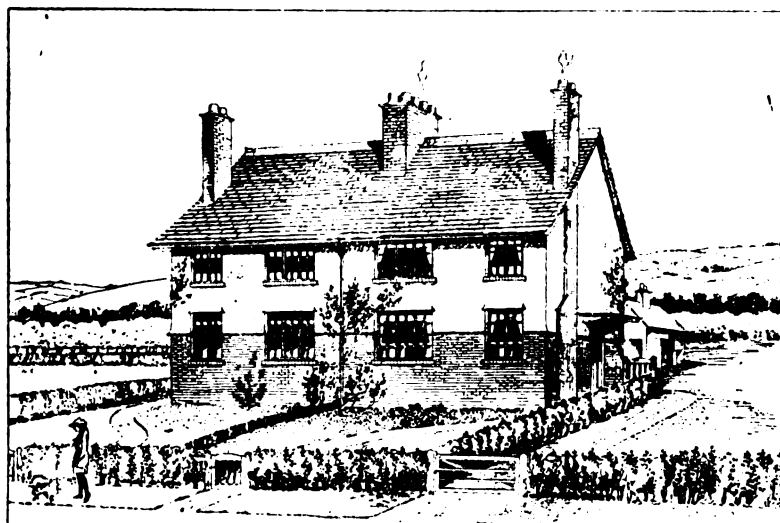
THE BUILDING NEWS, FEBRUARY 4, 1921.



SELECTED DESIGN, CHURCH OF ST. COLUMBA, HULL.
Messrs. LOFTING & COOPER, Architects.



A PAIR OF HOUSES, ALDERLEY EDGE, CHESHIRE.
Mr. F. M. Cashmore, Architect.



HOUSING EXPERIMENTS AT WALSALL.

Our Illustrations.

SELECTED DESIGN, NEW CHURCH OF ST. COLUMBA, HULL.

This drawing was exhibited at the last Royal Academy. It represents the proposed new Church of St. Columba, Hull, which was the subject of a limited competition assessed by Mr. Walter Tapper, F.R.I.B.A. The building is to seat 800 people on a corner site in Holderness Road. The chosen plan provides a three-aisled church with a tower at the east end of the south aisle. Extreme simplicity had to be adopted on economical grounds, the only detail being in the tracery of the windows. It is intended to use Carlton stone for the facings and dressings, and the roofs to be covered with green Westmorland slates. Messrs. Lofting and Cooper, of 44, Bedford Row, W.C., are the architects.

A PAIR OF HOUSES AT ALDERLEY EDGE, CHESHIRE.

The pair of houses illustrated are now practically completed, having been built at Alderley Edge, near Manchester. Every endeavour has been made to keep the cost as low as possible consistent with good workmanship, materials, and accommodation required, the estimated cost being £2,600. The materials are hollow brick walls of stock brickwork, lime-whitened, with sand-faced plinth and dressings, hand-made tile roof, and wood casements. The builders are Messrs. Isaac Massey and Sons, Ltd., of Alderley Edge, and the architect Mr. F. Milton Cashmore, A.R.I.B.A., of Old Burlington Street, W. The drawing was included in last year's Royal Academy Exhibition.

WEST DOORWAY, LANERCOST. PRIORY CHURCH.

This sheet of measured elevation and section was reproduced from a fully detailed sheet of drawings, with mouldings and other parts set out to a big scale, but which space available precluded illustration. We mention the fact in justice to Mr. H. Lidbetter, A.R.I.B.A., whose thorough study of his subject was complete. Lanercost Priory was founded in 1169 A.D. by Robert de Vallibus, and was completed about seventy years after. The church, however, the first thought of the borderland Austin Canons, was completed a good while before their own monastic buildings. The last part to be erected was the nave and western end, about 1216 A.D. The work is a refined and well-designed example of purely Early English character. The red sandstone used, being soft in nature, has long suffered from the action of the weather; consequently, the delicate mouldings have greatly worn away in parts. The jointings depicted are from actual measurement. The section shows the accumulated richness of the joint and archway of this beautiful portal, which is much enhanced by the stops on which the mouldings of the archivolt terminate.

HOUSING EXPERIMENTS AT WALSALL.

Brick houses, as well as those of concrete blocks, are being built at Walsall by direct labour, and the comparison offers a valuable object lesson to minds hitherto prejudiced against the use of concrete in any form for housing purposes. Concrete block houses are too often finished on the outside with rough-cast. With some systems this may be necessary or advisable, but where, as in the present instance, a rich excellent aggregate is obtainable on the spot, suitable for producing blocks of a texture fit for any

architectural effect, the blocks themselves are far better left alone. At Walsall all the blocks have been made with two "Winget" Standard Machines, served by one chain-spade mixer, and the result has won the highest praise from the numerous bodies of municipal authorities who have visited the scheme from various parts of the country. From its inception, the whole scheme has been carried out by the borough surveyor, with the aid of a capable staff, of which Mr. W. H. Booth is the chief architectural assistant, the clerk of the works being Mr. S. G. Wilson. At present the Council has 450 new houses in hand, the great majority of which are being built on the Bloxwich site, which has a gravel sub-soil thirty feet deep, and lies on high ground to the north of the town. About 120 of these houses are being built by direct labour. A smaller estate is being developed on the West Bromwich Road. Some fifty per cent. of the houses on the Bloxwich site—those in brick as well as in concrete blocks—are of the Ministry of Health "B" Type, with three bedrooms each. Besides the usual parlour and scullery, a really good sitting-room serves as the nucleus of the house plan. This last was planned with 180 square feet floor-space before the Ministry of Health, owing to increasing costs, reduced the maximum space allowed to 160 feet; and, as a special concession, due to the economical methods employed at Bloxwich, the Walsall Borough Council has been permitted by the Ministry, whose regional commissioner for this area is Mr. H. E. Farmer, F.R.I.B.A., to complete its scheme on the same generous lines. The sitting-room is also provided with a large cupboard, which, with two drawers and flat top, serves as a fixed sideboard. Each bedroom is big enough to take a double-bed and a suite of furniture. In the largest bedroom there is room for a cot as well. Other features include a hot closet for airing clothes, and other useful cupboards in the bathroom.

A LAND SETTLEMENT SCHEME.

The Rycroft Farm Land Settlement Scheme—one of the first of its kind to be approved by the Ministry of Health—has also been organised by Mr. Taylor, with the same staff, for the Borough of Walsall. The site is pleasantly situated on the Bloxwich Road, about a mile out of the town, and covers some nineteen acres. Nine pairs of cottages have been built, each facing a newly-made road. Each holding is approached from the roadway through a double gateway along a side road to the house, stable, etc. At the rear of each cottage, and separated from it by a fowl-run 50 ft. long, is a roomy farm building comprising a stable for either horses or pigs, an implement and fodder store, with boiler and flue, and also a fowl-house with roost above. The cottages are of substantial construction, with internal hollow walls of local red brick, and roofed with hand-made tiles. On the ground floor is a tiled entrance-hall leading to a parlour and a commodious living-room, a scullery with boiler and sink, and a well-ventilated larder. Upstairs is a compact landing leading to three good bedrooms, a bathroom, and a linen cupboard. The bathroom is fitted with full-sized bath and lavatory basin, to both of which there are hot and cold supplies. A closet containing the hot-water cylinder forms an airing cupboard in the bathroom. The cottages are lighted throughout by gas, which is also laid to supply a gas cooker in the scullery.

Mr. Mason Hunter, A.R.S.A., a well-known Scottish landscape painter, has died at Edinburgh.

PROFESSIONAL AND TRADE SOCIETIES.

ARCHITECTS AT PAINTERS' HALL.—Sir Charles Ruthen, President of the Society of Architects, with Lady Ruthen and a large number of members of the Society and their friends, visited the Painter-Stainers' Hall, in Little Trinity Lane, last Saturday. They were received by the Master (Mr. Albert E. Pridmore) and the wardens of the Worshipful Company of Painter-Stainers, and were conducted over the building. The ancient charters and plate of the Company were brought out for their inspection, and a paper on the Company's history was read by Mr. Englefield, the assistant clerk. Subsequently, the visitors were entertained to tea.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.—The seventh general meeting of the session was held at the Imperial Hotel, Birmingham, on Friday, January 28. Mr. H. T. Buckland, F.R.I.B.A., presiding. Mr. H. E. Forrest gave a most interesting lecture entitled "The Old Houses of Shrewsbury." The old houses, said the lecturer, divide themselves naturally into three groups, according to the materials used in their construction—stone, timber, and brick. Ignoring the primitive wooden huts of the Britons and Saxons, the earliest houses were a few stone mansions dating mainly from Plantagenet times. Shropshire was rich in timber, especially oak, and in the fifteenth century, when houses began to be erected in numbers, the builders naturally adopted this as the most convenient material. The first timber frames were simple. They consisted of a row of vertical posts 9 in. wide and 9 in. apart, reaching from floor to floor. The space between the uprights or studs was filled in with flat pieces of lath wedged into grooves on either side, then clayed, and finished with plaster both inside and out. "The Abbots' House in Butcher Row is a fine example of this period, rendered all the more interesting by its perfect series of medieval shops. Originally these were open booths, the shop-keeper sitting inside and the customer conversing with him from the street. The wide oaken sills on which the merchandise was displayed are still intact. In Queen Elizabeth's reign the timber houses reached a very high state of perfection, many of them being lavishly ornamented. In Shrewsbury a sunken quatrefoil seems to have been the favourite design of one particular craftsman, as it is confined to the immediate vicinity and appears on some eight or nine houses erected between 1570 and 1595—Owen's Mansion in High Street is a notable example. Timber houses continued to be erected as late as the reign of Charles II. The use of bricks was at first confined to the chimney stacks of timber houses, but about 1580 a few houses with brick walls were built in Shropshire; Conover Hall is a fine example. The earliest brick house built in Shrewsbury was Rowley's Mansion in Hills Lane, which dates from 1681. The lecture was profusely illustrated by lantern slides.

EDINBURGH ARCHITECTURAL ASSOCIATION.—Mr. William Cowan, president of Old Edinburgh Club, lectured to the Edinburgh Architectural Association on January 27 in the Hall of the College of Art, Lauriston, on "Early Views and Plans of Old Edinburgh." There was exhibited a series of photographs of all the known published maps and views of Edinburgh down to the rise of the New Town; and some account was given of their origin and the circumstances of their publication. The earliest was a sketch of a castle dating from the fourteenth century, probably intended for Edinburgh. In the sixteenth century there were the drawing illustrating the attack on the town by the English in 1544, the plan showing the siege of the Castle in 1573, and the somewhat imaginary view published on the Continent in a collection of views of the principal cities of Europe. The earliest reliable plan was that executed by the Rev. James Gordon, of Rothiemay, at the instance of the Edinburgh Town Council. Two differing engravings of this were shown, and also six other views prepared by Gordon at the same time. Following two views of

the city from the south by Van den Hoyer and W. Hollar, the work of Captain Slezer was discussed in connection with the views appearing in the various editions of his "Theatrum Scotiae." The principal authority for the topography of Edinburgh in the middle of the eighteenth century was the plan by Wm. Edgar, published in 1742, and re-issued with illustrations in 1765. A plan published by Kirkwood, founded on surveys made in 1759, afforded information on the various properties north and south of the Old Town now covered by the modern city; and Armstrong's plan, of which at least four editions appeared between 1773 and 1787, illustrated the progress of the New Town during the earliest years of its existence. Mr. T. P. Marwick, A.R.I.B.A., president, was in the chair, and a vote of thanks to the lecturer was moved by Dr. Thomas Ross.

EDINBURGH AND DISTRICT BUILDING TRADES' ASSOCIATION.—The annual general meeting of the Edinburgh, Leith and District Building Trades' Association was held in Edinburgh last Monday. The annual report referred to the joiners' strike of last year, and recorded with satisfaction the loyalty of the members throughout the nine weeks period of the strike during the busiest season. It meant to many of the members very serious inconvenience. The demand by the operatives for a further increase of 4d. per hour from December 1 had been definitely refused and successfully resisted. During the year an important scheme of levelling up rates between sections and the grading of districts for Scotland had been accomplished, and the basis of settlement would effect adjustment of wages for the future for the whole country. As a result of the year's working, the Association, it was reported, was numerically stronger and financially sounder. The following office-bearers for the ensuing year were appointed: President, Mr. George Bain; vice-presidents, Mr. J. R. Watson, Mr. John Kennedy, and Mr. Wm. W. Finlayson. The retiring president, Mr. David A. Angus, presented a silver cup for annual competition among the golfing members of the Association.

INSTITUTE OF SCOTTISH ARCHITECTS.—A meeting of the Council of the Institute of Scottish Architects was held in the offices of the Institute, 117, George Street, Edinburgh, on January 27, Mr. A. M. Paterson, Glasgow, president, in the chair. On the motion of the chairman, a vote of condolence was passed to Sir R. Rowand Anderson, Allermuir House, Colinton, past president, on the lamented death of his wife. Applications for membership by nine Fellows and fourteen Associates were passed, and the elections agreed to. This brings the total number of new members enrolled during the year to eighty. Two more applications were read, and, in terms of the constitution, these will come up for election at the next meeting. A draft of the Royal Charter, for which application has to be made, and which has been under consideration for a considerable time by committee, was considered and passed by the Council. It will now, in due course, be forwarded to the Privy Council for its consideration. On the application of the Ancient Monuments Board for Scotland, a consultative committee, consisting of seven members representative of the various chapter districts, was appointed.

ST. PAUL'S ECCLESIOLOGICAL SOCIETY.—Canon W. P. Besley, Chairman of the Council, presided over the annual meeting held at Bishopsgate Institute last Saturday. The Council, in their report, noted with satisfaction the steady increase of membership; and appealed for continued efforts in that direction to enable it to expand the educational value and influence of the Society. The report and balance-sheet having been passed, it was reported that as St. Paul's Chapter House was no longer available, a new meeting place had been secured, through the offices of the Rev. Edwin C. Bedford, rector of St. Andrew's Holborn, who had obtained from the trustees the use of St. Andrew's Court House for the Society's usual Wednesday meetings.

Our Office Table.

Mr. A. Leslie Armstrong, F.S.A. (Scot.), of Sheffield, in a paper on "The Discovery of Engravings upon Flint-crust at Grimes Graves, Norfolk," read before the Society of Antiquaries of London last week, said that during excavations last September on this prehistoric flint-mining site, he discovered on an ancient living level at 3 ft. below the present surface and immediately on glacial sand pieces of flint-crust on which drawings had been engraved by prehistoric man, also flint implements of Mousterian type, bone tools, and other remains. The most important engraving was a wonderfully life-like drawing of a stag, evidently disturbed while browsing. One fore-leg was raised, its head was held erect, and grass was shown hanging from its mouth. The second piece had a well-drawn animal's head on it, perhaps that of a deer. Other engraved pieces had lines and irregular forms on them. The importance of the discovery was in the fact that engravings of this sort were only produced by late palaeolithic men of the cave period. Similar drawings had been found in the French caves in some abundance, also in Spain and Italy, but hitherto only one engraving had been found on an occupied site in Britain—namely, that of a horse's head, on bone, found by Sir W. Boyd Dawkins in Cresswell Cave, Derbyshire, in 1876. This discovery at Grimes Graves established the fact that man was living there at the close of the glacial period.

At a meeting of the Award Committee, consisting of the Presidents of the principal representative British Engineering institutions, held in London on Tuesday, January 25, the first triennial award of the Kelvin Gold Medal was made to Dr. W. C. Unwin, F.R.S., he being, in the opinion of the Committee, after their consideration of representations received from leading engineering bodies in all parts of the world, the most worthy to receive this recognition of pre-eminence in the branches of engineering with which Lord Kelvin's scientific work and researches were closely identified. The arrangements for the presentation of the medal will be announced shortly. The Kelvin Gold Medal was established in 1914 as part of a memorial to the late Lord Kelvin and in association with the window placed in Westminster Abbey in his memory by British and American engineers.

Senator Gideon Robertson, Minister of Labour at Ottawa, speaking before the Hamilton branch of the Association of Canadian Building and Construction Industries a few days ago, made a statement that we should all like to believe, namely, that sixty odd per cent. of the employers of labour had expressed themselves as satisfied with the efficiency of their workmen. "We regret to state," comments the Canadian *Contract Record*, "that we have been unable to find a single contractor who holds this view. If the building industry is marking time to-day with thousands of men out of work we cannot see it otherwise than that these men are themselves largely responsible. There is nothing that irritates the man who is paying out good money in the erection of a new house or factory so much as to see the workmen idling their time away. We have yet to meet the owner who has not been 'sore' on this point. It is not the high wages he objects to; it is the laziness, cussedness and unreliability of the men on the job. Perhaps the present period of inactivity will bring these men to see things in a more reasonable light. Already we have been assured by one contractor that the efficiency of his workmen is improving, and that in his future estimates he will take it for granted that this improvement will continue. He is not bothering much at all about reduction in wages; what he wants, and what he knows his clients want, is value for the wages. Let us hope the day will come soon when the teaching of the unions will be changed from 'get as much as you can' to 'get as much as you earn.'"

LIST OF TENDERS OPEN.

COMPETITIONS.

- Feb. 25, 1921.**—For Designs for General Hospital in Shrewsbury Road, East Ham, to cost £40,000. The author of the selected design will be appointed Architect, and Premiums of £75 and £50 will be awarded to the authors of designs placed second and third. Mr. George Hubbard, F.S.A., F.R.I.B.A., Assessor, whose award will be final. Site plan, conditions and instructions on application to the Hon. Sec., Mr. G. Ernest Richardson, "Montfitchet," 29, Katherine Road, Forest Gate, E.7.
- March 17.**—For Design for a War Memorial at Chatham to the Royal Engineers of all ranks who fell in the war. Sir Reginald Blomfield, Assessor. Conditions and particulars of the Secretary of the R.E. Memorial Committee, R.E. Institute, Chatham.
- April 15.**—For best Designs of a "Temple of Memory," for the Trustees of the Alexander Thomson Travelling Studentship of £75, with a possible Second Prize of £25. Open to all students resident in the United Kingdom between 19 and 34 years of age. Conditions obtainable from C. J. Maclean, 21, West George Street, Glasgow.
- July 15.**—For Designs for the proposed Council Chamber in Calcutta, for the Legislative Council of Bengal. Three premiums of £50, £250, and £100. Assessor, Mr. Henry Crouch, F.R.I.B.A., Consulting Architect to the Government of Bengal. Architect placed first to be employed to carry out the work. Conditions on application, with payment of two guineas, returnable to the Secretary, Public Works Department, India Office, Whitehall, or to the Secretary to the Government of Bengal, Public Works Department, Writers' Buildings, Calcutta.

BUILDINGS.

- Feb. 7.**—For 20 houses (brick), Eastern Road, Hayward's Heath.—For the Hayward's Heath Urban District Council.—Tenders to E. J. Waugh, clerk, Hayward's Heath.
- Feb. 7.**—For 16 parlour and four non-parlour houses and road-making and sewerage.—For the Disley Rural District Council.—Messrs. Adsbach, Topham, and Ad-head, 23, King Street, Manchester, architects.—Tenders to J. L. Lowe, clerk, Council Offices, Disley, Cheshire.
- Feb. 8.**—For new post-office and telephone exchange at Luton.—For the Commissioners of H.M. Works.—Tenders to the Secretary, H.M. Office of Works, Storey's Gate, Westminster, London, S.W.1.
- Feb. 10.**—For houses at Bere Alston, Buckland Monachorum, and Bere Ferrers.—For the Tavistock Rural District Council.—Mr. T. H. Harris, architect.—Tenders to A. K. Johnstone, clerk, Town Hall Chambers, Tavistock.
- Feb. 11.**—For houses at Hove, Sussex.—For the Commissioners of H.M. Works.—Tenders to the Secretary, H.M. Office of Works, Storey's Gate, Westminster, London, S.W.1.
- Feb. 11.**—For 46 houses, Castle Road, Kendal.—For the Kendal Town Council.—Tenders to F. W. Oxberry, borough engineer, Town Hall, Kendal.
- Feb. 14.**—For rebuilding Holy Trinity School, Bury, Lancs.—Messrs. Bram and Fletcher, architects, 17, George Street, St. Helens.
- Feb. 15.**—For 14 houses (type "A"). Chesham Park, Anerley, S.E.—For the Penge Urban District Council.—Tenders to the Clerk to the Council, Town Hall, Anerley, S.E.20.
- Feb. 18.**—For working-class houses, Cublington.—For the Warwick Rural District Council.—Mr. Hugh Trepass, 1, Church Street, Warwick, architect.—Tenders to C. H. Passman, clerk, 45, Bedford Street, Leamington Spa.
- Feb. 19.**—For 40 houses (scullery type "H"). Wakefield Road, Halifax.—For the Housing Committee.—Tenders to P. Saunders, clerk, Town Hall, Halifax.
- Feb. 21.**—For five pairs of semi-detached cottages, Preston, Weymouth.—For the Rural District Council.—Mr. G. A. Andrews, F.I.S.E., 167, Dorchester Road, Weymouth, architect.—Tenders to H. A. G. Stevens, clerk, Bank Chambers, Weymouth.
- Feb. 21.**—For 40 houses at Worth, West Hoathly, Forest Row, and Hartfield.—For the East Grinstead Rural District Council.—Tenders to A. Huggett, clerk, 36, High Street, East Grinstead.
- Feb. 22.**—For 88 houses (in pairs), in various parishes.—For the Maldon Rural District Council.—Tenders to A. W. Freeman, clerk, Gate Street, Maldon, Essex.
- March 1.**—For converting buildings into hospital and construction of drains and sewage disposal works at county sanatorium, Almeley.—For the Herefordshire County Council.—G. H. Jack, M.I.C.E., F.S.A., county surveyor, High Town, Hereford.

The Minister of Health has declined to sanction an application by the Islington Board of Guardians to add to its form of contract a clause that a contractor shall employ only persons holding the card of the appropriate trade union. The Board have reiterated their previous demand.

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Strand, W.C.2.

Amesbury Farm Settlement, Wiltshire. Pié-de-Terre Houses, Ministry of Agriculture and Fisheries. Blocks 26-28, and single tenements 19. Major H. P. Maule, D.S.O., M.C., F.R.I.B.A., Superintending Architect. Views and Plans.

Pair of Bungalows for Miss Curtis, erected at Rogers Hill, Worcester, at an inclusive cost of £1,300. Elevations, section, and plan. Messrs. Henry Rowe and Son, Architects.

Currente Calamo.

A Cabinet Council held on Monday afternoon, which lasted for about an hour, and was almost entirely concerned with the condition of things in the building trade, caused by the trade unions concerned having, as we announced last week, declined to consider the Government plan for the admission to the unions of trained ex-Service men, though the unions were offered a bribe of £5 for each man so introduced, can hardly have been a happy gathering. No decision was arrived at, in spite of the fact that the Government had already prepared a scheme for the direct employment of these men. In December the Federation of Building Trade Operatives flatly refused to go to the Ministry of Labour to receive the "definite and final" proposals of the Government, after which was to be "no further discussion." Meanwhile the Royal Institution of British Architects has put pressure on the Ministry of Health, and at last, as was announced at the Institute's business meeting on the 31st ult., has arrived at a satisfactory agreement about the various fees connected with housing work, which "will be published as soon as possible." But the master builders are still naturally hostile to the procedure of the Office of Works, which, it is complained, is not observing the conditions to which it was a party—namely, that it would not build houses with its own staff except in cases where disputes had occurred between the local authorities and the building trades. The Department is now said to be putting forward tenders in competition with the master builders. At the moment, therefore, the long story of muddle and meddle, for which, from the start, the Government and the Ministry of Health are responsible, has reached a climax of confusion and delay irritating to everybody concerned, and fraught with great burdens on the taxpayer only secondary to those which the wasteful general expenditure during the war, and, worse still, since, has saddled him with!

The price curve shows the estimates approved; but an actual cost curve would be considerably higher. In the same way, the amount of the subsidy would increase with the cost of construction, and it is also probable that in the final settlement the National Exchequer will be saddled with more than 50 per cent. of the cost. If, however, both curves were drawn at a higher point on the scale, their relationship, and the lesson they convey, would remain the same. It will be observed that the cost of the average-sized house authorised under the Ministry scheme was, in the middle of 1919, £740, or about two and a-half to three times the pre-war cost. It remained at that figure for three months, until the subsidies became effective. From then onward the increasing sum of the subsidies and the increasing cost of the individual house show a steady and evidently related rise. The recent drop may be the usual winter seasonal drop in building prices, such as is indicated by a flattening of the curve in the previous winter, or it may be due to the attitude of the Ministry of Health in refusing to sanction what it considers inflated estimates. Anyhow, the result of this experiment in State intervention will be a dead loss to the taxpayer of about £100,000,000, and even then the houses built can only be let at very high rents. There is also a very grave indirect loss. The building of working-class dwellings does not occupy more than one-quarter of the building trade, but the extravagant prices and small output have affected the remaining three-quarters. In ten months to the end of November private builders had completed 4,324 houses, and local authorities, in seventeen months, 11,122, or a total of 15,446 houses. If the Government had not made their unfortunate experiment, private enterprise by now would have built more houses at a much lower price, and with a great saving to the public purse. The granting of public money for housing should stop now, and if it is ever renewed, there must be the strongest safeguards against the repetition of such waste of public money.

We are indebted to Mr. William Woodward, F.R.I.B.A., F.S.I., who was one of the principal witnesses in the action, of which we give a report elsewhere, lately brought against an architect for alleged

"negligence." We completely share Mr. Woodward's conclusions in regard to the judgment of the Official Referee, whose impartiality and determination to grasp every detail are evident. We also congratulate the defendant on the wisdom which sought such invaluable and expert testimony as that of Professor H. Maxwell Lefroy, of the Imperial College of Science and Technology, to whose kindly co-operation we have ourselves been many times indebted for the identification of insects sent to us with requests for information as to their nature and habits, and whose knowledge has been repeatedly so successfully enlisted at home and abroad in the prevention of insect ravages. The case is one which should be carefully noted by all architects. On page 40 of our issue of January 28 last we congratulated the architects of the Province of Quebec on the spirited stand they are making against the unconscionable extension of their liability for "negligence" during no less than ten years! There are some people at home who seem to think the period should extend to the day of final judgment, no matter how unreasonable the building owner's demands, or how impossible it is for an architect to grapple with a shifty contractor. It is therefore well to preserve every record of cases like this in which justice has been done.

The very informative paper read last Monday night before the Surveyors' Institution by Mr. Arthur H. Davis should find many more readers than his professional brethren, because here we are much more handicapped as regards the acquisition of land for public purposes than in Egypt, where the process is far simpler and less expensive, in spite of the fact that all the services for the conduct of the municipal life of Cairo are under Government control, and spread over different departments, each responsible to Government generally. One result—as here, though not so badly as at present—is that there is a lack of the co-ordination we get in the municipal management of our own cities and towns. The services chiefly concerned are eight out of the twelve controlled by the Ministry of Public Works, while three come under the jurisdiction of the Department of Public Health and two under that of

All interested will do well to get and preserve the diagram which the *Times* gave last Monday illustrating from official figures the relationship between the national subsidies and the cost of houses.

the Ministry of the Interior. The financial arrangements certainly are simpler. The Government, as a whole, having approved—say, a main drainage scheme costing a couple of millions, as designed by the Department concerned—votes the money at once, and there is no need to go to another Department for sanction for a loan, the repayment of which is spread over a number of years. The expropriation of owners is certainly worked on the principle of "the greatest good for the greatest number," and the property-owner certainly bears a larger share of improvements than the rest of his neighbours. The regulations are also much more hostile than here to claims for disturbance, or other losses by owners or occupiers. The law, in short, expressly aims, as in France and Belgium, at the facilitation of continuous acquisition and demolition by the Government of buildings encroaching on alignments.

Although they will miss subjects from such masters of their art as Mr. Axel Haig, Mr. W. Walcot, Sir Aston Webb, and some others, whose contributions are among the few consolations left to "the poor rich," who can seldom enjoy them elsewhere at the modest price of admission, few will miss the opportunity of visiting the thirty-ninth annual exhibition of the Royal Society of Painter-Etchers and Engravers, at 5a, Pall Mall East, which, as usual, is a display of more than average general merit, with not a few exhibits of much more than ordinary excellence. Perhaps the best three this year are Mr. Herbert Dicksee's "Idlers" (61), his "Leopard and Jungle Fowl" (77), and "Suspense" (126). All three are delightful examples of animal life. The lion and the lioness, "The Idlers," especially is splendid. Among others that will specially attract are Mr. W. L. Wyllie's "Cherry Gardens, Rotherhithe" (109), and "Greenwich" (113), two excellent views of Thames-side scenes. Our own readers will look out for Mr. H. Macbeth-Raeburn's "Entrance to Chancel, Palenzia Cathedral, Spain" (115); Mr. William Walker's "A Touraine Tower" (121); "The Porch of Coronation, Burgos" (130), by Mr. H. J. Molin; "Trafalgar Square" (133), by Mr. Nathaniel Sparks; "Sweetheart Abbey, Dumfriesshire" (171), by Mr. Charles O. Murray; "Liverpool Cathedral, from Liver Buildings, Liverpool" (179), by Mr. Sydney A. Gammell; and "The Roman Amphitheatre, Nimes" (187), by Mr. A. Hugh Fisher. Among the rest of the 200 shown, the great majority will deservedly elicit interest, and there is scarcely one that will not. We are glad to learn the Society has formed a Print-Collectors' Club with the view of bringing people interested in etching and engraving into closer touch with those who practise the art, and of promoting general knowledge of all forms of engraving. The club will hold meetings at which lectures and demonstrations will be given. There will be an annual issue to members of presentation prints.

The entrance fee (except for the first 200 original members) is a guinea, and the annual subscription three guineas. Applicants should apply to the Secretary, Royal Society of Painter-Etchers and Engravers, 5a, Pall Mall East, London, S.W.1.

Another link with former days (though whether by repute than reality is a matter of opinion) which has changed hands is the Old Curiosity Shop in Portugal Street, which has been sold for £10,000. Before his successor conceived the fortunate idea of associating Little Nell and her old gambler of a father with the building, it was kept by a garrulous but not uninteresting dealer in old prints and other relics of the general past, on whom we often used to look in and sometimes cheapen a bargain. The last visit we paid was in the early seventies of the last century, the result being the acquirement of three very decent Albert Dürers, which we still have. The old vendor never failed to assure us that it was only his "love for the fine arts" that still energised his efforts "to get a living," and that he found it "a hard job at the best." May Envy, which

Withers at another's joy.

And notes the excellence it cannot reach, as Thomson assures us in *The Seasons*, never disturb his admiration of the luckier speculator in the admiration of the idol of the American tourists and others who flock to Portugal Street to carry away the memorials of the master of fiction which are so conveniently provided to meet all tastes and means.

"We are looking for great reforms through the new Church organisation," writes "Reformer" to the *Guardian*, "which, we hope, will soon come into full operation, and be guided by the true spirit of wisdom. One of the first steps to reform is the abolition of those things that are useless or injurious, and one of the most conspicuous of these is the system of diocesan survey. For brevity's sake, may I just state baldly some reasons for the abolition of this system? It is antiquated and obsolete, extravagant and wasteful, inefficient and autocratic. I shall be ready to support each of these with arguments unanswerable, and am confident that I shall have behind me a solid consensus of opinion from the parochial clergy." The "reasons" seem to us, indeed, stated very "baldly," but that is not unusual with some of the parochial clergy. We shall watch for "unanswerable arguments!"

It is, perhaps, no business of ours—architects being seldom hanged for murder, although a client occasionally evinces his desire to bleed one to death for negligence—but we cannot help echoing the protest of some of our decent daily contemporaries against the disregard of the will of Parliament that executions should be private, which, in the case of the two wretched culprits who were hanged at Wandsworth Prison last Friday, has been

contravened by the authorities, with the result that the double execution has been turned into a "stunt" by a section of the Press which delights in pandering to the morbid instincts of the degenerates who gloat over last dying speeches, etc., etc. The next thing, we suppose, will be a film of the hangman's task!

THE BRITISH SCHOOL AT ROME EXHIBITION.

The galleries of the Royal Academy are largely devoted to an extremely interesting exhibition, which was opened last Tuesday, for the display of the competitive works submitted for the Rome Scholarships in Architecture, Sculpture, Decorative Painting and Engraving, and for the Henry Jarvis Studentship in Architecture. The chief contributions on view are the decorative lunettes and picture panels by Mr. Henry Ball, of the Nottingham School of Art, who has been evidently influenced by Mr. Frank Brangwyn, R.A. His principal exhibits show the decoration of "The Boardroom of a Navigation Company," for which a silver medal was won not long ago. The paintings are accompanied by an excellent small-scale elevation showing his scheme generally. The river scene is very handsome, with York Minster in the middle picture. The cartoon of Harvest in a spandril panel is broad, well composed, and harmoniously coloured. Mr. Ball's life studies leave nothing to be desired, and his oil painting of a nude man is quite remarkable. Among the other works in this section chosen for the final competition are the rather scattered figure frieze and Italian-like composition of figures in varied sizes by Miss Frances D. Taylor (Slade School). The works of Mr. Herbert Buckley, of the Royal College of Art, include a rococo ceiling of figures flying amidst clouds and rocks for a cul-de-sac passage. No 42, by Miss Audrey Weber, of the Royal Academy School, has three-panel decorative frieze for an elementary school; rather too crowded, though a capable and appropriate scheme; and a good pencil cartoon of two figures. Nine exhibitors failed to obtain an entry for the final course in the Painting section.

The designs shown by the Architectural students number eighteen, seven being selected for the further competition. The subject set this year is a National Pantheon, to be erected in a lake of 1,000 acres, and to be approached by a causeway designed so that a funeral car can be rolled into the building to stand in the centre of the edifice under the dome. The purpose of the Pantheon is to give equality of record irrespective of all creeds. Among the chosen list the Architectural Association Atelier, or school, distinctly holds its own with four most excellent designs. These are much less ambitious in idea than the three favoured schemes submitted by the Liverpool University men. In No. 21 Mr. Eric R. Arthur, of Liverpool, has a flat domical composition with an encircling colonnade below a battered massive plinth-square on plan, with Doric porticos. This is a skilful and original proposal, very capably drawn, and accompanied by a quite excellent detail. No. 22, by Mr. S. Roland Pierce (A.A.), shows a pointed cupola, with a secondary dome inside, well poised on a receding consoled feature pierced with lunettes, making a very graceful line. The scheme, which is 130 ft. in diameter, has apsidal radiating chapels set out on the ground stage. No. 26, Mr. Edward W. Armstrong (A.A.), is repre-

sented by an eminently suitable composition, circular in form, surmounted by a plain and lofty cupola of double formation. There is a laudable reserve about the entire design which suggests eternity and strength by its definite note of simplicity, set as it is upon the waters of a great lake. Seven colonnaded alcoves furnish space for mural monuments, and are admirable adjuncts. They are neither too deep nor dark. The entrance portal occupies the remaining compartment. The drum of the pantheon is well proportioned, refined in detail and nicely colonnaded. The entrance doors are enormous, much too tall in fact. The detail shows them the full height of the arch, but the general elevation includes a spandril grille, which perhaps struck the author as being a trifle commonplace, hence the more severe treatment adopted by the larger scale drawing. We admire Mr. Armstrong's delineations very much, and consider them possibly the best in the big gallery. No. 29, Mr. William Gregory, of Liverpool, has an over-ambitious group of structures, with a domical tower set in the midst of four axial pavilions, linked together below by subsidiary corridor buildings. The elevation is enormous, with a gallery of spacious dimensions below the dome which is too much encumbered by set-offs and fussy details. The drum is encircled by an over-deep bracketed frieze cornice. No. 30, Mr. Bernard George (A.A.), has much in common with No. 26, but his seven deep radiating chapels of wedge shape are quite different, and might be rather dark. This structure, like the other, is circular, and set in a corresponding manner with a long causeway. The drawings fail to attain the same standard, and the dome is solid and too tall inside. The porch is surmounted by a big quadriga group, fixed rather too low to be seen from right and left, except from a great distance, as the water would prevent the spectator from viewing the sculpture unless from a boat or the far-off shore. No. 31, Mr. Bernard A. Miller, Liverpool, shows a wonderfully clever sectional perspective worthy of Viollet-le-Duc. It is a masterly performance, but it accentuates the over-elaborated and redundant features displayed, and exhibits a lack of repose appropriate to a palatial memorial of the eminent dead. The perched-up portico over the vast portal arch is not only out of scale, but out of perspective, looking like a toy. This set of drawings surpasses all in size and in the elaboration of draughtsmanship, but the result is not good architecture. No. 34, the last in the list of selected competitors, is by Mr. James H. White (A.A.), who evidently has been actuated by the same spirit of breadth and simplicity without, however falling to the level of a mere mausoleum, the scale adopted overmastering such a limitation. In this respect 26, 30, and 34 thus form a distinctive group inspired by an identical power of reserve. The circular plan of 34 has a continuous aisle round the arcaded ground storey. This relies unduly for light from the windows forming the main feature below the springing of the dome. There are, however, we notice, a series of small openings which give low down windows lighting the floor to each bay of the corridor. The cupola is solid and lofty. A sort of whispering gallery occurs, set behind an inclined colonnade round the drum inside. The frieze is too small, and not so suitable in depth as in No. 26, to which we accord our preference.

Four students are preferred out of eleven for the final competition in the sculpture section, which includes work of

a good class, though not so distinctive as in the painting and architecture sections. No. 3, by Miss Arnid B. Johnston, of the Slade School, has a flat relief carved grey stone panel of six horses grouped in a decorative manner, with the modelling lightly suggested. Her drawings from the life display a sculpturesque aim, the pair of studies to a big scale of a woman being first-rate. The model is holding a plaque above her shoulder, and two side views of the same subject are exhibited to a smaller scale. Her statuette of a girl is vigorous and capable. No. 5, by Mr. Charles W. Dyson-Smith (R.C.A.), is represented by a Greek-like processional frieze of maidens, and the interior design of a panelled room, as well as a domical baptistry building, with a granite font for immersions. His statuette of a man with extended arms is good. No. 6, Mr. David Evans (R.C.A.), is not very happy with his "Station of the Cross" panel, the figures in flat relief being undercut, leaving a hard thin edge. The Christ is lumpy in the shoulders, and too defiant in attitude. The Episcopal Monument in colour is bizarre, but the drapery study and the head of a man show skill and taste. No. 11, Mr. Charles T. Wheeler (R.C.A.), is distinguished by a "Grief" panel of four women and a child monumentally treated and nicely composed in bas-relief. His war roll of honour set out on an open book placed in a Della Robbia garland panel frame is not a suitable form of sculpture for this purpose. The seated figure of a girl is, however, a graceful and refined performance as a piece of modelling.

The engravings are few, and not particularly attractive.

THE INTERNAL PROTECTION OF BUILDINGS FROM DAMPNES.—III.

INTERIOR VERTICAL DAMPCOURSES.

An internal vertical dampcourse, when applied to an old wall, as in Fig. 1, is perfectly satisfactory if the mortar is gauged with waterproofed cement and applied in three coats to a total thickness of 1 in. to the following specification:—3 parts coarse washed sand, 1 part Portland cement, 3 lb. of waterproofing powder to every 100 lb. of cement.

Should any of the lime plaster be left on the wall it will probably be not more than 3/4 in. thick, and the rendering must be of a similar thickness to produce a flush or straight surface when finished. It should then be applied in two coats, gauged 3 and 1 as above, with 5 lb. of waterproofing powder to every 100 lb. of cement.

For walls built on waterlogged or clay land, render 1 in. thick, in three coats, in the proportions of 2 parts of sand to 1 part of cement, with 5 lb. of waterproofing powder as in the last example.

The insertion of a horizontal dampcourse is much more expensive than a waterproofed cement rendering, and would be prohibitive in many cases. Such dampcourses prevent damp from rising out of the ground, but the wall takes much longer to dry than when it is cement rendered. No horizontal dampcourse can keep a wall dry if it is constructed of porous bricks, but with the simple method advocated above there is no possibility of any moisture penetrating the wall either from the foundations or from driving rains. Complete success is naturally dependent upon the treatment of every portion of the defective walling, in some cases including that which is actually underground. Thus, in the case of a lighting area, or even a coal shoot such as is often found in a basement, the waterproofing is more complete when carried entirely round

such projections, as in Fig. 2. Sometimes it may be advisable to render behind the door frames and window frames to insulate them as far as possible from the old surfaces. The frames may be spiked, or screwed for preference, to thick screeds of

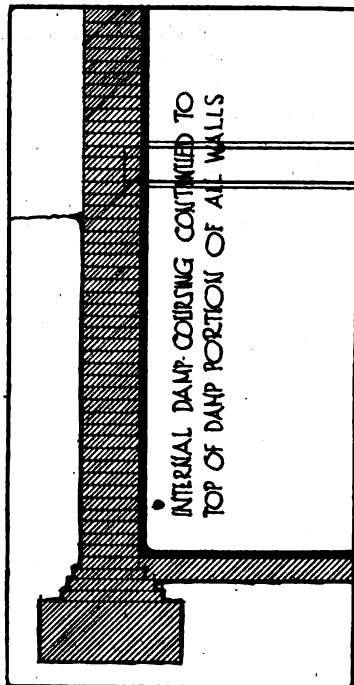


Fig. 1.—Method of damp-proofing basement rooms in an existing building.

waterproofed cement, as in the case of the sill of the window frame shown.

If the area is efficiently drained, no trouble can occur, but a soakaway (that is, a sump with a loose rubble bottom) cannot be used with safety in an area treated as is shown in the sketch. Should it be impossible to provide an outlet, and the area

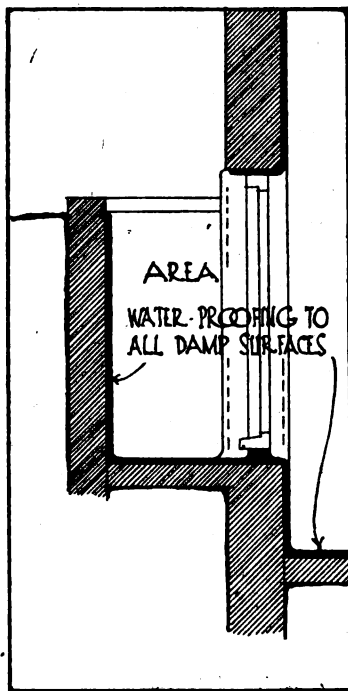


Fig. 2.—Last method applied to an area, etc., of existing building.

be of necessity uncovered at the top, sufficient depth should be allowed below the sill of the area window to hold any reasonable amount of rain-water which may run in from the ground above.

By careful attention to these details, coupled with good materials and honest

workmanship, the walls of any building are protected against the slightest trace of rising damp, even though it be actually standing in water. Such a remarkable efficacy of one phase only of our latter-day discoveries with regard to cements, limes, and other matrices surpasses in importance and utility the famous "lost secret" of the composition of the cement used by the masons of Ancient Rome.

ARCHITECTS AND "NEGLIGENCE."

This action was brought against an architect on the ground of "negligence" by the Rev. John Bishop Marsh, plaintiff, against Mr. E. J. W. Hider, defendant. The case, which lasted eight days, was tried in the High Court of Justice, King's Bench Division, during the month of December of last year and January of this year, before Mr. G. A. Scott (Official Referee), whose judgment was delivered on the 21st of last month. The case is of such importance to architects that I have obtained a copy of the judgment in full, which is hereto annexed, and which I should be obliged by your publishing *in extenso*.

It is in some cases quite easy to delay paying, or decline to pay, an architect's legitimate charges by threatening or commencing an action for "negligence," and unfortunately it is not possible, in the case of many of us, to face the enormous law costs, which, even if successful, we are bound to incur. It would be unfortunate if, in cases of real negligence, or of improper or unprofessional conduct on the part of architects, the assistance of architects could not be obtained by those who may have suffered by such negligence or improper or unprofessional conduct; but, on the other hand, great care should be exercised by expert witnesses before consenting to give evidence against an architect. It is no part of my province to criticise the expert evidence which was given in this case against Mr. Hider; the judgment of Mr. G. A. Scott is conclusive proof of the value of that evidence.

I am glad to say that, after careful consideration of Mr. Hider's case, I was thoroughly willing to support him, as I did, during the trial, and the other expert witnesses on his side gave their full attention to the details of the case, which are sufficiently set forth in Mr. Scott's judgment, a judgment delivered after the most painstaking care of, and attention to, technical details, which exhibited a knowledge and ability well meriting the encomiums which were passed upon the learned gentleman.

The impression left upon my mind is that in this case it was wrong to attempt to introduce formulæ quite applicable to a new building of the warehouse class, but by no means so with regard to the conversion of a dwelling house about a hundred and fifty years old into a warehouse with floors to carry heavy weights, and that at a cost which had to be, by the client's instructions, kept down to the lowest limits.

I should like to add a word of appreciation at the conduct and grasp of the case displayed by the learned counsel on both sides.

The counsel for plaintiff were Mr. Holman Gregory, K.C., and Mr. Herbert Smith, instructed by Mr. William A. Sanders, solicitor. Counsel for defendant: Mr. E. F. Lever and Mr. N. P. D'Albuquerque, instructed by Mr. W. P. Armstrong, solicitor. Witnesses for plaintiff: Mr. William A. Sanders; Mr. Mumby, architect; Mr. Dacres, architect; Mr. H. A. Porter, architect; Mr. F. K.

Sykes, lessee; and Mr. Crowther, builder, who cut well for lift. Witnesses for defendant: Mr. Wm. Woodward, architect; Mr. Harry George Leslie, architect; Mr. Ernest J. Caston, quantity surveyor; Mr. Percy Hawkins, estate agent; Professor Harold Maxwell Lefroy, entomologist; and Mr. E. J. W. Hider, defendant.

WM. WOODWARD.

15, Great James Street,
Bedford Row, W.C.1.

THE JUDGMENT.

21, Beak Street belongs to the plaintiff, the Rev. John Bishop Marsh, of Nayland Vicarage, Colchester, and for many years was a public-house known as the Coach and Horses. When the lease to the brewers expired in March, 1916, he determined to let the licence drop and to convert the premises to other uses. For this purpose he put the matter into the hands of his cousin, Mr. Sanders, a solicitor of experience in the management of house property, and in July, 1916, Mr. Sanders got in touch with the defendant, Mr. Hider, who is an architect of general practice with considerable experience in dealing with old houses in that neighbourhood and elsewhere. The claim in this action arises out of the retainer by Mr. Sanders of Mr. Hider as architect to convert these premises, and is a claim for damages alleged to have been suffered by reason of Mr. Hider's breach of duty created by the retainer. His duty was two-fold: first to advise as to the proposed reconstruction and to draw the specification to carry out the scheme decided upon, and, secondly, to supervise the execution of the work by the builders employed. After some interviews the defendant inspected the premises three times, and on July 24, 1916, reported to Mr. Sanders. This report, as shown on the face of it, was to assist Mr. Sanders to give the defendant definite instructions; it was not in itself a definite opinion as to any particular scheme. It indicates the sort of work Mr. Hider thought should be carried out to convert the premises into business premises, and it suggests that Messrs. Garrett, White, and Poland would advise "that the best permanent let would be as a small warehouse in connection with Golden Square trade." For this conversion the report indicates a somewhat drastic scheme of structural reconstruction. As I read the report it meant practically gutting the second and third floors, leaving only the steel joists which then supported the second floor. This is what Mr. Hider said he meant, and this view was confirmed by Mr. Porter, called for the plaintiff, who said: "The report, pages 2 and 3, points to reconstruction *in toto* of the second floor, except steel joists, and all third floor." I pause here for a moment to point out the general conditions which then underlay all building operations. A contract for more than £500 had in the public interest been made illegal; a priority certificate for steel was necessary even if obtainable; seasoned wood scantlings were practically unobtainable, and experienced labour was almost as difficult to obtain as materials. In addition to this, Mr. Sanders was most insistent upon the strictest economy. This was the position when these gentlemen met to discuss what should be done. They met at the premises on July 26, and I am quite certain they both discussed a very difficult building operation with the one idea of doing the very best that could be done for Mr. Marsh. Since that conversation more than four years have passed, and there is considerable discrepancy as to what was said, not so much in reference to what work was to be done, but as to the result of the scheme then generally agreed. Mr. Sanders' memory is that Mr. Hider expressed himself in such a way as to pledge his professional skill that this work when executed would convert the premises into a warehouse for cloth capable of lasting fifty or sixty years. Mr. Hider, on the other hand, says cloth was not mentioned, but the woollen trade might have been, and his memory of the proposed user was a "small self-contained building for Golden Square trade." He categorically denied that he was instructed to prepare a specification for a light warehouse, but he did contemplate

that the building might be used for a small warehouse amongst other things. My view is that in looking back the memory of both these witnesses has been tinged by subsequent events. I am not satisfied that Mr. Sanders is accurate as to the definite user of the premises as a warehouse, and I am not satisfied that Mr. Hider said anything about the sort of load the second or third floors could be expected to carry when reconstructed. Such details were then premature.

It is, I think, necessary to see what was in fact the result of the conversation, and about this there is no room for dispute, because the scheme of work decided upon was thereafter embodied in a draft specification. In my mind this specification in respect of the second and third floors conclusively proves Mr. Hider's statement that the report, in so far as it related to the work on these floors, was turned down. The old beams, called for convenience bressummers, which had seriously sagged, were to be retained, and the third-floor bressummer centrally supported by a fitch beam. Mr. Hider says he pointed out to Mr. Sanders the then construction of the floors, and said it was a wonder that it had hung up so long. He says he took Mr. Sanders to the basement and explained how, by using a central support for the third floor over the steel joists, the floors could, if necessary, be further supported without destruction by a central column from the basement. He said also he mentally calculated that the reconstruction would roughly double the strength of the third floor from $\frac{3}{4}$ cwt. per foot to $1\frac{1}{2}$ cwt., though he does not say he told Mr. Sanders these loads.

Two letters then passed, one from Mr. Hider, dated July 28, 1916, and one from Mr. Sanders, dated July 31, 1916. Mr. Hider wrote as follows:—

"Referring to our interview yesterday, I have made application to the Westminster City Corporation for pavement lights, and have shown new line of shop front. Will you kindly decide how you would wish the application to be made for license from Ministry of Munitions? I will get drawing and specifications in hand and will see you with drafts before copying."

In his reply, Mr. Sanders wrote:—
"I thank you for your letter of the 28th inst. I take it that you had better apply to the Ministry of Munitions, at any rate in the first instance. You can state that the premises belong to a clergyman who is giving up the use of them as a licensed house and who wants to convert them into business premises, that he is a man of restricted means, and as from March 25 last has been without any returns from the property."

Let me here sum up this interview as leading on the defendant's liability in this action, and for this purpose it is necessary to look ahead. The premises, when finished, were let on July 20, 1918, to Haigh, Sykes and Co., woollen piece goods merchants. When let the second and third floors were approached by a staircase 2 ft. 9 in. in breadth. This firm put in a lift 4 ft. by 4 ft. up to the third floor, and they were then advised that the second and third floors could not be safely used as a store for their rolls of cloth. The full user which they desire, having the facility of the lift, involves a weight, so I understand, of about $2\frac{1}{2}$ cwt. per ft., and it is agreed by every one the floors cannot be safely used for such a load. In these circumstances the plaintiff says:—"You (the defendant) are liable to pay the cost of making these floors strong enough to carry this load, because you warranted that the work in the specification, if properly executed, would have this result."

Mr. Holman Gregory then conceded this was not the measure of damage, but he claimed the difference between what it would then have cost and would now cost—sum of, say, £70 in regard to the third floor.

The alleged warranty arises in this way: You, as an expert, stated these floors were to be fit for warehouse floors, i.e., fit to carry at least 2 cwt. per ft.

To my mind, it is most improbable that Mr. Hider made, or, indeed, could have made, any such statement. It is inconceivable, even

if a possible user should have been expressly referred to as a cloth warehouse, that Mr. Sanders, who had as a solicitor experience in the employment of architects, should have regarded such a statement as a warranty that these floors would carry that load, nor can I understand why, if he thought Mr. Hider had committed himself to so wild and so improbable a prophecy, he did not put this on record as a term of his employment. So far from this, he refers to the conversion scheme simply as a conversion to business premises. The subsequent user of shops and warehouse as designating the premises does not, in my opinion, carry the matter further. Mr. Hider's duty as architect was, within the conditions then appertaining and in accordance with instructions, to draw a specification to convert these floors from domestic to business use with reasonable professional skill. In my judgment those were his instructions, and, despite the alternative suggestions made, in the light of subsequent events, which, in my opinion, involved an expenditure that the law prohibited and the building owner was unwilling to incur, as to a better scheme, I have come to the conclusion he showed not only ordinary skill, but a most remarkable ingenuity in the specification he drew. I think his letter of September 28 is true in fact. I think it exactly carried out the instructions expressed in the letter of September 27. Mr. Hider wrote as follows:—

"Please accept my assurance that the scheme of proposed renewal has been very carefully considered, and is provided for in the specification as simply as possible consistent with the necessary finish to appear as nearly new as possible and to last for the next fifty or sixty years."

Mr. Sanders had written as follows:—

"You will bear in mind that my great desire is to have the work well done, but that, subject to this, economy is of great importance in this case."

This finding of fact really disposes of one part of the case, and I now turn to the second head of complaint, which was that Mr. Hider was negligent in the supervision of the work, and also to some extent in the fitch beam construction.

This question I have found a difficult problem, and before dealing with it I desire to shortly state my view as to what the warranty of skill means.

The warranty of skill arising from the profession of a particular calling is not a warranty that the course advised will necessarily succeed. The maxim is *spondere peritiam artis*; it is not *operis*. Where the result depends upon exact rules, which should be known to a skilful expert, it may be, if failure results from a deviation from such rules, it is proof of a breach of this warranty of skill; but where there is no exact rule the position is different. An engineer may with certainty predict the strain steel will bear and also its contraction and expansion in varying temperatures, but who could say that an architect lacks skill simply because his opinion proves erroneous as to the strength of old timber when, as in a case like the present, one set of experts condemn and the other set vindicate the character of the scantlings?

How does the case arise? On cutting the joists for making the lift the tenants were alarmed at the condition of the wood. The floors were opened up, and not only the joists, but the bressummers caused them further alarm. They brought in an architect, who calculated the bearing capacity of the joists. This gentleman has not been called, but it appeared from his report, which was put to Mr. Leslie, that he had not, for some unexplained reason, used the usual formula—he had squared the breadth and not the depth of the scantlings. I asked Mr. Leslie to work these figures out on the commonly accepted formula, and it made a difference between 72.9 cwt. distributed load to 182.25 cwt. I don't say this fact makes me pre-judge the evidence actually adduced on behalf of the plaintiff, but it is impossible to avoid feeling that some misconception may have in the initial stages affected the judgment of the plaintiff's advisers in launching these proceedings.

Now, to my mind the real gravamen of the

charge is that the defendant permitted timbers, joists, and bressummers to be used which were in fact defective. In not rejecting them he was, it is said, guilty of negligence; not lack of care, but lack of skill. His constant attendances on the site were unchallenged. The evidence as to the wood is very conflicting, and I found difficulty in coming to any definite conclusion as to whether it was in fact defective until Professor Lefroy gave his evidence. Unfortunately, he only examined the specimens in court, and therefore did not see the bressummers, which, of course, are the all-important timbers. To my mind, he completely vindicated the soundness as weight-carriers of the joists. He said they were not weakened structurally, and that the depredation of the anobium represented merely the normal infestation of old timber. It is a beetle, he said, which merely attacks the outer sapwood. I accept this testimony, which was practically unchallenged, and I desire to say that his evidence was most convincing. I think the real point of danger, if any, is where the edge of the joist rests on its support, and I made, on my view, a careful inspection of their engagements, and, though rather ragged, they appeared sound. Apart from the conclusion I have formed that these joists are sound, and were properly left as floor supports, I should have hesitated to find Mr. Hider guilty of negligence, even if I thought them unsound, after having the evidence of Mr. Woodward and Mr. Leslie, and applying that evidence to the principle which, I understand, underlies the warranty of skill.

Now, with regard to the main bressummer, I have not Professor Lefroy's assistance, and, so far as I could judge by personal examination, the anobium did not find this fine old beam very palatable. The surface, however, at the centre was not sound. At the point above the fitch beam there was decay to the depth of just over 1 in., gradually decreasing, till about 2 ft. off on either side the beam was absolutely sound. I think Mr. Hider did himself credit by at once and without any hesitation admitting this condition. I also accept his statement that when the work was done the beam showed no sign of decay at this point. Am I on this ground to find him guilty of negligence? Most decidedly no. Whether past moisture collecting at the lowest level subsequently affected the fibre when the wood fibre passed from compression I don't know, but to put upon an architect a finding of lack of skill for a faulty diagnosis of this sort is, I think, unjustifiable.

After some doubt I accept Mr. Leslie's view that the decay in this spot does not affect materially the strength of the floor, and the suggested strengthening Mr. Hider advises is really made *ex majori cantata*. I further find that the fitch beam without the fitch plate gives ample support at the ends and that the fitch plate was a proper method to strengthen the beam where it carried the real load. Perhaps filleting was not an ideal construction; but as against that the only alternative suggestions were the user of two longitudinal steel joists in lieu of the fitch beam, and I have great doubt whether at the time these suggestions could have been carried out, having regard to cost and general building conditions.

I do not think that I am called upon to decide on the conflicting evidence given whether these floors will carry cloth rolls stacked 5 ft. high, carefully placed, as Mr. Hider and his witnesses assert, or whether a load of approximately this character is a dangerous load. In the view that I take of the facts these matters do not affect the defendant, and I should be wrong to prejudge any issue that may arise between parties not before me.

In my judgment the defendant exercised the skill which the law requires of him as an architect, and he carried out the work of supervision with all proper care and attention and skill. Having regard to the condition of these premises before Mr. Hider was called on the scene, I consider that, having regard to the great difficulties attendant on all building operations in 1916, the plaintiff may be congratulated upon the present condition of the premises, for they certainly come up in appearance to the requirement of having the necessary finish to appear

as new as possible, and I see no reason to doubt that, with the care and attention which all old buildings necessarily demand, they should last sound and substantial in their present condition for many years.

It has been impossible to go into every detail of this case in my judgment, which has occupied some considerable time, but not more than its importance warranted, and I hope that the parties will give me credit, nevertheless, for having considered carefully all the evidence given and all the arguments addressed to me.

I desire, if I may say so, to acknowledge that I have had every assistance from counsel and experts, and it only remains for me to say that the defendant is entitled to my judgment with costs.

COMPETITIONS.

GLASGOW.—Hillhead (new) High School: First Competition.—The assessor, Sir John Burnet, out of the seventy-eight designs sent in, has selected the best ten. The authors of these ten designs are as follow:—(2) Charles B. Pearson, F.R.I.B.A., Lancaster; (6) George Reid and Jas. T. Forbes (Reid and Forbes), Edinburgh; (29) W. Naseby Adams, A.R.I.B.A., 25, Ryder Street, London, S.W.1. (32) A. B. Llewellyn Roberts, of Colcutt and Hamp, 20, Red Lion Square, W.C.1; (33) Thos. Braddock, Wimbledon, London, S.W.19; (38) E. Barry Webber, 8, New Square, W.C.2; (54) Edward G. Wylie, A.R.I.B.A., Glasgow; (68) H. E. Clifford, F.R.I.B.A., and T. M. Lunan, L.R.I.B.A., 209, St. Vincent Street, Glasgow; (70) Wm. Ross, Glasgow; (77) John C. T. Murray, F.R.I.B.A., 69, The Outer Temple, W.C.2. None of the seventy-eight designs have been seen by the authority. All of them will be returned forthwith to their authors. Ten architects of eminence have been invited to send in designs for the second competition, along with the above competitors, and we understand that each of the invited firms will be paid £100 for their designs. The assessor commented highly upon the quality of all the designs, and on the care and ability displayed by the several competitors.

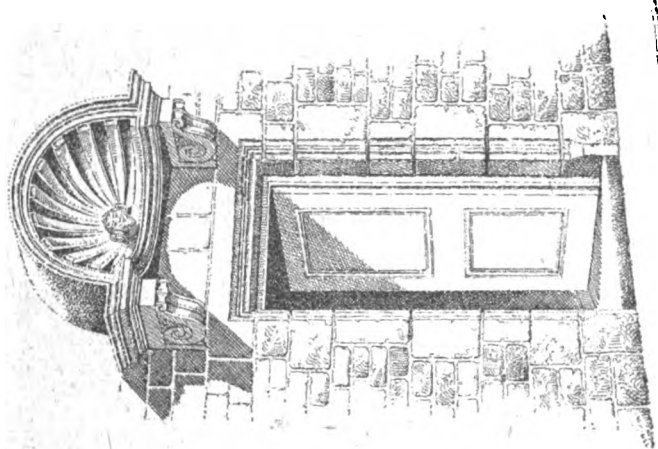
STATUES, MEMORIALS, ETC.

KETTERING.—In memory of the boys associated with the parish church who gave their lives in the Great War, a crucifix 14 ft. in height is to be erected on the grass plot near the north-west corner of the church tower. The design for Kettering War Cenotaph, prepared by Messrs. Gotch and Saunders, architects, has now been approved by the committee, and the work is now in hand. The monument is to be of Weldon stone on Derbyshire stone steps, and will be erected in front of the Art Gallery, on which will be placed six tablets bearing the names of the 800 Kettering men who fell in the war.

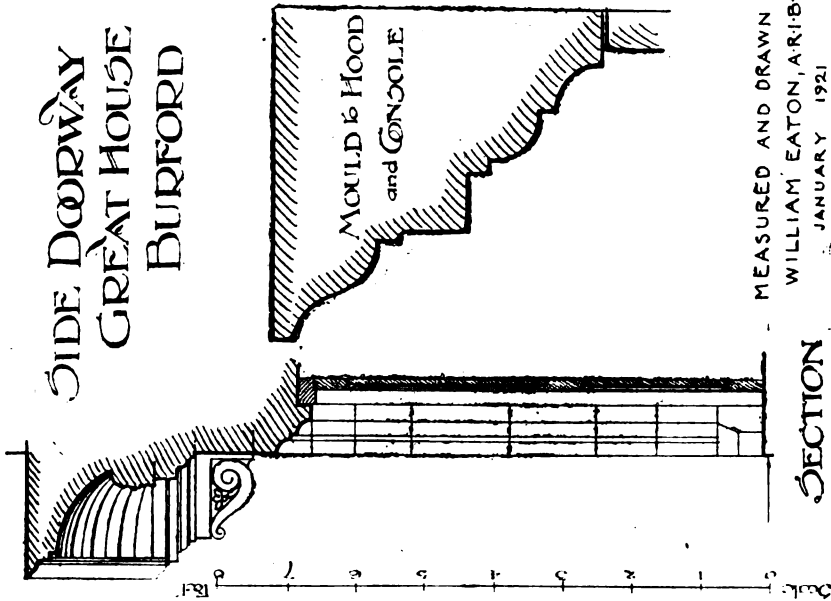
The wood blocks and asphalt paving of the streets of London may in time be replaced by rubber. Recent experiments of paving the Borough High Street with rubber sheets has proved satisfactory, and the suggestion is now made that the Westminster City Council should take the matter up, and adopt a scheme for deadening sound on the island site on which stand the Charing Cross Hospital and the Ophthalmic Hospital.

A meeting of the Society for the Promotion of Roman Studies will be held on Tuesday, February 15, 1921, at the Society of Antiquaries, Burlington House, Piccadilly, W.1 Mr. R. E. Mortimer Wheeler, M.C., M.A., D.Litt., Keeper of the Archaeological Department, National Museum of Wales (Cardiff), will read a paper, illustrated by lantern slides, on "Roman Colchester: New Materials, the Forum and the Town-plan." The chair will be taken at 4.30 o'clock. Members may introduce friends.

The Val de Travers Asphalt Paving Company have agreed to acquire the shares of the United Limmer and Vorwohle Rock Asphalt Company, giving one ordinary share for each United share. The directors of the United Limmer, who, with their friends, hold approximately 40,000 out of the 90,000 issued shares, have decided to ratify the agreement. The shares to be allotted will rank equally with the remaining ordinary shares, except that for four years they will only receive dividends after 5 per cent. has been paid on the existing Val de Travers shares.



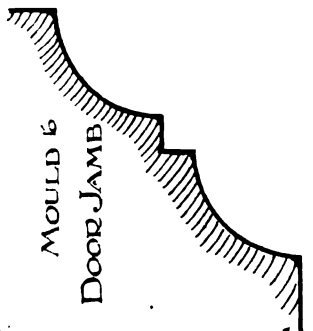
SIDE DOORWAY
GREAT HOUSE
BURFORD



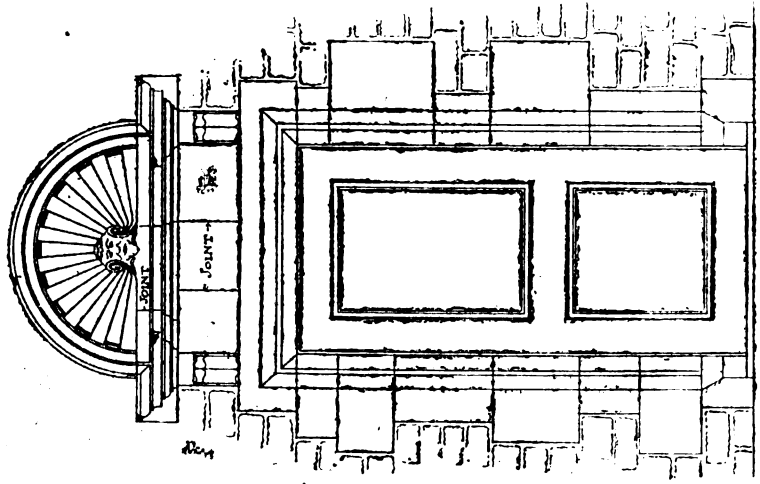
MOULD & HOOD
and CONSOLE

MEASURED AND DRAWN BY
WILLIAM EATON, A.R.I.B.A.,
JANUARY 1921

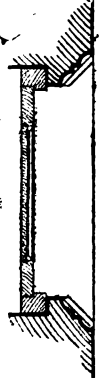
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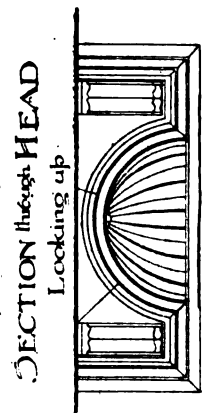
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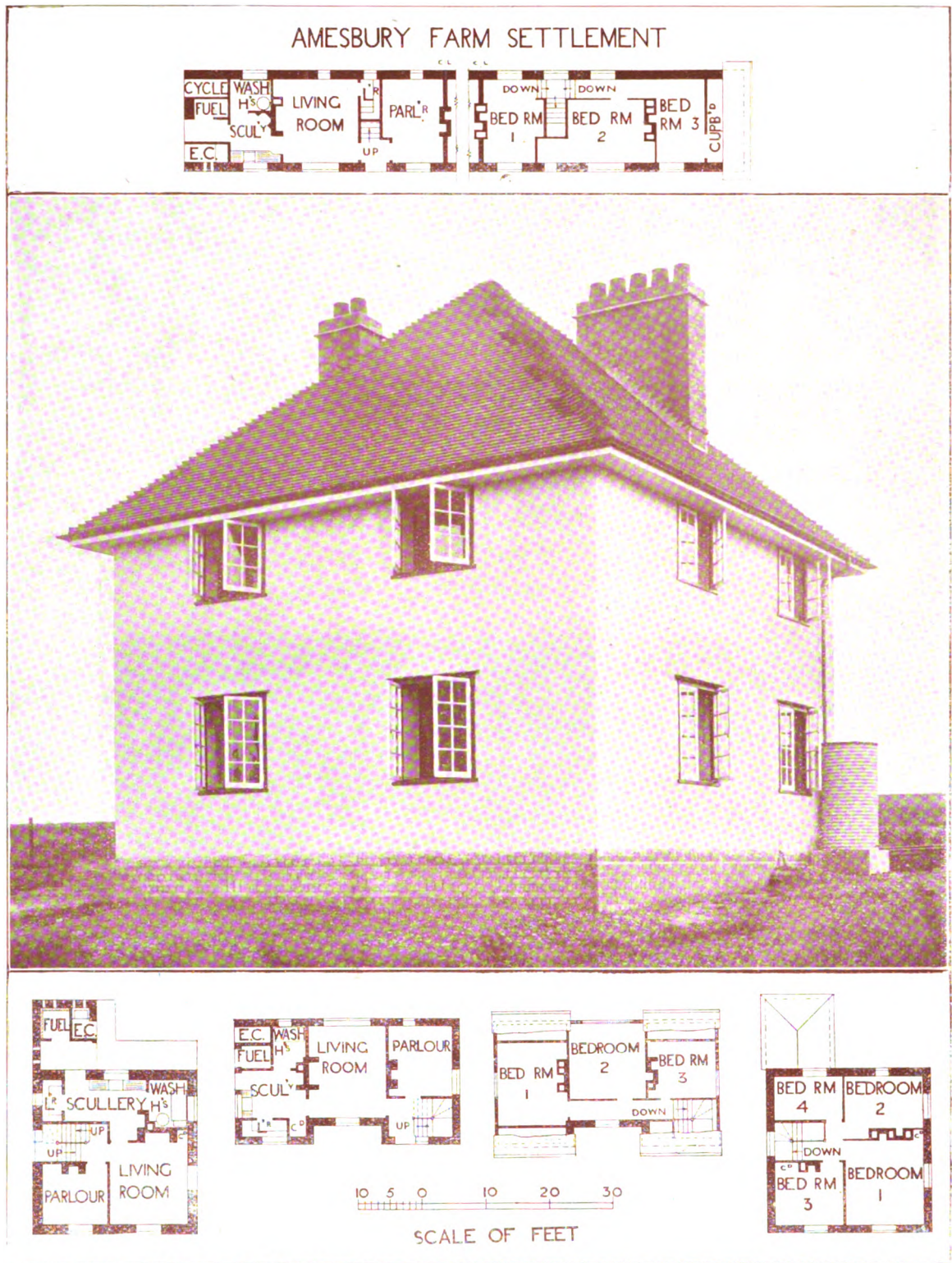
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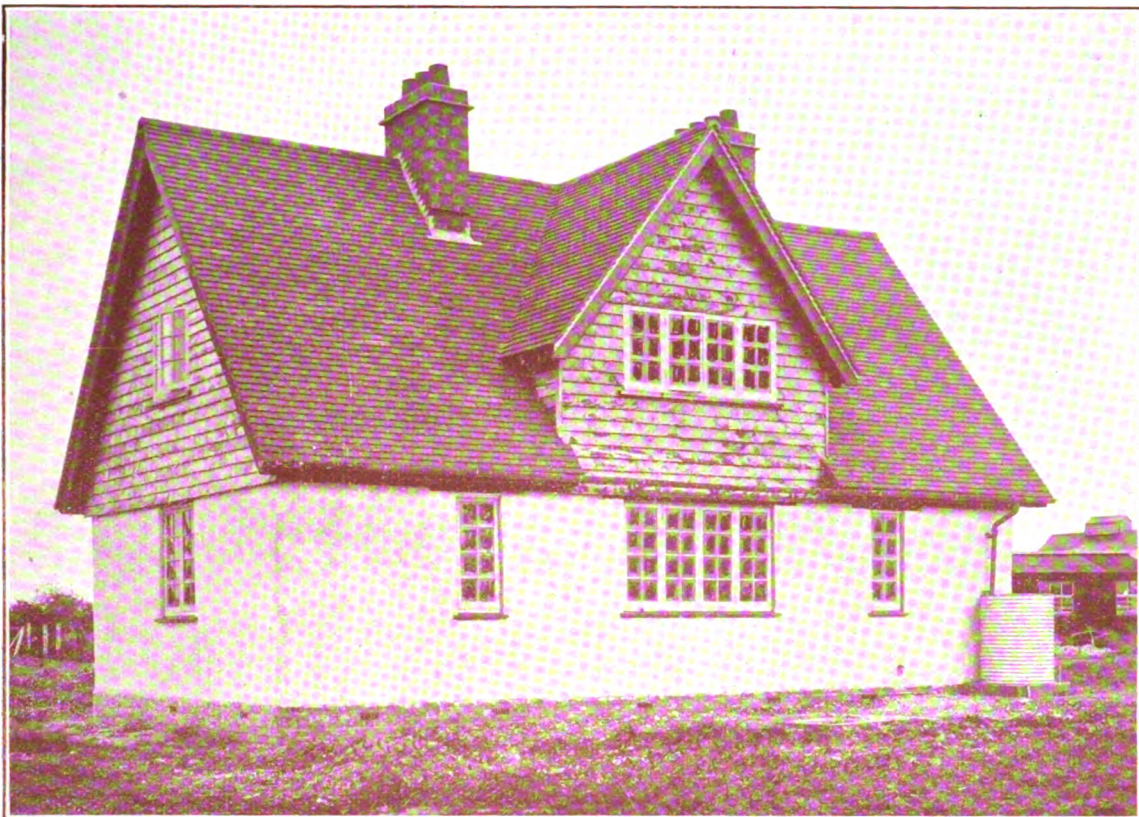
PLAN



SECTION through HEAD
Looking up



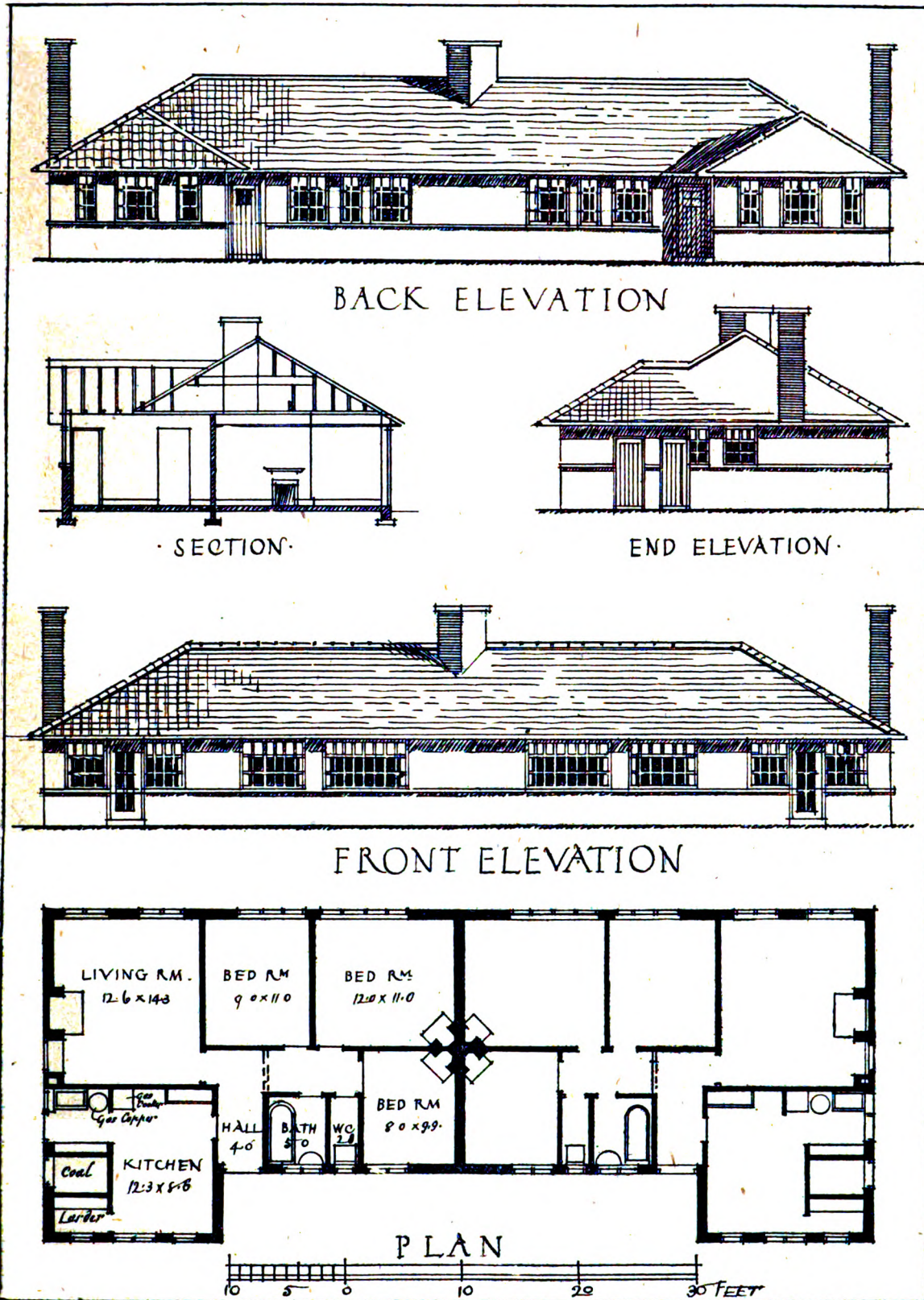
PISE-DE-TERRE COTTAGES, AMESBURY FARM SETTLEMENT.
 Ministry of Agriculture and Fisheries, Single Blocks 19.
 Major H. P. G. MAULE, D.S.O., M.C., F.R.I.B.A., Superintending Architect.



PISE-DE-TERRE COTTAGES, AMESBURY FARM SETTLEMENT.

Ministry of Agriculture and Fisheries, Blocks 26-28.

Major H. P. G. MAULE, D.S.O., M.C., F.R.I.B.A., Superintending Architect.



BUNGALOWS, ROGERS HILL, WORCESTER : INCLUSIVE COST, £1,300.
Messrs. HENRY ROWE & SON, Architects.

Our Illustrations.

AMESBURY FARM SETTLEMENT, WILTSHIRE. PISÉ-DE-TERRÉ HOUSES.

The Ministry of Agriculture and Fisheries have arrived at conclusions by the experience gained by the experiment carried out on this estate by building pisé-de-terre cottages under the supervision of Major Maxwell Ayrton, F.R.I.B.A., and Mr. T. Tyrwhitt, F.R.I.B.A., formerly superintending architects to the Ministry, and Major H. P. G. Maule, D.S.O., M.C., F.R.I.B.A., now chief superintending architect to the Department. We give photographs and plans of three samples of the single and grouped houses. In addition to bituminous coatings, the following external finishings have been tried:—A. Sand and ground lime, 1 to 1, brushed on; B. Sand and chalk lime, 1 to 1, ditto; and C. Sand and cement ditto. The last-named is quite satisfactory, but the colour is not attractive, and needs a wash accordingly. With sufficient protection, pisé work can be carried out in winter weather, but this extra cost is against it. Pisé, it seems, does not show an appreciable saving over ordinary brickwork, with all the finishings and fittings, though this result as to cost was arrived at in experimental work, which is always greater, and the men employed had to gain experience. The labour, however, was 1s. 3d. per hour, a rate now advanced. The scaffolding would be less with pisé than with brick, but the shuttering has to be reckoned, and brick foundations about 12 ins. above the ground are essential, though stone or concrete will serve, and level sites make differences, of course, as compared with differing contours. The design of pisé cottage plans must avoid breaks and gables, and tall walls are unsuitable, so bedrooms on first floors ought to be formed as much as possible in roofs, the eaves of which must have bold projections, with elm board soffit strongly built from the rafters, as elaborate bracketing is objectionable, and painting periodically is costly. The lintels and temporary supports to all openings are a difficulty, as the walls in pisé are 18 ins. thick below on lower floors, and 14 ins. to the upper, where high walls are really needed. Brick and concrete are employed for heads and cills, the window-frames being fixed flush outside with projecting oak cills and hood weathered lintel. Two-coat plastering inside is good, and, if pisé, dries evenly and has an unbroken surface. Brush coats of chalk or ground lime and sand suffice where exceptional wear is not expected. The all-important element is the water present in the earth at the time of actual use. Generally it ought to be between 7 and 14 per cent. of the weight of the earth. Clay-gravel-sand mixture gives the best result, with as much as 15 per cent. of water. In chalk loam mixture, with 13 per cent. of water pisé shrinks excessively on drying, but works satisfactorily with 7 per cent. of earth. It "pugs" under the hammer if it is too wet. Shuttering must be strong enough to resist a considerable thrust during ramming. Solid floors are best for pisé houses. Dampcourses are essential, and the brick or concrete bases should be tarred.

BUNGALOWS, ROGERS HILL, WORCESTER.

These bungalows are constructed with 9 in. brickwork outer walls, roughcasted above sill level, and 3 in. breeze slabs internal partitions; roofed with Bridge-

water Roman tiles, at a cost of £1,300 per pair, inclusive of drains, gas, and electric light installation. They have been erected for Miss Curtis, of Worcester, the architects being Messrs. Henry Rowe and Son, of 38, Foregate Street, in the same city. The undertaking had the advantage of a moderately level site. Our illustration is from the working drawings.

THE SIDE DOORWAY, "GREAT HOUSE," BURFORD, OXFORD- SHIRE.

The "Great House," Burford, Oxon, shows the transition from the Early to Late Renaissance. It is a stone building of three storeys, and has a battlemented parapet surmounting a Classical cornice, which in the front elevation is broken in the centre by a pediment. The doorway at the side has the eggshell kind of hood, which is a good example, and is executed in stone. If not so refined as the wooden type of eggshell hood often met with in the south of England, this detail is well adapted to its purpose. A fine photo, accompanied by measured drawings of the front of this house, are given in Belcher and Macartney's "Later Renaissance Architecture." Mr. Wm. Eaton, A.R.I.B.A., of Cardiff, lent us the original drawings here reproduced.

THE DAILY MAIL EFFICIENCY EXHIBITION.

The *Daily Mail* Efficiency Exhibition now open, and till February 26, will interest everybody. There are about 200 separate exhibits, including a most welcome section that will attract all who are sick of the obstacles raised by the trade unions to the employment of our work-wanting heroes, who will be seen busy to some purpose in all the building and many other trades. None who watch their skill and aptitude will leave without the conviction that if the Ministries of Health and Labour will stop muddling matters and parleying with the men who will neither work nor let others, the unionists should be left to join "the unemployed" and let the ex-Service men get on with the houses.

There is also an attractive series of six rooms designed as offices by the Kings of Spain, Norway, Belgium, the French President, the Prince of Wales, and the Earl of Athlone. Other displays by the Board of Trade, the Ministries of Health and Labour, our leading hospitals and Universities, are instructive, especially the last two groups named. Also may be seen the actual making of many articles of all kinds, and demonstrations of newest methods of production, together with varied types of machinery in motion, and new and striking examples of "the best way" in industry, commerce, education, science, and every phase of human activity.

Among the most attractive exhibits will be found that of our own printers, the St. Clements Press, Ltd. (Stand 180, in the Gallery), the leading "Day and Night" printers of the kingdom. None should miss a visit or fail to carry home to the kiddies the little booklet "Nearly a Tragedy," which will make them laugh, and impress all grown-ups in want of printing with a bit of very timely truth. With it they will be sure to ask for Mr. Max Pemberton's excellently illustrated brochure, in which the fascinating story is told of the squalid area round and about the site of the Law Courts, no considerable space of which is now occupied by the St. Clements Press, but in which within our own memory it was seldom safe to venture, and never after nightfall, thronged as it was by thieves, prostitutes, and their bullies. In thirty years

the energy and ability of Mr. George Eaton Hart have converted the most crowded and pestilential spot in this former nexus of crime and pestilence into a scene of skilled industry unequalled in the printing trade, and one from which, day and night, week in and week out, millions of copies of our leading newspapers are despatched, eagerly awaited here and abroad by their various readers. Added to which, printing of all kinds is turned out, including the catalogue visitors to the exhibition will see, with a skill and beauty not to be equalled elsewhere.

Another stand (No. 82) that will well repay a visit is that of the British Thomson-Houston Co., Ltd., the leading exponents of the great industry, electrical engineering in all its branches, that, perhaps, more than any other, is contributing to real efficiency in domestic comfort and commercial activity. The exhibits include such diverse items as turbo-generators and motors, X-ray apparatus, electrical gear for railways and tramways, lamps and other lighting appliances, automatic arc-welders, electrical rivet heaters, wireless apparatus, etc.—all of which are represented in the exhibit, either by actual models (many of them shown under working conditions) or, in the case of the larger machines, by drawings and photographs. Some of the exhibits—as, for example, a portable X-ray outfit (which comprises everything necessary for bedside diagnosis) and an electric rivet heater—have never been publicly shown in this country before, while the B.T.H. portable wireless receiving set is still of sufficiently recent origin to be a novelty to the majority of people.

Those who use them, instead of damaging their walls, to their satisfaction, shared by thousands of our own readers, and those who as yet are unaware of their value, should not fail to carry away a few specimens of the "Rawl-plugs" shown at Stand 16, which entirely supersede the old, tiresome, and unsightly method of cutting a hole in the wall and plugging it with a wood block, which seldom stays in its place and always damages its surroundings. Carry away one of the little three-and-sixpenny "household outfits," comprising all that is needed, and you will never start to hang a picture, or fix up a shelf, or a coat-hook, or a gas branch or an electrical appliance without these wonderful little plugs, which hold fast half a ton in brick, and save more than half the time wasted on the old methods.

The Higher Production Council is organising, in connection with the exhibition, a series of conferences at Olympia up to February 26. On February 15 and 16 there will be two conferences in the morning and afternoon of each day, that on the 15th dealing with "Traffic Control," and that on the 16th with various aspects of "Civil Life," including the provision of open spaces, smoke abatement, disfigurement of towns, and atmospheric pollution. Members of the R.I.B.A. are invited to be present at these conferences and to take part in the discussions. Tickets may be had from the Secretary, R.I.B.A.

A further conference will take place in the afternoon of February 12, the subject of discussion being "Satellite Towns in Relation to Industrial Efficiency." Applications for tickets must be made direct to the Office of the Higher Production Council, 66, Victoria Street, S.W.1.

Mr. John Roberts, of Russian Drive, Stoney-croft, Liverpool, plumber and gasfitter, who died on October 10, aged 82, has left £13,803, with net personality £4,398.

Our Office Table.

The President of the R.I.B.A., Mr. John W. Simpson, has received from M. Louvet, President of the Société des Architectes diplômés par le Gouvernement, notification of his election as Membre Correspondant of that body. The President has also been elected an honorary member of the Institute of Scottish Architects. In conveying to the President intimation of his election, Mr. W. Glassford Walker, Secretary of the Scottish Institute, writes:—"I was instructed, when forwarding you this intimation, to inform you that the election was due not only, or primarily, to the position of President of the Royal Institute of British Architects, which you so ably fill, but in recognition of your personal worth as an architect, and more especially of your long continued and self-sacrificing labours for the promotion of the interests and advancement of our Art."

On the best authority we are exceedingly glad to be able to state that the President of the Royal Academy, Sir Aston Webb, R.A., is now convalescent, and is hoping to return to town from Eastbourne, where he has been recuperating, at the beginning of next week, none the worse but perhaps the better for the rest, which he has taken since his recent illness.

"Concrete Roads and Their Construction" (Concrete Publications, Ltd., 4, Catherine Street, W.C.2, 8s. net) is a useful description of many of the concrete roads in the United Kingdom, together with a summary of the experience gained in this form of construction in Australia, Canada, New Zealand, and the United States of America. Certainly, under good systems, experience, so far, is in favour of the concrete road in this country, especially when a really good reinforcement is used, such as that which the British Reinforced Concrete Engineering Co., Ltd., of 1, Dickinson Street, Manchester, have enabled us from time to time to illustrate excellent examples, which have well earned the approval of local authorities and others. The chapter on mechanical devices, by Dr. A. B. Searle, is a very informative one, and there are a number of illustrations of the machines, etc., described.

Recent alterations to the city hall of Berlin, according to the special correspondent of the *Daily Chronicle*, included the reconstruction of the municipal treasury office. Ornamenting one of the pillars was a garboyle sufficiently grotesque, yet strangely familiar. Closer inspection convinced the councillors that here, caricatured in enduring stone, were the features of the municipal accountant. In special conclave assembled, the council summoned the architect to appear before them, and asked him whether or not their eyes had deceived them. No, the garboyle did intend to represent the accountant, but it was only a joke, said the architect. Moreover, it was only a plaster cast—presumably the artist rightly doubted Potsdam's sense of humour—and in the event of giving offence could be destroyed with one blow of the hammer. That blow was ordered to be administered. The architect also received a blow—a solemn vote of censure for trying to be funny in Potsdam.

The need for labelling inflammable varnishes as such was emphasised by the Manchester City Coroner on Monday, during the inquiry into the death of Henry Esilman, 68, a foreman employed by the Manchester Chemical Company, of Gibson Street, Manchester, and living at 7, Theta Street, Clayton. One of the managers of the firm, Mr. Alfred Haslam, said in evidence that he had been pouring out a drum of varnish when Esilman came into the room. Esilman, on his own suggestion, brought a light, the drum burst into flames, and both were badly burned. Esilman died in the Ancoats Hospital on Saturday. Mr. A. S. Walsh, of Smith and Forest, tar and resin distillers, of Holt Town, said his firm had supplied the varnish, but had given no certificate of inflammability, nor was there any label on the tins. The Coroner said it was most important that the varnish should be labelled in-

flammable. He advised the witness to see that this was done in future, and suggested that specific directions should be sent out with each tin. In reply to a question from the witness, the Coroner said he had no power to enforce his advice, but if such an accident happened again he would summon a jury and explain to them the facts of the case, and a charge of manslaughter would probably be brought in. A verdict of accidental death was found.

PROFESSIONAL AND TRADE SOCIETIES.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.—The Birmingham Architectural Association held a most successful and enjoyable dance on Friday last in the Wellington Room at the Midland Hotel, New Street, Birmingham. This is the first dance the Association have held since the war, and it was very gratifying to the Dance Committee to have a total attendance of about seventy members of the Association and their friends, who were also invited. A full programme was carried through and included a variety of old dances for the older members, while the younger and more spirited folk were provided with Fox Trots and One Steps to their hearts' content. It cannot be said that some of the older people did not enjoy the modern dances as well, and several noted and staid members of the profession were seen eagerly learning the latest One Step by watching the more initiated!

THE INDUSTRIAL COUNCIL FOR THE BUILDING INDUSTRY.—The quarterly meeting of the above council was held at Montagu House, Whitehall, London, S.W.1, on Thursday, February 10, 1921, at 2.30 p.m., and will be resumed to-day, at 10.30 a.m., for despatch of business as per agenda. An invitation has been sent to the President of the Board of Education (the Right Hon. A. L. Fisher, M.P.) to address the Council, and the President has kindly promised to do so at 2.30 p.m. to-day, being the second day's sitting.

The American Society of Testing Materials has adopted as standard a test for determining the softening point of fire-clay brick, by comparison of test cones with standard Orton pyrometric cones heated in a suitable furnace.

On Wednesday the following were elected Academicians of the Royal Scottish Academy:—Painters: Mr. James Cadenhead, Edinburgh; Mr. W. Y. MacGregor, Bridge of Allan; and Mr. George Smith, Edinburgh. Architect: Sir Robert Lorimer, Edinburgh.

The death of Mr. Henry Mills took place at his home in the Great Whyte on Thursday week, after a wearying illness extending over two years. The deceased was a native of Warboys, but for twenty-six years he had been well known as a builder, residing in Ramsey.

The Aldershot Camp Lodge, No. 1,331, which meets at Aldershot, has been presented with a curious memento. Major W. F. Crosson, when in Palestine, dug up a piece of the rock on which King Solomon's Temple was built and brought it back with him to Aldershot. This piece of rock has been fashioned into two stones, one rough and the other smooth, as adornments for the junior and senior wardens' pedestals. They have been fitted with engraved plates commemorating the gifts.

Complaints of losses involved in floating a loan for housing purposes were made at last week's meeting of the Court of Common Council of the City of London, and it was decided to refer the whole question to a committee, with a view to curtailing the City's housing scheme. The mover of the resolution, Mr. H. Preen, said if the most promising results were achieved the annual deficiency to the Corporation would be £116,532. The motion was carried practically unanimously.

The Sheldonian Theatre, Oxford, where the Prince of Wales received his honorary D.C.L. on Tuesday, was Wren's first public building, and cost, so the architect told Evelyn, about £25,000. At the time it was held to completely eclipse in beauty the Gothic buildings by which it is surrounded, and a versifier of the period, referring to Streater's painted ceiling, declared:—

That future ages must confess they owe
To Streater more than Michael Angelo.

CHIPS.

A well-known ecclesiastical builder, Mr. William Wade, of St. Neots, died on Wednesday week, aged 85.

Mr. Alfred B. Ygates, F.R.I.B.A., was the architect of the Magdalen College Memorial Cross unveiled by the Prince of Wales on Tuesday.

An exhibition of 18th century tapestries, lent by the French Government, will be opened at the Victoria and Albert Museum to-morrow, Saturday, by the French Ambassador.

An "unofficial" strike of plasterers at Rochdale is holding up the local housing scheme. So the local paper says. "Officious," like most, would perhaps be the better word.

Mr. Cammack Dennis, of Agincourt, Manchester Road, Bury, Lancs, head of Messrs. C. Dennis and Sons, builders and contractors, Bury, well known as a builder of mill chimneys, has left £29,152.

Mr. C. F. W. Denning, F.R.I.B.A., R.W.A., of Bristol, has been elected Artists' Chairman of the Royal West of England Academy, in succession to the late Mr. G. A. W. T. Armstrong, R.B.A., R.W.A.

Messrs. T. F. Shepherd, F.R.I.B.A., and Egerton L. Bower, A.R.I.B.A., have removed from the Royal Liver Building to Liberty Buildings, School Lane, Liverpool. (Telephone, Royal 1628.)

Mr. Alexander Findlay, Liberal M.P. for North-East Lanarkshire from 1904 to 1910, has died at The Granze, Lanarkshire, aged 76. Mr. Findlay was founder and head of the bridge-building firm of Alexander Findlay and Co., of Motherwell.

Work of the value of £100,000 has been lost to Portsmouth. A local firm were prepared to accept a contract for the reconditioning of the White Star liner *Arabic*, lying at Southampton. There is a joiners' strike at Southampton, but not at Portsmouth. Portsmouth joiners were prepared to do the work, but representatives of Southampton joiners declined to sanction the removal of the ship. The work is now expected to go to Cherbourg.

The scheme for the erection of eighteen model cottages on the London County Council's Old Oak Estate having been abandoned as the result of a decision of the Ministry of Health, the Council's Housing Committee proposes to arrange for the erection of eighty-three additional houses, at an estimated cost of £95,530, a figure which, in the opinion of the Finance Committee, will, on the basis of rates recently fixed, involve a cost on public funds of £75 10s. a year for each house.

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.

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 circumstances.

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, 1, Arundel Street, Strand, W.C.2, 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 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.

Telegrams: "Timeserver, Strand, London."
Telephone: Gerrard 1291.

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Correspondence.

ARCHITECTURAL STUDENTS' COMPETITIONS.

To the Editor of THE BUILDING NEWS.

Sir,—The present methods for the adjudication of students' competitions leaves very much to be desired; the students' duty, apparently, ends when their drawings have been submitted; how, by whom, and when they are judged are things which they must not inquire.

No practising architect would submit a design in competition where the names of the assessors were unknown, or where the names of the assessors appointed did not inspire confidence in their ability to make a proper selection. The architect in such case can always do the obvious thing and not compete, but the student is not in the same position; he *must compete*, how otherwise will his abilities receive recognition?—yet he must do so under conditions which are, to say the least, arbitrary and slipshod.

Take, for instance, the Rome competition, the "Blue Riband," so far as value goes, of architectural students' competitions. The names of the jury are utterly unknown to the student; even those few people in the know only hear names casually—the full list is never published. The names, when one does hear them, are those of eminent architects whose student days were over half a century ago.

The jury probably includes the names of one or two middle-aged men, but too small a proportion to ensure a thorough appreciation and understanding of the present-day student.

Present-day methods of training and fashions in architecture are somewhat different to those of the mid-Victorian

régime, and, as a consequence, too often the mediocre design is selected in place of those designs showing evolutionary tendencies, which one would imagine the prizes were intended to foster.

Slackness in writing programmes and in assessing competitions is not confined to any particular body. I was myself on the jury of an important institute prize recently, and was entirely ignorant until the committee met as to who the members were. I did not receive a list of the members, nor has a list been published. Some members of that committee were probably unable to attend; but, if so, I was unaware of it, and one can easily imagine a case where the absence of a particular member would have necessitated an adjournment so that his advice might be obtained.

It has been my experience many times that the best students have failed to win the recognition to which their genius entitled them solely through the poor selective ability of the assessors or examiners to whom they submitted their work.

Students' competitions are not on a par with competitions for practising architects, and should be assessed differently; they (the students) should have the opportunity of expressing their aims and ideals to the jury, and as none better than the students themselves know where the shoe pinches, so all juries of students' competitions should have 50 per cent. of their members as little removed from the student as circumstances permit, not only in justice to the student, but also to ensure that tricks, cribs, and dodges should be exposed.

I would personally not advise any student to compete except under the following conditions:—

(1) The names of the jury or assessors

should be published with the conditions of the competition.

(2) All competing students should be entitled to submit one name for election to the jury—all such names receiving nomination equal to 25 per cent. of the total number of competitors to be enrolled on the jury.

(3) A written précis of the award to be published (or delivered by a member of the jury).

ROBERT ATKINSON,
Director of Education.

The Architectural Association,
34 and 35, Bedford Square, W.C.1.

COST OF LIVING MIS-STATEMENTS.

Sir,—Referring to my letter of January 20, in which I pointed out that the Board of Trade *Labour Gazette* figures for December were grossly exaggerated, I think it will interest you to know that I have not so far received a single acceptance of the challenge I therein made. That was that I would pay out of my own pocket any excess they could show over 100 per cent. increase on July, 1914, cost of living to twenty people whose income was £5 a week or less.

The only condition was that they should purchase at such prices as I could indicate the bought goods could be obtained at.

H. J. WHITE.

Cromwell House,
High Holborn, W.C.1.

A panel by Mr. Stanhope Forbes, R.A., portraying "The Destruction by Fire of the Second Royal Exchange," will be unveiled in the Ambulatory of the Royal Exchange on February 23 by the Lord Mayor. It is the gift of the Royal Exchange Assurance in celebration of their Bicentenary.

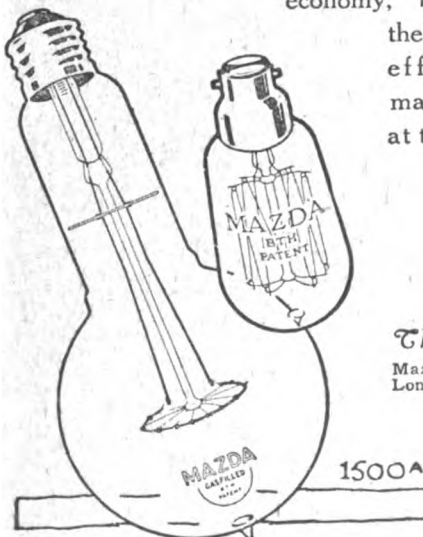
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THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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Currente Calamo.

There have been more conferences since our last issue between the Government and the master builders with reference to the course of action to be taken in view of the refusal of the building trade operatives to fall in with the proposed absorption of the 50,000 unemployed ex-Service men, but as we write this no agreement has been arrived at. At a somewhat rowdy meeting at the Holborn Empire, Mr. R. Coppock, the General Secretary of the Operatives Federation, is reported to have said he had good reason to understand that the Government would again approach the Federation. "They'll not offer you five quid a time this time," he said; "they are going to ask the bricklayers, plasterers, and slaters to dilute themselves from the members of the labourers inside their own particular crafts. If I know anything about the first-named, there will be no sectional movement as far as they are concerned. We have got to look forward to one organisation in the industry." If that still means dogged opposition, it is little wonder that the master builders have their doubts as to the value of any guarantees by the Government. The master builders are quite willing to help, but they are business men, and they do not want a loose bargain. If they take up any scheme there may be trouble with the trade union operatives, and the employers want to know, not in general terms, but exactly, how they will stand in such a case. Besides, the fall in prices all round points unmistakably to an early reduction in wages in most of the principal industries—in the building and printing trades especially, in which many workers are being added to the "unemployed" every week, simply because the public cannot and will not pay the heavy charges consequent on the huge increases in wages during 1920. Strikes may ensue, but no strike can prevail against general public refusal to be taxed to keep the "unemployed" lazy, on the one hand, while work is refused at a wage which will permit sales at prices which buyers can afford.

All who are interested in building or in dealing with houses are affected by the strong and striking decision of the Court of Appeal in the recent case of "Barton

and Mitchell v. Fincham." The defendant, a woman, had for some years been tenant of a small house at Thornton Heath, let at 12s. 6d. a week. In July last her then landlord sold it to the plaintiffs, and they at once made a bargain with the defendant tenant. In consideration of £20 paid her she agreed to give them notice to quit and to surrender possession at Michaelmas. When that time came she refused to go, and plaintiffs summoned her to the Bow County Court. The judge there ordered her to give up possession. She appealed to a Divisional Court; but, as the two judges sitting differed, her appeal failed, and she had to go up to the Court of Appeal. Three Lords Justices have now decided that parties cannot be allowed to contract themselves out of the Rent Act, 1920, even if they wish to do a deal for their mutual benefit. Taking a very high line, the appeal judges held that the Legislature in this Act placed a fetter not upon the landlord's action, but upon that of the Court itself. The effect of the Act was that the Court had no longer any jurisdiction to make an order for possession except in the specific cases allowed, which did not include this claim. They therefore could not recognise any agreement of the tenant to go out even for good consideration; nor any sort of contracting out of the sacred Statute. The defendant's appeal was then allowed with all costs there and below. So far, the result is that the tenant keeps her house and the £20 paid her to give it up, while the landlords bear all costs from the beginning, and can now consider whether it is worth their while to carry the fight up to the House of Lords!

We suppose every reader of this journal will take it for granted that we are among the very last to discourage house building, but we really do not wonder that, even with the Government subsidy, people generally are asking themselves why they should build houses, or why they should buy housing bonds to cut their own throats presently. Here is a case in point which is well vouched for. The owner has four well-built modern five-roomed houses in an industrial town in the West of England. One has become vacant, and his agent (who knows the district well) tells him he cannot sell it for more than £200. The local authority is building workmen's houses of a similar

class in the same district at a cost (including land, roads, etc.) of some £800. A few years hence these houses will be selling at £200, and will be renting at a corresponding figure. If anybody builds such a house now, he must get £2 a week from the tenant if he repairs and pays outgoings. Who is going to pay such a rent? Work it out thus:—

6 per cent. interest on outlay	£48
2 per cent. depreciation per annum	16
Rates, taxes, insurance, &c., say 10s. on rateable value (? £60)	30
Repairs, say 10 per cent. on gross value	10
Total ..	£104

which means £2 a week without reckoning anything for cost of collection. The mayor of the town issued an urgent appeal before the winter to subscribe for Housing Bonds as a duty to the country, and pointed out that the county authority was guaranteeing the bonds! The owner of the houses in question pointed out that this was, according to the old adage, feeding a dog with a bit of his own tail, as he paid county rates! Are not thousands of other ratepayers exactly in the same boat?

"Scotland is threatened with the loss of one of her most notable historical monuments, or rather she has already lost it, unless the voice of public opinion makes itself heard promptly and in unmistakable fashion." So the Scotsman declares, with an unusual burst of the *Perfervidum ingenium Scotorum!* Within the past week or two the famous Hilton of Cadboll Stone "has been more or less furtively transported to London and lodged in the British Museum." Long known to antiquaries as a conspicuous member of the early Christian series to which it belongs, it originally stood near the ruins of a chapel, dedicated to the Virgin Mary, under the brow of the hill on which the farmhouse of Cadboll is situated. Some time in the latter half of the nineteenth century it was removed to Invergordon Castle, where it has since remained. Unfortunately, the position in which it was then placed was a very exposed one, with the result that in recent years the sculptures with which it is covered have been badly weathered. Possible anxiety of the proprietor to consent to its being taken away for better protection from the weather is gratefully acknowledged, but "he cannot

be excused for having done it in a thoroughly wrong way," and "if his action is difficult to understand, that of the officials of the British Museum is wholly unintelligible" to our contemporary. Their conduct, it insists, is "neither excusable nor intelligible." They are reminded that it is not so many years since Dublin successfully insisted on the surrender of certain gold ornaments over which the British Museum seemed to have gained a far more secure hold than it has had time to do over the Cadboll Stone. "There the aid of the law courts had to be invoked. Here a simple appeal to international comity and the ordinary courtesies of life ought to be more than sufficient." If not, we expect the fiery cross will be raised to some purpose!

A large and well-known manufacturer is of opinion that we are on the eve of a great world demand for galvanised corrugated sheets. Many buildings in the United Kingdom must be re-sheeted without further delay, while tens of thousands of iron roofs and sheds all over the world are in a dilapidated condition. To-day's prices are pounds per ton below actual cost of production, and, even should fuel, steel billets and labour fall still further, there is no possibility of galvanised iron prices remaining much longer at present low levels. Galvanising spelter is becoming somewhat scarce, and, with an improved demand from sheet-makers, there will undoubtedly be a sharp advance in price. It is generally admitted that the downward movement in prices of galvanised sheets has been overdone, but it is to be hoped that the upward reaction will not be too great. There will probably be a concerted movement on the part of makers to try to steady prices. Consumers and merchants could prevent a runaway market by anticipating their requirements now.

THE GROSVENOR GALLERY.

We have to congratulate the new management on the reopening exhibition of the Grosvenor Gallery. The place is brightened up, the pictures are well hung, and there are not too many of them—the total show is 167, and it includes a creditably typical collection of the best work by the leading artists of the time.

Some few we have seen before, but none will grumble at that. Mr. John S. Sargent, for instance, lends his "Venetian Tavern" (17) and "The Grand Canal and San Geremia, Venice" (19), both small works, but each bearing the stamp of vigour that with apparent little effort ensures greatest effect. His third work shown, "Mrs. Leopold Hirsche" (26), is lent by Mr. Hirsche, the fortunate owner of one of the artist's best portraits.

Another familiar work is Sir James Guthrie's "The Velvet Cloak" (18), lent by Mr. Alexander Maitland. Equally well known is Sir John Lavery's "Lady Latham" (9), but Sir John has two later subjects, "The Funeral of Kaid Sir Harry Maclean, at Tangier, Feb. 6, 1920" (8), and "In Morocco" (10), each full of life and colour.

Sir William Orpen sends three grimly humorous scenes of war and armistice times—"Armistice Night, Amiens"

(89), is indeed a laughter-provoking rendering of the joy of victory, and "Changing Billets" (91) probably little exaggerated; but "The Official Entry of the Kaiser into Paris" (93) is the bitterest but best-deserved satire on the pretensions of the wretched cause of all the misery the world is enduring yet attempted. It should be reproduced and impressions made obtainable all the world over.

Mr. Augustus E. John sends no oils, but he has no less than thirteen vigorous drawings (108-156) in the Small Gallery, which, by the way, is, throughout, hung with others of much more than average merit and interest, including a very delightful "Morning" (103), by Mr. George Clausen, and "Lambeth Bridge" (145). Mr. Clausen is also well placed in the Long Gallery, with "Afternoon Sunshine" (36A), a good portrait of "Mark Fisher, Esq., R.A." (45), and some very beautiful "Flowers in Sunlight" (60).

Mr. William Strang has a fine portrait, "The Exile" (15), and a good series of vigorous figure sketches (160-166). Mr. William Nicholson's only contribution is "Lady Pentland, D.B.E." (28), a good portrait, but hardly the better by the contrast between the subject's tartan shawl and the crimson curtain in the background. Mr. Muirhead Bone's coloured chalk drawing of "The Vindictive at Dover After the Attack on Zeebrugge," lent by the Lords Commissioners of the Admiralty (149), is an impressive record of an achievement second to none in the glorious annals of the British Navy.

Mr. D. Y. Cameron is at his best with "The Sanctuary" (3), a strikingly spacious panorama of rockbound hilly landscape. He also sends "The Blue Lochan" (33) and "Cove" (54). Mr. Gerald Kelly scores well with "Mrs. Nicolls" (16), best of all, perhaps, with "Sasha Krepotkin Lebedeff" (20), but scarcely less so with "Consuelo (V.). The Pink Shawl" (72). Mr. James M'Beay sends several portrait studies, "Dacia" (7) appealing most to our appreciation.

Among others specially deserving mention are Mr. David Muirhead's "Battersea" (2) and "Rochester" (4); Mr. Arnesby Brown's "The Hamlet" (6); Mr. Philip Connard's "Epping" (12), Mr. Charles Sim's "Love and Pan" (36), Mr. Charles Shannon's "The Infant Bacchus" (43), and Mr. Glyn Philpot's "Adoration of the Three Kings" (53).

There is not much sculpture, but the four pieces contributed by Mr. F. Derwent Wood are very good. The marble "Portrait of a Lady" (74A) is a lovable and dainty piece of work; and his eight sketches in terracotta for a statue of Sir Joshua Reynolds are excellent, and will, we hope, be realised in connection therewith.

ROYAL ACADEMY EXHIBITION.

OPENS MAY 2, CLOSES AUGUST 6.

All works intended for the annual exhibition of the Royal Academy must be punctually sent there on one of the days fixed for their reception. These days this year will be:—Water-colours, Pastels, Miniatures, Black and White Drawings, Engravings, and Architectural Drawings, Thursday, March 24; Oil Paintings, Saturday, March 25, and Tuesday, March 29; Sculpture, Wednesday, March 30.

No work will under any circumstances be received before or after these specified dates.

All works must be delivered at the Burlington Gardens entrance. None will be received at Piccadilly entrance.

Hours for the reception of works, 8 a.m. to 10 p.m.

All works sent from the country or from abroad must be consigned to an agent in London for delivery at the Academy, unpacked, on one of the appointed days. No works in cases will be received; nor will the expenses of carriage be defrayed by the Academy. The attention of foreign artists and of English artists residing in the country and abroad is especially called to this regulation.

No photographing or copying of works will be permitted on the premises of the Royal Academy.

2.—MODE OF DESCRIBING WORKS.

All the works sent by each artist must be entered on a printed form duly filled in with the name (Christian and Surname in full, signed by the artist) and address of the artist, titles and descriptions of the works as they are to be inserted in the catalogue, and the price if it is desired to place them on Sale. These forms must be sent under cover addressed to "The Secretary." No advertisement, unnecessary quotation, or narrative can be admitted.

At the back of each frame must be written the name and address of the artist, with the title or description of the picture, and the number (if there be more than one) to which it refers in his or her list. This information must also be repeated with great distinctness and accuracy on a label securely attached by a string to the top of each frame, and made to hang over in front, as also to each piece of sculpture.

It is necessary that these regulations, more especially the last, should be strictly complied with, in order to avoid delay and inconvenience, as well as inaccuracy in the catalogue.

The forms and labels can be procured (during the month of March only) from the Academy. Applications for them made by letter must be accompanied by a stamped and addressed envelope for their enclosure.

No artist is allowed to send or exhibit more than three different works.

4.—SIZE OF FRAMES, MARGINS, ETC.

Each picture or drawing must be in a separate frame, or if a series of drawings from one story be at any time admitted in the same frame, they must be enumerated as distinct pieces. A case of sculptured gems will be considered as one work, provided the size of the case does not exceed 6 ins. by 5 ins.; and a case of medals or plaques, each of which is not more than 7 ins. in its widest dimensions, will be considered as one work, provided the size of the case does not exceed 3 ft. by 4 ft. Miniatures must be in separate frames, uncased, and enumerated as distinct pieces. Miniatures in frames set with jewels are inadmissible.

Oil pictures must not be sent in under glass, but any oil picture not more than 30 sq. ft. superficial measurement obtaining a place on the line may have a glass put over it if so desired on an appointed day before the opening of the exhibition, of which due notice will be given. Excessive size of pictures and drawings, or excessive breadth in frames or margins, may prevent pictures and drawings obtaining the situation they otherwise merit. Frames of extravagant design or colour or unusual material should be avoided as likely to cause difficulty in arrangement. The frames of engravings and other works in Black and White must not exceed one inch in breadth. Reliefs should be framed.

Small photographs of architecture and architectural sculpture not exceeding "half-plate" size will be admitted, but

only in connection with working drawings and included in the same frame. Good geometrical drawings of moderate size are desirable. Architectural drawings which are the work of an artist other than the designer must have the name of the draughtsman clearly inscribed on the mount, but the draughtsman's name will not be included in the catalogue.

5.—WORKS INADMISSIBLE.

No works which have been already publicly exhibited in London, or which have not been executed within the preceding ten years; no copies of any kind (excepting paintings in enamel, and impressions from unpublished medals, in which case the name of the original designer must be specified); no mere transcripts of the objects of natural history; no realistic models of ships or of other inanimate objects, except architectural models of buildings; no Vignette portraits in oil; and no engravings or etchings that have been published six months, can be received. Miniature paintings over a photographic basis should not be sent.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE CUNARD BUILDING.*

A meeting of the Royal Institute of British Architects was held on Monday at No. 9, Conduit Street, London, W. (Mr. Guy Dawber presiding), when the principal business was the reading of a paper on the Cunard Building by Mr. W. E. Willink.

The preliminary business included the announcement of two deaths—those of Sir Wm. Blake Richmond, K.C.B., R.A., and Mr. Edward Cox. Of the first of these, Mr. Arthur Keen, the hon. secretary, said that Sir Wm. Blake Richmond had been an honorary member of the Society, and had contributed to its proceedings by the reading of papers before it; he had also been one of the leaders of the movement for the abatement of coal smoke in cities.

Of Mr. Edward Webster Cox, Mr. Keen said that he had been associated with the *Builder* for sixty-six years, and for the past forty years had managed its financial affairs. Votes of regret and condolence with the bereaved were passed in both cases.

New associates and members were then formally admitted, and the Chairman called on Mr. Willink for his paper.

The lecturer said that he greatly valued this invitation, but the honour should rather have fallen to his late partner, Mr. Philip Thicknesse. Valued advice had also been given by Mr. Arthur Davis, to whom was due the adoption of the Italian Renaissance as the guiding style of the exterior; and Mr. J. Watson Cabré had handled most of the detailing, until in 1916 he had gone off to the war.

A slide was then shown giving a plan of Liverpool in 1725, when it was a small town, and the present site of the Cunard building part of the open estuary of the Ribble. About thirty-five years later, said the lecturer, the George's Dock was made by enclosing this part of the estuary by a quay wall. This dock remained in use until 1900, when it was closed and sold by the Dock Board to the corporation, which thereupon continued across it the two streets which butted on to it—Water Street and Brunswick Street—thus dividing it into three fine sites. On one of the

* We have several times freely illustrated the Cunard Building. We gave two interiors in our issue of October 3, 1917: an elevation and detail in that of January 22, and a plan and section in that of January 29, 1916; and an exterior view in that of June 21, 1916, from the Royal Academy Exhibition of that year, together with a description furnished by the Cunard Company.

end sites the Dock Board had erected: very fine building; at the other end was that of the Royal Liver Insurance Co. A these differed in height and design, an extreme difficulty was presented to any one who had to erect a building between them, and it was decided to put up one in all respects different from both. An initial difficulty connected with the site was that the water of the estuary percolated through the retaining walls of the old dock; this difficulty was got over by continual pumping, the Cunard Company in this matter performing a service for their neighbours as well as themselves.

When excavating for the foundations the dock floor was found to be of boulder clay. Although this was excellent for buildings of ordinary weight, it was thought advisable to go down to the underlying rock at a depth of about 2 ft. 6 in. at one end and 20 ft. at the other. From the rock up to the basement mezzanine, piers had been built in mass concrete; at that point reinforced concrete began.

The lecturer continued: I do not know that there is anything very special in the reinforced concrete of this building, but I think you might be interested in two matters—the flooring and the cornice construction. The general flooring of the building is based upon a method first introduced and much used by the Trussed Concrete Steel Company. From main beam to main beam (in this case spans of 16 ft. or so) are carried small reinforced concrete beams spaced 2 ft. centres. Between these small beams are placed in position corrugated iron formes, the top of which comes to 2 in. below what will be the top of the beams. The whole is then filled in with fine concrete, all slightly reinforced. The top of this concrete is some 1½ in. below the finished floor level, the difference being made up with cement rendering brought to a fine surface. Then come cork slabs, and finally, linoleum. The slabs serve two purposes, for they help to give the linoleum floor resilience and warmth, and at the same time provide a convenient and easy way of leading wires for light, telephones, bells, and the like, from the walls to interior positions. Through the small beams steel tubes are concreted in, for the purpose of conducting electric light wires without disturbance of the plaster ceiling, and on the sole of the small beams are boards of equal width, fixed by means of hoop-iron placed in position before concreting, and these serve for the reception of fibrous ceiling slabs. The corrugated iron formes were so arranged that after the removal of the sheeting on which they stood they could be detached and used again, and most of them were so re-used three or four times. This floor has been found to be very successful, and has stood all tests, up to the moving of heavy safes—which, of course, in their permanent positions always stand on beams—and except when some temporary annoyance has been caused by the fitting up of offices overhead, we have never heard any complaint on the score of noise. As to the cornice, it is evident that the style adopted demanded a very heavy cornice—as a matter of fact, the cornice actually projects nearly 7 ft. from the wall face. The construction of such a cornice was at first a puzzling problem, for we very naturally wished to have it all of stone. If constructed in the usual way enormous stones would have been needed, especially at the corners of the building, stones far bigger than we could obtain. So a system of reinforced concrete cantilevers was de-

vised, anchored back to the main beams and projecting enough to render possible the use of none but stones of a very ordinary size.

The covering of the building, said the lecturer, was of Portland stone. Roach, a shelly rough stone, which could not be worked to a fine face, but which was as hard and durable as Whitbed, had been used for the rock-faced battered base of the building. The spaces between the basement windows had been made of flat rock-faced stones, with the hope of giving the effect of huge blocks carrying the whole structure. Then came the heavily-projecting rock-faced batter. The story above the batter was built of stones grooved horizontally with fine tines; above this was the ordinary rubbed surface.

Of the planning and the general proportions of the building the lecturer said: The planning of the building is very simple. An important doorway in the centre of each side gives access to a main corridor dividing the block into two halves equal and similar in all but width. On each side of this corridor on all floors above the ground is accommodation of one bay, 16 ft. in width, practically all given up to staircase, lifts, and lavatories, etc., for principals and staff, men and women. The staircase is worth mentioning, for since the introduction of lifts there has been a tendency to relegate the stairs to a very secondary place, making them narrow, dark, and inconvenient. By putting in a really good staircase you not only give opportunity for easy and quick communication between floor and floor, but you add light and cheerfulness to each corridor and good chance of ventilation. On the four lowest floors, including the ground floor, the whole of the space covered by the building is utilised, but on all the floors above the ground floor each half of the building has in the middle of it an open area, about 60 ft. by 50 ft., lined with white tiles, giving excellent light to the offices—about 55 ft. wide between the areas and the streets. . . . The ground floor is some 8 ft. above the pavement, so as to allow for good windows to the lower ground floor rooms, some of which are of considerable importance. The ground floor is 23 ft., floor to floor, all floors above it 14 ft., except the second floor, which is 16 ft. The height of the corona is 110 ft. above the pavement, and the screen wall about 10 ft. more. The total length of the building is 330 ft., the breadth at the pierhead end 170 ft. and at the city end 200 ft.

The style of the exterior, said Mr. Willink, was Italian Renaissance, though he did not claim that he could give chapter and verse for all the details. Of these a distinguished critic had observed that there were in them items showing Greek, Italian and French influence; but Italian Renaissance was a style in which you could find anything you looked for, and there was a real danger in being a purist in such matters. (Hear, hear.) There was a good deal of carving on the outside of the building.

Of the interior, the lecturer said that the main corridor was clothed with Subiaco marble, a material of a very pleasant cream colour. The main columns were Doric, reaching up to the ceiling, with a Greek lower order between them. In the centre the corridor was widened, to give importance to the main entrance to the Cunard Public Offices on the one side, and that of the Pacific Steamship Co. on the other. The piers and walls of the Cunard office were covered with a white

grey veined marble, Arni Alto by name, which reflected light wonderfully well. The columns under the skylights, apparently magnificent green monoliths, were scagliola. (Laughter.) Really, they were ventilation trunks. The piers in the Pacific office were plastered and painted, with a good deal of gilding—marble could not be obtained in sufficient quantity when this office was fitted up. A feature of the Cunard office was a corridor parallel to the river front. The marble for these columns was Pentelicon, and that for the lower order Crestola, one of the Carrara series, very similar to the Arni Alto. In all the offices, whether those of the Cunard Co. or of smaller tenants of the building, doors were glazed down to the bottom rail, and dividing walls were avoided as far as possible, their purpose being served by 7-foot framing with uninterrupted plate glass to the ceiling. Thus a general air of spaciousness was noticeable, and in most cases the piers were plastered in a decorative manner and painted cream. The building was heated by radiators with forced circulation of low pressure hot water, but ordinary fireplaces could be added where desired.

The lecturer concluded with the following surprising reference to the cost: The whole of the general contractor's work was carried out without contract, on the principle so common in shipbuilding, and almost universal during the war, of cost plus profit. And though this method has worked shockingly badly in many cases, in this instance I feel sure it was the wisest that could have been adopted. It all depends upon the honourable character of the contractors, and as we were so fortunate as to have Messrs. Cubitt and Co. in that capacity, we were safe. In the calculation the Cunard Co. were taken as tenants, and their fitting up was not taken into account. But including all the landlord's work, the building, the heating, drainage, lavatories, lighting, lifts, etc., and not omitting the marble decoration of the main cross corridor, the cost of the whole works out to 1s. 2d. per cubic foot. This price seems absurd now, and seeing that almost the whole was carried out during the war, I do think it is rather remarkable, and a justification of the methods adopted.

Professor Adshead moved the vote of thanks, saying that he had been a fellow architect of Mr. Thicknesse for a number of years previously to the erection of the Cunard building. He remembered well the anxiety with which the Liverpool Corporation had viewed the question of a building on the site, and had himself prepared a plan for a building there, which, happily, had not been erected. One or two questions in detail interested him. In the first place, what was the connection between the reinforced concrete and the Portland stone exterior? Did the Portland stone stand upon itself or was it attached to the building?

Mr. Desch (one of the directors of the Cubitt Co.) seconded the vote of thanks, saying that no building he had ever been connected with had left more pleasant memories than this one associated with Mr. Willink and Mr. Thicknesse.

Mr. Cross said the architects of the Cunard building might be congratulated on having produced something which would be regarded in future as marking an epoch, alike for architectural merit, constructional merit, and fineness of plan.

Mr. Gilbert Scott said it might be interesting to know that he had just had a tender for a reinforced concrete factory in London at 2s. 10d. per cubic foot.

The Chairman congratulated Messrs. Willink and Thicknesse upon having had

the opportunity to put up such a wonderful building. It fell to the lot of few architects in England to put up a building on an island site, untrammelled by restrictions as to light and air, and on one of the finest sites in the world. Anyone who came across by the steamer from Birkenhead to the landing-stage, and saw the series of buildings—Saint Nicholas' Church, the Liver Building, the Cunard building, the Dock Board building, and, on the far horizon, the growing Cathedral—would agree that this was one of the most beautiful pictures you could have on any waterway in the world. He congratulated Messrs. Willink and Thicknesse on the way they had seized their opportunity and given Liverpool a building to be proud of. He had been greatly struck by the simplicity of the planning. Like others present he would like further information as to the great seven-foot cornice.

Mr. B. L. Hurst, M.I.C.E., A.M.I.M.E., who had been responsible for the erecting of the cornice, gave the further details that were asked for. He said there was an overhang of seven feet from the wall face and of about eight feet from the face of the columns, because the columns stood behind the wall face. The way in which the cornice was carried was made possible by the large stone corbels or modillions underneath. Over each modillion a reinforced concrete cantilever of the full depth of the cornice, but hidden from sight by the modillion, stretched out; and the cornice was hung from this. These cantilevers were carried away back into the building, and anchored to a line of beams running parallel with the wall face and about ten feet inside, so that there were the wall beams with a line of beams behind them, and the cantilevers coming out at intervals of four or five feet where the modillions occurred. The cornice stones were dovetailed on to the sides, and the modillions on to the bottom of the cantilevers. There had been a difficulty at the corner where the angle of projection had been twelve feet from the face. This was dealt with in the same way, but with larger cantilevers. In this case the cantilevers were too large to dovetail the cornice stones on to them, so these were slung up to the cantilevers.

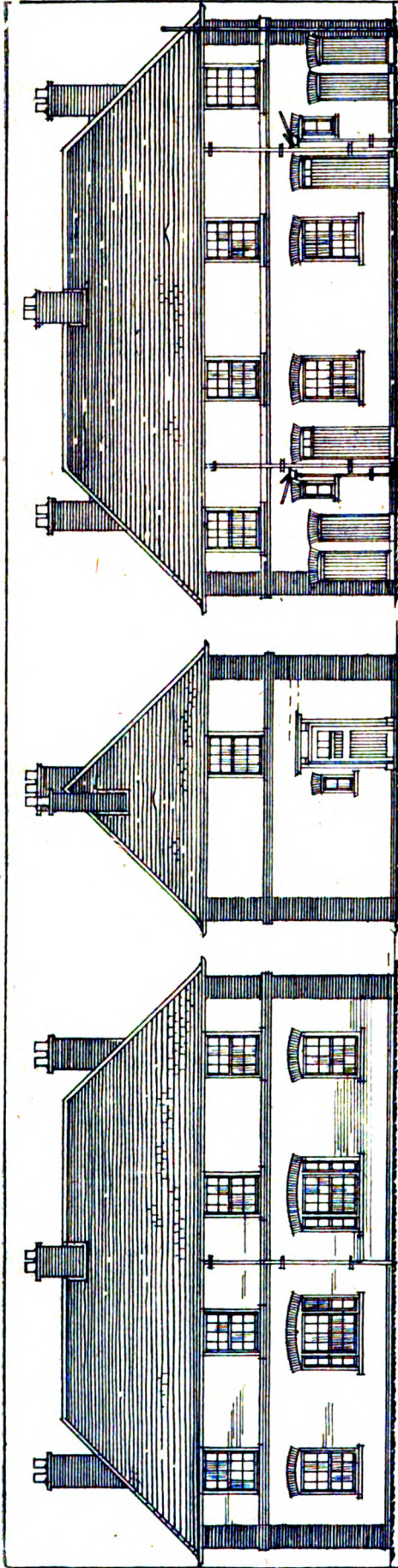
Mr. Willink thanked the chairman and audience for all the exceedingly kind things that had been said. He had been hoping, he said, there would be many criticisms, and had anticipated getting some sort of definition as to the length to which one might go when adopting a style, in taking liberties with it, and making it something different from what it had been before. In this respect he had been disappointed. With regard to Professor Adshead's question as to how the Portland stone clothing was put on to the reinforced concrete, the Portland stone would very nearly stand by itself. It was not a complete wall, because it had to be thinned very much as it came across the piers. Similarly with the beams which formed the ends of the floors. The stone had to be thinner over the beams, but it was on top of, and below the beams, so that these made part of the wall. At the angles he remembered being very much puzzled how to get the strength which there ought to be at the corners of a building. At first they had put a big square column at the end, but did not like the Portland stone being so thin; and, on Mr. Hurst's suggestion, they had put two columns, giving an extremely strong corner, on which the support of the main building could be very well trusted to rest. Mr. Hurst had left one matter a little uncertain with regard

to the cornice. The cantilevers came where the modillions were, but were dovetailed in to the top of the modillions, so that the modillions themselves could not fall; not because the reinforced concrete came underneath them, but because it was dovetailed in to the top of the modillions, and could not fall unless it broke in the centre.

OBITUARY.

We very sincerely regret to announce the death of Sir William Blake Richmond, R.A., K.C.B., D.C.L., at his residence, Beevor Lodge, Hammersmith, last Friday, in his 79th year. With the possible exception of Sir Frederick Leighton, no artist of our own time displayed so successfully so many activities. A sculptor of no mean eminence, he was equally master of the arts of fresco, tempera, mosaics, and other decorative processes, while the long list of his paintings would fill a page. Nor were his achievements confined to art alone. He took a prominent part in 1860 in the formation of the Artists' Volunteer Corps, he was one of the most active members of the Hammersmith Borough Council in the days before it began to skin the ratepayer, he was an Alderman of the L.C.C., he took a most useful and persistent part in fighting the smoke fiend, and with all these demands on his time and patience, no cause worth championing, no case of distress ever failed to elicit his sympathy and practical help. As a student at the Royal Academy he won two silver medals in 1857, and ten years after exhibited his first picture there. "Enid and Geraint," conceived under the influence of the Pre-Raphaelite school, with the members of which, notably Ruskin, Morris, Leighton, and Holman Hunt, his early associations were identified. Several years in Rome were followed by the exhibition in 1869 of his first great work "The Procession of Bacchus." A winter in Algeria was followed by the taking of an old manor house at Richmond, and from that time thenceforward scarcely a year passed without the exhibition of his works at the Royal Academy and elsewhere. In 1888, the year of his election to Associate rank, he was represented by four portraits, "Prince Bismarck," "Mrs. J. A. Fuller Maitland," "Mrs. Ernest Moon," and "Viscountess Hood." Again, in 1895, when he was elected R.A., his picture was a presentation portrait of the "Rev. Canon Milman, M.A." He was made a K.C.B. two years after, while D.C.L., LL.D., and F.S.A. followed his name. He was also Slade Professor of Fine Arts at Oxford from 1837 to 1893, President of the Society of Miniature Painters in 1899, and a member of the Atheneum Club. Amid all this work, in 1891, he accepted the invitation of the Dean and Chapter to decorate the interior of St. Paul's, stipulating that it should be in real and not "paper mosaic," and that the work should be done by Englishmen and not by Italians. Something like twenty years were devoted to this labour of love. About its success there has been much controversy, and probably opinion will vary always according to the preferences or prejudices of critics. Anyhow, it was, we venture to think, more successful than the mural paintings in the Central Hall of the Sessions House in the Old Bailey, which Sir William completed in 1909. Sir William married in 1869 Clara Jane, daughter of Mr. William Richards, of Cardiff, with whom a life of unbroken felicity was spent till the winter of 1914, when Lady Richmond was killed by a motor car at Chiswick. His funeral took place at Chiswick Parish Church on Tuesday last.

An account of discoveries made during excavations at Glastonbury Abbey was given by Mr. F. Bligh Bond to members of the Society of Architects on the 10th inst. It was mentioned that among the finds was a leaden disc which had become detached from a Papal Bull, emanating from Callixtus, one of the Borgias, who instituted a Holy War against the Turks.

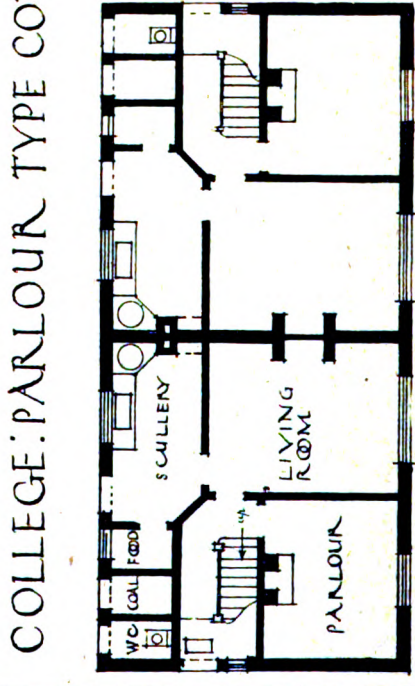
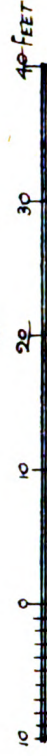


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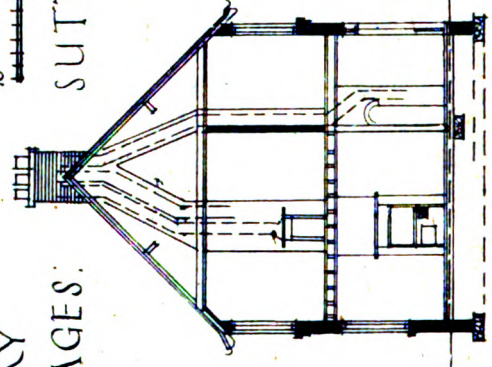
: SIDE ELEVATION :

: REAR ELEVATION :

MIDLAND AGRICULTURAL & DAIRY
COLLEGE: PARLOUR TYPE COTTAGES:



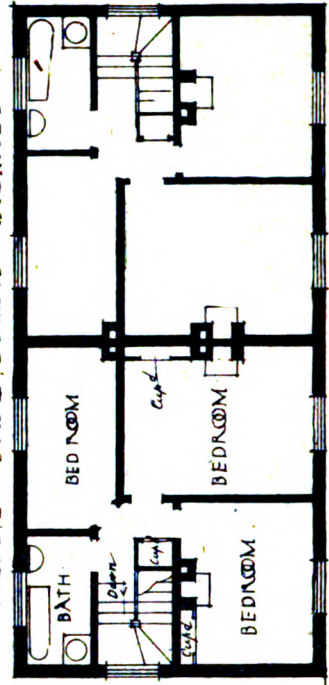
GROUND PLAN



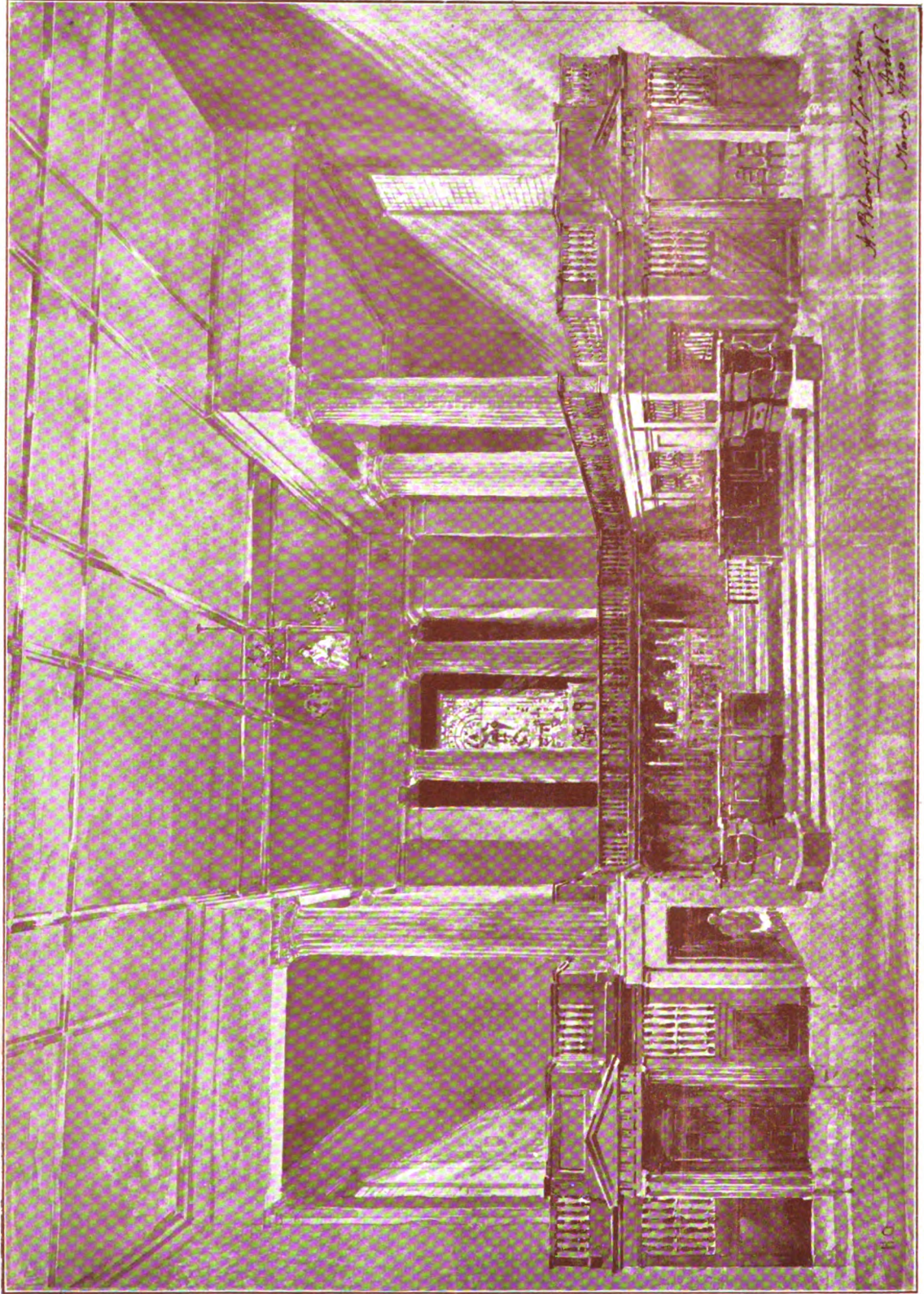
SECTION

SUTTON BONINGTON:

PICK, EVERARD, & KEAY, ARCHITECTS.



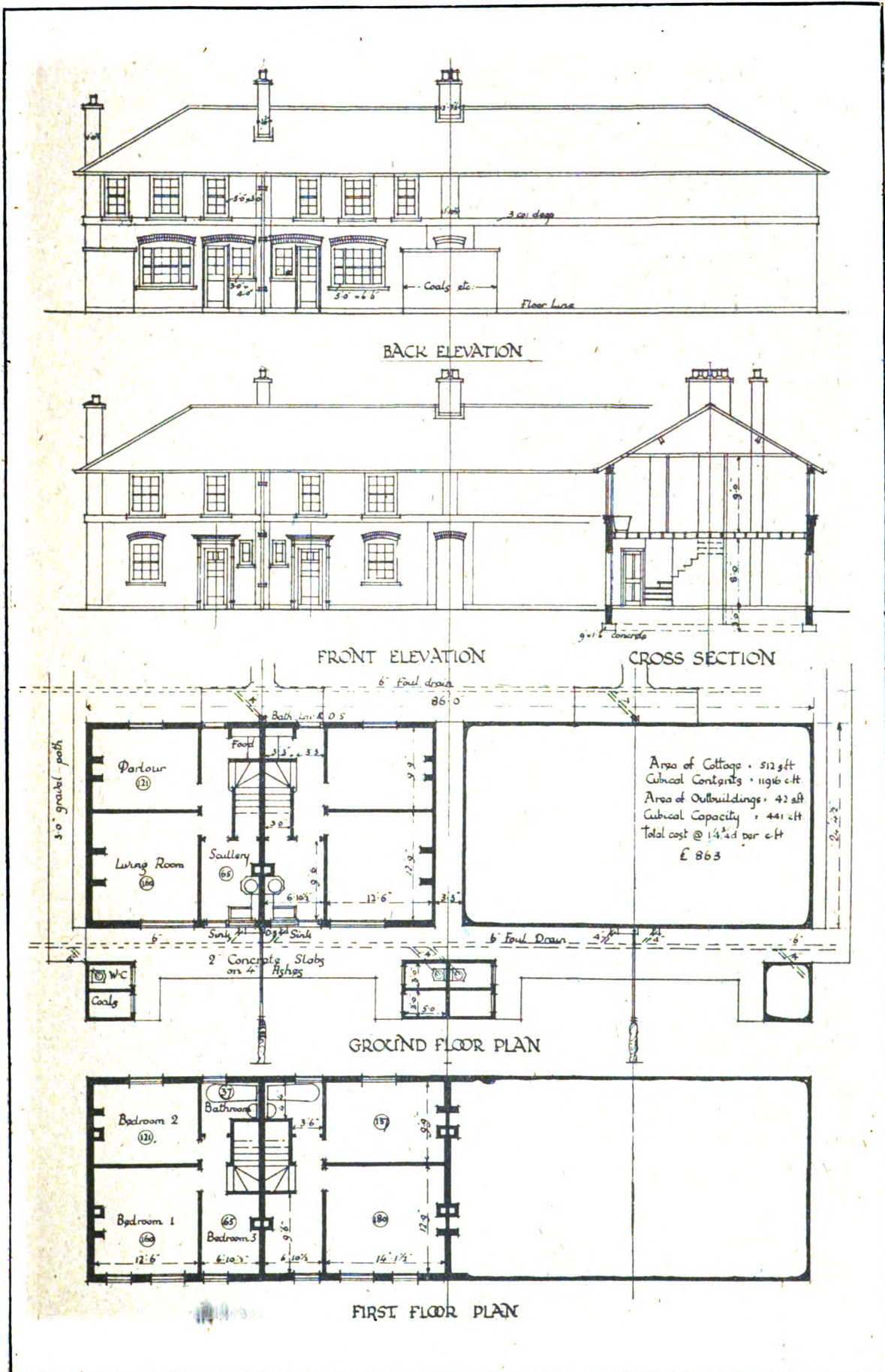
FIRST FLOOR PLAN



ST. MATTHEW'S CHURCH, BRINGTON : RECONSTRUCTION OF EAST END.
Mr. A. Blomfield-Jackson, F.R.I.B.A., Architect.



VILLAGE CROSS, NORTHAM, SUSSEX.
Mr. E. GUY DAWBER, F.R.I.B.A., Architect.



AGREED PRICE HOUSES : LEICESTER HOUSING SCHEME.
Messrs. PICK, EVERARD & KEAY, Architects.

Our Illustrations.

ST. MATTHEW'S CHURCH, BRIXTON.

Our illustration from last year's Royal Academy Exhibition shows the intended alterations of the east end of this church. At the present galleries extend on both sides to the east wall. These are to be removed to form a chancel and sanctuary, with a morning chapel on the south side and vestries on the north side. The vacant space in the tower, immediately behind the altar in the chancel, is to be utilised for the memorial chapel, with a staircase on each side and an approach over the altar. A new memorial window, containing the figure of St. George, is intended to be inserted over the altar in this chapel. The new return stalls in the chancel for the clergy face east, and those for servers and others are on the north and south sides. The choir, as heretofore, will be in the west gallery in front of the organ. The new work is to be carried out partly in plaster and partly in oak, the new flooring consisting of the old stone slabs laid in patterns with brick filling in between. The seating in the body of the church and re-colouring the whole of the interior form part of the undertaking. Mr. Arthur Blomfield Jackson, F.R.I.B.A., of 5, New Square, Lincoln's Inn, is the architect.

VILLAGE CROSS, NORTHAM, SUSSEX.

This cross has been erected on the village green at Northam, in Sussex. The base is of stone; the shaft, with its buttresses, being of oak, surmounted by a group of St. George and the Dragon, carved very nicely and coloured as a finish. The architect is Mr. E. Guy Dawber, V.P.R.I.B.A. The drawing reproduced is by Mr. Harry Waring, the water-colourist.

MIDLAND AGRICULTURAL AND DAIRY COLLEGE PARLOUR-TYPE COTTAGES, SUTTON BONINGTON.

Owing to the difficulty of obtaining suitable accommodation for the College staff, a scheme was prepared for the erection of ten houses, four of which, as illustrated, are in progress. The bricks used are a local wire-cut, with dark brick facings to quoins, arches, and string band. All the windows are of the sash type. The roof is covered with brown tiles. The same difficulty has necessitated the erection of houses of a non-parlour type for the labourers on the College farm. The contractors are Messrs. F. Perks and Son, Ltd., of Long Eaton, and the architects Messrs. Pick, Everard and Keay, Leicester.

CITY OF LEICESTER COLEMAN ROAD HOUSING SCHEME.

This scheme provides for the erection of 350 cottages on the east side of Leicester, of which 250 are now in course of erection. The houses are built twelve to the acre. All houses are of the "parlour" type, the ground floor consisting of a living room-kitchen, parlour, and scullery. Where possible outbuildings are dispensed with, and the necessary offices contained under the same roof as the house. On the first floor are three bedrooms (in some cases four) and a bathroom, together with several cupboards built into the walls. The living room is provided with a "Colhainer" range, supplemented by a gas cooker in the scullery of each house for use in the summer months. The lighting is partly electric and partly gas. The materials consist of a local wire-cut brick with Welsh slates.

The concrete door surrounds are also made locally. The front and divisional fences consist of privet hedges. Mr. E. G. Mawbey, M.Inst.C.E., the city surveyor, is responsible for the lay-out of the scheme and the construction of the roads. The whole scheme is under the direction of three architects: Mr. A. J. Wood, A.R.I.B.A., Messrs. Pick, Everard and Keay, Messrs. S. Harrison and Sons. The drawings illustrated show some of the houses designed by Messrs. Pick, Everard and Keay, of Leicester, for this scheme now in progress of execution.

PROFESSIONAL AND TRADE SOCIETIES.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.

—The eighth general meeting of the session of the Birmingham Architectural Association was held at the Queen's Hotel, Birmingham, on February 11, when the President, Mr. H. T. Buckland, F.R.I.B.A., occupied the chair. Mr. H. B. Creswell, F.R.I.B.A., read a paper entitled "Pecksniff, the Architect, Artist and Man." The lecturer said he had observed that papers read before architectural societies, however valuable they might be as contributions to the science and the art, were uncommonly hard to listen to, and with the example of the London Architectural Association before him, he had decided to choose a playful subject rather than a learned one. He had therefore taken the opportunity of tracing out exactly what Dickens had in mind when he drew the famous character of Pecksniff, pointing out that the novelist did not regard him as the good joke his readers found him to be, but rather piled abuse on him, seeming to resent him with a bitterness which suggested that Dickens had suffered at the hands of Seth Pecksniff in real life. On this account, the fact that the author had represented a mean scamp as being an architect was a matter for serious self examination by members of that profession. A very close reading was necessary to reveal what Dickens' ideas on Pecksniff's professional accessories, status, and surroundings were; such a reading would show an almost perfectly consistent picture, indicating that Dickens had not made a study of his subject, but had drawn on his observation, filling in the touches as his art required. The lecturer displayed a plan of Pecksniff's house, which he had reconstructed from hints scattered throughout the novel, and read extracts setting forth Pecksniff's ingenious system of capturing orphans with four or five hundred pounds, and binding them to himself as pupils, with the added obligation of paying seventy pounds per year for board and lodgings in his house. This the lecturer compared to the present-day system of architectural pupilage, which attained the ideal of certain architects who aspired to get people to pay for the privilege of doing work for which the architect received six per cent. remuneration, the pupil's advantages being in learning how his employer liked his work done. Having dealt with Pecksniff the architect, the lecturer went on to elaborate on Pecksniff the artist and man, explaining that his art was the social art, by far the most important art an architect could study. Passages were read illustrating the three chief characteristics of the man, namely, his almost perfect self-control, his entire lack of humour, and his efforts to keep up appearances. At the conclusion of the lecture Mr. Arnold Harris proposed a vote of thanks, which was seconded by Mr. S. N. Cooke, and carried unanimously.

THE SURVEYORS' INSTITUTION.—Messrs. J. E. Drower, C.B.E., A. E. Harris, R. M. Kearns, and E. C. P. Monson have been nominated as representatives of the institution on the Industrial Council for the Building Industry. Mr. E. H. Selby has been appointed by the Minister of Health to serve on the Departmental Committee to investigate the high cost of building. As a result of the recent examination two scholarships have been awarded; one of £80 per annum to Mr.

J. K. Reid, of 11, Warrington Road, Newcastle-on-Tyne, who will take his at the Armstrong College, Newcastle-on-Tyne, and one of £50 to Mr. R. J. Newcombe, of Brasenose College, Oxford, who has entered for the agricultural course at Oxford University. The council has invited representatives of the Auctioneers' and Estate Agents' Institute and the Central Association of Agricultural and Tenant-right Valuers to confer with them as to the basis of remuneration for arbitrators to be laid down under Section 21 of the Agriculture Act, 1920.

Our Office Table.

The National Federation of House Builders regrets to state that there is no reasonable ground for the recent rumours of a fall in the cost of house building. Dr. Addison has stated that contracts can be let at £100 per house less than was possible a few months ago, and this appears to have inspired many prophets to predict a rapid fall in the cost of the house. Unfortunately the facts do not confirm these rumours, for prices are constantly increasing, and it is more expensive to build to-day than it ever was. The increase since the end of March last year in the cost of the necessary materials for one house in Manchester, which is typical of the country, is £130. In London the increase during the last twelve months is 20 per cent. of the then cost, and consists of such items as cement, 73s. 6d. to 90s. 6d.; lime, 63s. to 80s.; bricks, 75s. to 97s. 6d.; facing bricks, 130s. to 165s.; tiling, 62s. 6d. to 97s. 6d. There has been a slight decline in the price of timber due to the reduced freight charged, but in almost every other item substantial increases have taken place. In view of these hard facts the repeated statements as to a reduction in the price of houses are misleading. The reduced tenders obtained by the Ministry of Health may be due to a variety of causes quite apart from the cost of building, the specification may be different, the administration may be improved, or the conditions may be varied. Wages have increased by 20 per cent. during the past year, and as labour is the chief item in the production of houses, there cannot possibly be any reduction in the cost of building until very different conditions prevail.

At Old Street Police Court on the 10th inst., William Brakes, licensee of the Horse and Groom public house, Curtain Road, Shoreditch, was fined £30 and seven guineas costs for supplying three men with intoxicating liquor before noon on January 10. The men were in turn summoned for consuming the liquor. Each of the consumers was fined 40s. Sub-Divisional Inspector Ruck said the licensee told him that men belonging to certain trade unions attended at that house between 7 a.m. and 4 p.m. and signed the books in order to get unemployment pay, and the money was paid there. The licensee confirmed this, and said that the Labour Department provided the money to pay out. The Magistrate (Mr. Wilberforce): Then it is compulsory for anyone who wants unemployment pay to go to the public house once a day?—Yes. Mr. Wilberforce said that the Court would communicate with the Ministry of Labour with reference to a practice which was opposed to the spirit of a fairly old Act of Parliament, and must lead to most undesirable consequences.

The Speaker took the chair last Friday at a meeting of the London Society at the Royal Society of Arts, where a lecture, illustrated with lantern slides, on "The History of the Houses of Parliament," was delivered by Mr. Thomas Wilson, Clerk of the Works, Houses of Parliament. The place of the origin and development of Parliamentary institutions, the lecturer said, must always have an especial interest for the English race. The unity of the site was shown in the history of Abbey and Palace. The Abbey was always conceived as enclosed within the precincts of the Palace, and, in official language, every Coronation still took place, not in the Abbey, but in "Our

Palace of Westminster." The Painted Chamber might be regarded as the chief link in the chain of an unbroken past, dating from the time of the Conquest right on to the Great Fire of 1834. Its final demolition did not take place till 1840. As the attendance of the Commons grew in number, the Knights and Burgesses assembled in the Chapter House, and out of this the House of Commons arose. The lecturer referred to the night of October 16, 1834, when Charles Barry, returning by the coach from Brighton, saw the red glare which betokened that the Great Fire had begun. The Houses of Parliament had caught fire, a new building was inevitable, and the present structure was the attempt of the Victorian age to rival the glorious productions of our forefathers, the builders of our wonderful abbeys and cathedrals.

The exhibition of Franco-British tapestry at the Victoria and Albert Museum is an interesting one. A series of Gobelin Tapestries and Savonnerie capets has been transferred from the Mobilier National and arranged in the north court. They include illustrations of Old Testament stories after designs by Antoine and Charles Coypel, scenes from the "Iliad" by Charles Coypel and Charles Héroult, Pagan deities by Pierre Mignard, and dancers and musicians adapted from designs attributed to Raphael and Giulio Romano; woven by Jean Jans fils (1668-1723), Jean le Febvre fils (1699-1736), and Audran (1733). In the south court are three early Sixteenth Century tapestries illustrating the life of the Virgin, belonging to Rheims Cathedral. These are of Franco-Flemish origin, and were given to the Cathedral by Robert de Lenoncourt, who was elected Archbishop of Rheims in 1509. In the East Cloisters are the King's sixteenth century Flemish panel representing the "Death of Hercules on Mount Oeta," and other pieces, lent by the Duke of Rutland, Mr. J. Pierpont Morgan, the Duke of Buccleuch, Duke of Devonshire, and the Duke of Portland.

The inter-trade union squabble which has interfered seriously with municipal building in Manchester for some months past is at last ended. Representatives of the Parliamentary Committee of the Trade Union Congress, to whom the dispute was ultimately referred, have decided that the claim put forward by the Operative Plumbers' Association was justified. Their claim was that the fixing of pipes for conveying hot and cold water to dwelling-houses for domestic use was their work, and that the fixing of pipes for heating or warming was the work of heating engineers. More than one attempt at arbitration failed. The result was that the work under ten of the Manchester Corporation housing schemes could not be proceeded with. The Parliamentary Committee add to their decision the recommendation that these unions should enter into an amalgamation, since the inquiry has made it clear that the standard wages vary as between the two organisations, being in each case governed by separate agreements.

"The Mechanical World" Electrical Pocket Book, 1921 (Manchester: Emmott and Co., Ltd., 306 pp., 2s.), is, as usual, marvellous value for the money. Revised throughout, with much fresh matter added and many new illustrations, and including a diary, it should be included by every architect, builder, and electrical fitter and worker in the list of indispensable reference books about everything connected with the source and management of the great power which, for one purpose or another, is the present best and the future only energiser in every house, factory, mine, and transport facility, of heat, light, and motion.

Part II. of "Modern Sanitary Engineering," by Gilbert Thomson, M.A., F.R.S.E., M.I.C.E. (London: Constable and Co., Ltd., 12s.), deals with sewerage in continuation of Part I., noticed by us a few months since, and will be found equally useful to engineering students. It is, of course, true, as Mr. Thomson says, that while marked progress has been made during the last fifty years in the design and construction of sewers, the older practice has not become so hopelessly

obsolete as in the case of house drainage. None the less is it important, with the possibility of future developments ever before him, that the engineering student should be constantly directed, as in this well-considered volume, to the scientific considerations which must control his practical work if it is ever to be more than mere rule of thumb. He will also be grateful if his practice hereafter includes the less obvious applications of those principles to such works as sea outfalls, inverted syphons, and the like, illustrations of which from practical work are given.

CHIPS.

Wandle Valley Sewerage Board proposes to reconstruct sewerage works at Mitcham at a cost of £300,000. Before the war the cost would have been only £64,000.

Frank Brangwyn has accepted a commission to decorate the dome of the State capitol in Jefferson City. The *Kansas City Times*, discussing the matter, believes that if any painter has found the poetry of industry it is Brangwyn.

At a meeting of the Industrial Council for the Building Industry, held at Montagu House, Whitehall, last Friday, the resignation from the council of the Scottish National Building Trades Employers' Federation was received.

In view of the disappointing result of the competition, the L.C.C. has decided not to award the prize of £1,000 offered last May for the best design for a new electric tramcar. "Nothing really new and at the same time practical has been suggested," reports the Highways Committee.

St. Alban's Church, Worcester, the oldest remaining church fabric in the city, and one which was familiar to St. Wulstan, the last Saxon bishop of the Sea, has been restored at a cost of £900. The original arch of the South door has been uncovered, and a Roman round window and a piscina have been discovered and replaced.

A Danish architect named Ramsing has, it is reported, patented an invention for the utilisation of wind power. The invention is said to consist in a new method of constructing the sails, which renders possible the utilisation of a far larger proportion of wind power than is the case in an ordinary windmill. At the same time, the machinery is stated to offer much less resistance than in any system employed hitherto.

Mr. James Webster, A.R.I.B.A., of Vale Royal, Tunbridge Wells, Kent, late of Lewisham High Road, New Cross, S.E., and of Wickham Road, Brockley, S.E., architect, who died on December 16, aged 69, left estate of the gross value of £42,685, with net personally £18,095. The testator left all of his property to his wife, leaving it to her sole discretion to make provision for his children.

The foundation-stone of the new wing to Boston Hospital was laid on February 3. A new block is being erected at the west end of the present building, with a men's ward on the ground floor and a women's ward on the first floor, each 48 ft. by 25 ft., and each providing accommodation for twelve beds. Messrs. Watkin and Son, of Lincoln, are the architects, and Mr. F. W. Horton, of Lincoln, is the builder, and the contract is £3,490.

A return published in this week's agenda of the London County Council shows that the aggregate net debt of London on March 31, 1918, amounted to £101,429,855, against £108,606,825 on March 31, 1914; or a decrease of £7,176,970. No less than £3,881,668 of this decrease is in respect of the debt of the London County Council itself. Notwithstanding this great reduction, the charge on the rates shows an increase in the year 1917-1918 as compared with 1913-1914 due to a large increase on the rates in respect of the Metropolitan Water Board!

A decree of divorce was granted by Mr. Justice Horridge on Wednesday to Mr. Horace Maginnis Wakley, architect and surveyor, Warwick Road, Earl's Court, because of the misconduct of his wife, Helena Theodora, with John Reiss, a former head boy at Repton School. It was stated that at the time referred to she was forty-three, while the co-respondent was only nineteen. The Judge, giving his decision, said: There must be a decree nisi, with costs and the custody of the child. As to the question of damages, this woman is a perfectly worthless woman. She has been divorced once already. I think that if I give the husband £100 and costs against the co-respondent he gets more than she is worth.

LIST OF TENDERS OPEN.

COMPETITIONS.

March 17.—For Design for a War Memorial at Chatham to the Royal Engineers of all ranks who fell in the war. Sir Reginald Blomfield, Assessor.

July 15.—For Designs for the proposed Council Chamber in Calcutta, for the Legislative Council of Bengal. Three premiums of £500, £250, and £100. Assessor, Mr. Henry Crouch, F.R.I.B.A., Consulting Architect to the Government of Bengal. Architect placed first to be employed to carry out the work.

BUILDINGS.

Feb. 22.—For 88 houses (in pairs), in various parishes.—For the Maldon Rural District Council.—Tenders to A. W. Freeman, clerk, Gate Street, Maldon, Essex.

Feb. 22.—For completion of Public Library, Ramsden Square, Barrow-in-Furness.—Tenders to L. Hewlett, town clerk, Barrow-in-Furness.

Feb. 24.—For 54 houses, Shortlands Site, Beckenham.—For the urban district council.—Mr. J. A. Angell, Council Offices, Bromley Road, Beckenham, surveyor.

Feb. 25.—For 11 houses, Great Driffield.—Mr. B. M. Parkin, Belvedere Parade, Bridlington, architect.—Tenders to H. Brown, clerk, Exchange Street, Driffield.

Feb. 25.—For nurses' home, Booth Hall Infirmary, Blackley, Manchester.—For the Blackley Guardians.—Mr. F. H. Overmann, F.M.S.A., 5, Cavendish Street, All Saints, Manchester, architect.—Tenders to Mr. J. Macdonald, clerk, Union Offices, All Saints, Manchester.

Feb. 28.—For filter house and reinforced concrete tanks, Hill Top, Balendine Nook.—For the Budefield Corporation.—Tenders to the Town Clerk, Town Hall, Huddersfield.

March 1.—For converting buildings into hospital and construction of drains and sewage disposal works at county sanatorium, Almeley.—For the Herefordshire County Council.—G. H. Jack, M.I.C.E., F.S.A., county surveyor, High Town, Hereford.

March 1.—Alterations and repairs to premises, East Gate Street, Carnarvon.—For the Co-operative Society.—Mr. H. G. Thomas, Castle Buildings, Carnarvon, architect and surveyor.—Tenders to R. Davies, Co-operative Stores, Palace Street, Carnarvon.

March 1.—For coastguard buildings (houses for four men), Abbotsbury, near Weymouth.—The Superintendent Civil Engineer, H.M. Naval Depot, Portland.

March 1.—For 140 houses, Wealdstone.—For the urban district council.—Tenders to R. J. Bryant, clerk, Council Offices, Wealdstone.

March 3.—For county council school, West View, Letchworth.—For the Hertfordshire Education Committee.—Tenders to Lieut. Col. A. E. Prescott, county surveyor, Hatfield.

March 4.—For infectious diseases pavilion, Cottingham Castle estate, Hull.—For the health committee.—J. Hirst, city architect, Guildhall, Hull.

March 8.—For converting Branston Hall, Lincoln, as a county sanatorium, and erection of open-air school in connection.—For the Lindsey County Council.—Messrs. Scorer and Gamble, F.R.I.B.A., Bank Street Chambers, Lincoln.

March 15.—For 70 houses, Brentford.—For the urban district council.—W. J. Westlake, engineer, Clifden House, Boston Road, Brentford.

Fifteen bricklayers brought from the Channel Islands to work at Beacontree have been sent back, the trade union refusing to give them tickets on the ground that they were unqualified.

It has at last been decided by the Government to dispose of the site of the old General Post Office in St. Martin's-le-Grand. The scheme for the erection of a new building for the Accountant-General has been abandoned.

The Village Cross War Memorial at Barnack, the gift of Mr. Alfred Webster, was unveiled on Sunday week. The cross occupies a prominent position at the western entrance to the village. It is from a design by Mr. Temple-Moore.

The next ordinary general meeting of the Surveyors' Institution will be held at 12, Great George Street, Westminster, S.W.1, on Monday, March 7, when Mr. A. B. D. Lang (Fellow), will read a paper on the Report of the Select Committee on Business Premises. The chair will be taken at 8 p.m.

Mrs. Josephine Sugden, the widow of a well-known North Staffordshire architect, of Leek, who was rescued from the River Avon at Bath on January 29, was last Monday taken from Bath Hospital to the Guildhall, having made a complete recovery from the effects of her immersion. The magistrates dealt with her in private, and subsequently announced that Mrs. Sugden had been handed over to her friends.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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The Onslow Village, near Guildford, Surrey. "The Close." Messrs. Knapp-Fisher, Powell, and Russell, Architects.

Corrente Calamo.

The Government's Supplementary Estimates, presented this week, amounting altogether to over a hundred and eight millions, including the Supplementary Estimates voted last autumn, hardly bear out its pledges of "Economy." Like the rest of us, we suppose it cannot help paying more for rates levied on its property, but the total, £328,000, seems a heavy one. Large additional sums are required for salaries and wages, and in several instances for actual increases of staff. The Office of Works wants £311,000 altogether for new works, alterations, additions, and purchases. Four items, totalling £228,000, represent expenditure undertaken for the Stationery Office, for which an aircraft factory in Lancashire has been bought and adapted at a cost (included in the foregoing figure) of £195,000. Of course, therefore, the salaries and wages bill of the Office of Works has increased by another £60,000. A further £1,418,000 is required for the Royal Irish Constabulary, and the unrest in Ireland has a reflex in the expenditure of £29,000 more on the safeguarding of public buildings. Remonstrances are useless, of course. Item after item will be voted by obedient majorities, but some of them, we trust, will be remembered by the helpless taxpayer at the coming General Election.

It is little wonder, perhaps, that while our various "Ministries" are premiated by Parliament for muddling and meddling, the minor autoeracies like the Metropolitan Water Board should follow suit needlessly and mischievously. That badly managed authority has within the last few weeks issued to their inspectors and others new instructions, which have resulted in the rejection by them in many parts of the Metropolitan Water Board area of fittings which have hitherto been fixed without any difficulty arising. This rejection is in the form of a statement that the fittings "cannot be passed," or that they "are not approved," or that they "must not be fixed," because they are not made in accordance with either the specification of the New River District of the Metropolitan Water Board, or in accordance with the specification of the

British Waterworks Association. Generally and in effect, the inspectors are saying, or are giving the builders and plumbers definitely to understand, that a supply of water will be withheld unless the fittings are thus made and stamped. No notice of this new departure appears to have been given to any of the manufacturers or merchants, or to the trade generally. No consideration has been given to the effect of the sudden enforcement of such new and illegal demands in rendering obsolete large stocks of fittings held in many hands. The leading manufacturers of such fittings are naturally penalised, and we are glad to hear that a powerful committee has been formed to organise resistance which can hardly fail to be effective. In our opinion, the Metropolitan Water Board have no legal power to enforce what they are demanding through their inspectors. A method is provided by Statute for obtaining consent to all necessary and suitable regulations, and such method ensures that the interests of the public shall be duly considered by the means therein provided. In 1901 the water companies actually tried to get new "requirements" added to their Regulations of 1872, and had to abandon their attempt owing to the strong opposition they encountered. The course now taken by the Metropolitan Water Board is not legal, and it is certainly not in the public interest that the cost of building should be increased, as it inevitably would be by the enforcement of the Board's demands. Not only would the fittings cost more to produce, but the public would have to bear the expense of having the fittings stamped by the Board. For this stamping the Board charge fees already sufficiently high, but probably to be still further increased in the near future. There is no desire on the part of makers to refuse to supply fittings of a sound, suitable, and efficient kind as required by the Regulations of 1872, but the standard of fittings now demanded is far in excess of reasonable requirements, and we trust it will be contested with the support of every professional and trade organisation and by the general public.

Mr. McArthur Butler's letter on another page may find crusty critics among the Pecksniffs of the profession, but that his suggestive "trial trip" would save some "pupils" waste of time

and money we think extremely probable. That the existence of other "bands of hope" besides the Architectural Benevolent Society is not calculated to increase public appreciation of the requisite qualifications for leadership in architecture is certain; and candidates for admission to its ranks will do well to note that the Society's examinations are held under conditions which not only render distance from London no object and reduce the candidate's expenses to a minimum, but also enable them to display their qualifications to the best advantage, a very important gain, especially in regard to its influence on local public opinion, not possible in a theoretical test conducted in an examination room, within a short and limited time, and under high pressure. Probably "more progressive than some people like," the Society's method will do more to advance the need for unity of action in the direction of statutory education and registration than a good deal of the talk we have had during the last few years.

It has probably been noted by those concerned that the principle of leasehold enfranchisement has recently received statutory approval—limited, it is true, to a particular class of cases, but the principle is admitted all the same, and it should not be impossible to extend its application to other classes of cases (and there are many) where justice and social needs can be shown to be paramount to private and particular interests. On December 23, 1920, the Places of Worship (Enfranchisement) Act, 1920, was passed. It is limited to the cases of small properties used for public worship or in connection therewith, including burial grounds, Sunday school buildings, ministers' and caretakers' houses, etc., but where they are held on other than very short leases the trustee leaseholders can as a general rule compulsorily buy up the landlords' interests; and in determining the amount of any compensation, the value of any buildings erected or improvements made by the trustees (*i.e.* the leaseholders) shall be excluded.

Mr. Robert Tappan, a well-known New York architect, addressing the National Housing Association, pleaded for stan-

dardisation in house building, as applied to factory production, especially as regards the use of wood as a building material. He instanced the methods of the Japanese builders, by whom house plans are designed in terms of a standard unit of measurement, the floor mat. The dimensions of the mat are three feet wide by six feet long. The architect marks on his plan the number of mats each room is to contain—this number defining the size of the room; hence the timber used must be of definite lengths, and the carpenter is sure to find those lengths in the timber yard. It follows that but little waste of timber occurs in the construction of a Japanese house. It occurred to Mr. Tappan that an adaptation of this system of unit planning might result in a similar saving in timber in America if he could get the timber producer interested in co-operating. He employed a unit or module of sixteen inches, as that spacing is in common enough use among carpenters, though generally ignored by architectural designers. This unit, when faithfully followed throughout an entire house organism, permits the use of a few simple standard lengths of timber that can be used in many places in scores of differently designed houses. The floor, wall and roof boards, for example, may be cut in multiples of four feet, and be nailed in place without waste. Next, Mr. Tappan carefully scheduled all the timber and submitted his complete details to several manufacturers for their estimates. Instead of saving 25 per cent., he found that he could lower the cost 50 per cent. This was interesting, but it is not the whole story. It was found that unit design and standardised wooden construction sped up the work all along the line. The psychological laws underlying the wonderful manufacturing efficiency of our great modern industrial establishments, Mr. Tappan insists, work out just as truly when they are applied to standardised house construction, and declares he has proved the beneficial effects of Ford car production methods on carpenters, painters, plumbers and other house-building craftsmen. There is absolutely no doubt in his mind but that the housing problem, from the point of view of economical production, will solve itself eventually. It may, with the better-informed American workman. Here, so far, the trade unions bar the way.

Mr. Rex. Vicat Cole's new book, "Perspective as Applied to Pictures, etc." (London: Seeley, Service and Co., Ltd., 38, Great Russell Street, W.C., 18s. net), will do much to make a subject not particularly a favourite with the students of any branch of art more attractive and more comprehensible, and may be read with pleasure and profit by the man of ordinary taste. It is, moreover, profusely illustrated by 472 engravings, many of which are of much value, quite apart from their main purpose. Mr. Cole wastes neither time nor space on the discussion

of theories and technicalities about which much breath or ink and paper have been expended without any great benefit—to beginners, at any rate. What he has to say is set down in plain words and divested of problematic exercises, dear only to the mathematical mind. As he truly says, a knowledge of Nature's perspective is essential to the artist; but her laws are not difficult to understand, if they are taken one at a time, with an explanation of the reasoning on which they are based. Following his method in Part I., no one with average common sense should fail to utilise it for all ordinary purposes. The architect, of course, dealing with drawings of details, has to resort to some elaboration, and with his elevations and details expedients for simplifying the work come into play and are as valuable as they are welcome. These are kept together in Part II., except a few additions in Part III. in the chapters on mechanical perspective. Not that Mr. Cole applies the word mechanical to this branch of perspective as an opprobrious epithet, but merely to distinguish it from its other and more tractable offshoot where fancy and reason can have free play. Some of Mr. Cole's useful hints should be studied by a few of our younger readers from whom we occasionally get drawings—sometimes, as he says, which fail from too wide an angle of view being represented, and at others from an apparent lack of knowledge that we cannot see the whole of a room without altering our position.

America will almost certainly have the biggest War Memorial in the world in Gutzon Borglum's plans for carving a vast memorial to the Confederacy on the face of Stone Mountain, a great granite monolith just outside Atlanta, are carried out. Stone Mountain is a solid block of granite, the northern side of which is a sheer cliff nearly 1,000 ft. high and 1,500 ft. wide. That perpendicular surface is without seams and even enough to offer a vast natural medium for the sculptor's chisel. The memorial will take the form of a big army, composed of more than one thousand figures of Southern leaders, marching across the face of this cliff. Mr. Borglum will cut the figures in heroic proportions, 40 ft. or 50 ft. in height, so that they can be recognised for four or five miles. The principal figures will stand out in complete relief, while other figures will be scaled down through various stages of relief to mere chisel sketches on the surface of the stone, thus giving the appearance of an army fading into the heart of the mountain. Mr. Borglum plans to retain a large number of artists under his supervision, who will work upon the face of the cliff from steel cages swung on cables down the side of the mountain. It is estimated that it will take about eight years to finish the work, at a cost of several million dollars.

Threadneedle Street is to be widened at a cost of £213,275.

"A SHAM AND HYPOCRISY."

Those were Mr. Lloyd George's own words yesterday week in his reply to Mr. Clynes' amendment regretting that there had been no mention in the King's Speech of legislation recognising the right of the genuine unemployed to work. What need there was of any such "regret" we do not see, when, as every employer knows, to-day there is work waiting of all kinds for lack of men who can and will work. That difficulty has been as yet in no way obviated by Mr. Lloyd George's speech. He says the Government will stand by the master builders, whatever action they may take. These were his words in the House of Commons yesterday week:—

"My right hon. friend (Mr. Clynes) has moved an amendment in which he expresses regret that there is no mention in the King's Speech of legislation recognising the right of the genuine unemployed to work. Does he mean everybody's right to work or simply the right to work with a trade union permit? (Cheers.) My right hon. friend wants legislation recognising the right to work. Has a trade union the right to veto? (Cheers.) Take what is happening in the building trade. That is the one trade I know of in which there is more work than workers. Contracts for building houses have been let. You have not enough workers to go round. You could absorb 50,000 more workers now. The money with which to build, the contracts, the materials, are there. Why are not the workers there? There are plenty of able-bodied men wanting work—men who have served their country well, and who, if anybody, have earned the right to work. (Cheers.) Why are they not working? The trade unions which demand the right to work are preventing them. It is a sham and hypocrisy. (Cheers.) Those 50,000 men have got to be maintained by the State at the present moment. We are paying them 20s., some of them 29s., a week out of the taxation of the country. They are anxious to work. The Government are building a certain number of houses. Suppose we were to say that upon the houses to be built by the Office of Works we would put ex-Service men. It would not make the slightest difference. We are putting it to the builders that they should insist upon a fair proportion of ex-Service men being employed on these building contracts. (Cheers.) I have been engaged with them this afternoon—and if the building trade refuses, the Government will stand behind them whatever action they may take. (Cheers.) That is in order to carry out in practice—not in the Division Lobby—the resolution of my right hon. friend. (Cheers.) I am here as a supporter of his resolution. (Laughter and cheers.) The trouble is very largely the unskilled men."

On Tuesday last the Executive Council of the National Federation of Building Trade Employers decided unanimously to recommend the Federation to accede to the request of the Government that employers should take into the industry 50,000 ex-Service men, and agreed to issue forthwith a manifesto to the members upon which a vote will be taken to confer authority upon the executive to carry out the request. We have not the slightest doubt that the action of the Council will be upheld. What will follow? On Tuesday evening Mr. R. Coppock, the general secretary of the National Federation of Building Trade Operatives, stated that a national conference of the joint executives of the different unions has been called for March 3 to discuss the whole position with regard to dilution, and particularly the Government proposals to the employers and the employers' proposals to the unions. "If the employers decide on a certain policy which is anti-trade union from our point of view," he said, "obviously there is the danger of a national strike or a national lock-out, and the position might quite easily become serious."

It might, and will—very speedily, in our opinion—if a national strike is proclaimed by the building trade unions, and is followed, as we hope it will be,

promptly, by a national lock-out by the building trades employers. In any case, Mr. Lloyd George has distinctly promised that the Government will stand behind the building employers whatever action they may take. What can the Government do? As Dean Inge pointed out in the debate at the Oxford Union on Tuesday night, by the Trades Disputes Act of 1906 constitutional democratic government committed suicide, for the trades unions were then placed outside the law of conspiracy. Nothing, as he added, has been more contemptible and yet tragic than the impotency of the Government in the case of raids by the unprincipled classes of the population. Nothing will be more disastrous than the stoppage that will follow a strike proclaimed by the building trades unions simply to keep the ex-Service men out of work. It would indeed be "a sham and hypocrisy" if the Government hesitated in such a case to repeal the Trades Disputes Act of 1906, and passed a short Act providing for the same action as that taken by the French Government last autumn, when it soon broke the big labour strikes in France by imprisoning the agitators who fomented them against the interests of national necessity. At the moment no national necessity is more urgent here than that for the housing of the people; and nothing can be more criminal than conspiracy against such a wise and promising step as the enlistment of the ex-Service men for the quicker completion of the housing schemes that are in abeyance or delayed all over the country, and every honest man will stand by the Government against the machinations of the unprincipled agitators who are striving to keep the people homeless.

NOTES FROM THE MINUTES OF THE R.I.B.A. COUNCIL MEETING (February 14, 1921).

H.R.H. the Prince of Wales: The Prince of Wales has consented to accept the Hon. Fellowship of the Royal Institute, and the nomination will be submitted to the general body in due course.

The R.I.B.A. Library: The Council are considering an interesting scheme prepared by the Literature Standing Committee for improving the accommodation of the Royal Institute Library.

The Conditions of Contract: The Council have appointed a committee for the purpose of meeting representatives of the Institute of Builders and the National Federation of Building Trades' Employers and discussing the position with regard to conditions of contract.

Housing in Rural Districts: Arrangements have been made for the appointment of a member with special experience in rural housing schemes to assist the representatives of the R.I.B.A. in negotiations with the Ministry of Health.

R.I.E.A. Garden Party: A garden party will take place on Peace Day, 1921, on the same lines as the successful function of last year.

The Godwin Bursary, 1921: The programme of the tour of Mr. C. B. Pearson (Fellow) as Godwin Bursar, 1921, has been approved. Mr. Pearson will travel in the United States to study the planning and construction of hotels.

Reinstatements: Three members have been reinstated under By-law 22.

THOMAS HARDY, O.M.

On Tuesday week the members of the Twenty Club were entertained at Kimbolton by Capt. T. C. Chamberlain, A.F.C., with a paper on Thomas Hardy, dealt with purely as a novelist. Commencing his paper, Captain Chamberlain said Hardy was the sole survivor of the great Victorian school of English authors, an age which produced literature only second to that of the Elizabethan period. On the death of Meredith, Hardy's genius found a tardy recognition in being awarded the Order of Merit. Born in 1840 at Dorchester, he was trained as an architect, and in 1865 went to London to study. One finds the effect of his architectural training in frequent references in his works, and also in the balance imparted to his stories. He did not give up his career as an architect until the great success of his third novel, "Far from the Madding Crowd," in 1874. He very early settled down to a definite style. His first book, "Desperate Remedies," finds him experimenting to attain this style. His next, "Under the Greenwood Tree," shows his style fixed. The whole of Hardy's style is extremely simple, clear prose, comparable only to that of Swift, and again providing a contrast with Meredith, who delighted in very complex writing. Hardy did not merely project the writing of one book, but planned a whole series of novels dealing with the life of the Wessex countryside. Hardy defines Wessex as the whole trace of country lying south and west of a line drawn from Oxford to Bristol; however, the bulk of his work centres round Dorsetshire. On the whole, Hardy was a pessimist owing to the fact that he chose to view life as a whole, and not merely in part. It was a revolt against a prevalent Victorian defect—smug self-satisfaction. This displeased the critics of the day, who found, however, that argument with such a master of clear pointed speech was not a profitable game. Hardy showed himself a great artist in his admirable descriptions of landscape. He portrays his scenery as a background before which the actors play their parts. The scenes either harmonise with the emotions of the characters or contrast with them in beauty, with their gloomy thoughts. Capt. Chamberlain then read a description of Egdon Heath in "The Return of the Native," which incidentally was the Heath of Lear, an early King of Wessex. In this story the dark and sinister heath becomes almost an extra character, and infuses at the beginning of the book the atmosphere of tragedy which the tale portrays. In all Hardy's stories the actual characters are the main interest; given certain characters, certain definite results are inevitable. Hardy lets the progress of these results go on to the bitter end; he never introduces any lucky accidents in order to influence the outcome of the plot.

At the last meeting of the Hebburn-on-Tyne Urban Council, a ratepayer had written asking whether it was in order for a councillor to be employed upon the council's housing scheme which is being carried out by the Office of Works. The council unanimously decided that Councillor James Milne, chairman of the Housing Committee, by working as a joiner on the scheme, had become disqualified, and declared his seat vacant.

The Scottish Board of Health has set up a Departmental Committee to consider the high prices of building material, and whether these are justified by the existing conditions. The chairman will be Mr. G. W. Currie, the former member for Leith, and he will have the assistance of Mr. John Train, Glasgow; Mr. John White, Edinburgh; Mr. Wallace, Chairman of Edinburgh Trades Council; an architect, a surveyor, and one or two official members.

Correspondence.

THE ASSISTANT AND OTHERS.

To the Editor of THE BUILDING NEWS.

Sir,—The activities of the A. and S.A.P.U. are having at least one good result in causing quite a flutter in the various professional dovescotes and in drawing attention to matters affecting the public as well as the profession.

The correspondence in the *Edinburgh Evening News*, referred to by one writer, supports my contention that the public have not the least idea of "how to become an architect." They are not to blame, because, except where the way has been pointed out to them in individual cases, they are left to find out in the costly school of experience.

This is a state of things which the Society hopes in due course to remedy by affording the public some guide in this matter. In the meantime it is my personal policy strongly to discourage the indiscriminate entry of all and sundry into the architectural profession, and to point out to inquirers that it is unfair to the individual as well as to the profession for anyone to be admitted who is not fitted by education, temperament, qualifications and circumstances to take up a career of this kind.

In regard to professional educational matters, there are exceptions to every rule, and with all respect to any who may differ from me, I consider that the pupilage system should be superseded by—or, at any rate, combined with—training at a recognised school of architecture, and that in any case the potential architect should not be bound for a term of years, but should, as it were, take a trial trip not exceeding twelve months, in order to ascertain whether or not he is likely to become fitted to discharge the duties of an architect, or whether he would be better employed in some other calling which would afford him more scope for his abilities. In the latter case he would avoid a waste of time, money and energy which he would otherwise have to expend in completing an uncongenial contract, or forfeit the premium, and would in the meantime have obtained an insight into a profession which would always be of some service to him in whatever other calling he adopted.

In regard to prospects—which, being interpreted by most people, means salaries—I suggest that potential architects should be taught to regard the profession of architecture as a healthy rather than as a remunerative one, as I understand it can be demonstrated that architects exist longer and in a greater state of poverty than the members of any other profession.

As Assistants they find that their chiefs have their own ideas on the wages question, and regard any attempt to establish a minimum as indicating also a maximum, and when assistants cross the line and become principals they find their own scale in like manner regarded by their employers, the public, as the maximum, and consider themselves lucky if they get that, and by the time they have paid the trades-union rate of wages for Assistants and their other expenses and overhead charges, the margin between that and their own minimum wage, if they get it, is so small that they are probably earning less than their chief Assistants.

One correspondent states that in his district an architect who is earning

Mr. Thomas Rutherford, builder, Bonnyrigg, expired last Sunday evening in the vicinity of Cockpen United Free Church, of which he was an elder. The death is attributed to heart failure. Mr. Rutherford was for a number of years a member of Bonnyrigg Town Council.

£1,000 a year is looked upon as a leader in the profession.

This may account for the increase in the "band of hope" locally which he so deplures, but if this idea really prevails it is calculated, in my opinion, to give the public an entirely erroneous idea as to the qualifications necessarily required for leadership in architecture.

In regard to a point raised by a correspondent with reference to some examinations, may I be permitted to point out that the Society's examinations, which are advertised in your columns, are held under conditions approximating to private practice, which not only renders distance no object and reduces the candidate's expenses to a minimum, but also enables him to display his qualifications to the best advantage, which in my view is an important point, and which is certainly not usually possible in a theoretical test conducted in an examination room within a limited time and under high pressure.

The Society's method may be more progressive than some people like, but it will appeal to candidates when they grasp its possibilities.

The subjects which I have traversed very briefly contain, I believe, some points of the greatest importance not only to the persons concerned, but to the future of the profession, and I hope they will be pursued and developed by others more capable than myself of putting them into a shape which will commend itself to all concerned. They all connote the need for unity of action in the direction of Statutory Education and Registration.—I am, Sir, yours faithfully,

C. McARTHUR BUTLER,
Secretary.

The Society of Architects,
28, Bedford Square, W.C.1.

WINDSOR CASTLE.

Sir.—May I be allowed to announce through your paper that on Easter Tuesday the main part of St. George's Chapel will be closed, probably for three years, in consequence of the necessity having arisen for extensive restoration.

The danger is so pressing that the architects would not guarantee that the Chapel would stand for another year without the collapse of the roof, a collapse which would entail utter destruction of the fabric, with all its artistic and historical glories.

Though the Chapel and its precincts stand within the walls of the Castle, they are an ecclesiastical freehold, like any other Church property, and consequently public money cannot be spent on them. The Chapter have no funds available for the purpose. They laid the matter, therefore, before the Sovereign and Knights of the Order of the Garter, for whose use and by whose generosity the Chapel was originally founded.

It was then decided at a meeting of the Order under the presidency of H.R.H. the Duke of Connaught—(1) That the Chapel must be saved; (2) that, in view of the financial conditions of the time, as little call as possible must be made on the generosity of the public.

In pursuance of this decision it was arranged to spread the work over four years, and the members of the Order undertook to provide the funds for the first year.

A committee was formed, including some representative men outside the Order, especially the Provosts of Eton and King's, as representing the interest of those great foundations in the Chapel

as the burial place of their founder. Of this committee H.R.H. the Prince of Wales agreed to be Chairman. A subscription was also begun among the members of the Order, which was responded to with the generosity they have always shown towards the Chapel; a generosity all the more striking in the financial conditions of to-day. This subscription, though not yet quite complete, amounts already to £20,000.

When the first notice appeared in the papers many months ago that a restoration would be necessary, some of the firms holding the Royal warrant united in sending me a handsome subscription, saying that they were doing so as an opportunity of giving expression to the gratitude which they, with the whole nation, felt for the great services the King and Royal Family had performed for the nation during the war, the restoration of a building so closely associated with the Royal House being a suitable occasion in their opinion for such an expression of feeling.

This, with one or two other subscriptions, has brought the fund up to £25,000. As we expect to spend about £2,000 a month, the first year's work is secured. During this year we must try to raise the funds for next year, so that the work can go on without check.

During the coming month we shall be glad to give facilities to those who would like to see the Chapel before it is closed, especially to architectural and archaeological experts who wish to see what we are proposing to do. During the three years when the choir and transepts are closed the services will be held in the Nave.

The work is pure restoration, merely the replacing of decayed material. No alteration will be made in the fabric, and no restoration included in the scheme which is not necessary for stability. The committee and the Chapter feel that this is an assurance due to the nation in its present financial difficulties. There is only one apparent exception to this rule. The architect holds, as Sir Christopher Wren urged long ago, that the King's beasts must be restored on the pinnacles, as their weight is one of the counterpoises provided by the original architect to resist the thrust of the roof. The cost is not a very important item. Anyone can see their artistic value by looking at Hollar's print of the Chapel before their removal.—Your obedient servant,

ALBERT BAILLIE,
Dean of Windsor.

The Deanery, Windsor Castle.

ARCHITECTURAL STUDENTS' COMPETITION.

Sir.—I will not enter into controversy with Mr. Atkinson on the points that he raises: he may be right or wrong in his views, and few things are too perfect for amendment; but I suggest to him seriously that his right course is not to publish his criticisms in the Press when he has in his own hand the means for securing all that he wishes.

The Institute Prizes are awarded not by any jury of assessors, but by the Council of the Institute, which is a body elected by all the members. The Board of Architectural Education advises the Council on matters relating to the prizes, and if Mr. Atkinson had criticisms or suggestions to offer, his obvious course was to bring them before the Board, of which he is a member, knowing quite well that full weight would be given to any proposals made by him. If he failed to convince the Board, he could deal with the

matter in the Council, of which also he is a member. He has every opportunity of knowing the names of those appointed to study the work sent in for the prizes, of revising the conditions that he describes as arbitrary and slipshod, of amending the programmes that he objects to, of securing the publication of lists of names, and of excluding assessors whose selective ability does not seem to him to be up to the standard that he desires.

He advises students not to compete except under conditions which he outlines, but he has not brought these conditions before the notice either of the Board or the Council.

As regards his claim for students' work to be dealt with by young men who have sympathy with the attitude of the student, may I remind him that in the very Committee that he particularly refers to, out of a total of eight members there was only one who could not be described as a young man, and he is at the head of one of the architectural schools. As a matter of fact, he was not present. All the others were men who are well known for their active interest in schools and students.

The Press should be used for the discussion of broad matters of principle; questions of administration are better dealt with in the bodies that are concerned with them.—Yours, etc.,

ARTHUR KEEN,
Hon. Sec. R.I.B.A.

4, Raymond Buildings,
Gray's Inn, W.C.

February 15, 1921.

COST OF LIVING MIS-STATEMENTS.

Sir.—The discredited figures of the Board of Trade *Labour Gazette* for December have now been revised for January, and show a drop of 14 points on the month to 151 per cent. over July, 1914.

I state that such figures are absurd. My figures, carefully tabulated for every reasonable expense of a small household, only show an increase of less than 80 per cent., and the actual increase in price of food and consumable stores is about 70 per cent. My actual figures are at your disposal if required.

With trade bad, unparalleled unemployment, depressed markets, and prices reduced as they are, wages in many cases are being reduced. Yet we read that it was stated in Parliament yesterday that the bonus to the Civil Service is proposed to be increased one-eleventh as from March 1 based on the cost of living figures and estimated to cost the taxpayer another two million pounds per annum.

This is an outrage on the general public, and it should be the duty of every Member of Parliament who has pledged his constituents to work for economy to oppose it.—Yours faithfully,

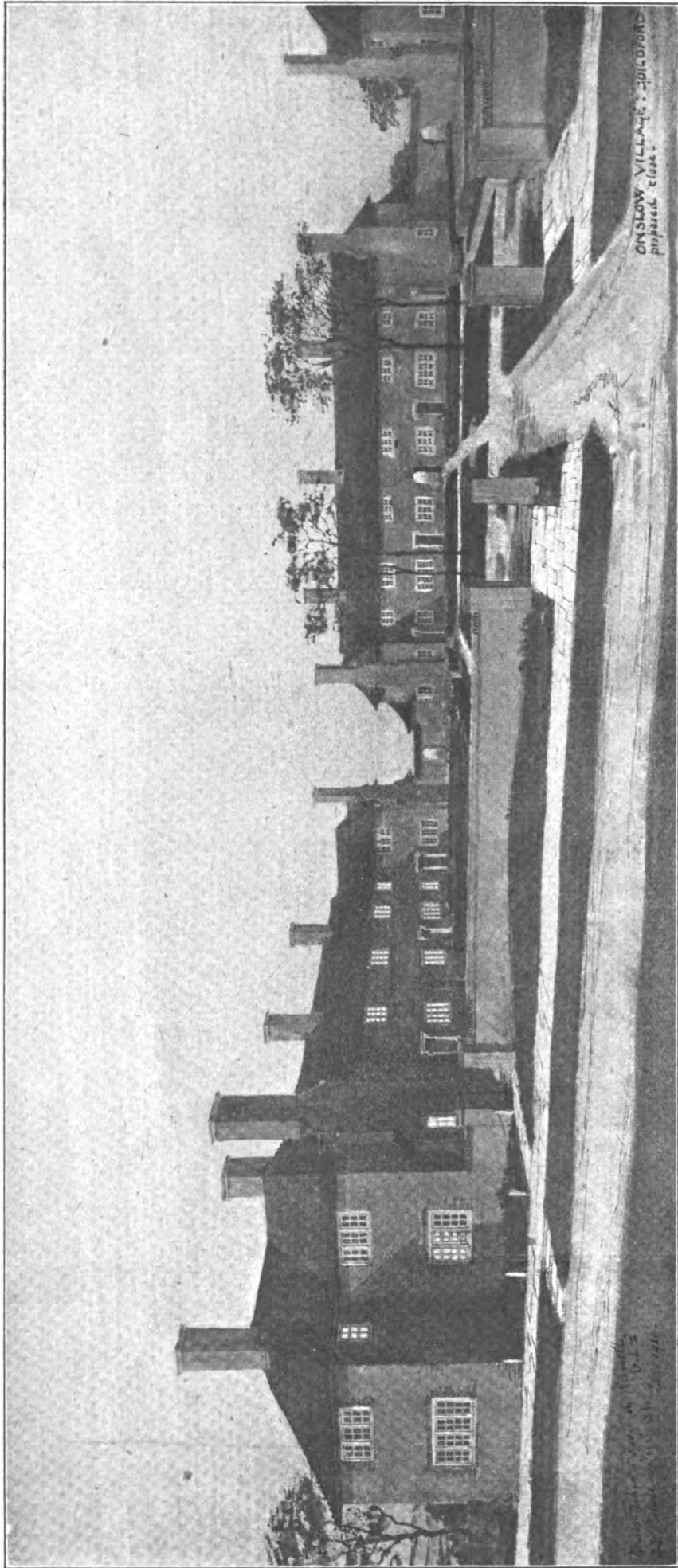
H. J. WHITE.

Cromwell House,
High Holborn, W.C.1.
February 23, 1921.

The death is announced on February 14, at 35, Park Hill Road, Wallington, Surrey, of Mr. John Payne, A.R.I.B.A., the beloved husband of Adelaide Payne, at the age of 72.

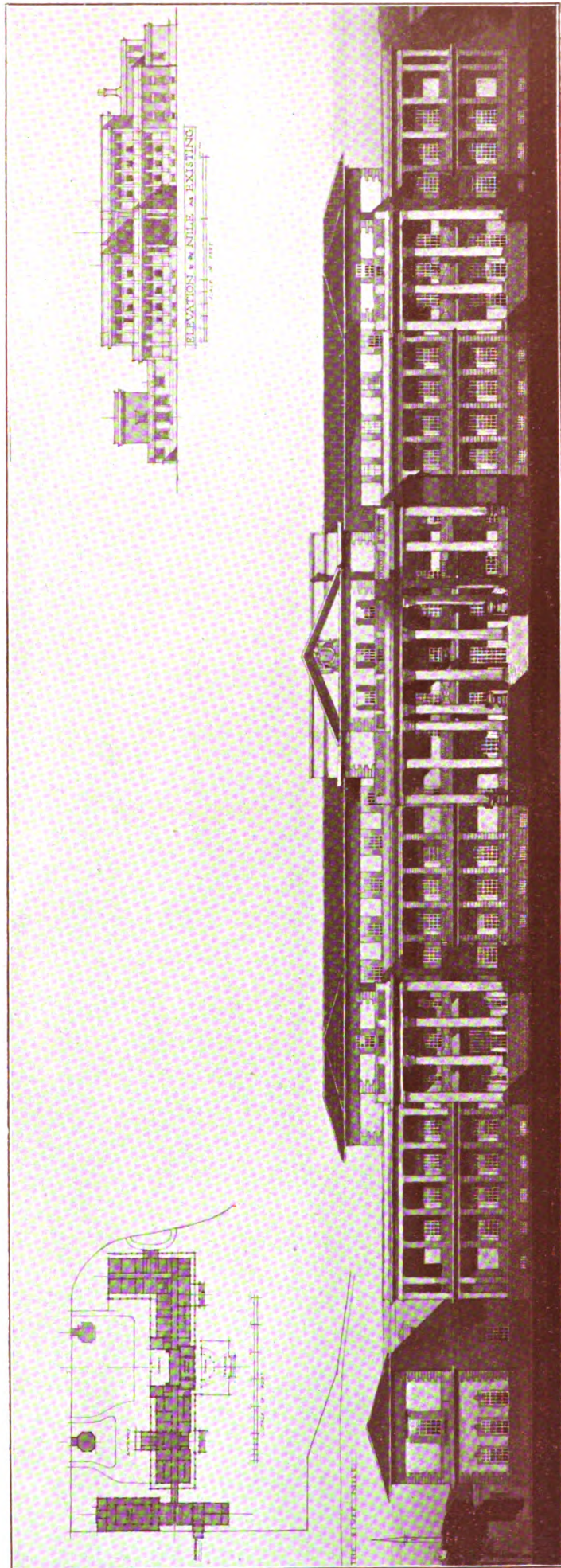
In a codicil to the will of Alderman John Isaac Barton, of Brynmer, Ryde, for six years Mayor of Ryde, the testator revokes the appointment of the Public Trustee as his executor, on account of "the colossal mistakes and muddles which I have observed are made in every Government Department with which I have recently been brought into contact, which mistakes and muddles are combined with gross extravagance." He went on to say that he had no faith in the present Government with such a danger at the head as Mr. Lloyd George. Mr. Barton left estate of the gross value of £44,059, with net personalty £40,577.

THE BUILDING NEWS, FEBRUARY 25, 1921.

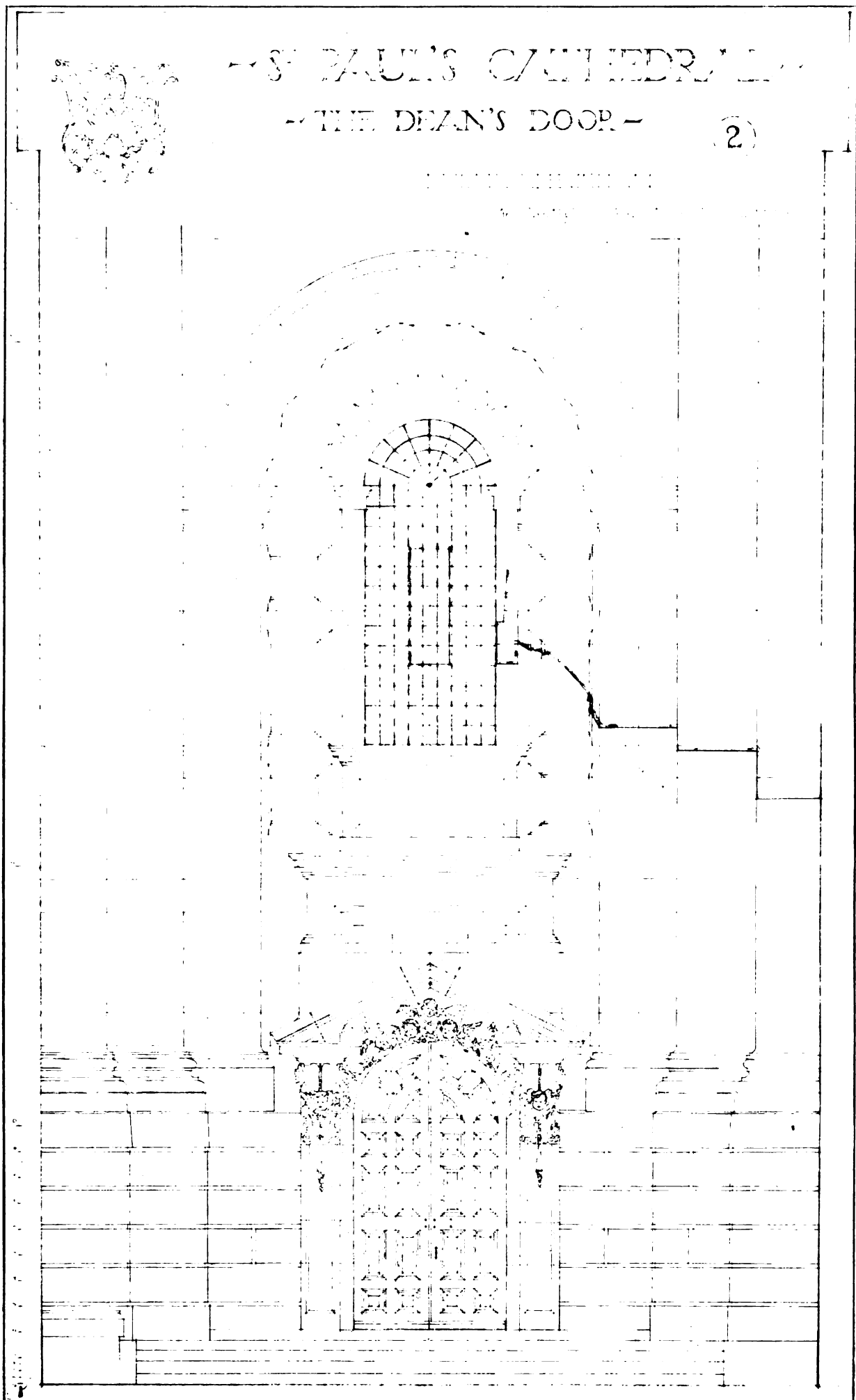


THE ONSLOW VILLAGE, NEAR GUILDFORD, SURREY: "THE CLOSE."
Messrs. KNAPP-FISHER, POWELL & RUSSELL, Architects.

THE BUILDING NEWS, FEBRUARY 25, 1921.

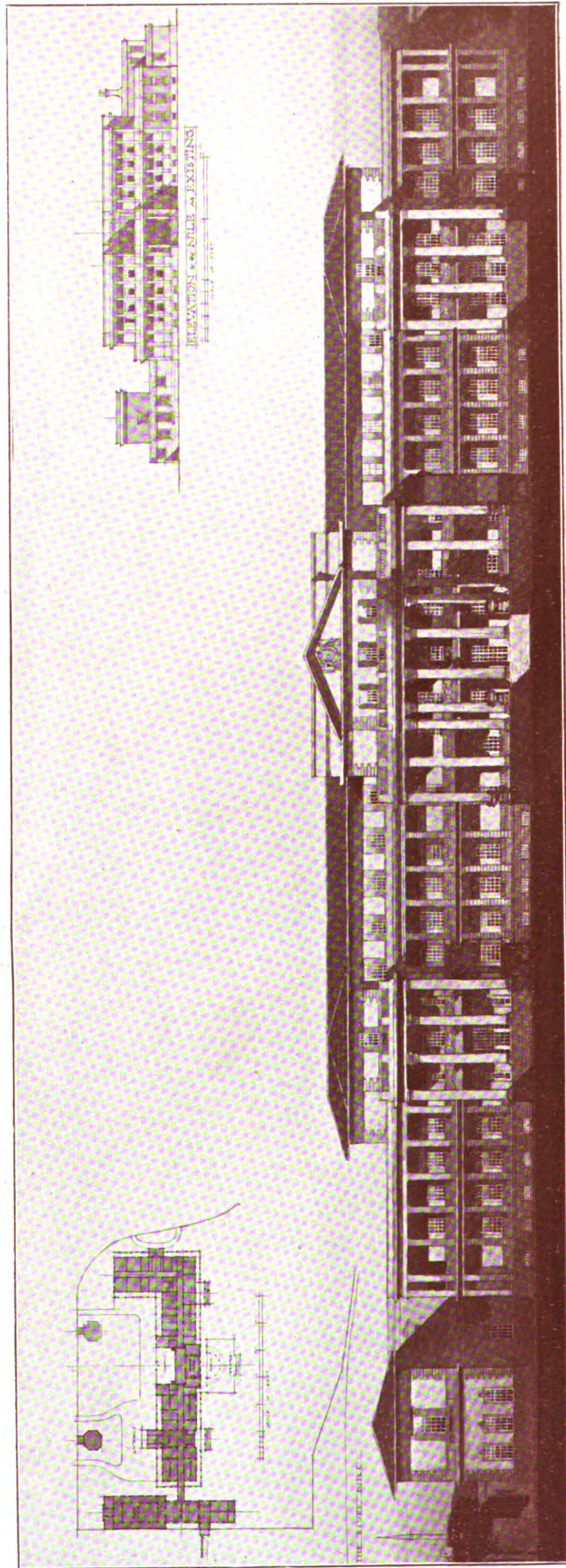


THE BRITISH RESIDENCY, CAIRO, EGYPT : PROPOSED EXTENSIONS,
Mr. RICHARD J. ALLISON, F.R.I.B.A., Architect (H.M.O.W.).



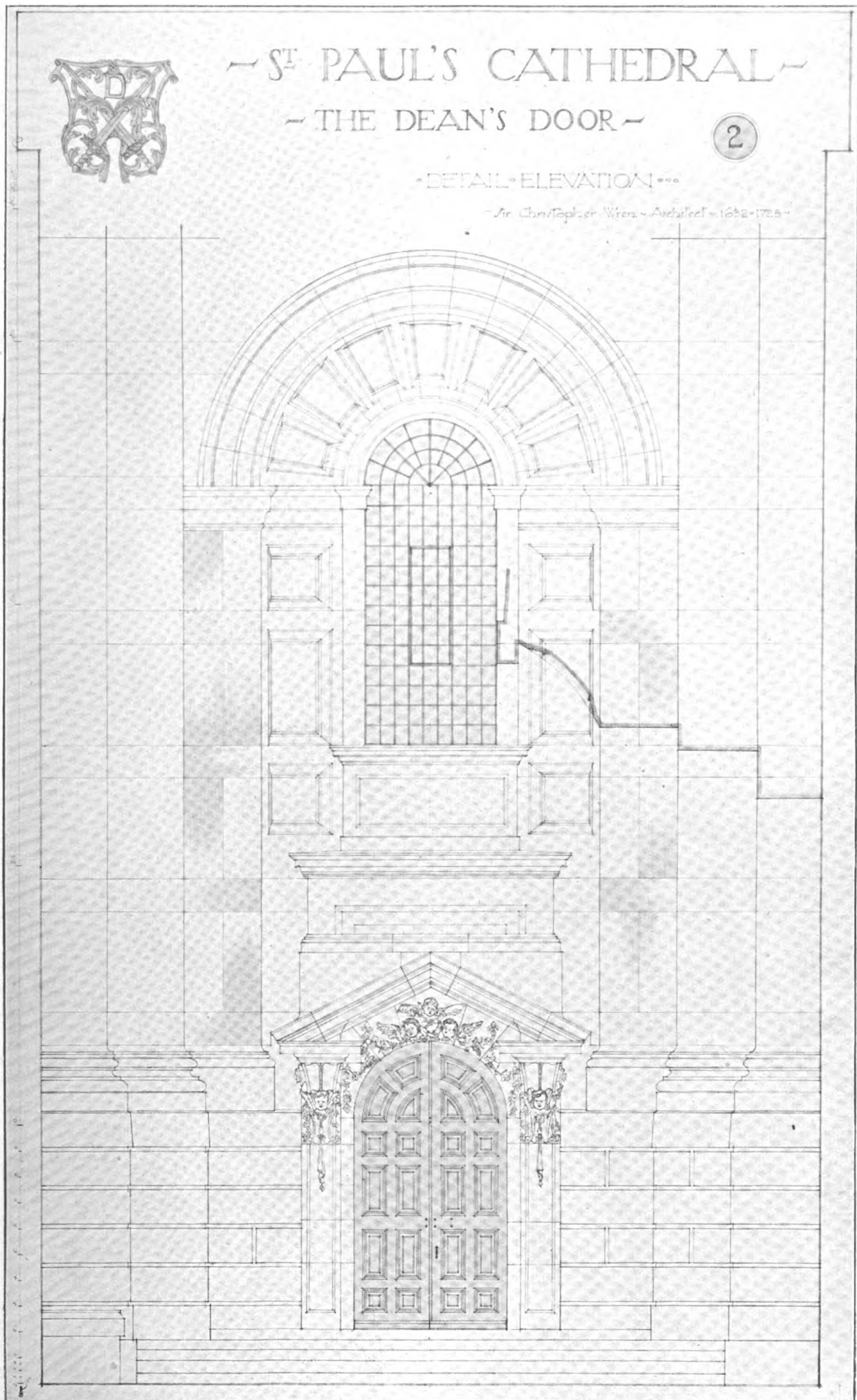
ROYAL ACADEMY SILVER MEDAL PRIZE DRAWINGS.
Measured and Drawn by Mr. ROMILLY B. CRAZE.

THE BUILDING NEWS, FEBRUARY 25, 1921.



THE BRITISH RESIDENCY, CAIRO, EGYPT : PROPOSED EXTENSIONS.

Mr. RICHARD J. ALLISON, F.R.I.B.A., Architect (H.M.O.W.).



ROYAL ACADEMY SILVER MEDAL PRIZE DRAWINGS.
Measured and Drawn by Mr. ROMILLY B. CRAZE.

Our Illustrations.

THE BRITISH RESIDENCY, CAIRO, EGYPT: PROPOSED EXTENSIONS.

The large extensions and alterations here shown are to be carried out. A new ballroom was added in 1913 from the design of the late R. H. Boyce (?), of H.M. Office of Works, and the question of providing additional offices and the need of erecting secretaries' quarters in a separate building was raised a few years ago. Considerable other additions and improvements to the accommodation provided for residential purposes were also found to be necessary. Therefore, an adjoining property having been acquired with a view to meeting these requirements, it was decided that a comprehensive scheme should be prepared providing for the whole of the accommodation in one building, thus giving an opportunity for modifying the architectural treatment of the existing structure and designing a more imposing building, the most important façade of which faces the Nile. The plan now illustrated includes a new dining-room, which is placed in the centre of the Nile façade with a colonnaded loggia and terrace in front. The drawing here reproduced was exhibited at the last Royal Academy. The architect is Mr. Richard J. Allison, F.R.I.B.A., of His Majesty's Office of Works, Westminster.

ROYAL ACADEMY SILVER MEDAL DRAWINGS.—THE DEAN'S DOOR, ST. PAUL'S CATHEDRAL.

This door, opening on to the Dean's geometrical staircase, leads up to the Cathedral Library and south-west corridor. Situated in the South face of the podium of the southern tower, it is as one of the most beautiful of the minor details of the exterior, being designed with simplicity, breadth, and boldness, quite suitable for its position. The brackets, with winged heads and flowers in full relief, are distinctive, with widely projecting volutes rising from the panelled pilasters, and with a scroll over, beneath the pediment. The tympanum is filled with cherubs' heads and pendant fruits and flowers in perfect scale with the surrounding work. The massive masonry enclosing the cylindrical core of the campanile, around which the stone stairs wind, is carried by a flat, coffered barred vault sloping up towards the interior. This slope of the vault is due to the preservation of the height from floor to springing and the difference between the floor level immediately within the doorway and the staircase compartment, a rise of three steps intervening. The carving in the coffers is well seen from this point of view at the foot of the stairs, where steps pass round the cylindrical face across the window opening; above the doorway a band has been inserted forming a raised sill, structurally devised as an inverted key-stone, supported on either side by the splayed jambs. The upward tendency of the cantilevered steps is thus counter-balanced very cleverly, and is another evidence, of Sir Christopher Wren's constructive ability. Though the northern door on the other tower is very similar in a general way, it is not so satisfactory as this one. Both doors are carefully shown on Wren's own small-scale side elevations of the cathedral, and except for a few minor points the work was executed according to these drawings. Our two illustrations are reproduced from the set of measured details by which Mr. Romilly B. Craze (of Electra House,

Finsbury Pavement) won the Royal Academy Silver Medal and money prize this winter. The original drawings were exhibited at the Royal Victoria and Albert Museum, Kensington. The third sheet consists of a general plan and a section of the Dean's entrance stairs. This will appear shortly. We published Mr. Arthur F. E. Poley's R.I.B.A. silver medal drawings (1920), giving the west front and details of the south tower façade, in *THE BUILDING NEWS* for March 5 and 12 and April 9 last year.

"THE CLOSE," ONSLOW VILLAGE, GUILDFORD, SURREY.

Views of some of the houses and their typical plans of dwellings on this estate appeared in *THE BUILDING NEWS* for May 21 last, when several particulars about the property were printed. The village comprises 646 acres of rolling upland in Surrey, close to Guildford's quaint old town. A view of the High Street, with the site in the distance, was included with our previous illustrations of the houses on this estate. "The Close," illustrated to-day, is one of the central features of the lay-out of the village, and forms a quadrangle, as shown in the perspective. The repetition of the flanking block on right-hand side had to be omitted owing to the extreme length in the proportions of the picture. The architects are Messrs. Knapp-Fisher, Powell and Russell, of Palace Street, Westminster, S.W. This drawing was exhibited at the Royal Academy last summer.

SARACENIC ARCHITECTURE IN SICILY AND ELSEWHERE.

On Thursday Mr. M. S. Briggs, F.R.I.B.A., delivered before the Central Asian Society, at 74, Grosvenor Street, London, W., a lecture on Saracenic Architecture, which was substantially the same as he had previously given before the Royal Institute of British Architects. As on the previous occasion, he defended the style from some of the strictures that had been passed upon it, saying that it was the product of the Moslem faith in a semi-tropical climate during the middle ages, and must not be judged according to its suitability for Christian worship, northern latitudes, and modern habits of life. It should be seen through Oriental eyes. It had an interest for the student of Gothic architecture in Europe, because some of the forms most familiar to us in our Gothic buildings—notably the pointed arch—were attributed to the Saracens. In the long intercourse of Saracen and Crusader many things had changed hands.

In a brief discussion that followed the address Major Ormsby-Gore said he had been a humble student of the architecture of the Middle East. Whether that style should be called Arab, Saracenic, or Moslem had been discussed by the lecturer, who would, he hoped, use the word Arab; for scholarship tended to prove that the earliest great Moslem monuments, such as the mosque at Samara, owed their origin to pre-Islamic Arab art. As to the inter-action of Western architecture and Saracenic, the architecture of the Island of Sicily was of great importance in this connection. In Sicily you found an extraordinary blend of Saracenic, Byzantine, and Norman styles in buildings that had survived from the eleventh century—the time of Sicily's Norman kings, Roger and Robert. It was argued that most of the Crusading churches in Palestine—such, for instance, as the Church of St. Anne, in Jerusalem, just inside the St.

Stephen's gate—had been built by Sicilian masons who had accompanied the Crusaders. Before we got the pointed arch in France and England, the Sicilian masons had got it from the Saracens in Sicily, and had taken it back to Palestine, for the structural use of the pointed arch—which seemed to come from Southern Persia and Mesopotamia about the time of the rise of Islam—had been carried west to Sicily in the seventh and eighth centuries.

As to stalactites, Major Gore said he believed you found earlier examples in Sicily than you did in Cairo—possibly they were earlier still in Mesopotamia. On a Saracenic palace outside Palermo, dating from the end of the ninth or early part of the tenth century, there were stalactites, and on the Norman architecture of Sicily of the eleventh century stalactite vaulting was developed in the most splendid manner.

Sir Francis Younghusband, who presided, speaking of architecture among the Arabs as expressing the character of the people, said that the way a mosque, or tomb, or fine piece of domestic architecture was brought into being was this: The chief, or other notable man who wished to have it erected, got together his friends and others who were experts in building. Then many conclaves were held, and the project was discussed in all its bearings. Many different views were expressed, but gradually the idea took shape. As it rose everybody gave his opinion about the building—though the chief, of course, had the principal say in the matter. As the result of it all we got in the building an expression of the character of the people.

COMPETITIONS.

GLASGOW.—In connection with the competition for Hillhead (New) High School, Glasgow, Sir John Burnet, as we stated in our issue of February 11, has made his selection of the following ten competitors in the first competition:—Charles B. Pearson, F.R.I.B.A., 18, Dalton Square, Lancaster; Reid and Forbes, 14, Randolph Place, Edinburgh; W. Naseby Adams, A.R.I.B.A., 25, Ryder Street, St. James', London, S.W.1; A. B. Llewelyn Roberts, of Colclutt and Hamp, 20, Red Lion Square, London, W.C.1; Thomas Braddock, 8, The Ridgeway, Wimbledon, London, S.W.19; E. Berry Webber, 8, New Square, Lincoln's Inn, London, W.C.2; Edward G. Wylie, A.R.I.B.A., 212, Bath Street, Glasgow; H. E. Clifford and Lunan, 209, St. Vincent Street, Glasgow; William Ross, 93, Hope Street, Glasgow; and John C. T. Murray, F.R.I.B.A., 69, The Outer Temple, London, W.C.2. The above successful competitors will take part in the second competition along with the following ten architects, who had already been specially invited:—A. C. Dickie, M.A., Professor of Architecture, Manchester University; W. Curtis Green, F.R.I.B.A., 5, Pickering Place, St. James Street, London, S.W.1; Maxwell Ayrton, 3, Verulam Buildings, Gray's Inn, London; H. Burke Downing, 12, Little College Street, London, S.W.1; A. M. Paterson, M.A., A.R.S.A., 266, St. Vincent Street, Glasgow; John Keppie, A.R.S.A., 257, West George Street, Glasgow; John Watson, F.R.I.B.A., 242, West George Street, Glasgow; Reginald O. Fairlie, 14, Randolph Place, Edinburgh; Andrew Balfour, F.R.I.B.A., 110, Mains Street, Blythswood Square, Glasgow; and Matthew Adam, 160, Hope Street, Glasgow. These will be paid £100 each for their designs.

The death is announced at Lindfield last Monday night of Mr. George Dunlop Leslie, the oldest member of the Royal Academy. The artist was in his eighty-sixth year, and as he was elected to the full honours of the Academy so far back as 1876 he has held the distinction longer than any living man. His father before him was also a Royal Academician.

Our Office Table.

As representing "an interesting experiment towards solving the housing difficulty in agricultural districts," the Minister of Health has advised Wimborne and Cranborne (Dorset) Rural District Council that they may issue a certificate entitling the Marquis of Salisbury to the building subsidy for a bungalow at Cripplestytle. The council having considered that the bungalow did not comply with the regulations, the Minister adds that the minimum sizes of individual rooms in such cases are not statutory, and no useful purpose would be served by insistence on the normal size.

The Empire Theatre and the Queen's Hotel, Leicester Square, with the adjoining vacant site, comprising about 3,000 ft., is to be sold by auction by Messrs. Knight, Frank, and Rutley at Hanover Square in March. The block covers an area of about 33,300 ft. The theatre stands on the site of Savile House (the town mansion of the Earls of Ailesbury, and later of the Savile family), where Peter the Great stayed in 1698. From 1800-1845 it was used for an exhibition of Miss Linwood's needlework pictures, then second in popularity only to Madame Tussaud's Waxworks. Panorama and entertainments were held there, including Madame Warton's notorious "Poses Plastiques." The house was burnt down in 1865, and lay in ruins until 1883, when a new theatre was built.

It is officially announced that the average level of retail prices at February 1 was 14 points below the figure at January 1. This, added to declines of 4 points during December and 7 in November, makes a total reduction of 25 points since the downward movement began. Throughout the first ten months of 1920 prices steadily rose until a level of 176 per cent. above the average of July, 1914, was reached. Now the drop is proceeding more rapidly than the former rise, and is likely to continue for some time to come. The large drop in the index figure will be followed by reductions in wages in those industries in which "cost of living" wages are based on a sliding scale regulated periodically as these figures are published.

No. 20, St. James's Square, one of the best-known houses of the Adam brothers, has been taken by Messrs. Hampton and Sons for their estate agency, which they are removing from Cockspur Street. In the same house they will shortly open a sale-room for their auction of properties. There is to be no spoiling of the mansion. The sculptured marble staircases, the decorative panels by Angelica Kauffmann, the carved doors of figured Spanish mahogany, and other adornments of the house will remain as they were left by Robert Adam in 1773.

The teachers and students of the Camberwell School of Art, Peckham Road, are showing in the adjoining gallery a collection of their work, which reflects much credit on all concerned with the school, either under Mr. W. B. Dalton, its former principal, or Mr. Stanley Thorogood, his successor. Mr. Thorogood himself has a pottery group of figures of good craftsmanship, and Mr. Walter Bayes, now principal of the Westminster School of Art, has two fine paintings, one a harlequinade, the other a bathing scene. Mr. Schwabe, Mr. Albert Rutherford, and Mr. Wilfrid Norton contribute drawings, Miss Cockell and Miss Dillon send sculpture, and Mr. C. W. Cain pictures of Mesopotamia. There are some good etchings by Mr. Whydale, and among other exhibitors are Mr. Guy Miller, Mr. Medworth, Mr. Hawkins, Mr. Milner, Miss Dodd, and Mr. R. C. Moore.

The Art Standing Committee (Royal Institute of British Architects) are organising a series of visits to buildings of interest in London and the neighbourhood. The first will take place on Saturday, March 5, at 2.30 p.m., to Westminster Hall to inspect the work of repair to the roof, which is being carried out by H.M. Office of Works under the direction of Sir Frank Baines, C.B.E., M.V.O. As the work is now nearing completion, so good an opportunity for seeing

this most interesting roof and its restoration at close quarters is not likely to arise again for this generation of architects. The number of visitors is strictly limited, and as the names of members and licentiates who desire to attend must be known to the authorities, application should be made to the Secretary R.I.B.A., 9, Conduit Street, W., on or before Tuesday, March 4.

The Standing Committee on Water Regulations of the British Waterworks Association has now completed the revision of the specifications of standard waterpipes and fittings. The British Waterworks Association took over the powers and duties of the late Incorporated Joint Committee on Water Regulations, which was wound up in voluntary liquidation in November, 1919. That Joint Committee issued specifications in 1908, which were revised in 1912 and supplemented in 1913. These specifications have been under revision during the past twelve months, and the first issue of the 1921 revised edition of the specifications is now available upon application to the Secretary, British Waterworks Association, Metropolitan Water Board Offices, New River Head, 173, Rosebery Avenue, London, E.C.1, at 5s. per copy. What the "powers" of the British Waterworks Association may be we do not know. We have said more about those of the Metropolitan Water Board on page 95.

PARLIAMENTARY NOTES.

BUILDING SUBSIDY TO BE EXTENDED.—Dr. Addison (Minister of Health), in reply to several hon. members, writes: There has been no general fall in the cost of building materials during the last six months, though the prices of lead, glass, and linseed oil have shown reductions. The total number of houses erected up to the present time under the subsidy to private builders scheme is 9,673, and it is my intention to introduce at the earliest possible moment legislation to provide for the extension of the period during which the subsidy can be earned. I see no reason for preventing the erection of properly constructed wooden houses. Up to the 1st inst. 26,005 houses had been completed under the Housing Acts of 1919, and a further 1,173 houses are known to have been completed since that date.

THE CABINET AND DILUTION.—In the House of Commons, on Wednesday, Dr. Macnamara (Minister of Labour), in reply to Sir W. H. Davison (C.U.—Kensington), said that negotiations for the employment of 50,000 ex-Service men were now proceeding actively on the lines indicated by the Prime Minister in his speech last week, and he hoped to be in a position shortly to state the arrangement which had been made. He had received that morning a letter from the National Federation of Building Trade Employers indicating that at a meeting of the Executive Council on February 22 it was unanimously resolved to confirm the report of the sub-committee on the Government's proposal that 50,000 ex-Service men should be taken in and trained, and heartily to recommend its endorsement by the whole Federation. A ballot vote on the matter would be taken immediately.—Sir W. Davison asked whether the Minister was aware that for twelve months past the reply had been given every week that the negotiations were in active progress, and that for nineteen months these men who might have been in employment had been out of employment. Did he not think it time that some of these men should be immediately employed, especially as employment was awaiting them?—Dr. Macnamara replied that he did think it was high time. (Cheers.) They made certain offers to the men which had not been accepted, and they had now turned to the employers. He thought the reply from them was highly satisfactory.—Mr. Neil McLean (Lab.—Govan): How many ex-Service men in the building trade are unemployed at the present time?—Dr. Macnamara: I cannot answer that question. No doubt the building trades, like every other trade, have taken back their own men who joined the colours, but it remains a fact that there is opportunity for the employment of 50,000 ex-Service men in the trade, and as far as I am concerned they are going to take a hand in it. (Cheers.)

PROFESSIONAL AND TRADE SOCIETIES.

ARCHITECTURAL ASSOCIATION.—Before the Architectural Association at Bedford Square last Monday evening, Mr. Gordon Selridge read a paper on "Architecture and Commerce." He said that commerce, generally speaking, had failed to produce beautiful buildings. America had probably achieved more in this direction than any other country, and her business men took a pride in the surroundings in which they worked. Skyscrapers, of course, were very difficult to make beautiful; their height necessarily militated against proportion. The most successful attempt at this form of architecture was the Woolworth Building, the work of Mr. Cass Gilbert, who was absolutely independent, and who refused to pander to the tastes of his clients. The Equitable Building, of some forty or fifty storeys, which housed something like 10,000 workers, was utilitarian rather than beautiful. He, personally, objected to high buildings, and to the building of them in London; he preferred beauty to utility. He wished to see the architecture of commerce placed on a higher plane. Commercial edifices had been surpassed by almost every other kind of building, but commerce must realise its responsibilities and erect edifices which are joys and delights to the great public.

THE SOCIETY OF ARCHITECTS.—Monsieur J. P. Chaires' connection with the Atelier was temporarily interrupted owing to his being on service with the French Army, during which time he was severely wounded. The Beaux Arts Committee has, in the meantime, kept his place in the Atelier "warm," and, though at one time it appeared doubtful whether his health and professional engagements would permit of his returning, we are pleased to know that these obstacles have been removed, and that he is now on his way to England to take up his work again. A meeting of members and friends of the Atelier is to be held at 28, Bedford Square, W.C.1, on Tuesday, March 1, at 8 p.m., to welcome Monsieur Chaires, when anyone interested in architectural education is invited to be present.

CHIPS.

Mr. R. A. Newstead, assistant borough surveyor of King's Lynn, has been appointed surveyor to the Melford, Suffolk, Rural Council. Mr. Newstead served with the Royal Engineers in the war.

Mr. Gilbert H. Lovegrove, F.R.I.B.A., F.S.I., 374, Old Street, has been appointed the Surveyor to the Honourable Artillery Company in succession to Mr. William Woodward, F.R.I.B.A., F.S.I., resigned.

Work was commenced last week in connection with the housing scheme which is being undertaken by H.M. Office of Works at Birmingham Road, Blackheath. The number of houses to be erected on the site is 255.

Presiding at Powick Parish Council, near Worcester, Mr. W. H. Buckley contended that by the erection of four houses at Clevedale there was an absolute waste of public money. There was no need for them, and no likelihood of their being let. There were cottages at Clevedale which had remained unlet for six or seven years.

As the result of excavations at Pagasæ, in Thessaly, a palace of the Mycenaean period has been discovered in very good preservation. Pagasæ, which used to give its name to the gulf, was the port of Iolkos and of Phææ, and is famous as the place where Jason built the Argo for the first passage of the Hellespont and the search for the Golden Fleece in Colchis.

At the meeting of the Isle of Wight Employment Committee on Monday it was reported that the Home Office had been written to about the use of convict labour on new house building and painting at Parkhurst Prison. A reply had been received that funds would not admit of work being done entirely by free labour. The Home Secretary had stated that he could not ask Parliament to vote more money for prison work, and that if this particular work was not done by prison labour it would either not be done at all or it would be necessary to divert funds from the work of providing houses for prison officials.

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Strand, W.C.2.

Memorial Screen, St. Swithin's Church, East Retford, Notts. Mr. Harold Bailey, F.R.I.B.A., Architect.	
Cheltenham Housing Scheme, parlour blocks, elevations and plans. Messrs. Chatters, Smithson and Rainger, Architects.	
A Cottage at Kingswood in Surrey for Mr. Allen H. Hopkinson. Plans and elevations. Mr. E. Guy Dawber, F.S.A., F.R.I.B.A., Architect.	

Currente Calamo.

The Government's Supplementary Estimates, which we criticised in our first paragraph on this page last Friday, came before the House of Commons the same day, and with a party majority of about 400 the Government was able to score a majority of ten. To beat up even that they had to summon all the Ministers in reach and their Under-Secretaries and Parliamentary Secretaries. Even the Prime Minister had to be called to the House to vote, and did vote. The division was on the supplementary estimate for the Office of Works, and a chief item in it was for the branch building near Manchester for the Stationery Office. The division was upon a motion by Sir Donald Maclean to reduce the estimate by £100,000. The figures were 88 for the Government and 78 against. The minority was composed of 15 Independent Liberals, 20 Labour men, and some 40 Coalitionists, mostly Conservatives. Among those who voted against the Government were Lord Robert Cecil, Sir Frederick Banbury, Mr. Walter Guinness, Lord Winterton, Sir Henry Craik, Mr. R. J. Lynn, General Townshend, Sir Thomas Polson, and two Manchester Unionist members—Colonel Hurst and Major Nall. The advertising "Anti-Wasters" were conspicuous by their absence.

The following letter in the *Times* of last Monday appears to confirm the conclusions arrived at in the third paragraph on this page of our issue of February 18 last. It is written by Mr. F. W. Brandreth, the Chairman of the Cerne Board of Guardians and the Rural District Council and Housing Committee. Writing from Buckland Newton, Dorchester, he says:—"The position of rural housing committees is an impossible one, as the following will show: In May, 1920 (under pressure from the Ministry of Health), my Council entered into a contract with a local builder to erect ten cottages (primarily for the labouring class) at a cost of £9,712 14s. 2d. The cost of the site for these ten houses, including all expenses and allowing a quarter-acre of land to each house, is £120, or £12 per house. The architect now informs me that the estimated extra cost on the builder's contract, owing to the rise in price of labour and materials since last

May, will be at least £2,500, making the total cost per house, including the site, £1,233 5s. 5d. In these circumstances I have no alternative but to ask my Council to pass a resolution not to proceed with the erection of any more new cottages in the district, owing to the heavy burdens imposed on the ratepayers and taxpayers at large, pending a return to more normal times. The architect's fees are not included."

During the war the picture galleries, among other portions of the Victoria and Albert Museum, were occupied by the staff of the Board of Education, and some little time must still elapse before these galleries as a whole can be redecorated and reopened to the public. In the meantime, a temporary exhibition of selected water-colour drawings has been arranged in Rooms 88 and 90, which will later be decorated and rehung in consonance with a general scheme. It has not been found possible to represent here all phases in the development of the art, and an effort has rather been made to illustrate the work of a few leading painters, including Cozens, Girtin, Turner, Crome, Cotman, De Wint, and David Cox, and to show a number of the more recent acquisitions, with special reference to Brabazon and Sir Alfred East. The visitor who wishes to follow the rough sequence in which the drawings are arranged should begin at the south-west wall of Room 88, where a few pre-Turner drawings are hung. On the adjoining wall are works of J. R. Cozens and Webber, and the rest of the wall is devoted to Girtin and Turner. On the north-west wall is a group of drawings illustrating the final impressionistic phase of Turner's genius; on the north-east wall are works by Crome and other artists. The east wall is given up to Cotman, the Varleys, De Wint, and Cox. On the screens are drawings by Francia, Bonington, Müller, and others. It will be noted that Turner and De Wint have been chosen for fullest representation. Among examples of the latter artist are several fine drawings, some of them showing unusual aspects of De Wint's work, from a collection kindly lent by the artist's granddaughter, Miss Tatlock. On the north walls of Room 90 are hung paintings by the pre-Raphaelites and their contemporaries. At the other end of the room are some works by James Holland and W. H. Hunt, in which fine draughtsman-

ship and simple colour are used in happy combination. With them, as a distinguished example of modern art, is placed a drawing by D. Y. Cameron, R.A. In the main the room displays the free and bold technique which in English water-colour began to gain a firm hold about 1880, with Cecil Lawson, Tom Collier, Buxton Knight, and Brabazon amongst its earliest exponents. As a reminder, however, that such methods were not new, a sketch by John Constable, R.A. (1776-1837), has been hung among some of the most modern drawings. The west wall is largely devoted to Brabazon and Sir Alfred East. The former artist was hitherto almost unrepresented in the Museum, and the present series of drawings by him is now exhibited for the first time. The impressionism of Arthur Melville's "Little Bull-Fight" stands as a keynote to much recent work, and brilliant expression of the modern spirit will be found in water-colours by J. S. Sargent, P. Wilson Steer, Francis James, and many other leading artists of recent years.

The Kirkcaldy election to-day once again advertises that "lang toun" as the birthplace of Adam Smith. It is recalled by the *Morning Post* as a change that five years before him was born there his great contemporary Robert Adam, second and chief of the Brothers Adam. We cannot easily realise the prominent place in the public eye held in their day by the Brothers Adam. Robert's genius not only changed the face of London, but also directed the great commercial and speculative combination whose encroachments, alleged, on public and private interests were celebrated by the populace in doggerel as well as by the City in a petition for a dissolution of a Parliament. An amusing subsidiary cause of a pamphlet war was the lawsuit over their patent rights in the stucco for house-facings. Lord Mansfield, who tried the case, was in the embarrassing position of hearing his mansion, Caenwood, which Robert Adam had built for him, cited as proof of the worthlessness of the cement in question, and apparently very wisely fell asleep while builders and plasterers droned out their irrelevant evidence.

Some time ago the Bradford Libraries Committee decided to place in the City Art Gallery a group of statuary in marble, symbolising the dawn of an age of free-

dom, and the design of Mr. F. Derwent Wood was approved. The sketch model of the statuery (two female figures in combat, representing Humanity overcoming War) evoked, however, some amount of criticism, voiced chiefly by ministers of religion, and a deputation of the Committee recently waited on Mr. Derwent Wood. The Committee on Monday, after hearing the deputation's report, decided to ask the sculptor to supply another sketch model. The Chairman informed the Press that the Committee had come to the conclusion that it was asking too much from a sculptor to interpret in marble the involved idea the Committee had in mind. The Committee, therefore, had decided to abandon the former scheme and give the sculptor a free hand. Mr. Wood would not be asked to interpret any particular scheme. Perhaps, if Mr. Derwent Wood complies, the Committee will not inflict any more "involved ideas" on him evolved by captious busybodies.

"THEY MANAGE THESE THINGS MUCH BETTER IN FRANCE."

The Building Trades Operatives are still dilly-dallying in regard to the Government's proposals for dilution. Their National Federation has called a meeting in London for yesterday, at which, in all probability, nothing was done to comply with Dr. Macnamara's latest intimation that whatever the attitude of the building trades' operatives might be the Government meant that the ex-Service men should be employed on housing. Meanwhile the building trades operatives are wasting time over matters of no immediate concern, such as the introduction of a sliding scale on the basis of 1d. an hour increase for every ten points advance in the cost of living, and 1d. an hour decrease for every fall of 13 points. No such scheme has been proposed, or is likely to be. The truth is that the National Wages and Conditions Council is sending this week certain documents to the adherent employers' and operatives' federations for ratification or otherwise, including, *inter alia*, a proposal for varying wages by a sliding scale based on the cost of living. The return is to be made by April 4. If ratification takes place the National Wages and Conditions Council will proceed to deal with all outstanding notices for alterations of wages and conditions now pending, and any decision it may give cannot take effect until August 1. So dissatisfied are the employers with the present "productiveness" of their workmen generally, that we believe the great majority believe there is no real remedy for canny but piece rates. They know perfectly well that on building guild contracts the bricklayers can average 900 bricks a day, while on private contracts they will not lay more than 300; and they know that in less than three months any ex-Service bricklayer will approach much more nearly the higher than the lower total. That, of course, is at the bottom of all the opposition to dilution, and the Government knows it. How much longer is the nation to wait for the houses while the game of playing fast and loose goes on?

"They manage these things very differently in France!" Last Monday ten of the leaders of the general strike of last May, when the Bolshevik section of French organised labour made a desperate attempt to bring the economic life of the country to a standstill by direct action, were put on their trial at the Paris Assize Court. The prisoners are Boris Lifschitz,

better known as Souvarine, a journalist, of Russian origin; Pierre Monatte, a printers' reader; Gaston Monmousseau, a railway employee; Isidore Lorient, an elementary schoolmaster, who are all four members of the committee of Lenin's Internationale, and the most militant of French Bolshevik Socialists; Jacques Sigrand, a railwayman; Henri Bott, an engine driver; Marius Hannot, an omnibus employee; Alexandre Lebourg, a shunter; Emile Giraud, manager of the newspaper *Le Soviet*; and Louis Rabillaud, manager of the newspaper *Le Communiste*, the six last-named all being members of the Soviet Communist Federation. All these men are charged with plotting against the safety of the State—in other words, with high treason—the penalty for which, as laid down in the Code, is perpetual imprisonment in a fortress. The case for the prosecution is that these men, by promoting a general strike which definitely and admittedly aimed at the very life of the nation for the purpose of overthrowing the existing social order, which they did not hesitate to admit was their object, were guilty of treason. In France "direct action" is not tolerated as it is here, but is regarded as among the most serious crimes known to the Penal Code. The trial is expected to last about a fortnight, and the result will be watched with interest.

It is evident that the recent great strikes of the railway men and the colliers were in every respect "direct action" against national necessity. We are possibly faced with further strikes in both industries; and, probably, in the building trades, which certainly minister, or should do, at the present time, to the relief of a "national necessity" second only to either of those before mentioned. Who are behind the fomenters of these disturbances? In France there were three organisations principally concerned in fomenting this movement, the committee of Lenin's Internationale, the French section of the Communist Party, and the Communist Federation of Soviets, to one or other of which all the prisoners belonged. To which, if to any, our own agitators belong we do not know. Possibly to none. Possibly their real object is simply to surpass the older and steadier leaders of Labour, in eagerness to champion impossible claims, simply that they may themselves sit in the seats of the mighty, and draw good salaries and allowances, or get subscribed for money grants and houses, or become in their turn heads of "Ministries" and "Departments" under a Government despairing of any other means of stopping their mouths. Whatever the truth may be it is time a more effective silencer was resorted to in the French fashion. Happily, not all the trade unions are similarly playing dog-in-the-manger. As Dr. Macnamara said at his visit on Monday last to the Government Instructional Factory at Battersea, to present medals and diplomas to disabled ex-Service men, in connection with the competition organised by a newspaper, "We owe a deep debt of gratitude to most of the trade unions who agreed on the numbers to be admitted to the crafts having regard to the ultimate employment in those crafts. I say 'most' of the trade unions deliberately, because a few have not been generous." That is as true as it is creditable to the trade unionists concerned, and we owe it to them that they shall not be prejudiced by their unpatriotic fellows.

The late Mr. Henry Thomas Hare, of Tarnham Common, Bucks, and of 2, Gray's Inn Square, past president of the Royal Institute of British Architects, has left net personalty £16,600, the gross £25,053.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

DYNAMIC SYMMETRY IN ANCIENT ARCHITECTURE.

At a meeting of the Royal Institute of British Architects, held on Tuesday, at No. 9, Conduit Street, Mr. Jay Hambidge brought forward further evidence in support of his theories with regard to the architecture of ancient Greece. The address was a very lengthy one; the following summary of its main points was supplied to us by Mr. Hambidge:—

With the Greeks of the classic period it was customary to study arithmetic with the aid of simple geometrical diagrams. Plato, in the *Theaitetos*, supplies a lesson in this method of study wherein root rectangles are used. See "Schools of Hellas," by Kenneth J. Freeman, pp. 159-160. If we use this method of arithmetical study, and the same diagrams, the result is dynamic symmetry as the writer has worked it out from the best examples of ancient Greek architecture and general craftsmanship, such as that supplied by surviving objects in bronze and pottery.

During the past year some of the most important of the classic buildings in Greece have been re-measured and examined in detail for the purpose of determining precisely the methods used by the ancient master builders in fixing their proportions, or, as they termed it, symmetry. These buildings include: The Parthenon at Athens, the temple of Apollo Epikurios at Bassae, in Phigaleia (both by the Periclean architect Iktinos), the Zeus temple at Olympia, the temple at Sunion, and the temple of Athena Aphaia at Aegina. It is the writer's belief that the results of this labour show conclusively that we have recovered the classic Greek method of fixing building proportions.

An interesting situation is revealed by a comparison of the two buildings designed by Iktinos, the Parthenon at Athens and that of Apollo at Bassae. The symmetry of the Parthenon is characteristic of the building; it is subtle, refined, and modified in many ways by the introduction of curvature. The building at Bassae is without curvature, except that of the circular columns and their capitals. The Parthenon column has an extremely delicate entasis, while that at Bassae is perfectly straight. Of all examples of Greek design so far found to conform to dynamic symmetry that furnished by the Bassae temple is the simplest.

As was explained in lectures of last year, the highest type of symmetry is furnished by areas which are fixed by a diagonal to two squares, in relation to a side of one of the units.

If a side of one square equals 1, two sides equal 2.

And a diagonal of the two units equals 2.23606 plus, or root 5.

The mystery of classic Greek proportion will, therefore, be found in an area the end of which is 1.0 and the side 0.23606 plus, or 1.0 by 2.3606.

Iktinos seems to have thoroughly understood this, as the nave, the column centreline, and the placing of the statue of Athena are arranged in strict accord with the proportions inherent in this peculiar figure. The proportions of the Parthenon unfold from the centre of the statue of the goddess like those of a flower.

The proportions of the Bassae temple are another evolution of this basic form of 236.

The overall plan at Bassae is 2.236 plus, 236, or 2.472, i.e., four whirling-square rectangles, or .618 multiplied by 4.

The stylobate proportion is 2.618, or 1.618 plus 1.

The naos proportion is 3.236, or 1.618 multiplied by 2.

The cella proportion is 2.472, or a similar figure to the whole.

If we divide the length of the temple by 2.36, we obtain the length of the cella. If we divide the width of the temple by 2.36 we obtain the width of the cella.

The Zeus temple at Olympia, and the temples at Aegina and Sunion show variations of the same basic ideas of proportion found in the Parthenon and the temple at Bassae. It should be remembered that the proportions of all details in these buildings conform strictly to their general proportions.

A lengthy discussion followed. Among other speakers, Sir Cloudeley Brereton said that on the occasion of the last lecture on this subject, certain of the audience had formed the idea that Mr. Hambidge was trying to formulate a new theory of aesthetics; but this was a mistake. What Mr. Hambidge was trying to do was to recover a valuable bit of lost technique—a lost bit of the grammar of art. In grammar we are always talking about something which had a large element of logic in it. Every art began with a guild of craftsmanship; later, when the craftsmen got together and discussed their art, they gradually formulated definite rules. Next, the more philosophic amongst them investigated still further these rules of technique, and, whatever the art might be, they found at the base certain definite logical laws. It was this fact which should make non-mathematical people listen with patience to the very complicated mathematical truths which underlay the theory of Professor Hambidge.

Mr. Fyfe said that no one who had seen the serene perfection of detail of ancient Greek art could conceive that those who practised it were slipshod in their general design.

Sir Charles Walston (who presided) said that the great change noticeable in Greek art (alike in architecture and sculpture) at the time when their lecturer said the change was made from static to dynamic proportions was that thenceforth there was not only symmetry, but rhythm was combined with the symmetry.

A vote of thanks was passed to the lecturer.

A MESOPOTAMIAN EVENING.

On Wednesday the Royal Institute of British Architects devoted an evening entirely to Mesopotamian subjects. Major Edward P. Warren, F.R.I.B.A., spoke of architectural impressions he had received during a recent tour in that country. After stirring adventures in Serbia, where he gained the rank of Honorary Major in the Serbian Army, Major Warren became principal architect of Mesopotamia for the Imperial War Graves Commission, and his lecture described the impressions made upon his mind by the marvellous architecture of the country—especially the tombs and shrines of characters famous in sacred history. It was illustrated by lantern slides from his own original drawings and photographs. One thing he mentioned in the course of his remarks was that the monument set up in Bagdad to commemorate the fall of Kut was already in a dilapidated condition, and was now being kept in repair by the British.

Following Major Warren's lecture, Mr. Money gave an account of the building of the Hindieh barrage, illustrated by lantern slides. The whole of this great work, he said, was done by Arab labour, except

for foremen and supervisors. At first the work was done with lime and stone brought down the river from Hit, 150 miles away; but it was discovered that the earth on the very site of the barrage would make good bricks.

To conclude the evening, Mr. Lionel Muirhead gave a description of a large number of water-colour drawings that he had made during his residence in the country. These were on exhibition in the hall, and dealt chiefly with architectural subjects.

A vote of thanks was passed to the three lecturers.

Correspondence.

ARCHITECTURAL CONTINENTAL TOURS.

To the Editor of THE BUILDING NEWS.

Sir,—When lecturing last January before the Northern Architectural Association I was urged to resume the architectural and sketching tours to the Continent which I conducted regularly for some twenty-five years before the war. I demurred at first, being no longer a young man, but have given way, and am endeavouring to gather a party to visit Normandy at Whitsuntide.

So far as it can be decided yet, and subject to the exigencies of the tidal boat service between Havre and Caen, it is intended to leave London at 8.30 p.m. on Friday, May 13, and to proceed to Caen, staying there till Thursday, May 19, and meanwhile making day excursions to Bayeux and the Château Fontaine Henri. Then, returning to Havre, the remaining time would be spent there, paying visits to Graville Abbey and Harfleur (which are within walking distance, or can be reached by tram), and making day excursions to Honfleur and to the Roman Amphitheatre at Lillebonne.

The journey home from Havre would commence late on Monday, May 23, London being reached early next day.

The total cost, including first-class travelling, hotel expenses (three meals a day), and tips, will be £17 17s. from London, or £17 from Southampton. This will be exclusive of meals on the journeys out and home, and of beverages.

I should be glad if all who intend going would kindly send me cheques at this rate by Saturday, April 23, at latest, to enable the final arrangements to be completed. Any friends who are willing to share bedrooms would oblige by letting me know their wishes in this respect at the same time.

The party will not necessarily be confined to architects, but others (including ladies) who are genuinely interested in architectural study will be welcome to join. Special facilities will be sought for sketching and photography, and it is hoped that all will participate in this work. I have been over the whole ground myself on more than one occasion, and have carefully chosen the route for variety of interest and study value.

Passports will be essential, and these should be applied for some few weeks in advance on forms to be obtained from the Passport Offices, 1, Lake Buildings, St. James's Park, London, S.W.1. After these have been secured they will have to be shown personally for visa at the French Passport Office, 7, Gower Street, London, W.C.1, or else at 79, High Street, Southampton, or some other French Consulate.

—Yours faithfully,

G. A. T. MIDDLETON.

1. The Meads, Hartley,
Cranbrook, Kent.
March, 1921.

ARCHITECTURAL STUDENTS' COMPETITIONS.

Sir,—Mr. Keen takes me to task for not bringing my views before the Institute instead of the public Press, but as my criticism largely extended to bodies over whom the Institute exercises no control, such a course would have been of little value. The Institute, although its committees do their work exceedingly well, is not, however, blameless, and I would remind Mr. Keen that neither the council of that body nor the members of the Board of Education generally had any say in the appointment of this last year's prize committees. My entire argument rests on the fact that the constitution of the jury or committee is the essential element of successful adjudication; given the proper jury, minor details will disappear of themselves. Some committee or jury is no doubt appointed to draw up the conditions and programmes, and logically the same committee should make the award. Where, therefore, arises the difficulty of publishing the names of the jury with the programmes? In attacking a system one does not necessarily attack individuals, and, for my part, I have always found the older members of the profession exceedingly kind-hearted and generous, not least so Mr. Keen.

The present-day student, however, is quite ready to take his grælling standing up, and much prefers a frank and critical statement of the defects of his work to a uniform measure of well-meant encouragement, and expects in return carefully studied programmes, rigorous conditions, and critical logical awards.—Yours, etc.,

ROBERT ATKINSON,

Director of Education A.A. Schools.
February 22, 1921.

THE ARCHITECT'S ASSISTANT.

Sir,—I wish through your columns to ask the secretary of the R.I.B.A. whether the Institute's scale of fees allows for a salary of £6 6s. a week for the architect's assistant?

By assistant I mean the draughtsman who, week after week, month after month, year after year, is kept very busy making working drawings, details, and so on from his principal's rough sketches.—Yours, etc.,

HENRY HYAMS, F.R.I.B.A.

6, Waterloo Road, S.E.1,
February 26, 1921.

The Lord Mayor unveiled, on the 23rd ult., at the Royal Exchange, the panel by Mr. Stanhope Forbes, R.A., illustrating the destruction of the second Royal Exchange by fire in 1838.

Mr. John Brightmore Mitchell Withers, of Heatherleigh, Oakholme Road, Sheffield, architect and surveyor, a former President of the Sheffield Society of Architects and Surveyors, and a former member of the Council of the Royal Institute of British Architects, has left £57,932.

The Holy House of Loreto, which has long been the resort of pilgrims, being rivalled only by Lourdes, caught fire on the night of the 22nd ult., apparently owing to a short circuit in the lighting arrangements of the shrine. The next morning, when the monks entered the church, which is intact, they found the Holy House still burning, but the altar and ebony image of Our Lady were entirely destroyed. The material damage is said to amount to several million lire.

Preparations are being made for the unveiling of the memorial to the 55th Division at Givenchy, the scene of the greatest exploit of the division in which Liverpool shares with West Lancashire a natural pride. The date provisionally fixed for the ceremony is Whit Sunday. The memorial takes the form of a cross, 24 ft. high, on which are carved the Red Rose and the motto of the division, "They win or die who wear the Rose of Lancaster."

Our Illustrations.

PROPOSED CATHOLIC CHURCH, HAYES, MIDDLESEX.

This new Catholic Church is for the "Order of the Immaculate Heart," to be erected on a site in the grounds of "Botwell House," Hayes, now in possession of the Order. A distinguishing feature of the Church, and of this particular Order, is the Chapel, which is placed behind the High Altar at the Clerestory level, having an altar at the foot of the Cross, the figure of the Virgin revolving to face either way. This chapel is approached by two separate staircases, one for the laity and the other for the clergy. Mr. F. Lindus Forge, of 3, Crooked Lane, King William Street, E.C., is the architect.

MEMORIAL SCREEN, ST. SWITHIN'S CHURCH, EAST RETFORD, NOTTS.

A Memorial Chapel has been formed in the North Transept of St. Swithin's Church, Retford, Notts, and this screen divides it from the tower. The rood and screen are of oak, partly gilded and coloured. It has been executed by Mr. R. Swaby, of Gainsborough. The architect is Mr. Harold Bailey, F.R.I.B.A., of 5, John Street, Bedford Row, W.C.

CHELTENHAM BOROUGH HOUSING SCHEME.

This sheet of elevations and plans shows the Parlour type blocks on the Gloucester Road site, of which we published the layout plan on January 14 last, when a perspective with plans and elevations of other houses on this property were illustrated. The land in question consists of 118 acres, and about 70 acres are being used for the present undertaking, which includes a recreation ground, and allotments. Messrs. Collins and Godfrey, of Tewkesbury; Messrs. Billings and Sons, and Mr. W. Drew, of Cheltenham; and Messrs. W. H. Nicholls and Co., of Gloucester, are the builders engaged upon the erection of the cottages already in hand. Messrs. Chatters, Smithson, and Rainger, of Cheltenham, are the architects, in conjunction with Mr. I. S. Pickering, the borough surveyor.

A COTTAGE, KINGSWOOD, SURREY.

This sheet of working drawings, lent us by the architect, Mr. E. Guy Dawber, F.S.A., has all the essentials indicated in the margin of the plans. The cube form of the building is distinctly economic, all the available space being made the most of. In design, the cottage harmonises with the big house, carried out by the same architect, to which it serves as an adjunct in the same property. The walls are of brick.

THE BRITISH RESIDENCY, CAIRO, EGYPT: PROPOSED EXTENSIONS.

Last week we illustrated this work, of which the architect is Mr. Richard J. Allison, F.R.I.B.A., of His Majesty's Office of Works. Owing to an omission and transposition, the facts in the opening paragraph were incorrectly stated. The first twelve lines should have read thus: "The large extensions and alterations here shown are to be carried out to the existing Residency building, which was erected in 1890-94 from the designs of the late Mr. R. H. Boyce, C.B., of His Majesty's Office of Works. A new ballroom was added in 1913, and the question of providing additional offices and secretaries' quarters in a separate building was raised a few years ago."

PROFESSIONAL AND TRADE SOCIETIES.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.—At a meeting of the Birmingham Architectural Association last Friday night, Mr. Lionel B. Budden read a paper on "Architectural Education." The lecturer analysed the functions of the architect, stating he must be able to fuse together practical needs, materials, and construction into an aesthetic whole, and must be competent in the technical sciences involved in the practice of architecture. Proficiency in all branches being impossible, specialisation in the case of any large practice became inevitable, and architectural education must be adapted to meet that situation. Mr. Budden outlined the means by which this could best be done, and advocated the adoption of an academic system of training.

EDINBURGH ARCHITECTURAL ASSOCIATION.—At the last meeting of the Edinburgh Architectural Association, on the 24th ult., a paper on "George Square: Its History and Romance 1766-1820," was given by Mr. George Gray, F.R.S.E. George Square was the creation of James Brown, an Edinburgh architect, who was also responsible for the erection of Brown Square, Charles Street, Crichton Street, and Buccleuch Place. In 1761 he purchased twenty-six acres in this quarter for £1,200. The Town Council had declined the first offer, but no sooner had Brown bought the property than that body realised its mistake. The Corporation offered Brown £2,000, but he refused to sell for less than £20,000. Having leased the ground, Brown received the purchase money as an annual return. Brown's fencing plan (1779) was shown, and it was mentioned that the Square was not called after George III., as is generally supposed, but after George Brown of Lindsaylands and Elliston, the architect's brother. Building operations were begun in 1766, the first houses being erected on the north side. By 1779 the east and west sides were completed, while the south side was finished about 1785. The stone was obtained from Craigmillar, and most of the houses were built by Michael Nasmyth, the father of the painter of the famous portrait of Burns, and the grandfather of James Nasmyth, the inventor of the steam hammer. Some interesting details were given respecting past notable residents in the Square, and their special privileges and obligations.

INSTITUTE OF SCOTTISH ARCHITECTS.—A meeting of the Council of the Institute of Scottish Architects was held on the 24th ult., at 117, George Street, Edinburgh, Mr. Alexander N. Paterson, Glasgow, presiding. As a result of the Housing and Town Planning Act of 1919 having made compulsory on urban districts of over 20,000 inhabitants the adoption of a town planning scheme from 1923, the matter was remitted to the Town Planning Committee in view of the desirability of expert provisional advice being obtained by such urban districts. In connection with the removal of the Hilton of Cadboll Stone to the British Museum, a letter of protest was drawn up to be forwarded to the Trustees of the Museum, the Secretary for Scotland, H.M. Board of Works, and the donor, Colonel M'Leod, of Invergordon Castle.

LLANDUDNO AND DISTRICT BUILDING TRADES EMPLOYERS' ASSOCIATION.—The members of the Colwyn Bay, Llandudno, and District Building Trades Employers' Association met last week at their annual dinner at Llandudno. Councillor Henry Hughes, of Llandudno, presided. The toast of "The North-Western Federation of Building Trade Employers" was proposed by Mr. Sam Jones, Colwyn Bay, who said the trade was passing through a crisis, and to get back to normal times the employers must be united, as the operatives were. Mr. B. Talbot, chairman of the Central Council of the Federation, replied. He referred to the operations of the "building guilds," denying the accuracy of the statement which had been made that the guilds were now erecting houses at £250 less per house than they could be built under ordinary contracts. There were likely to be, in fact, some startling developments in connection with the building guilds now engaged in

house building work. Mr. J. M. Macfarlane, of Manchester, a member of the Executive Council of the Federation, also replied to the toast. He said that systematic technical education was required throughout the building trade. He did not approve of helping Socialistic experiments at the cost of the public purse. Mr. Talbot proposed the toast of the local association, to which the chairman replied, and the toast of "The Visitors" was submitted by Mr. R. T. R. Hughes (Llandudno, chairman-elect) and responded to by Mr. C. F. Farrington and Mr. W. T. Brocklehurst. The toast of "The Building Trade" was given by Councillor Arthur Hewitt (Llandudno), to which Mr. G. Salt (Deganwy) responded.

SCOTTISH FACULTY OF SURVEYORS.—The annual dinner of the Faculty of Surveyors of Scotland was held in the North British Station Hotel, Glasgow, last Friday night, when Mr. Hugh A. Low, F.F.S., occupied the chair. After the loyal toasts had been submitted by the Chairman, Mr. F. H. Lightbody proposed "The Scottish Board of Health and H.M. Office of Works." He said he thought that no one who had been associated with the Board of Health would deny that that body had carried out its work in a most satisfactory manner, and with great efficiency. Mr. J. T. Galletly, H.M. Office of Works, replied, in the absence of Mr. John Jack, of the Board of Health.

An amended scheme for a new town hall to cost £330,000, instead of £553,000 as originally suggested has been presented to the Islington Borough Council.

Thomas Holt, a painter, who was bound over at Willesden on Tuesday for collecting 30s. in two hours by means of a money-box labelled "Unemployed ex-soldiers," admitted that he was collecting for himself and had been charged as a deserter during the war.

Competitions, open to all Allied subjects, are announced for plans for the new drainage and water supply systems of Chauny (Aisne), which suffered severely in the war. Two prizes of 10,000 francs (approximately £200) and 5,000 francs will be given in each competition.

From now until the end of August Sir John Soane's Museum, 13, Lincoln's Inn Fields, containing paintings, sculptures, and antiquities, will be open free from 10.30-5 on Tuesdays, Wednesdays, Thursdays, and Fridays, and at other times by cards obtained of the curator.

The death has occurred of Mr. James Paton, who was for many years superintendent of Glasgow Corporation Art Galleries and Museums. He was elected president of the Museums Association of the United Kingdom in 1896, and was a recognised authority on art and archaeology.

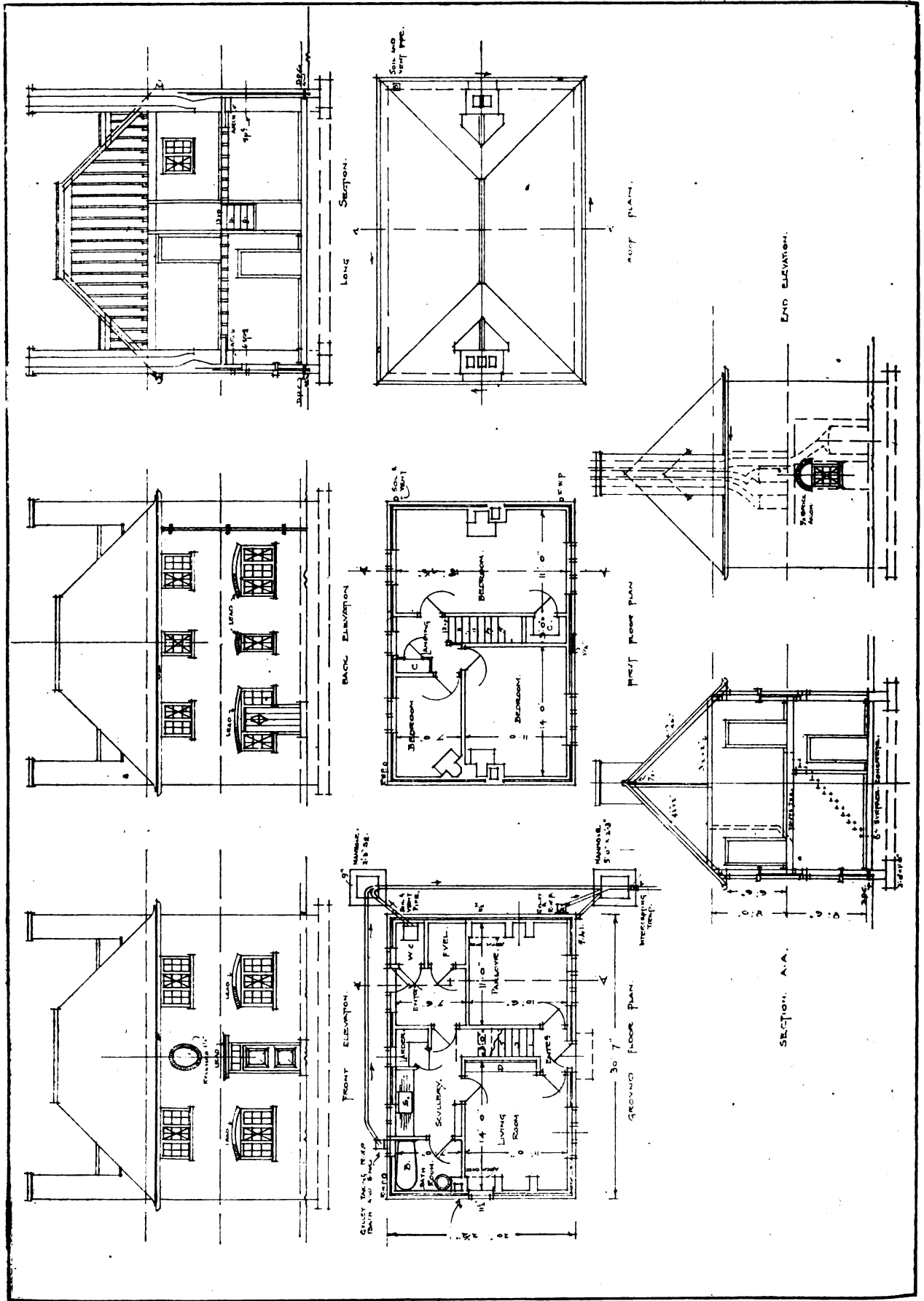
The London and North-Western Railway Company are expending several thousand pounds on the establishment of works at Sydney, near Crowe, for the purpose of manufacturing their own concrete. The work already has been started, and new sidings extend over a large portion of land.

A building syndicate has surveyed several sites in Great Crosby with the view of erecting a garden village. Thornton flats, the site of one of the derelict camping and drill grounds, and land in Endbutt Lane have been under consideration, together with more central sites temporarily occupied by allotment holders.

A teacher in a provincial Sunday School, says the *Morning Post*, recently giving a lesson dealing with the disastrous consequences of idleness, exhorted his class always to remember who it is who finds work for idle hands. "Who is it?" he asked, and was promptly supplied with the disconcerting answer: "Please, sir, the Labour Exchange."

The death occurred suddenly on Saturday last at his residence at 173, Kenmore Street, Pollokshields, Glasgow, of Mr. William Kennedy, Clerk of Works, His Majesty's Office of Works. Mr. Kennedy was born in 1856 in the parish of Logierait, Perthshire. About thirty years ago he was appointed Resident Clerk of Works in Glasgow, and until his death was in charge of the department responsible for the maintenance of Government buildings in the city and in the West. Mr. Kennedy, who was due to retire in September, was the Senior Clerk of Works in Great Britain, he having been the first to be appointed by competitive examination.

THE BUILDING NEWS, MARCH 4, 1921.



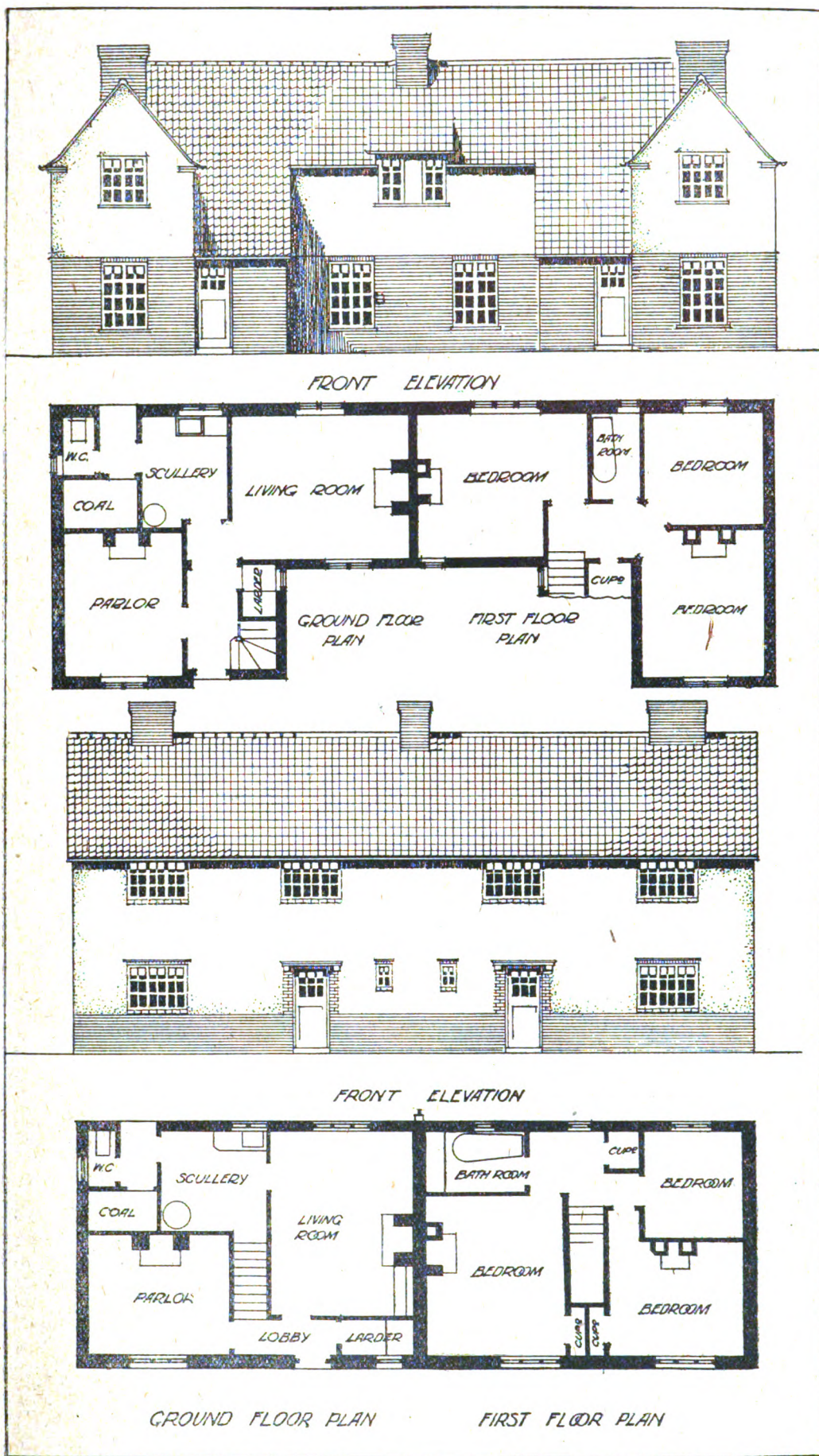
COTTAGE AT KINGSWOOD, SURREY.—Mr. E. GUY DAWBER, F.S.A., F.R.I.B.A., Architect.



ROMAN CATHOLIC CHURCH, HAYES, MIDDLESEX.
Mr. FREDERICK L. FORGE, Lic.R.I.B.A., Architect.



MEMORIAL SCREEN, ST. SWITHIN'S CHURCH, EAST RETFORD.
Mr. HAROLD BAILEY, F.R.I.B.A., Architect.



CHELTENHAM HOUSING SCHEME : PARLOUR BLOCKS.
Messrs. CHATTERS, SMITHSON, & RAINGER, Architects.

PARLIAMENTARY NOTES.

THE OFFICE OF WORKS AND THE SUPPLEMENTARY ESTIMATES.—Last Friday, Sir D. MacLean moved a reduction of the Vote by £100,000. He said that the First Commissioner of Works, in placing these estimates before the Committee, presented the spectacle of a good business man struggling with adversity in the shape of a wholly inefficient and unbusinesslike Administration. What the country wanted was ordinary and reasonably habitable houses, and the information already in existence as to bricks and cement was sufficient for the purpose without spending any more money. He found that despite the present urgent need of economy and the appeals of the Prime Minister to the Departments to reduce their staffs, the services of only 390 persons had been dispensed with. What happened was that when they were dismissed from one Department they got into another, bolting about like rabbits from one official burrow to another without the House of Commons getting hold of them. Sir F. Banbury said he understood that without such research houses might fall to pieces in ten years. He did not know whether the right hon. gentleman meant the houses the Department had built or the houses built under the auspices of the other Department—the Ministry of Health. In past times people built houses which did not fall to pieces in ten years but lasted for centuries. Sir A. Mond's principal justification of the vote, in reply, was an interesting but not strikingly pertinent account of his recent visit to the Pyramids, which were built a great many years ago. A good deal of research work lasting for a great many years must have been undertaken before anyone attempted that task. The method of blocking employed was one of the most ingenious things the world had ever seen. But perhaps that was rather far away from the subject. After more talk to make time to get the Prime Minister and a few more non-week-end Members into the House, the Committee divided and there voted:—For the reduction, 78; against, 88; majority against, 10. The announcement of the figures was received with laughter and cries of "Resign" from the Opposition benches.

Owing to the continued increase in the cost of newspaper production, the proprietors of the *Leicester Daily Post*, Leicester's only morning newspaper, which was started in 1872, have reluctantly determined to suspend publication of that journal at the end of March.

The next ordinary general meeting of the Surveyors' Institution will be held in the Lecture Hall of the Institution on Monday, March 7, 1921, when a paper will be read entitled "The Report from the Select Committee of the House of Commons on Business Premises," by Mr. A. B. D. Lang (Fellow). The chair will be taken at 8 o'clock.

The Bishop of Lincoln dedicated in St. Peter-at-Gowt's church, Lincoln, on Sunday week, a roof cross, suspended from the roof by dark chains, broken by the gilded keys of St. Peter. It represents the Tree of Life, and its springing branches are suggested by golden crockets. The designers were the late Mr. Temple Moore and Mr. Leslie Moore, and the work has been carried out by Messrs. Thompson and Sons, of Peterborough.

At the thirteenth ordinary general meeting of the International Paint and Compositions Co., Ltd., held on Friday last, the chairman said that, after writing off bad debts, the profit for the past year was £37,686 odd, as compared with £63,655 in 1919. The directors recommended a final dividend of 3 per cent. on the ordinary shares, making, with the 3 per cent. already paid, 6 per cent. for the year, as compared with 10 per cent. paid in 1919.

Speaking to 2,000 employees last Saturday, Mr. W. G. Tarrant, of Messrs. W. G. Tarrant, Ltd., building contractors, Byfleet, said the cost of cottages, now £1,400, must be reduced to £600. He did not desire to see the men earning less money, but a 44 hours' week was not fair. He advocated a 50 hours' week and the dismissal of slackers. The men passed a resolution unanimously to increase production by 10 per cent., the question of hours and wages to be left in abeyance. If so left, there will be little increase in production, in our opinion.

LEGAL INTELLIGENCE.

BIRMINGHAM BUILDING CONTRACTOR'S APPEAL FAILS.—An appeal by Mr. Sydney W. S. Saunders, building contractor, of Pershore Road, Selly Park, Birmingham, from a decision of the High Court Official Referee in an action brought against Messrs. Pagett and Swain, builders' merchants, of Oldbury, came before Justices Coleridge and Greer in the King's Bench on February 24. The action was commenced at the Birmingham Assizes and then remitted to the Official Referee. According to the appellant's contention, there was delay in the delivery of the bricks, and some that were delivered were of the wrong size. He said he had lost entirely his anticipated profit of £400 upon the undertaking, and was put to the expense of some £500 to carry out his contract, and after allowing for certain sums he claimed to recover £800 odd. The Official Referee gave judgment for £45 only, which was in respect of bricks delivered that were of the wrong size. With regard to the main question, he found that there was no delay and no breach of contract. He, however, thought it well, in case he was wrong in that view, to assess the damages that would be due, and found that Mr. Saunders would be entitled to £125 for expenses to which he had been put in carrying out the work and £50 for additional carting. It was now sought to have these sums included in the judgment and added to the £45 which had been awarded on the ground that there was a breach of contract. Mr. Dyer, K.C. (for the respondents), contended that the evidence showed that any delay in delivery was due to the difficulty in obtaining railway trucks. Mr. Justice Coleridge, giving judgment, said the Official Referee had found there was not unreasonable delay in obtaining trucks to convey the bricks, and the Court could not say that he was wrong. The appeal would therefore be dismissed.

HASTINGS BROTHERS, LTD.—The Official Receiver and Liquidator of the above-named company (registered office, 83, 84, and 85, Farringdon Street, London, E.C.) intends to apply to the Board of Trade for his release, and any objection to the granting of his release must be notified to the Board of Trade within twenty-one days from the 24th ult. A summary of receipts and payments as Official Receiver and Liquidator shows that the total receipts from date of winding-up order, viz., the assets disclosed in the statement of affairs, amounting to £4,772 6s. 2d., were covered by debentures. Other receipts have realised £7 7s. The total costs and charges have been £31 3s. 8d., leaving a balance due to the Board of Trade of £23 16s. 8d. The assets realised up to the present have been insufficient to discharge the debenture debt. As it is doubtful whether any further assets will be realised, there appears to be little prospect of any surplus becoming available for the unsecured creditors. Creditors and contributories can obtain any further information by inquiry at the Department of the Official Receivers, 33, Carey Street, Lincoln's-Inn, London, W.C.2.

Mr. George Parker has been elected Master of the Paviers' Company. The Wardens are Mr. Thomas D. Cooper and Mr. Sheriff Newton Knights, M.P.

Swiss building employees have decided by a large majority in favour of the employers' proposal to return to the labour conditions of last summer, which include a fifty-hour working week.

As part of the city memorial to those who died in the war, Bradford is being girdled by an avenue of trees, and already more than 2,000 saplings of elm, sycamore, and lime have been planted. Children who have won scholarships from elementary schools will have the privilege of planting trees in the avenues and shrubberies in the parks and recreation grounds.

Lieutenant-Colonel Roysds, M.P., who was successful in the ballot for private members' Bills, has introduced the Local Rates (Increase Prevention) Bill, which is down for second reading on April 29. This Bill will embody the policy of the People's Union for Economy, and will be drafted by them. We hope every reader will at once postcard his M.P. to support this Bill.

At a meeting of the Ampthill (Bedfordshire) Rural Council last Saturday a member stated that in one small village there were twenty new houses for which no tenants could be found. The houses were built near some works to save the men from having to walk two miles from other villages, but they preferred their old cottages. The Council decided to defer three new housing schemes.

Our Office Table.

The Prince of Wales has been installed President of the Royal Commission which has charge of the British School at Rome, and the following elections for the ensuing year are announced:—Executive Committee: Lord Esher (chairman), Lord Plymouth, Lord Harcourt, Sir Rennell Rodd, Sir Frederic Kenyon, Mr. George Clausen, Mr. J. S. Sargent, Sir Thomas Brock, Sir George Frampton, Sir Aston Webb, Sir R. Blomfield, Sir Frank Short, Mr. D. Y. Cameron, Professor J. S. Reid, Mr. Arthur Smith, Mr. John Penoyre. Faculty of Archaeology, History and Letters: Mr. Edward Bullough, Mr. A. M. Daniel, Sir Arthur Evans, Mr. G. F. Hill, Professor H. S. Jones, Mr. G. A. MacMillan, Professor Thomas Okey, Mr. John Penoyre, Professor J. S. Reid, Mr. Arthur Smith, Mr. G. M. Trevelyan, Sir Charles Walston, Professor W. H. Woodward. Faculty of Architecture: Sir R. Blomfield, Sir John Burnet, Mr. H. Chalton Bradshaw, Mr. W. Curtis Green, Sir Edwin Lutyens, Mr. Ernest Newton, Professor C. H. Reilly, Mr. Gilbert Scott, Mr. J. W. Simpson, Sir Aston Webb. Faculty of Painting: Mr. D. Y. Cameron, Mr. George Clausen, Sir Arthur Cope, Mr. Dermot O'Brien, Sir William Orpen, Mr. Charles Ricketts, Mr. J. S. Sargent, Mr. Charles Shannon, Mr. Wilson Steer. Faculty of Sculpture: Sir Thomas Brock, Sir George Frampton, Mr. C. S. Jagger, Sir W. Goscombe John, Mr. Gilbert Ledward, Mr. Bertram MacKenna, Mr. F. W. Pomeroy, Mr. J. Havard Thomas, Sir W. Hamo Thornycroft. Faculty of Engraving: Mr. Muirhead Bone, Mr. D. Y. Cameron, Mr. Campbell Dodgson, Mr. Charles Shannon, Sir Frank Short, Mr. William Strang. The new members of the Faculties are:—Architecture: Sir John Burnet, Mr. Gilbert Scott, architect, of Liverpool Cathedral, and Mr. H. Chalton Bradshaw. Painting: Mr. Charles Shannon. Sculpture: Mr. C. S. Jagger and Mr. Gilbert Ledward, also former winners of the Rome Scholarship. Engraving: Mr. Frank Brangwyn.

"The Lay-Out of Small Water Mains," by H. H. Hellins, M.Inst.C.E. (London: Sir Isaac Pitman and Sons, Ltd., 7s. 6d.), will be of much service to many who have found the existing formulae for the discharge of water through compound, double, and ring mains troublesome to calculate, especially to all entrusted with the effective and economical laying-out of small water supplies, including the fire and general services on estates, factories, and large works. Most of the tables were found extremely useful during the war by several Government Departments, where many hundred water supplies had to be rapidly designed and executed.

"Laxton's Builders' Price Book for 1921. With Supplement" (London, Kelly's Directories, Ltd., 182, High Holborn, W.C.1, 7s. 6d.) is the 104th edition. Naturally, the number of corrections for this year's edition have again been very heavy, as the result of the higher rate of wages and the constant rise of building materials, due, in some measure, to the advance in railway rates. The list of specialities has been carefully revised and extended, and will prove to be even more useful than before. Certain Building Acts of Parliament and regulations referring thereto, to which have now been added the Housing (Additional Powers) Act, 1919, and essential extracts from the Housing, Town Planning, etc., Act, 1919, having reference to loans to private persons, are issued in the form of a separate supplement, and can be obtained upon application. The new edition well maintains the high position which the book holds in public opinion as a useful and reliable handbook.

Messrs. Hayward Tyler and Co., Ltd., of 99, Queen Victoria Street, E.C.4, have just issued a new edition of their "Practical Guide for the Water Supply of Towns, Estates, Villages, Houses, etc.," which will be found of great service to architects, builders, estate agents, district surveyors, and property owners. It indicates lucidly, and without formulae, the best sources of supply, the means

of ensuring purity, methods of softening, advisable amounts, most suitable pipes, and the various other details on which depend good supply at reasonable cost. We need hardly remind readers that Messrs. Hayward Tyler and Co.'s long and probably unequalled experience as hydraulic and sanitary engineers renders their offer of practical advice to all concerned a most advantageous one. The illustrations given are merely a selection of the usual forms, and this well-devised little volume is in no sense a mere trade catalogue, but a compendium of information seldom attainable, and never guaranteed by better results than those that attended the many installations for which its authors have been responsible.

We congratulate Mr. J. H. Brierley on his practical contribution to the training and employment of ex-Service men. He has at work in his department one painter, one carpenter, and one blacksmith, and each of these has agreed to take an ex-Service youth as an apprentice for three years. The lad will receive a wage rising to £2 5s. in his last year, and the instructor will get a yearly acknowledgment of £5 from the Town Council for his trouble. This might be done in many departments of most local governing bodies, and in thousands of other establishments. It would do much to restore the trade efficiency which trade unionists of today lack, and guarantee employment to the really fit.

A specification for liquid paint driers recommended by the U.S. Interdepartmental Committee on Paint Specification Standardisation applicable to both straight oil drier—that is, material free from resins or “gums”—and to Japan drier—that is, material containing varnish “gums”—is as follows:—The drier shall be composed of lead, manganese, or cobalt, or a mixture of any of these elements combined with a suitable fatty oil, with or without resins or “gums,” and mineral spirits or turpentine, or a mixture of these solvents. It shall be free from sediment and suspended matter. The drier when flowed on metal and baked for two hours at 100 deg. C. (212 deg. F.) shall leave an elastic film. The flash point shall be not lower than 30 deg. C. (85 deg. F.) when tested in a closed-cup tester. It shall mix with pure raw linseed oil in the proportion of 1 volume of drier to 19 volumes of oil without curdling, and the resulting mixture when flowed on glass shall dry in not more than eighteen hours. When mixed with pure raw linseed oil in the proportion of 1 volume of drier to 8 volumes of oil, the resulting mixture shall be no darker than a solution of 6 g. of potassium dichromate in 100 c.c. of pure sulphuric acid of specific gravity 1.84.

London County Council is recommended by the Public Control Committee to pass a resolution regretting the action of the Board of Trade in regarding the pre-war standard of the calorific value of gas supplied by the Gas Light and Coke Company as 500 British thermal units instead of 540. Had the latter figure (the average value of the company's gas for the year ended June 30, 1914) been taken, the new price would have been only 14.64d., instead of 15.2d. per therm. In other words, consumers will have to pay the equivalent of an extra 2½d. per 1,000 cubic feet for the gas, and the company will be entitled to declare an extra dividend of 5s. 4d. per cent.

The decision of the Board of General Purposes of United Grand Lodge deals a final blow to the attempt to secure recognition for women as masons. A petition was received from a body which claimed to be a genuine Masonic body departing only from the Masonic tradition in the one matter of the admission of women. It has been pointed out to the petitioners that this one matter involves a vital principle on which there can be no compromise. No woman can be a Freemason according to the original plan of Freemasonry to which English Freemasons have from time immemorial adhered, and all dissent from which they are pledged to discontinue. In these circumstances the Board of General Purposes finds it impossible

to recommend the petition to Grand Lodge, and further warns Freemasons that it will exercise disciplinary powers towards any member under its jurisdiction who is present at assemblies professing to be Masonic which are attended by women.

At a general assembly of Academicians and Associates held last Tuesday evening, Sir John Lavery, A.R.A., was elected a Royal Academician; Mr. William Strang, A.R.A.; was elected a Royal Academician Engraver; and MM. Paul Albert Besnard, painter, and Albert Bartholomé, sculptor, were elected Hon. Foreign Royal Academicians. Sir John Lavery, who was born at Belfast in 1856, studied art in Glasgow, London, and Paris. He was knighted in 1918. Mr. William Strang, painter and etcher, has been an A.R.A. since 1906, and he is President of the International Society of Sculptors, Painters, and Gravers. Born at Dumbarton in 1859, he was a Slade School student, and has studied and worked in London since 1895.

Lecturing on Wednesday at the Incorporated Institute of Hygiene on “Health Building,” Sir James Cantlie said it was easy to estimate in foot-lbs. or foot-tons the energy expended by a human body in a day, and so to judge of the amount of work that was being done in certain directions. Going upstairs made severe demands, and the girl who was climbing flights many times a day naturally sought her relief on the top of a ‘bus when she went out. A day's work for a man had been 300 foot-tons, but it was now reduced to 150; he went late to his work and came away early, and did not expend the energy that his father did. He had got lazy; the muscular power of his heart was going down; his arm was getting unfit for its work, and he was becoming a degenerate man, producing a nation which had lost in body and spirit, and had run down one-half in physique. The terrible business of “strike,” “strike,” “strike,” and reducing the labour of the men until they were incapable of doing their work, had brought the trade union to become the Sluggards' Protection Society of Carlyle. As things were, men were not doing enough work to keep their hearts strong, and Sir James thought he would have to invite them across to his school of physical “jerks” to cure the evil.

CHIPS.

A lapsus calami: On page 97 of our last issue, in the first column, in the eighth line, for “Oxford” read “Cambridge.”

Chelmsford Town Council has accepted the tender of a French firm to supply forty-seven tons of gas mains at £670, the lowest British tender being £1,065, or nearly £400 higher.

The London County Council is recommended to grant permission for the erection of the memorial to the officers and men of the Imperial Camel Corps in the Victoria Embankment Gardens near the Burns statue.

Lord Leonfield, Lord-Lieutenant of Sussex, last Sunday unveiled the Howe War Memorial, designed by Sir Edwin Lutrens. It is a single column of grey granite surmounted by a bronze figure of St. George, and is erected in Grand Avenue.

Mr. Paul Waterhouse and Mr. George Hornblower have been appointed joint architects for the University College Hospital Reconstruction scheme. The buildings and alterations of the scheme have been made possible by a gift from the Rockefeller Foundation.

A memorial of alabaster, with white marble slab, to the thirty members of the India Office and Store Depot staffs who fell in the great war was unveiled last Friday by Lord Crewe. It was designed by Mr. T. H. Winny, architectural surveyor to the Secretary of State, and made by Messrs. Farmer and Bundley, of Westminster Bridge Road.

The Treasury are empowered to issue from the Consolidated Fund sums up to £2,000,000 to meet capital expenditure in connection with the housing of persons employed by or on behalf of Government Departments. According to a White Paper issued on Saturday, at March, 1920, the balance available was £270,944. The only amount expended during the year was £56,000 by the Scottish Board of Health, relating to accommodation for Admiralty employees at Rosyth. For the Woolwich housing scheme £821,542 was expended by the Office of Works.

LIST OF TENDERS OPEN.

COMPETITIONS.

March 17.—For Design for a War Memorial at Chatham to the Royal Engineers of all ranks who fell in the war. Sir Reginald Blomfield, Assessor.

July 15.—For Designs for the proposed Council Chamber in Calcutta, for the Legislative Council of Bengal. Three premiums of £600, £250, and £100. Assessor, Mr. Henry Crouch, F.R.I.B.A., Consulting Architect to the Government of Bengal. Architect placed first to be employed to carry out the work.

BUILDINGS.

March 5.—For 138 houses.—For the Barton-upon-Irwell Rural District Council.—Mr. G. G. Forster, A.M.I.C.E., Green Lane, Patricroft, architect.—Tenders to J. W. Whitworth, clerk, Council Offices, Green Lane, Patricroft, near Manchester.

March 5.—For 32 houses, Liskeard.—For the town council.—Messrs. Truscott and Parkes Lees, architects.—Tenders to A. W. Venning, town clerk, Liskeard.

March 5.—For 34 houses.—For the Chard Rural District Council.—Messrs. Symes and Mudge, F.S.L., Somerset House, Chard, architects.

March 7.—For new fire station, etc., Hoole.—For the urban district council.—Mr. F. Davies, 14, Newgate Street, Chester, architect.—Tenders to E. H. Rigby, clerk, Council Offices, Hoole Road, Hoole.

March 8.—For converting Branston Hall, Lincoln, as a county sanatorium, and erection of open-air school in connection.—For the Lindsey County Council.—Messrs. Scorer and Gamble, F.R.I.B.A., Bank Street Chambers, Lincoln.

March 8.—For 54 houses, St. Peter's, Broadstairs.—For the urban district council.—Mr. E. E. Moody, 109, High Street, Broadstairs, architect.—Tenders to L. A. Skinner, clerk, Pierremont Hall, Broadstairs.

March 8.—For houses, St. Columa Major.—For the rural district council.—Messrs. Andrew and Randell, New Inn Chambers, St. Austell, architects.

March 9.—For ten houses.—For the Ulverston Rural District Council.—Messrs. J. W. Grundy and Son, F.R.I.B.A., Central Buildings, Brodgen Street, Ulverston, architect.—Tenders to C. W. Dean, clerk, Town Hall, Ulverston.

March 9.—For 26 type “B” houses, Goole.—For the urban district council.—Tenders to J. W. Pullen, clerk, Council Offices, Goole.

March 9.—For 91 houses, Ruislip, Northwood.—For the rural district council.—Tenders to E. R. Abbott, clerk, Council Offices, Northwood, Middlesex.

March 9.—For 64 houses (“A 3,” “A 5,” and “A 6,” in sixteen blocks of four), Boarshaw.—For the Middleton Town Council.—Messrs. T. A. Fitton and Son, 19a, Corporation, Manchester.—Tenders to J. P. Walmsley, town clerk, Town Hall, Middleton, Lancs.

March 9.—For 36 houses, Stainland.—For the urban district council.—Messrs. J. Barry and Sons, 3, Market Place, Huddersfield, architects.—Tenders to A. T. Longbotham, clerk, 4, Carlton Street, Halifax.

March 10.—For 54 non-parlour type houses, Cleethorpes.—For the urban district council.—Mr. L. W. Pye, A.M.I.C.E., Council Offices, Cleethorpes, surveyor.—Tenders to A. S. Barter, clerk, Council Offices, Cleethorpes.

March 10.—For bathroom addition, etc., Lamorna, Perranwell.—Mr. A. J. Cornelius, F.S.A., Truro, architect.—Tenders to E. Moore, Lamorna, Perranwell Station.

March 11.—For 26 “A” and 20 “B” type cottages, Ringwood.—For the rural district council.—Mr. E. H. Griffith, High Street, Downton, Salisbury, architect.—Tenders to Philip H. Jackson, clerk, The Market Place, Ringwood.

March 12.—For four pairs of cottages, King's Langley.—For the Hemel Hempstead Rural District Council.—Mr. T. H. Lightbody, M.S.A., 20, Marlowes, Hemel Hempstead, architect.—Tenders to L. Smeathman, clerk, Council Offices, 1, The Broadway, Hemel Hempstead.

March 12.—For 84 houses, Swadlincote.—For the urban district council.—Messrs. Baines and Provis, A.R.I.B.A. and M.S.A., 22, Friar Lane, Leicester, architects.

March 15.—For 70 houses, Brentford.—For the urban district council.—W. J. Westlake, engineer, Clifden House, Boston Road, Brentford.

March 17.—For 226 houses, Norton.—For the Stockton Town Council.—Housing Architect, 50, High Street, Stockton.—Tenders to the Town Clerk, Borough Hall, Stockton.

Dr. Addison writes, in answer to a question, that a local authority will not be prejudiced as regards financial assistance in respect of building commitments entered into with the approval of the Ministry of Health which the local authority by reason of circumstances outside their control are unable to carry out within the prescribed period.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

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Strand, W.C.2.

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Currente Calamo.

Mr. A. B. Lang's paper, read at the Surveyors' Institution, which we give almost *in extenso*, is a very timely one. There was, of course, a good deal of exaggeration in some of the evidence given to the Select Committee on Business Premises, but there have undoubtedly been some cases of extortion and of unreasonable eviction. Moreover, Mr. Frank Hunt's evidence on behalf of the London County Council did, in our opinion, prove that the Town Tenants Bill will in many cases make public improvements impossible and prejudice tenants in the long run. Again, the Committee admitted that the Rent Restriction Acts have stopped builders and building owners and alarmed capitalists. These and other anomalies might certainly be remedied by the course Mr. Lang suggests—namely, that the Surveyors' Institution should at once appoint a committee and draft a Bill giving due protection to tenants and adequate safeguards to owners, and initiate a campaign to educate the public upon the difficulties and dangers of upsetting the natural law of supply and demand. No other body could do this with such knowledge and authority as the Surveyors' Institution can exert, and it is, in a measure, bound to combat a suspicion which ignorant and aggrieved people quite wrongly entertain, that as a profession surveyors are always on the side of the landlords.

All lovers of the Lake District will, we hope, respond to the appeal of the National Trust for help to purchase part of the eastern shore of Derwentwater, which has been advocated in a letter in the *Times* by Mr. H. E. Luxmoore. It is no derogation of the wonderfully varied scenery of the neighbouring valleys to claim Borrowdale as the most exquisite corner of the Lake District, and Derwentwater as its most beautiful lake. For this reason, as well as from its nearness to the rail at Keswick, Derwentwater is much exposed to the risk, as land changes hands, of becoming bordered with new buildings which may quite possibly impair its charm. The tract of shore which it is now hoped to acquire includes the rocky

projection of Friar's Crag, which commands one of the most attractive views of Derwentwater and the heights of Borrowdale beyond it. The spot is also memorable, as the *Times* aptly reminds us, for its association with the awakening interest of Ruskin in natural scenery; and it is fitting that its surroundings should be dedicated, as it is hoped when the purchase is completed, to the memory of Canon Rawnsley, who did much, as a disciple of Ruskin, to vindicate and encourage the widest possible enjoyment by the public of Lake Country scenes.

"The Causes and Prevention of Decay in Structural Timbers" was the subject of an address by Mr. H. J. Blair at a meeting of the Montreal branch of the Engineering Institute of Canada on February 3. Mr. Blair said decay takes place in timbers either already weakened by fungus growths before being set in the building, or in which the growth is aided by an excess of humidity in the air near the timbers. One instance of the last was a cotton mill, in which a cold water pipe ran for several hundred feet just below the cross-beams. This pipe lowered the temperature of the atmosphere in its proximity sufficiently to raise the percentage of the humidity enough to start fungus growth, which in turn decayed the timbers to such an extent that they had to be renewed throughout the length of the building. Another instance, which would have produced disastrous effects if not checked in time, was a building in which one of the main supporting timbers was resting on the ground as a base. The moisture started decay, and the foot of the pier began to crumble away. This decay probably attacks roofs more than anything else, as moisture is more liable to work its way in and cause decay. The difference of temperature between the interior and exterior surfaces, and the consequent varying humidities, creates a situation under which decay progresses very favourably. Mr. Blair stated his objections to a theory held by some architects that a dead air space between the interior and the exterior surfaces prevents such decay, by showing examples in which decay was as rampant as in any other type of roof. In his opinion, the most successful roof is one in which the upper part of the roof (boarding, paper, tar, and gravel,

etc.) is of sufficient thickness to maintain at its inner edge a temperature of 59 degrees under the lowest atmospheric conditions. At this point a water-proofing layer should be introduced, and below that the wood boarding should be treated chemically to keep out moisture. This should be of sufficient thickness to maintain at the surface in contact with the weather-proofing a temperature of 59 degrees under the highest atmospheric conditions. As a means of overcoming growths of fungi all moisture should be drawn from the timbers and the place in which they are used made as dry as possible. If this method of defence fails, the timber, after being dried, may be treated with mercury chloride. This failing, the building should be wrecked.

The White House, in the occupation of which Mr. Harding succeeds his predecessors who have occupied it since and including the Presidency of John Adams in 1800, was built on a site chosen by George Washington, who laid the corner-stone in 1792 and lived to see its completion in 1799. A prize of 300 dollars had been offered for the best design for a house for the President. The successful competitor was James Hoban, of South Carolina, a native of Ireland, whose plans closely followed those of the seat of the Duke of Leinster, near Dublin, an edifice in the Italian style. Hoban's original design was for a three-storey structure capable of being extended by means of wings and colonnades. The idea was approved by Washington, but the American public shuddered at such magnificence, the plans were simplified, and a two-storey building was erected. It is constructed of Virginia freestone, and the main building is 170 ft. in length and 86 ft. in depth, consisting of a rustic basement, two storeys and an attic, the whole surmounted by an ornamental balustrade. The north front has a portico of lofty Ionic columns, and the south a colonnaded balcony. It is set in pleasant grounds of 80 acres, stretching down to the Potomac Flats.

Sir William Blake Richmond has left behind him a vigorous protest against Philistinism and class-selfishness, entitled "Democracy—False or True," which bears on its fly-leaf the inscription: "Dedicated to the honest working classes

of England, rich and poor, by one of themselves." In it he deals with things as they are and as he would have liked them to be. Many of us will hope his "dream" may be realised—at any rate, by those who come after us. He denounces the "dishonesty" of trade unions and laments the "slavery" of trade unionists; he deplores industrialism, and insists that "man was not made to be a machine." Then he pictures the world regenerated—the cultivation of art, the aristocracy of learning, the heavy taxation of machinery and of unproductive land, the end of river-pollution, and of "the smoke-fiend." "If a League of Nations is to succeed, the wings of science," we are assured, "must be cut," and that the hop, whatever Mr. "Pussy-foot" may say, is a "fragrant and desirable fruit." A glowing description of the England of his dreams under the beneficent rule of a genuine democracy is attractively described, which even those who may regard it as Utopian can read with interest.

"EMPTYING THE SAFE."

If their official representatives voice the general views of the building trade operatives, they are still bitterly hostile to the employment of ex-Service men on housing. Mr. George Hicks, President of the National Building Operatives' Federation, speaking at Canterbury last Sunday, said he wished to state definitely, with regard to the question of the fifty thousand dilutees whom the Government were particularly anxious to force upon the building trade, that it was a scandalous shame to create hopes in the breasts of men that they would never be able to fulfil. It was impossible to put those fifty thousand men at work. It was a stunt of Dr. Macnamara's, in order that he might acquire the reputation of being able to employ all these ex-Service men in nearly all the great industries producing the essentials of life. Where dilution had been tried, he declared, there was widespread unemployment. The present system, which was based upon the protection of private interests, was responsible for unemployment. "We do not intend," said Mr. Hicks, "in any circumstances whatever, to agree to the reintroduction of payment by results in the building industry. So far as I am concerned, I would be prepared to empty the safe to the last halfpenny in order to resist such a damnable thing being reintroduced into the industry. The declaration of the Master Builders with regard to dilution is nothing but a smoke screen. The poor ex-Service men are being used for the more sinister, deeper, and dirtier purpose of obtaining the system of payment by results."

The last statement is utterly untrue. The ballot papers issued by the National Federation of Building Trade Employers have all been sent out and are returnable by the 21st instant. The vote is to be taken on one issue only, that of dilution, and no other questions, such as the sliding scale for the regulation of wages, payment by results, or an unemployment insurance scheme, will be mixed up with it. The position is that the Government have made certain proposals to the employers, and the employers are asked to state whether they are prepared to accept and carry them out, whatever the consequences may be. If the master builders vote solidly in favour of taking in the ex-Service men and proceed to do it, as they will, the operatives have got either to submit or

fight. They could have got at an earlier stage from the Government certain concessions in consideration of taking in the dilutees. If they now consider the circumstances are such that they must now submit without those concessions, their own members will probably think they have had very poor negotiators, who have got for them a worse bargain than they could have made. If they now put up something to the employers which will enable an amicable settlement to be arrived at, we are sure it will be fairly considered.

The angry manifesto issued on Tuesday by the President and Secretary of the National Federation of Building Trade Operatives is, throughout, a misrepresentation of facts. It insists that: "As a result of the members affiliated to the National Federation of Building Trade Operatives refusing to entertain the Government's proposals of a money bribe to accept wholesale dilution, which was easily discernible as a concentrated attempt to break the power of our unions, the Master Builders' Association executive have met the Cabinet and agreed to admit the dilutees into the industry, and have also asked the Operatives' Federation to agree to a system on national lines of payment by results with adequate safeguards, and to agree to a supplementary scheme for unemployment pay, the amount to be equal and in addition to the present Act of Parliament on a contributory basis, equally borne by employers and workmen." Further, "the truculent attitude of the employers" is denounced, and, after more misrepresentation, the workers are told that: "Dilution is but the bait for public consumption. The real issue is the enforcement of payment by results on an industry that has religiously refused to accept the same. As a united army of industrial workers act with discipline to retain your 44 hours, and protect your plain time rates, and if a fight is determined, remember we fight on our stomachs, while the employers are supported by the Government. The sinister efforts of the Federation of British Industries are unmasked. Mass action is required from all industries affected. The miners to-day, transport workers to-morrow, etc.; but if the attack is met by combined action, their deliberate intentions will be frustrated. Mass attacks require mass defence."

If bluster about "emptying the safe to the last halfpenny" is the last card of the trade union leaders, and we are to have a long lock-out like that of 1859, housing will be stopped, the unemployed list will swell by thousands every week, and every industry in the country will feel the ill-effects more or less. More so, probably, than they have felt those of the coal strike last autumn. As much so, possibly, as they are feeling those of the working of the railways for the ten months ending January 31, which are gloomy reading. On the ten months there was a profit of £5,340,000 only, whereas the total profit needed to meet the guaranteed dividends was £41,664,000. The claim against the State is therefore for over £36,000,000. The railways are in a very serious position, and, unfortunately, it cannot be argued that the rise in rates and fares last summer is improving it very much, for in January itself there was an actual loss on the month's working. Mr. Cramp is clearly afraid that an attack on railwaymen's wages may develop in consequence of the financial difficulties these figures disclose, and he urges that at the settlement which followed the strike a basic wage was fixed below which wages are not to fall. That is pleasant reading for the railway share-

holder and the taxpayer. If rates and fares are increasingly month by month to stop traffic, while wages continue to "empty the safes" of the railway companies, as they are now emptying those of the employers in other trades, then we are within touch of the Utopia of the Communist who dreams of a new happiness without "capitalism" (such as Russia is enjoying to-day). But the bulk of the workers do not wish to tread the same path as Russia. It is for them to realise the honest truth: that unemployment in Great Britain to-day is chiefly due to mistaken Labour policy inspired by their revolutionary leaders.

THE REPORT FROM THE SELECT COMMITTEE OF THE HOUSE OF COMMONS ON BUSINESS PREMISES.*

By A. B. D. LANG, F.S.I.

It is unnecessary to enter into the history of the beginnings of the matter, for you are all acquainted with it. The Report presented to the House is divided into three parts: (1) General Remarks; (2) Conclusions; and (3) Recommendations. I propose to comment upon these paragraphs by paragraph, and then to offer certain conclusions and suggestions of my own.

Paragraphs 1-4.—These are introductory, but worthy of some note in that they enable us to form some idea of the mentality of the Committee and witnesses.

You will notice that a very large proportion of the evidence comes from non-technical witnesses, men representing some particular trade, or some particular association, labouring under a grievance. It would be idle to dismiss this body of evidence as worthless, however, for it is obvious that some cases of extortion and of unreasonable eviction must have occurred. There is no smoke without fire. Nevertheless, a careful perusal of the minutes of evidence renders it fairly evident that the Committee came to the conclusion that many of these witnesses were blinded by their sense of grievance to a proper perspective of the landlord's position, and were unable to adjust themselves to his point of view.

Mr. Frank Hunt's evidence on behalf of the London County Council will probably prove to be the most valuable yet offered. His position renders it impossible for the tenant to say, "Here is a landlord's man," or the landlord, "Here is a tenant's man." It is obvious that his opinions are formed purely from the point of view of the ultimate good of the general public, and as such they must carry great weight. To those who have not read his evidence in detail I strongly recommend it. He states, as his considered opinion, that such proposals as are contained in the Town Tenants Bill will not only make public improvements impossible, but will also inevitably prove in the long run to be against the interests of the vast majority of tenants.

The members of the Committee were shrewd men who asked very pertinent questions, and the replies which they received in many cases threw a deal of illumination on the complaints as a whole. Long lists of alleged extortionate actions were handed in to the Committee. These proved, in nearly every case, to be unsupported by evidence upon which a fair judgment could be based, and were quite properly treated as purely *ex parte* statements.

The Committee did, however, draw the following conclusions: (1) That in a sub-

* Read at the Ordinary General Meeting of the Surveyors' Institution on Monday, March 7, 1920.

stantial number of cases extortion had occurred; (2) that some tenants had been dispossessed without having been given the option of remaining on fair terms. The language in which these conclusions are couched is restrained to a marked degree. A careful reading of the minutes of evidence tends to show that the restraint indicates the Committee's feeling on the matter to be that the number of these cases is but a small percentage of the total number of tenants complaining, and but a minute one of the total of business tenants.

Paragraph 5.—Sets out four conclusions. The Committee are of the opinion that (1) in both the types of cases referred to under (1) and (2) in the preceding paragraph landlords have taken full advantage of the extraordinary demand for premises, and consequently in such cases special hardship has been suffered by tenants; (2) in the great majority of cases landlords have acted fairly towards their tenants; (3) on the whole, owners do not get more than a fair return on their capital; and (4) while the foregoing is true, yet the cases of hardship are sufficiently numerous to call for some form of Government action.

Careful consideration of these conclusions shows that the Committee's recommendation amounts to a proposal of that most dangerous form of Government action, legislation to suit individual cases. I suggest that this is almost certain to recoil upon the persons whom it is designed to protect.

THE INCREASE OF RENT AND MORTGAGE INTEREST (RESTRICTIONS) ACT, 1920.

Paragraphs 6-13.—By their comments on the above Act the Committee show themselves to be aware that this measure, framed to deal with small houses, is quite unsuited for application to business premises, and, moreover, has, in many cases, caused injustice towards landlords. In particular they point out that the adoption of a percentage scale for permitted increases of rent, whether suitable or not in the case of small residential houses, which are usually let on short tenancies, could only lead to more serious anomalies in the case of valuable business premises, frequently let on long leases, where the old rents often bear no proportion to the rental value.

The closing remarks of this part of the Report seem to me to be very important, being a direct recommendation that the section of the 1920 Act applying to business premises should not remain in force after June 24, 1921.

GENERAL EFFECT OF EVIDENCE.

Paragraphs 14-16.—I doubt whether a clearer statement of the position could well be condensed into fewer words. The Committee quite realise the serious danger of State interference, which would have the effect of drying up the supply of premises at the source, and so stifling healthy competition, the only real and working factor in the reduction of rents and prices.

The average business man needs all his available capital for the development of his business, and has none therefore to spend upon building. For this reason the community has to rely for the provision of that fresh accommodation which is required by an expanding business population upon the investor or speculator, who will naturally look for a reasonable return on his capital and reasonable security for it.

It does not seem, then, to be a wise or statesmanlike action to cause mortgagees and other investors to fight shy of lending upon the security of property, more particularly so in view of the fact that development has been at a standstill for so long a time.

Paragraph 17.—Divides the witnesses before the Committee into two schools: (1) The advocates of the Town Tenants Bill, *in toto* and even with embellishments, who desire to take the control of property out of the hands of the owner, and to place it in those of some irresponsible person who will be free to do much as he pleases with it, to alter it as may suit his purpose, and finally to leave it as and when he chooses, incidentally compelling the landlord to acquire his goodwill, fixtures, etc., at the tenant's own valuation; and (2) a small class of business men who either have or imagine that they have a genuine grievance against a rapacious, speculative landlord. This latter class only asks for temporary help to tide over what is, unquestionably, a trying time.

CONCLUSIONS.

Paragraphs 18-23.—Are the logical inferences drawn from the above, and, subject to later remarks, it is difficult to find fault with them.

It is interesting to note that the Committee definitely state that the Rent Restriction Acts have caused a cessation of building operations, and recognise that the real problem to be solved is how to meet the present difficulties without deterring builders and owners from building and reconstruction, without alarming the capitalists who finance such operations.

They point out that the true remedy for existing grievances lies in increasing supply—

- (a) By building new business premises on any available sites in business areas;
- (b) By reconstruction on larger lines, providing increased accommodation; and
- (c) By developing new sites on areas adjacent to business districts now occupied by decayed or undeveloped semi-residential areas.

Vol. 52, Part XI., of the *Transactions* of the Institution contains a Paper read by Mr. Sydney Smith, and I think a bright illumination is shed upon the subject by the figures therein. In the metropolitan police district the yearly provision of new buildings of all descriptions fell from 10,000 in 1910 to 8,500 in 1914, and to 3,600 in 1916. The percentage of "empties" fell from 5.9 to 3.8, notwithstanding the fact that general business was almost at a standstill in 1918. Moreover, it must be realised that of these 3,600 all were in some manner erected for war purposes; 1,537 were built by Government on their estate at Woolwich alone. That is to say, building as far as business premises were concerned had absolutely ceased. It should not, therefore, surprise us to learn that the 3.8 percentage of empties in 1916 had been absorbed by 1920, particularly when one realises that a large proportion of that percentage had been caused by the vacation of offices by men serving in the Army who desired to return in 1919-20. Another fact which the general public fails to realise is that the increase in capital or rental values is less than that in any other commodity necessary to the life of the community; e.g., £100 of rent produces to-day only about £55 of income where the landlord pays the outgoings, while in pre-war days it would have produced about £66—a fall of 15 per cent. Yet the cost of living to-day is 170 per cent. higher than in 1913-14. That is to say, while the owner's cost of living charges have risen by 170 per cent. his income has depreciated by 16 per cent. Moreover, a freehold property which sold then for 18-20 years' purchase will only command 15-16 years' purchase to-day. Now, while the Rents Restriction Act only

allows the landlord an actual increase of income of 32 per cent., yet the law permits the tenant to charge anything up to 200 per cent. extra for his food, clothes, etc., to the landlord.

It has been loosely stated in the Press that, owing to the rapacity of landlords, large numbers of business men have been turned out into the street and ruined. As to this I am going to make a somewhat bold statement, viz., I do not believe that fifty men or firms can be produced, from all parts of London, who have been driven out of business through eviction from their premises. Hardships there have been, undoubtedly, but I venture to say that in the ordinary course of commerce as harsh or harsher actions are committed every day by those very men who complain of their landlords, which actions result not seldom in the bankruptcy and ruin of the victim. This, however, is termed "fair business competition." On the other hand, during the war most landlords voluntarily gave to their tenants reductions in rent to assist them over the bad times. It appears that these concessions are now forgotten.

Paragraph 24.—Contains what is, to my mind, the most important of all the Committee's conclusions. They recognise two facts: (1) That the management of property is a profession to which a successful practitioner must devote a lifetime, and (2) that the average member of the public is painfully ignorant of the most elementary facts governing the provision and management of business premises; and therefore suggest that a small committee of experts should be set up to consider the whole, as distinct from the emergency and temporary, question, and to go more deeply into its many technical bearings. By this proposal I submit that the Committee recognise the true facts.

I draw great hope for the future from this clause.

RECOMMENDATIONS.

Paragraphs 26-35.—I do not propose to deal with the ten clauses under the heading of Recommendations in detail, for they are only intended to apply to a temporary measure, enacted to meet the immediate emergency and to remain in force only until June 24, 1923, the date of the termination of the 1920 Rent Act. It is proposed that the new measure should be eventually replaced by legislation of a more permanent character.

The following short statement of the method recommended for meeting the present emergency will, however, conduce to an understanding of the observations on points of principle which I shall have to make later.

It is suggested that—

(A) A tribunal should be set up before which a tenant should have the right to apply for a prolongation of his tenancy for a period terminating not later than the expiry of the 1920 Rent Act, the tribunal to have power to grant such application on such terms as appear just;

(B) The tribunal in deciding (a) whether to grant the application, and (b) on what terms, to have regard to all the circumstances of the case, and in particular to—

- (i.) the length and character of the tenancy or occupation;
- (ii.) the then rental value of the premises in the market;
- (iii.) whether the landlord wishes to terminate the tenancy in order to enter personally into possession.
- (iv.) the fact of notice to quit having been given in pursuance of any bona fide scheme of reconstruction or development, whether public or private;
- (v.) the date on which the tenant has received his notice to quit;
- (vi.) any improvements made by the tenant which have substantially increased the permanent value of the reversion and which have not been made by him in discharge of any contractual liability, such improvements not to be regarded as a reason for increasing the rent;

(vii.) any claim by the tenant that the goodwill of his business has added to the letting value of the premises;

(viii) the existence or otherwise of alternative accommodation equally suitable in all respects;

(ix.) whether the landlord has or has not previously consented or offered to renew the tenancy at a fair rental;

(C) The tribunal to consist either of the county court judge or of one of a panel of arbitrators to be appointed by him after conferring with any local branches of the Law Society and Surveyors' Institution;

(D) Questions in dispute to be settled by arbitration, or failing that by the tribunal;

(E) Contracting out to be made illegal;

(F) Buildings erected after or in course of erection on 2nd April, 1919, to be exempted from the operation of any Act founded on the Report.

The Report was signed by all the Commissioners, but was the subject of a reservation by Sir Philip Pilditch, which, in accordance with the usual custom with regard to Select Committees, was not printed with the Report. The reservation was made with the object of drawing attention to the fact that Sir Philip had only approved the recommendation on the distinct understanding that they were of a purely temporary character, and were unsuitable as a solution of the more permanent difficulties which surround this vexed question.

To begin with, I should like to make a remark of a general nature, with which I feel that everybody here will be in sympathy—viz., that no decent landlord has the least objection to the general principle involving security of tenure to the tenant, for the reason that the tenant has always had that security in fact if not in law. The nine safeguards provided in paragraph (b) above are, therefore, an obvious recognition of the fact that a landlord or owner of property has rights as other men. Sections (vi.) and (vii.), however, convey to my mind the admission of the vicious principle that although a contract has been freely entered into by two persons, neither being under duress of any kind, yet that contract may be voided or varied at will by one party though not by the other.

Another point upon which I feel strongly is the repeated use of the word "tribunal," which is apt to be misleading, and is, in fact, used in a most undesirable sense in these paragraphs. "Tribunal" presupposes the presence of a number of men, and can hardly be stretched to apply to any one individual, such as a county court judge or one of a panel of arbitrators. This misuse of the word may lead to the reference of matters in dispute to such a tribunal as we have become accustomed to under the Profiteering Act.

In these circumstances we must protest with all our force against the references of disputes in matters of value to a county court judge, or to a tribunal composed of men who are not experts in these matters. Such a course could not but lead to serious miscarriage of justice in very many cases.

TENANT'S RIGHT OF RENEWAL.

The grant of an absolute right of renewal to tenants will have the effect, I believe, of forcing owners to adopt one of two courses: either they will grant only yearly or quarterly tenancies, or they will insist upon so long a term without break, the burden of the rates being borne by the tenant, as will ensure to the owner a regular and steady income. Property will then incur no risk of "empties," except in cases of failure or bankruptcy. This second course would add a new terror to the life of the small trader, who would be faced with the prospect of leaving, at his death, heavy liabilities to his heirs and executors.

It is difficult and dangerous for us to combat these proposals, for to do so would lay us open to the application of that old word "reactionary." Therefore, though one feels that this question of right of renewal is a difficult and dangerous one for the tenant, and at the same time is, in a manner, the thin end of the wedge opening the way to State management, and possibly nationalisation, yet, always provided that proper safeguards be introduced, I think that the principle must be agreed to, subject to the following qualifications:—

No right of renewal should be granted—

(a) If the owner requires the premises bona fide for his own use;

(b) If the owner requires possession for the purpose of rebuilding or reconstruction;

(c) If the owner be a trustee or executor whose duty it is or may be in the near future to realise;

(d) Unless the tenant be prepared, subject to the above conditions not applying, to pay the full economic rent. Any dispute arising under this head to be referred to arbitration as hereinafter provided for.

COMPENSATION FOR IMPROVEMENTS.

Should any such right as is here suggested be given to tenants, the object of the promoters of the Town Tenants Bill will be very largely achieved. Such a weapon held over a landlord's head would be so powerful in many cases as to be tantamount to a compulsion of a grant of renewal. Moreover, it is almost impossible to cast such a principle into statute form on account of its complexity. Some protection the landlord must have; and who is to assess the value of an improvement? For, mark well that the promoters of the Town Tenants Bill hold that all fixtures are improvements to the landlord's property. Let us suppose, for instance, that a butcher converts a shop to his purpose, and that on the termination of his lease the only tenant available is a chemist, the situation being no longer suitable for a butcher's business. The landlord may then be forced to compensate—first, the butcher for the slabs, tiles, and other appurtenances of his trade; and, secondly, seven or fourteen years later, the chemist for his plate-glass front, his mahogany counters, and show-cases.

This is obviously a proposal to be strenuously opposed by owners of property.

COMPENSATION FOR GOODWILL.

To allow this principle to become law may well have the effect of confiscation of property. So much loose talk has been glibly mouthed on this subject that a glamour seems to surround it. Goodwill in almost every case is purely personal. Compensation for improvements in the case of agricultural property has the sanction of custom for the obvious reason that the tenant cannot remove the improvement; but who can say how much of the goodwill in the case of a business is personal and removable by the tenant to his new premises, and how much permanently pertains to the property? A business man may earn £10,000 a year in two offices rented at £100 per annum. Before the landlord can gain possession is he to pay two or three years' purchase of £10,000 a year for this hypothetical goodwill?

Should this proposal be incorporated in our legislation, the landlord will be well advised to make the tenant a gift of his property rather than ask for possession.

RESTRICTIVE COVENANTS.

Probably we are all in sympathy with that tenant who, at the expiration of his lease, is mulcted in dilapidations in respect of a property which is imme-

diately to be pulled down. But it would not be a difficult matter to frame a proviso by which a landlord should make a statutory declaration whereby he would bind himself not to pull down, alter, or rebuild within, say, three years, and making compensation under this head repayable in the event of non-compliance with the undertaking.

It must be clear to all of us that such proposals as those I have reviewed can only make the provision of new buildings impossible. In London to-day we are years behind America as far as the amenities of our office buildings are concerned. Such legislation as is suggested under sections (vi.) and (vii.) of paragraph (b) will simply stereotype old premises and stifle all progress. It will force landlord and tenant into a mutually antagonistic attitude, and will change the pleasant atmosphere which has hitherto subsisted in their relations to one of hostility and suspicion.

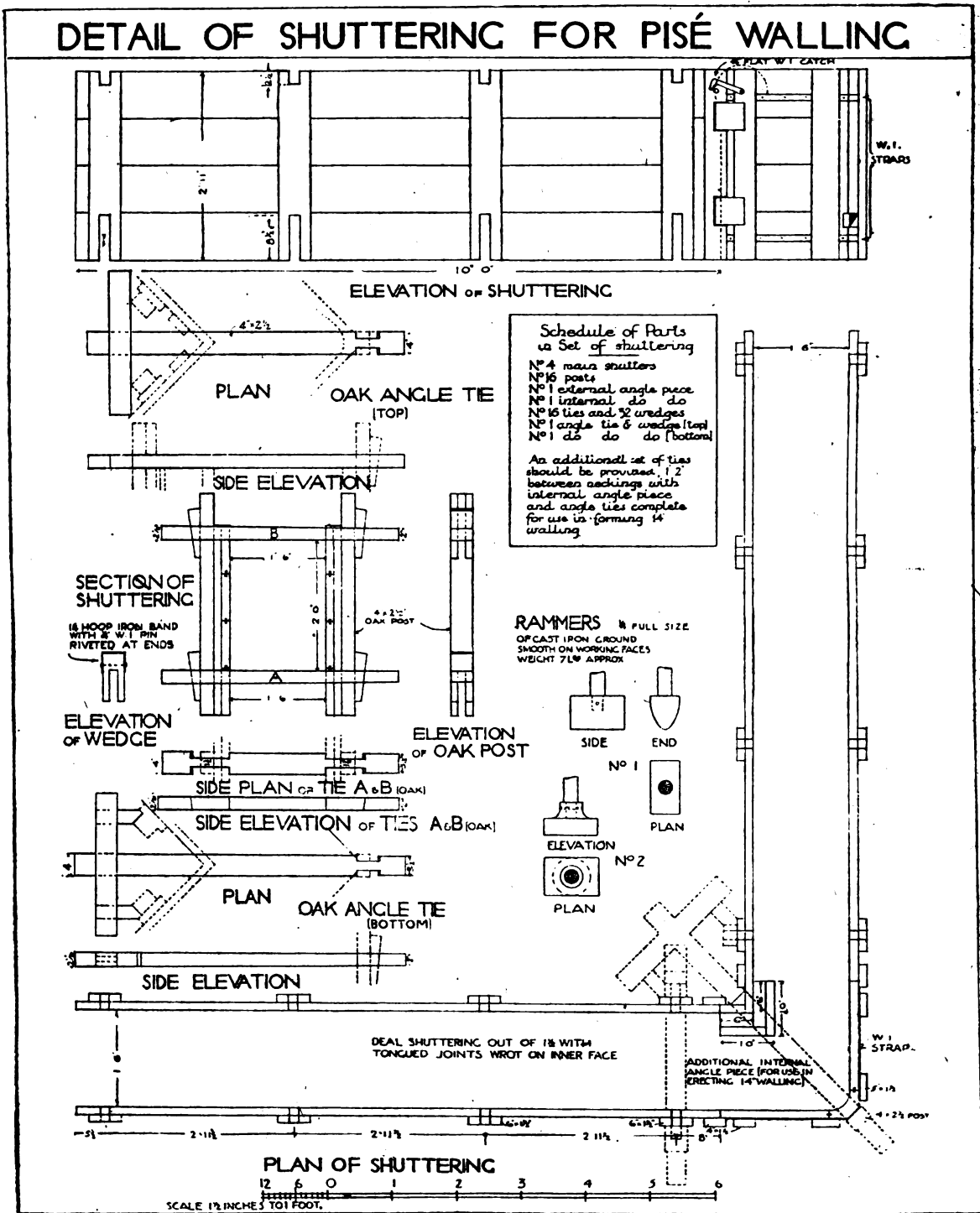
(To be continued.)

PROFESSIONAL AND TRADE SOCIETIES.

SOUTH WALES INSTITUTE OF ARCHITECTS (CENTRAL BRANCH).—At the annual general meeting of the above, held at the Institute Rooms, No. 6, High Street, Cardiff, on Feb. 25, the following officers were elected to serve on the Branch Executive Committee:—Chairman, Cecil Wilson, F.R.I.B.A.; Hon. Sec., Ivor P. Jones, A.R.I.B.A.; Hon. Treas., H. Teather, A.R.I.B.A.; Members, T. Alwyn Lloyd, F.R.I.B.A.; P. Thomas, O.B.E., A.R.I.B.A.; E. C. M. Willmott, A.R.I.B.A.; and Sidney Williams, M.S.A.; Associates' Representative, Colin L. Jones. Messrs. Wilson, Lloyd, Willmott, Williams, and Colin L. Jones were elected as Branch Representatives on the Council of the South Wales Institute of Architects.

THE SURVEYORS' INSTITUTION AND ARBITRATORS' FEES UNDER THE AGRICULTURE ACT.—A conference called by the Council and attended by representatives of the Institution, the Auctioneers' and Estate Agents' Institute, and the Central Association of Agricultural and Tenant Right Valuers, has been held to consider the question of the scale of remuneration for arbitrators which, under Section 21 (2) of the Agriculture Act, 1920, will be fixed by the Minister of Agriculture. In view of the difficulty of laying down any scale or scales of fees which would meet the many varying questions which will have to be settled under the different provisions of the Act, it was decided that the best course to pursue would be for no fixed scale of remuneration to be laid down beforehand, but for each arbitrator to be left to make his own charges when completing his award. Should either party then raise an objection to the amount of the charge, the Minister could consider the same with a view to its revision if higher than the circumstances seemed to warrant. The Council have invited representatives of the Auctioneers' and Estate Agents' Institute to attend an informal conference for the purpose of discussing with them the best method of securing the protection for the public and for the profession which is generally recognised as being desirable. The Council have contributed a sum of five hundred francs towards the memorial, organised by the Union des Géomètres-Experts de Bruxelles, to the late Mons. Philippe Baucaq, surveyor, who was executed by the Germans by the side of Miss Cavell on a charge of giving assistance to war refugees.

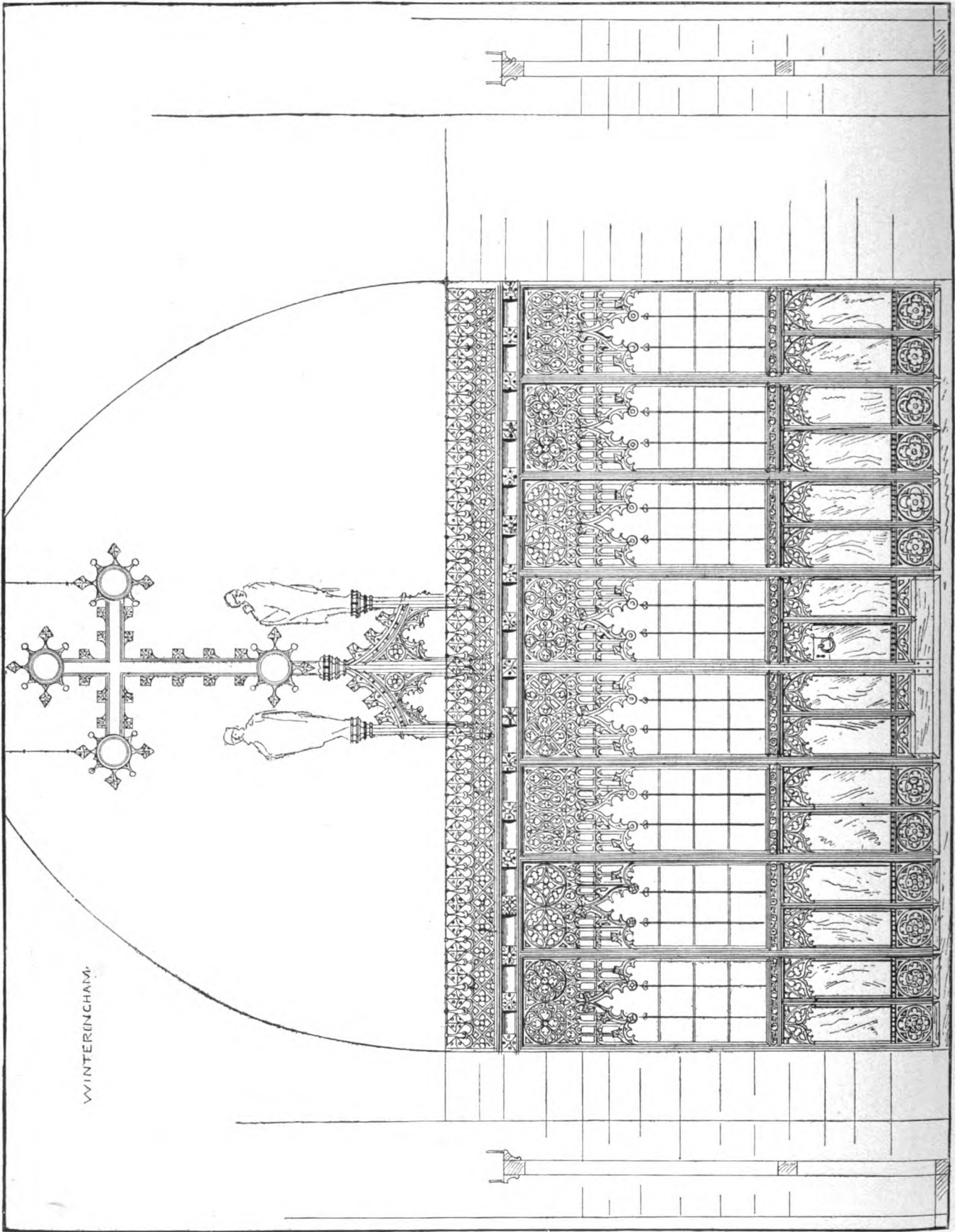
Mr. James Samuel Holliday, of Glenthorne, Cheam Road, Sutton, chairman of Holliday and Greenwood, Limited, contractors, who built the Victoria and Albert Museum, one time President of the London Master Builders' Association, President of the Institute of Builders, and Chairman of the London County Council School of Building, who died on December 4, has left £9,403 gross and £8,216 net. He gives £50 to the Brixton Orphanage for fatherless girls.



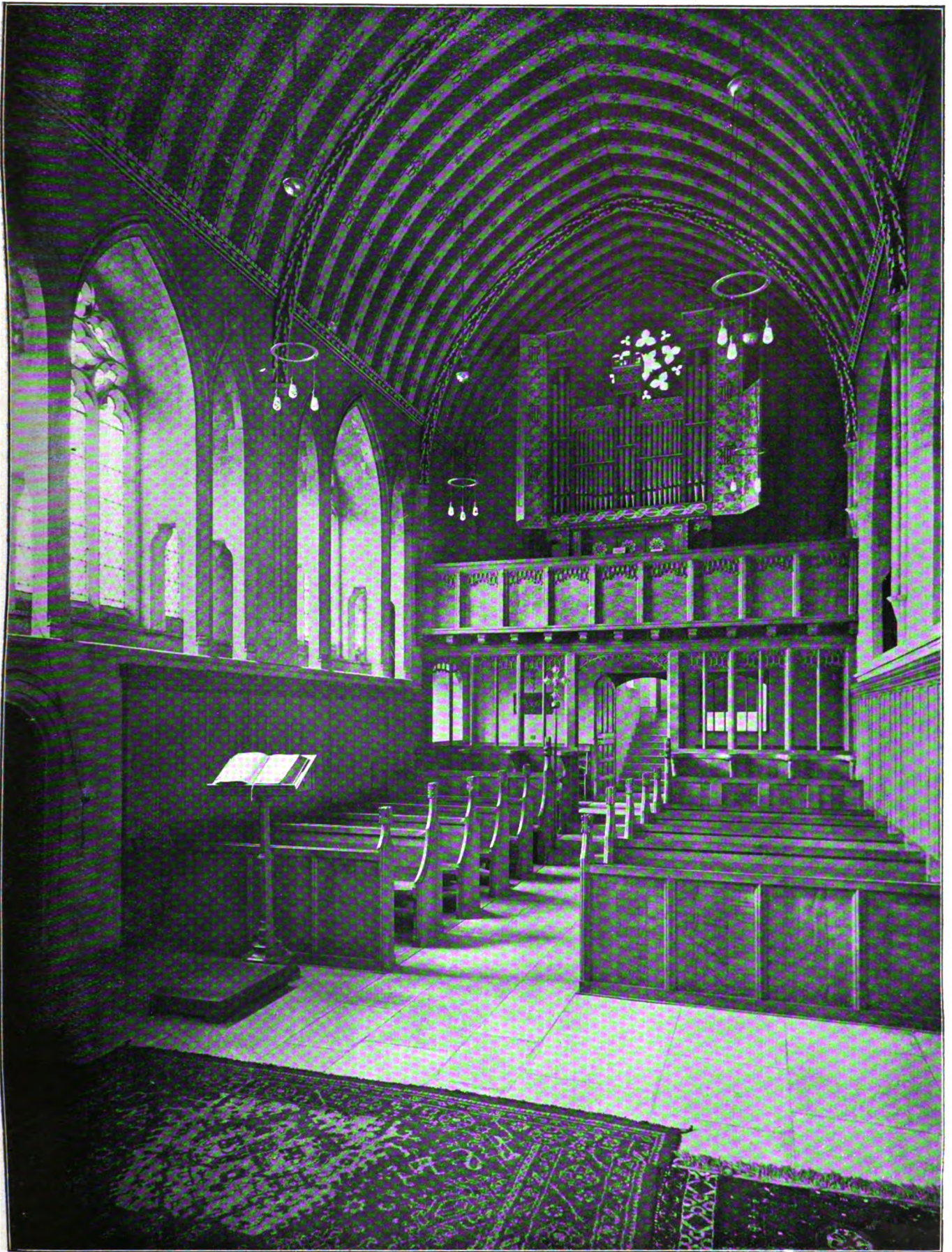
AMESBURY FARM SETTLEMENT ESTATE, WILTSHIRE.

MINISTRY OF AGRICULTURE AND FISHERIES.

Major H. P. G. MAULE, D.S.O., M.C., F.R.I.B.A., Superintending Architect.



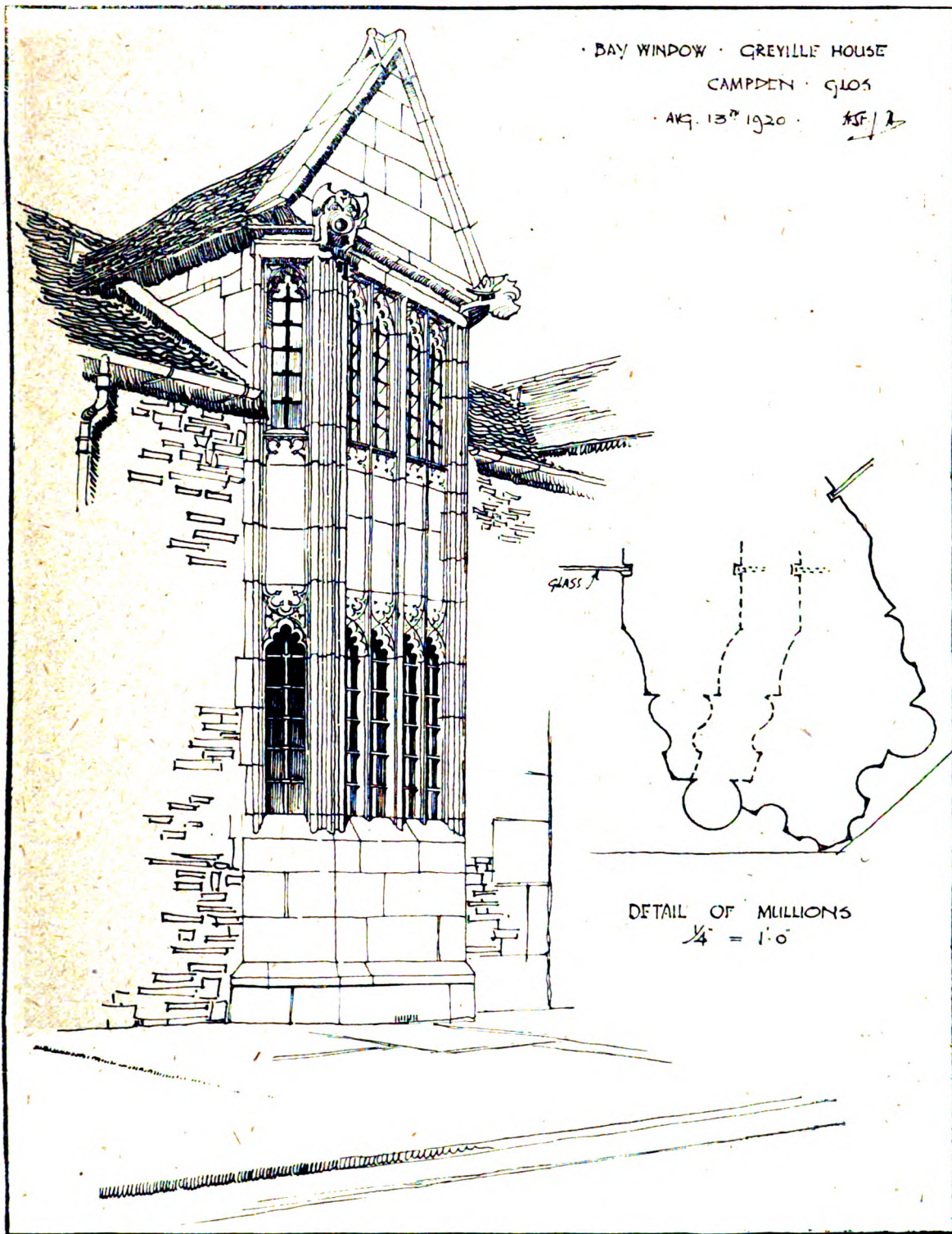
ROOD SCREEN, WINTONCHAM, LINCOLNSHIRE.
MESSRS. TEMPLE MOORE AND MOORE, F.F.R.I.B.A., Architects.



THE CHAPEL, THE BISHOP'S HOSTEL, AT LINCOLN.

Messrs. TEMPLE MOORE AND MOORE, F.F.R.I.B.A., Architects.

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GREVILLE HOUSE, CHIPPING CAMPDEN, GLOUCESTER: THE BAY WINDOW.
Sketched by Mr. H. ST. JOHN HARRISON.

Our Illustrations.

CHAPEL OF ST. HUGH, THE BISHOP'S HOSTEL, LINCOLN.

This photograph shows the organ loft and narthex screen of the small chapel connected with the Bishop of Lincoln's Hostel. The work is characteristic of the late Temple Moore's love of the Decorated Period of English architecture, and the details throughout show his skill as well as reserved taste in design. All the parts are cleverly kept in scale one with the other. We are indebted to Mr. Leslie Moore, F.R.I.B.A., for the loan of this photograph, not before published, though his late partner's plans were carried out some time ago.

ROOD SCREEN, PARISH CHURCH, WINTERINGHAM, LINCOLN.

The late Temple Moore carried out the screen, now illustrated, in oak in the middle period of his professional life. It is a typical example of an Eastern Counties screen, with deep traceried lights of small scale, as usually found in mediæval screens of this district, having no rood-bit. The reproduction now given was made from the working drawing lent us by Mr. Leslie Moore, F.R.I.B.A., the late architect's partner.

AMESBURY FARM SETTLEMENT, WILTS: PISE-DE-TERRE BUILDING CONSTRUCTION.

The details of shuttering in the carrying out of housings in this material, which we publish to-day, are the outcome of many experiments, and illustrate the conclusions derived from careful investigations at the instance of the Ministry of Agriculture and Fisheries. Major H. P. G. Maule, F.R.I.B.A., is their superintending architect. Views and plans of some of the houses thus erected under his care were illustrated in our issue of February 11 last, when a short general description appeared. The following additional information has been furnished by the Department. One of the chief necessities to insure success is the exact form of shuttering employed. Not only must it be easily and speedily placed in position and moved as the work proceeds, without support from the ground, but its cost should be economic, and, above all, it must be rigid, because the shuttering required has to resist the considerable thrust incidental to the ramming by which a true face to the wall is insured. The set of shuttering illustrated on the accompanying page was devised by the Ministry's technical officers, who report that it appears to meet the above requirements, has proved satisfactory in use, and is a pattern which has been adopted by many private owners who are beginning to build in pisé-de-terre. The filling in of innumerable putlog holes is, however, both costly and laborious. The Ministry is now experimenting with a tapered metal putlog which could easily be knocked out and the hole then filled with cement and sand by means of a syringe. In the first pisé cottage built at Amesbury there were some 250 putlog holes, the probable cost of filling each being probably 1s. 6d. to 2s.

GREVILLE HOUSE GREAT BAY WINDOW, CHIPPING CAMPDEN, GLOUCESTERSHIRE.

The Grevils, or Grevilles, of Campden built the parish church, and, being a wealthy family of wool-staplers, they erected a "capital mansion" in the village street in the fifteenth century. It is now chiefly famous for its handsome and well-designed bay window of two stories, surmounted by a stone gable and enriched by a pair of carved gargoyles.

This feature is often mentioned as an exemplar—for instance, in Parker's "Domestic Architecture of the Middle Ages," but it is not illustrated. The accompanying illustration shows this bay window admirably, and the sectional outlines of the mullions in the margin add very much to the value of the drawing, for the loan of which we are indebted to Mr. H. St. John Harrison, A.R.I.B.A. Nearly opposite to Greville House, on the other side of the way, is another contemporary residence which had a very fine oriel, but it has been mutilated and spoilt externally. Inside the work is better preserved, with its groined arch in the room, where a good fireplace is to be seen. The Greville bay is fairly perfect, and in style is very like the detail of the church tower. "A market house," built in 1624, and a "Court House," belonging originally to the fourteenth century, still stand in the main wide road along which the townlet of Campden extends for nearly a mile, including several ancient houses of minor importance, but all typical of the traditional style of Gloucestershire masonry, picturesquely arranged without efforts after effect.

TESTS ON HEAT TRANSMISSION.

Some experiments on the transmission of heat through single-frame double windows are described in a paper presented at the annual meeting of the American Society of Heating and Ventilating Engineers by A. Norman Shaw, Associate Professor of Physics, McGill University, Montreal. These investigations were performed as the result of an inquiry from Mr. F. W. Dakin, of Sherbrooke, about the relative transmissions of heat for single-frame double windows of various thicknesses.

Two sizes of single-frame double windows were examined, and they are referred to subsequently as the "half inch" and the "three-quarter inch" windows respectively. In order to eliminate the common errors due to external influences in such experiments, a special apparatus was constructed. In each case there are six parallel plates of glass at the recorded distances apart, separated by wooden frames and thin rubber strips. These were clamped together and gave a convenient water-tight apparatus which could be pulled to pieces and reassembled with ease. Each of the five compartments could be continually supplied with water or air by means of tubes let into the frames; and other holes were provided for thermometers and stirrers.

A summary of the results is given in the following table:—

	B.t.u. per sq. ft. per hr. per deg. Fahr. difference.	
	¾ in. Frames.	½ in. Frames.
Experiment No. 1 ..	1.21	—
Experiment No. 2 ..	—	1.27
Experiment No. 3 ..	1.26	1.35
Experiment No. 4 ..	1.21	(1.45)
Experiment No. 5 ..	—	1.24
Experiment No. 6 ..	1.20	1.20
Experiment No. 7 ..	1.24	—
Mean	1.22	1.27*

*Including the value 1.45, this mean value would be 1.30.

It may be concluded that the transmission of heat in each case is within 5 per cent. of 1.25 B.t.u. per sq. ft. per hr. per deg. Fahr. difference, and that there is less than a 5 per cent. difference between the two sets of frames.

The arrangement of the apparatus in these tests differs fundamentally from the practical case where our tanks of water are replaced by large bodies of air. The values obtained in these experiments should be about double the values for windows under ordinary conditions. If a 5 per cent. dif-

ference is produced by the different characteristics of the insides only, of the double windows, the percentage difference when we take into account the addition of the outer air-glass contacts in each case will be reduced to about 2.5 per cent. It may be stated, therefore, that the two types of windows represented in these experiments transmit under conditions of usage approximately 0.6 to 0.7 B.t.u. per sq. ft. per hr. per deg. Fahr. difference, and that probably they differ between themselves by less than 2.5 per cent.

Although these experiments were tried only for differences in temperature up to 60 deg. Fahr., it is clearly indicated by the linear character of the graphs that the same values of conductivity will hold over a greatly extended range. From general considerations also it is to be expected that Newton's law of cooling as applicable in these tests will be as valid for differences of 100 deg. Fahr. as it is for those of 50 deg. Fahr.

SUMMARY.

1. The existing data available for calculating the transmission of heat through single-frame double windows are found to be conflicting and unreliable. Approximate preliminary calculations, however, show (a) that the quantity of heat transmitted through these windows is of the order of half a B.t.u. per sq. ft. per hr. per deg. Fahr. difference, (b) that the variation of this quantity with the thickness of the window is small; (c) that in the particular case of half inch and three-quarter inch windows the difference should be less than 5 per cent.—probably much less.

2. In 10 determinations for "three-quarter inch" and "half inch" single-frame double windows with their external faces in contact with water, it was found that with two exceptions all the determinations were within 5 per cent. of 1.25 B.t.u. per sq. ft. per hr. per deg. Fahr. difference, an average of 1.22 being obtained for "three-quarter inch." and 1.27 for "half inch."

3. It is pointed out that when air replaces the water boundaries used in these tests, the transmission probably will be reduced by nearly 50 per cent. The percentage difference between the two windows will also be halved.

The final conclusion is that single-frame double windows of half inch and three-quarter inch sizes will transmit between 0.6 and 0.7 B.t.u. per sq. ft. per hr. per deg. Fahr. difference; and that the percentage difference for the two sizes will be less than 2.5 per cent.

LEGAL INTELLIGENCE.

WALTON v. YORKSHIRE MINERS' ASSOCIATION.—Mr. Justice Russell gave judgment last Monday for the plaintiff in the action which was brought by Mr. James Walton, M.P. for the Don Valley Division of the West Riding of Yorkshire, for a declaration that a resolution of the Yorkshire Miners' Association expelling him from membership was *ultra vires*. The plaintiff contended that the resolution was illegal, unconstitutional, and contrary to public policy, and that it was passed in bad faith. He said that the union wanted to get rid of him because of his views on the duties of miners during the war and because he defeated the candidate for Parliament who had received the support of the union. He also asked for an injunction restraining the union from acting on the resolution. The Judge found that there was no bad faith on the part of the defendants. He said the costs had been increased by the addition of the trustees and by the allegations of bad faith and malice. The plaintiff was not entitled to costs on these points, but on taxation the separation of them would be complicated. He would order the plaintiff's costs to be taxed, and that the first eight defendants should pay him three-quarters of these costs.

Our Office Table.

On Monday last Mr. George Topham Forrest, F.R.I.B.A., the architect to the London County Council, was elected a Fellow of the Royal Society of Edinburgh. Our congratulations on the bestowal of this well-deserved honour will, we are sure, be echoed by all the members of the important Section of the London County Council's staff of which he is the Chief, and by all Members of the Council, who, coming into contact with Mr. Forrest, have had good reason to recognise the ability and courtesy displayed in his relations with the Committees whose activities on behalf of the welfare of London it is his duty to second.

At a luncheon of the Federated Home-Grown Timber Merchants' Associations on Friday week, Lieut.-Col. G. M. Courthope, M.P., said that a few months ago he was a member of a committee for the erection of a war memorial. It was decided that oak should be employed, and he found that the oak was to be Austrian. The architect said there was no English oak of sufficiently high quality. Yet he (Colonel Courthope) had grown and felled on his own estate the oak which was being used in the roof of the House of Commons. There was an instance of the ignorance and prejudice which had to be overcome. Lord Lovat, Chairman of the Forestry Commission, said that home-grown timber was not given the credit it deserved: but as long as there was no standardisation of any kind in home-grown timber they would always have unfair terms, as compared with the foreigner. He had seen timber on the market which had no right to be described as it was described. The blame was due to the people who originally grew the wood, the trouble being faulty thinning and faulty growing.

In connection with the University College Hospital Reconstruction scheme, we are informed that the Committee have appointed as joint architects Mr. Paul Waterhouse and Mr. George Hornblower. Mr. Waterhouse collaborated with his father, the late Alfred Waterhouse, R.A., in the design of the hospital buildings, which he brought to completion after his father's retirement, and he was also the sole architect of the Medical School. Mr. Hornblower has been for many years the consulting architect to the Hospital Committee. The buildings and alterations which form the scheme are of an important character, and are largely the outcome of the magnificent gift of the Rockefeller Foundation. It will be remembered that when the gift was mentioned in the Press in June last it was allocated as follows:—New Nurses' Home, £103,000; New Residents' Quarters, £31,000; New Obstetrical Unit, £109,500; Bio-Chemical Laboratory, £50,750; Reconstruction Works in Existing Buildings, £106,000; making a total of £400,250.

No. 2 of "The Beaver Link," edited by the Sales Promotion Department, of the Beaver Board Co., Ltd., of 133-136, High Holborn, W.C.1, is the excellent second of a certain long chain that will unite the best interests of thousands more users of the unique and indispensable material that is so easy to fix to the studdings and ceiling joists of new buildings, or on existing lath and plaster, and so durable that all who hate mess and litter, and cannot wait while plaster dries, cannot fail to appreciate its economical and decorative advantages. Our own readers are appreciative buyers, and any fresh ones not already so wise should send at once for No. 2 of the "Link."

Messrs. Hampton and Sons will sell by auction at their St. James's Estate Rooms, 20, St. James's Square, S.W., on Tuesday, April 26, unless previously disposed of, The Manor House, Belvedere, Kent, erected from the designs of the late well-known architect, Mr. W. G. Habershon. The house is within daily motoring distance from town, and under eleven miles therefrom by rail, and about five minutes' walk from Belvedere Station. It is entirely situated in its own grounds of about five acres, well up above sea-level, gravel soil, central heating, com-

pany's gas, water, and electric light, telephone in good repair, and commands a fine vista of River Thames. Erected in Tudor style of Kentish rag stone, and containing porch, galleried hall, four reception-rooms, ten bed and dressing rooms, two baths, ample offices, lodge, tower, garage, summer, glass, and fowl houses, matured and well-kept gardens and grounds. Illustrated particulars and conditions of sale can be had from the auctioneers, 20, St. James's Square, S.W.1.

Roman and other relics have been dug up in a piece of waste land in Fetter Lane, E.C., adjoining Nevill's Court. The land has been used as an allotment by Mr. Hugh S. Gordon, a mining engineer, who lives in Nevill's Court, and discoveries while digging led him to make further excavations. Mr. Gordon sank a shaft to the London gravel, and in doing so came across 36 silver coins, one of which was of the Roman period, the others being of later dates; two women's gold rings of the Tudor period, pieces of what are believed to have been monks' chains, and bits of medieval tiles. Just before the excavation reached the London gravel some fine Roman objects were found. One is a Samian-ware plate (red terracotta), with very fine glaze. Below he found the most ancient of all the objects—a little gold ornament, three-quarters of an inch long, with enamel quatrefoils, which was probably part of a collar. There is nothing like it in the British Museum, but the authorities there believe that it is a specimen of the best Grecian ware, dating from about 400 or 500 B.C. Only a very small portion of the land has been excavated, and there is no doubt that other discoveries will shortly be made.

Lecturing last Friday at Edinburgh, Professor Baldwin Brown, whose subject was "Edinburgh Beautiful: Town Planning from the Aesthetic Point of View," pointed out that the problems of "Greater Edinburgh" had to be faced in a fresh, vigorous, and progressive spirit, but this was quite compatible with piety towards the past, and with the preservation of those features which made Edinburgh beautiful. That beauty consisted not only in varied and effective natural features, and in old buildings whose grouping, details, and texture were full of artistic charm, but also in the varying effects of light and colour which the northern climate provided. Some features of Edinburgh town planning in the past were criticised, on the ground that in the future development of Greater Edinburgh some useful hints and warnings might be drawn from past experience. For example, the West End of Princes Street supplied a most excellent object lesson of town planning at its worst, and this was largely due to the want of any sense of the future in Craig's plan of the new town. When upon this already congested and awkward spot there converged in future five lines of tramways with overhead wires, the result might be imagined.

PARLIAMENTARY NOTES.

LOSSES OF THE OFFICE OF WORKS.—A schedule of particulars relating to the various housing schemes now being undertaken by His Majesty's Office of Works on behalf of local authorities in England and Wales, issued as Cmd. paper 1,175 (H.M.S.O., 1d.), gives particulars of the Department's activities in this direction from January 20, 1920. The total number of houses undertaken is 3,736 (of which 1,135 have been begun and 116 have been completed to date), and the estimated total cost (including overhead charges) is £3,811,429. In many cases the figures included here provide also for cost of roads and sewers. Where this is not included the average cost per house is round about £1,000. The local authorities in the London area for which the Department is acting are: Camberwell, Poplar, Deptford, Lambeth, Shoreditch, Carshalton, Richmond, and Finchley; and a little farther afield: Bedford, East Ashford, Sheerness, and Hove. Negotiations are now in progress with other local authorities for the erection of 3,513 houses. Inasmuch as the estimates have not in all cases been completed, the total figure of cost cannot be given. On Friday week Sir Alfred

Mond stated that another £44,000 was wanted for the Office of Works for housing and £26,000 for the staff. Sir D. Maclean moved the reduction of the Vote by the sum of £20,000. He pointed out that this was the third time that these applications for increases in salaries and wages had been made, and in his view there was no justification for them. He was amazed at the extraordinary courage and the audacity of the permanent officials in placing such claims before the House. If the House would stand these Estimates it would stand anything. The reckless rate of extravagance was progressing, and it must be stopped.—Mr. Lorden (Co. U., St. Pancras North) said that Governments and municipalities could not build nearly as cheaply as private enterprise could. The Government had finished only a very few houses, and as a fact did not know what they had cost. He hoped they would all vote against the Estimate.—The amendment to reduce the Vote was defeated by 135 votes to 35.

HOW TRADE UNIONS ARE HAMPERING THE L.C.C. DAGENHAM SCHEME.—Dr. Addison, in reply to Sir F. Hall (Co. U., Dulwich), stated, on Wednesday, that the proposal of the London County Council was to build about 13,000 houses, sufficient for 80,000 to 90,000 persons, at Dagenham.—Sir F. Hall: How many of these 13,000 houses have been constructed?—Dr. Addison: I may have to correct this figure, but I think it is 4,000 houses.—Sir F. Hall: Is it not a fact that the building has been held up by the action of the trade unions? Will the right hon. gentleman take further steps, if possible, to enable these houses to be constructed?—Dr. Addison: This case exhibits in remarkable degree the very unsatisfactory attitude of the unions concerned. We have endeavoured to get the bricklayers in all sorts of places, but all kinds of difficulties are being raised by the bricklayers on the jobs. We are now endeavouring to get an increased proportion of houses made of concrete and other materials, but I am sorry to say that still difficulties of demarcation and suchlike have arisen. It is a very lamentable case.—Sir F. Hall: Does it not mean that the action of these various unions is keeping these working-class people from getting the proper houses to live in?—Dr. Addison: There is no doubt that in this case it is so.

OBITUARY.

The death is announced on the 21st ult. of Mr. Edmund Harold Sedding, F.R.I.B.A., in London, of 12, Queen Anne Terrace, Plymouth, where his practice is carried on by Mr. Basil Stallybrass, whom he took into partnership in 1914. Joining the R.I.B.A. in 1880, he won the R.I.B.A. first medal for measured drawings in 1884, the English Travelling Studentship in 1886, and the special Pugin Medal in 1887. Architect to the late Mr. John D. Sedding in 1891, he opened an office in Plymouth. His many works included a number of Cornish, Devon, and Somerset churches; and in 1906 his design was selected for the Cathedral at Dunedin, the nave of which has been erected, though not to the original design.

STATUES, MEMORIALS, ETC.

JOAN OF ARC AND WINCHESTER CATHEDRAL.—It is proposed to erect in Winchester Cathedral, near the tomb of Cardinal Beaufort, a memorial of Joan of Arc, "both as a slight act of reparation and as an earnest that we in England join in admiration and reverence for her with the great nation which in her days was our gallant enemy, but which has now become our trusted friend and heroic ally." Cardinal Beaufort was Bishop of Winchester, and at least on one occasion represented England among the heroine's judges.—The Bishop writes that to the memory of Joan of Arc "we owe certainly whatever we can pay." A design has been prepared by the architect, Mr. L. Ninian Comper. It consists of a figure of the Maid, following closely in details the famous statue at Rheims, with a pedestal and canopy. The sculptor will be Mr. W. D. Gough, and the ecclesiastical painter, Mr. H. A. B. Smith. The estimated loss is about £500.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

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OUR ILLUSTRATIONS.

A Farmhouse at Elmbridge, Oxfordshire. Two photographic views and sheet of plans and eleva-

Strand, W.C.2.

tions with section. Messrs. Ernest Newton, R.A., and Sons, architects.

War Memorial of the Honourable Society of Lincoln's Inn. (Working drawings.) Unveiled on March 18, 1921. Mr. John W. Simpson, P.B.I.B.A., architect.

London County Hall. The Central Facade in Belvedere Road, S.E. From a sketch by Mr. R. B. Urquhart.

Currente Calamo.

As we have more fully shown on another page, the situation in the building trade is a very critical one. The ballot of the members of the National Federation of Building Trade Employers is promising, and yesterday week a meeting of the Birmingham Midland Federation unanimously approved of the scheme. The employers, will accept the Government offer and at once take active steps to absorb ex-Service men into their staffs. Up to this point there appears to be no room for doubt as to what will happen. But what of the men's unions? As the *Birmingham Daily Post* said last Monday: "For many months they have obstinately resisted the introduction of ex-Service men into the industry. They have selfishly sought to set up a sort of close corporation, denying to the people clamouring for houses the satisfaction of their demand and at the same time compelling idleness to ex-Service men for whom employment could be found. Their pleas have been various, but the chief among them has been the alleged fear that the introduction of fresh labour would cause unemployment five or ten years hence. Their real object undoubtedly has been to perpetuate the anomalous situation created by the war, under which they could exploit a shortage of labour in face of an excessive demand to the unreasonable advantage of the workman. Everyone knows that during the past year or two it has been impossible to get a fair day's work for a fair day's pay from many of the workmen in the building industry, and that in ordinary matters of discipline the employer has been afraid to speak to a workman because of the ever-present threat to 'down-tools.'" That is true, every word of it, and that is the condition of things it is sought to perpetuate at the cost of the public.

Mr. Justice Eve on Wednesday dismissed the actions by members of two trade unions for an injunction to restrain the unions from expelling them on the grounds of their participation in a co-partnership scheme which had been established by Lord Leverhulme for persons in the service of Messrs. Lever Brothers, Limited. (*Braithwaite v. the Amalgamated Society of Carpenters, Cabinet Makers*

and Joiners; *Ashley v. the General Union of Operative Carpenters and Joiners.*) The statement of claim set out that the plaintiffs had been in the service of Lever Brothers since the incorporation of the firm in 1894, and were participants in its co-partnership scheme, which was instituted by Lord Leverhulme, then Mr. W. H. Lever, in 1909. In November, 1919, the joint committee of the two trade unions issued a notice excluding from membership all members in the employment of Lever Brothers who were in the co-partnership scheme of the firm, on the ground that thereby they were in alliance with the masters rather than with their unions. There will be an appeal, of course, and if Mr. Justice Eve's decision is finally upheld, as it seems to us it must be, it will be high time to revise or repeal the Trades Disputes Act.

The new Law of Property Bill, of which the Lord Chancellor is in charge, is the most voluminous measure ever presented to Parliament within living memory. Its 188 clauses, 16 schedules, and explanatory memorandum cover 322 pages. Even if passed into law this session, the measure would necessitate so many subsidiary operations that there is no intention of bringing it into force until 1923. It is officially described as a Bill "to assimilate and amend the law of real and personal estate, to abolish copyhold and other special tenures, to amend the law relating to commonable lands and of intestacy, to amend the Wills Act, 1837, the Settled Land Acts, 1882 to 1890, the Conveyancing Acts, 1881 to 1911, the Trustee Act, 1893, and the Land Transfer Acts, 1875 to 1897." According to an official memorandum, the Bill will effect a greater simplification in the practice of conveyancing, and of investigating title, without, however, destroying the power to settle land, than any measure hitherto proposed. The general principle is to assimilate the law of real and personal estate; this involves the repeal of the Statute of Uses. This principle is worked out in the different parts of the Bill. Hence, in favour of a purchaser in good faith of a legal estate, the Bill gives facilities for overriding all interests in land, except legal estates in fee-simple or for a term of years absolute, either by vesting the land in approved trustees on trust for sale or by applying the principles of the Settled Land Acts.

Certain equitable interests are required to be registered as land charges; in default they will be overridden. By these methods, with the aid of the provisions relating to mortgages and the legal estate, the reforms sought in Lord Haldane's Bill of 1914 are, with insignificant exceptions, carried out, without the complications incidental to that scheme, without inventing any new nomenclature, and without setting up a register of cautions and inhibitions. Though the Bill, as a whole, is long, the greater part of it consists of provisions for the abolition of unnecessary or objectionable technicalities. The working machinery which will ultimately be left will be short, and, as compared with the mass of statute and other law actually repealed or rendered obsolete, will be wholly insignificant.

Landlords generally have been, and still are, having a bad time. Not only does the Rent Act cut down their plenary powers of the good old days, but both the war and the peace have raised a new spirit in the Courts which is quite contrary to that to which they have been used. An illustration of this new tendency is afforded by the recent case of "Chatterton v. Evison," decided by Mr. Justice Sargant. The plaintiff occupied a house at Hunstanton upon a tenancy agreement for three years from April, 1919. The defendant had in August, 1920, bought up the freehold reversion in the house, and so became plaintiff's landlord. The agreement contained the usual covenant that the tenant, i.e., the plaintiff, should not assign without his landlord's consent, and then went on: "Such consent not to be unreasonably withheld in the case of a respectable and responsible person." Plaintiff arranged to sell the residue of his term to such a person, and applied to the defendant, who had by then become his landlord, for the required consent. This was refused by the defendant, who had, in fact, bought up the freehold not as an investment, but to get the house that she might live there. The plaintiff thereupon came to the Court, asking for a declaration that he was entitled to assign his agreement without the defendant's consent. The judge now held shortly that the tenant had a right to assign without his landlord's consent if that were unreasonably withheld. Ruling that the defendant's motive for refusing made it unreasonable, the Court made the

declaration asked, and plaintiff can assign his agreement without the consent of his landlord: the case thus creating an important precedent for future use.

Arrangements have been made to publish the drawings, prepared by the architectural students of the School of Applied Art, of specimens of the architecture of Scotland from the twelfth century down to the seventeenth century, including ecclesiastical and domestic buildings. The drawings are the property of the Board of Trustees for the National Galleries of Scotland, and they are published under the superintendence of a Joint Committee of the Board and of the Institute of Scottish Architects. The work consists of measured drawings, plans, sections, and elevations, drawn to scale, with details of mouldings, sculpture, carvings, heraldry, plaster and woodwork, exhibiting many of the most important examples of architecture in the country. It will be especially useful to architects and to all who are interested in the history of Scotland and her art. These plates will be published during the year in four parts, each containing fifteen or more drawings, accompanied by a short explanatory description of each building or subject, and a portfolio to hold the entire volume will be issued with the first part. An index for the whole will be published with the last part, and the sets can then be bound at the discretion of the purchaser. It is hoped to continue the publication of the work for five years, and it is possible that arrangements will be made for extending this period, as there are more drawings in the Survey than can be overtaken within that time. The first issue will be limited to five hundred copies, and has been produced at the remarkably low price to subscribers of 7s. 6d. per part, or 30s. for the set. The editors are Sir Rowand Anderson, LL.D., H.R.S.A., Mr. Thomas Ross, LL.D., and Mr. W. T. Oldrieve, H.R.S.A. The first part, now ready, contains seven plates of illustrations of Armsfield Tower, Dumfriesshire; five of Earhall, Fifeshire; and five of Elcho Castle, Perthshire; all most carefully drawn and excellently reproduced, prefaced by adequate descriptions. At the very moderate charge, all students of architecture should hasten to secure copies.

We and others have, of course, pointed out that one of the most stupid and unjust things Dr. Addison has done was the imposition of heavy liabilities on agents under the Public Health and Housing Acts, and are glad the Council of the Property Owners' Protection has taken the matter up, and is sending a deputation to the Minister of Health to try and make him understand that as the law stands the agent may be placed in an anomalous position, either as a breaker of the law or a non-performer of his obligations to his client. To saddle the agent with the responsibility of the cost of repairs done by order of the local authorities is mani-

festly unjust. The agent is often without client's money out of which to pay for these repairs, and when he has, he is legally bound to pay over to his client the rents he actually receives. No other profession is made similarly liable, and it is preposterous that agents should be.

A not uninteresting exhibition of contemporary American pictures at the Grafton Galleries, if it does not include many of the more prominent artists of the time, will nevertheless repay a visit. Among the best exhibits are "In Skating Costume," by Mr. Thomas Eakins; and "Easter Sunday," by Mr. George Bellows. Mr. Rockwell Kent's "Berkshire Winter" is among the best things shown, and his Alaska scenes are varied and well-rendered.

NOT VERY HOPEFUL.

While the prospects of peace in the immediate future of the coal industry are apparently favourable, and there is little doubt that the reduction of four shillings a week from April 1 will be accepted by the railwaymen, the situation in the building trade is still very uncertain. As our readers know, the members of the National Federation of Building Trade Employers are now balloting on the question of the Government's offer in reference to the admission and training of 50,000 ex-Service men.

This offer was discussed at a meeting of the Midland Federation of Building Trade Employers in Birmingham yesterday week, and the meeting unanimously approved the scheme as set out in the manifesto issued by the National Federation of Employers, and urged members to vote in favour of it in the ballot now being taken. The following are the terms of the manifesto:—

In view of the Government's appeal to the National Federation of Building Trade Employers in the above matter, we feel we must whole-heartedly respond. The Premier has publicly declared that it is the intention of the Government to render full support to the building trade employers. He further agreed that in all cases where building work is carried on by any Government department, directly or indirectly, or where the Government has or shall have control over the financing of any building work, any measures decided upon by the National Federation for enforcing the admission of 50,000 ex-Service men into the industry shall be made likewise to apply.

THE GOVERNMENT'S OFFER.

The ex-Service men will be paid at the following rates:—

	Percentage of skilled men's rates.
For the first six months.....	60
For the next six months.....	70
For the next six months.....	80
For the next six months.....	90
Thereafter	100

and towards these rates the Government will contribute in respect of the cost of training:—
10 per cent. of the standard rate of the district for the first six months.

5 per cent. of the standard rate of the district for the next six months.

The men to be engaged on a two years' agreement.

It is to be understood that these proposals, made by the Government, will also apply in the case of any ex-Service men now engaged in the trade as builders' labourers who desire to come under the scheme, and that so soon as a trainee secures a proficiency certificate, entitling him to receive a proportion greater than 70 per cent. of the standard skilled men's rate within the first twelve months of his training, the Government contribution in respect of that man will cease.

At a special meeting of the Executive Council in London on February 22 a

resolution was passed authorising a ballot vote, "and urging that a unanimous vote be given in favour of

"(a) Taking into the industry 50,000 ex-Service men on terms to be agreed with the Government.

"(b) In the event of the operatives opposing the inclusion of these men and resorting to strike, either sectionally or otherwise, the members undertake to take such action in resistance thereto, including a lock-out, as the Administrative Committee may direct."

The terms of the ballot paper are as follows:—

Name of Association	Date
Do you confirm the resolutions of the Special Executive Council on February 22, as set out in the accompanying manifesto? And do you pledge yourself to accord whole-hearted support to the Administrative Committee of the National Federation in any action it may deem necessary to take to carry them out?	
Yes	
No	

We are sure that the result of the ballot will place it beyond doubt that the Building Trade Employers are whole-heartedly ready to support the Government's effort to find work for the ex-Service men, and that they will unitedly resist the attempts of the unions to defeat it. Meanwhile, the resolve of the Federation of Building Trade Operatives to discuss a national ballot by the Federation of Building Trade Operatives on the new sliding scale principle, under which, if the scheme is accepted, wages will be governed by the rise or fall in the cost of living, is a mere red herring flung across the track. The ballot is returnable on April 1, and Mr. J. Murrey, the London District secretary of the Operatives' Federation, says the retention of the 44-hours week was guaranteed, and there would be no return to the pre-war position. The status of the workers would remain permanently improved. There could be no reduction of wages below 1s. 3d. an hour for mechanics and 1s. for labourers, even though the cost of living dropped under the 1914 level. The scale provided that for every complete fall of 6½ points in the cost of living index figure there should be a decrease of ½d. an hour in wages, and of 1d. for 13 points drop. The scale was to operate from the level of 170 per cent. above the pre-war standard of cost of living. In many provincial districts there had been increases in the rates of wages of 240 per cent. and 270 per cent. over the 1914 standard, although London was about 160 per cent. The level of 170 per cent. had been taken as the general average of advances of the whole industry. The only alternative to acceptance of the sliding scale would be sectional fights all over the country, and they wish to avoid that. The London employers have given notice of a wages reduction, which expires four weeks hence. In South Wales, Yorkshire, the North-Western and other areas the same thing is happening. If the sliding scale were agreed to the notices for reduction of wages throughout the country would be automatically withdrawn. The adjustment of wages under the scale would take place on February 1 and August 1. Whatever the cost of living was at the time of acceptance of the scheme, there could be no reduction in the existing rates until August. If the cost of living was down in July to the extent that it had dropped now it would mean a reduction on August 1 of 1½d. an hour.

Mr. Richard Coppock, the secretary of the National Federation of Building Trade Operatives, stated last Saturday that the Federation had communicated with Mr. F. Hodges, as secretary of the Triple Industrial Alliance, asking that that body

should take the initiative in calling a conference of the leading unions to consider the policy to be adopted in resisting threatened reductions of wages, and the principle of payment by results.

It is proposed that at the conference, if it is called, the Miners' Federation, National Union of Railwaymen, Transport Workers' Federation, Boilermakers' Society, Amalgamated Engineering Union, and the Building Trades Federation shall be represented, and any other unions interested. In our opinion any such attempt at dictation by unions of other industries can only be met in one way by the master builders. The struggle, if it comes, will be a much shorter and sharper one than it was in 1859, and we do not believe that the other unions, many of which have loyally seconded the Government's scheme for the employment of the ex-Service men, which is the only present issue challenged, will "empty the safe" to back up what will prove a fruitless struggle against the inevitable by the building trade operatives.

THE BREWERS' COMPANY'S LARGE TOWN LICENSED HOUSE COMPETITION.

On Wednesday the seventy-eight designs submitted in this competition were exhibited in the Galleries of the R.I.B.A., where the drawings remain on view till March 24. The President of the Institute, Mr. John W. Simpson, has made the award, and the results of the Company of Brewers' enterprise are eminently satisfactory and interesting.

The first prize of £300 is won by a coalition of four Associates of the Institute—viz., Messrs. Curtis and Natusch, White and George. Their design (marked 14) is distinguished by breadth and unpretentiousness, depending on a horizontal treatment, with a bold stone cornice of plain detail, and bands of masonry setting off a façade of purple brick. The corner site is moderated by a rounded angle containing an entrance to the big refreshment room in the principal street and above the assembly-room. The service department, which is located centrally, set behind the main staircase rising out of the entrance vestibule placed in the side thoroughfare, serves also the clubroom, which is set to the right of the establishment portal. These principal apartments are amply lighted, the club getting return and rear windows from the cart-way and court to the back, where there is a big bay. Under this the barrel chute communicates with spacious cellars. A lower court is formed to light the lavatories and heating chamber, with adjacent conveniences for the draymen and tradespeople. The bar is very commodious, next the service department, which is well furnished by lifts up to kitchen, on the second floor, set alongside of the upper part of the assembly-room. A convenient lavatory for ladies is disconnected from the public refreshment room by an isolating lobby. The men's cloakroom is on the first floor, that for ladies, hard by, being above the entrance vestibule. The manager's flat and office intervening, placed to the right, overlook the side street, with three bedrooms and a sitting-room. The w.c. and bathroom are combined. The staff bedrooms are on the second floor, where there is a common-room. An air of spaciousness, combined with judicious economic contrivance, also an absence of loss of space in the roofs, parts of which are flat, make advantages. Dormers in the roof slope along the side elevation add picturesqueness. The decorations are not a strong point in the first prize design.

Narrow blue curtains in the assembly-room, set within the wide architraves of the fenestration, are relied on for colour, and a coved ceiling fittingly finishes the apartment. At its end over the entrance below is a segmental alcove stage, accommodating a grand piano, where there is no angle-set window to break up the curved recess. The drawings are well got up with simple washes, but the diminutive accessories at either end of the façade, showing a palatial portico in the "main" street and a Classic church at the end of the other thoroughfare, produce a piffing effect, and unduly compare in scale with the public-house. "The Marquis of Granby" painted figure sign set at the corner is a poor piece of work. The cost of this design at 2s. per foot cube is set down at £19,710. On the whole this is the best scheme.

No. 42, by Mr. C. H. James, wins the second prize of £150. He utilises the party-wall of an adjacent house in "Main Street." His façades are conceived in an old English Classic fashion akin to that of Dance, with a palatial air of reticent arched architecture, and making much of a big rounded corner feature vertically distinguished by quiet dignity quite in keeping with the needs of the building. The elevations are illustrated by nicely tinted drawings in graduated tones of brown. The tavern sign is over the corner entrance, which has a boxed internal lobby windguard to the restaurant, similarly placed as in the premier plan. The service is also in the middle of the premises, at rear of square vestibule up the side street. A service counter at right angles and parallel to the frontages runs at back of the clubroom to the right. The staircase forms a well in the entrance lobby, and leads to the assembly-room by way of a none-too-well lighted long foyer, off which the two cloakrooms are entered. The stage is set in a semi-circular recess. The services are worked at the other end, with lifts going up to the top floor kitchen, set above the cloakrooms, with larders and dry goods stores. Adjoining is the manager's flat, not nearly so well arranged as in the first design, being mixed up with the barman's bedroom, the master's sitting-room being beyond. The maids' bedrooms on the second floor are approached by a top-lit staircase. The main public lavatory is in the basement, where there are capital cellars. The decorative scheme internally is architecturally managed, the arched windows being very good. In the spandrels between are plaques in a Wedgwood manner, in pale blue on a buff wall-space. The bar counters are ebonised and lined out with gold. This scheme, at 2s. per cubic foot, figures out at £23,000.

Messrs. Blount and Williamson, A.A.R.I.B.A., with No. 72, take the third prize of £50, and calculate the estimated cost at £22,150. Their proposal is based upon eighteenth century Classic, and their plan is entirely rectilinear. The café entrance is in the "Main Street," next the adjoining house. The bar is in the centre, and set out more on regulation public-house lines, with the manager's office put in a semi-circular ended enclosure, with a small counter-bar adjoining to work the clubroom, which is fitted with a billiard-table and lounges. There is a writing gallery in this apartment at the end up the side street, but the noise of the players below, and the smoke rising, as it must, might easily interfere with the occupants engaged in composition. The cloakrooms for the two sexes bisect their respective lavatories. A feature in this scheme is a mezzanine floor, while there is a sitting-out coffee lounge gallery in

the upper part of the restaurant. Near-by are two bedrooms for barmen, reached off the main staircase. The manager's bed-sitting room and bath are contrived overlooking the back courtyard, and approached from the gallery just referred to. The retiring room for artists has a males' w.c. attached cheek-by-jowl with those to be used by lady guests. The servery on the first floor, with its hot-plate, is very cramped, and depends on borrowed light, the lifts being in a very dark corner behind the door, which opens right on to them in an awkward manner. An external stairway in iron furnishes the approach to the manager's flat, and the kitchen department on the second floor, where the maids' bedrooms are set out. The internal fittings and furnishings of this design are marked by taste.

Messrs. L. G. Hannaford and H. G. Cherry are the authors of No. 1, which is "highly commended." The estimate is put at £17,550. The design is distinctly picturesque, handled in red brick, with wood mullioned windows fitted with casements in a good old English manner, with tall roofs. These hip back in the side street, and the building would work out well in a sensible way. The lower range of windows would have been much improved without the broad band of stone serving as transomes. The door openings are very indifferent in design. The plan is square and simple, with a central service. The corner-set portal is a crude feature, and the women's lavatory is cramped. The staff bedrooms are in the attics, with the kitchen and scullery set between. The cloakrooms are too small, and to reach the staffroom the main stairs must be used. It adjoins the proprietor's flat, so that his visitors must pass this common-room when they go in and out. The authors merit the commendation accorded them chiefly by their architectural elevations.

Space is lacking for any reference to the other plans, which, generally speaking, present much to praise, though not a few are more amusing than capable.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

COTTAGE HOSPITALS.

There was a meeting of the Royal Institute of British Architects on Monday last, the principal business being to hear a paper on cottage hospitals read by Mr. H. Percy Adams. Mr. John W. Simpson (President) was in the chair.

The preliminary business included, among other things, the announcement of the decease of an Honorary Associate, Lord Moulton, P.C., etc. When at the Bar, Lord Moulton, it was stated, had strongly advocated legislation to diminish the inconvenience and hardship arising from the law as to the rights of light. In March, 1900, he had read before the Institute a paper on "Reform in the Law of Ancient Lights," and he had afterwards been a member of a Committee of the Institute and the Surveyors' Institution formed to take steps to get an alteration in the law. In June, 1903, he had introduced into the House of Commons a Bill to amend the law.

Other announcements were of the death of Mr. Arthur Hill, of Cork, who had been a member of the Institute for fifty-three years, and the result of the competition promoted by the Worshipful Company of Brewers for a design for a licensed house.

Mr. H. Percy Adams said that a cottage hospital was generally understood to be one containing from three to thirty beds. Above that number it became a general hospital; but much the same rules applied

in designing and constructing either. The cost of building a cottage hospital at the present time was difficult to arrive at, probably about 2s. 6d. per foot cube; but very much depended on the surroundings, the nature of the site, local conditions and the accommodation provided, and all of these varied enormously. The site should be easy of access for patients and medical officer, with, if possible, a gravel subsoil. It should be well raised above the surrounding country, in a sunny position, and sheltered from cold winds. If expense was not of great importance it was well to have the ward floors well above the ground level, and the surface of the building site should always be covered with a layer of concrete. A good water supply was essential. The general arrangement of the plan depended largely on the number of the beds to be provided; many details considered essential in a general hospital were not possible in a cottage hospital. The accommodation was usually a male ward of from four to eight beds, female ward of the same size, one or two single bed wards, bathroom, sink-room and w.c. for each sex, ward kitchen, larder, linen-room, store for patients' clothes, operating-room, with possibly small sterilising-room adjoining, a doctors' room or dispensary, nurses' sitting-room, and two to four nurses' bedrooms, servants' bedrooms, bathroom and w.c., general kitchen, scullery, small pantry, larder, storeroom, stores for fuel, a detached mortuary and ambulance shed. The larger cottage hospitals for over twenty beds more or less followed the pavilion type of plan, and were really miniature general hospitals.

Going into details, the lecturer said that opinions differed largely as to the cubic feet to be allowed the patients in the wards. A thousand feet to each bed should be the minimum: some authorities allowed fifteen hundred, or even more: the floor area per bed should not be less than a hundred square feet, the space from centre to centre of beds should be at least 8 ft., wards with beds on both sides should be at least 20 ft. wide, or 24 ft. wide if there was a central fireplace, and the minimum height of a ward for six beds or over should be 11 ft. The walls and ceilings should be of some non-absorbent material, such as cement or plaster, with a hollow cove in the corners and next to the ceiling. Distemping was usual, but enamelled paint was preferable in every way.

As to the flooring, the lecturer said that teak was as good a material as any. Oak was not so good as teak, and maple was likely to wear unevenly. A good floor could be made with thick linoleum, either laid direct on the cement concrete or on a deal-boarded floor and wax polished. Any floor should have a hollow cove of teak, or other suitable material, 4 ins. high, next the walls. Windows for wards should have a glass area of not less than 1 sq. ft. to every 64 ft. of the cubic area. The glass line should not be more than 2 ft. 6 ins. to 3 ft. from the floor, and should be taken up as near as possible to the ceiling. The best form was a double-hung sash, with the lower rail of the bottom sash 6 ins. deep, and with a deep bottom rail on the sill, so that the lower sash, when raised a few inches, allowed of ventilation at the meeting rails. Above the sashes there should be a transome with a fanlight over it, having, in order to avoid down-draught, independent glass side-cheeks fitted in an iron frame. Doors to the wards should be at least 3 ft. 6 ins. wide and, as far as possible, without mouldings. There should be no moulded architraves. Joinery could be either painted, enamelled, or stained and varnished. Enamel was best, but stained

and varnished was less costly in upkeep. Door and window furniture should be of the simplest forms and of a material to minimise cleaning.

The lecturer said that the sanitary annexes, containing the sink-room and w.c., had in most recent hospital work been disconnected from the wards by cross-ventilated lobbies. But to-day, he said, this was not so necessary as in the old days of indifferent plumbing; and he cited some very recent examples of hospitals where the plan had not been followed. Often, he said, windows in cross-ventilated lobbies were kept closed and the doors fixed open. Windows fitted with glass louvres which could not be quite closed had been used, but the objection was that the patients, when passing through to the closets, were subjected to a draught. Sanitary annexes should, if possible, be warmed, as otherwise the air from them was drawn into the wards. Their floors and walls should be of materials as impervious as possible. W.C. doors should always open outwards, as otherwise a patient might fall against a door and so prevent it being opened. The sink-room should contain a special sink for emptying bed-pans and receiving slops, and should have a three-gallon flushing tank. It was very useful to have a scrubbing slab and an adjoining sink for soaking mackintosh sheets and soiled linen. There should be a rail or shelf for bed-pans over a radiator if possible, and a cupboard for brooms and pails. The bath-room should be, if possible, 9 ft. by 8 ft. The bath should be of porcelain enamelled iron, and placed centrally in the room. One bathroom was usually enough for ten or twelve patients, and, if well placed, could be used by both sexes. A ward kitchen or duty room was usually provided in hospitals of more than ten or twelve beds. Here the washing up and minor cooking operations for the wards were carried out. If placed between the male and female wards, with small spy windows, a night sister could well supervise two wards.

Of the operating room the lecturer said that it was sometimes omitted in quite small hospitals, some other room having to do duty. The ideal operating room should not be less than 18 ft. by 16 ft., and should have a large north side-light, as well as top-light, made of iron and glazed with clear plate-glass where not overlooked. The sill of the window should be at least 3 ft. 6 in. from the floor, and part of the window should be made to open as casements. The ceiling and walls could either be of white glazed tiles or enamel. The floors should be of white terrazzo and taken up the wall as skirting for at least six inches, with a hollow formed in all angles; the sills of windows should be of either tiles or glass, the doors perfectly flush both sides and 4 ft. wide. It was an advantage to finish an operating room white as far as possible, as it could then be seen at once if it was not kept spotlessly clean, and one rarely got too much light. The fittings usually provided were at least one sink 2 ft. by 1 ft. 6 in. by 10 in., with white fireclay slab on either side and one lavatory basin. There were various devices for turning the water off and on without using the hands. The best heating was obtained by vertical radiators with the loops specially wide apart so as to be readily cleaned. Radiators should be supplied with fresh air by means of glazed pipes on tiled inlets in the outside walls, having removable baffle gratings for access so that the glazed inlets could be sponged out. There should be extract ventilators next to the ceiling.

The lecturer gave details with regard to the ward furniture, and showed a model

of a bed-locker made to his own design. Speaking of heating, he said that in small cottage hospitals this was usually by either open coal fires or by gas-stoves. In the larger hospitals these fires were often supplemented by heating-pipes or radiators from a central heating apparatus. The open fires should be of the slow combustion type, and the best were those supplied with external air to a chamber at the back of the stove delivering the warmed air at a height of about 7 ft. into the ward. A most efficient and perhaps the cheapest possible slow combustion fire could be built with a few fire-clay bricks laid edgewise on a solid hearth with an inch space between the bricks. An inexpensive method of heating the wards of a small hospital was to have a closed type of anthracite stove with hot-water boiler at the back, the front of the stove fitted with mica, the stove being fed and the ashes removed from a door at the back of the stove opening into the ward kitchen or the corridor. By this means the ward was kept free from noise and dust. From the hot-water boiler at the back of the stove there would be flow and return pipes to feed radiators to warm the ward.

Of lighting Mr. Adams said that natural light was essential in every part of the hospital, not only in the wards, but in every corner and cupboard, for daylight was the enemy of disease and also of dirt. Electricity was undoubtedly the most efficient and hygienic artificial light, and if not obtainable from the public mains there were several types of combined plant on the market consisting of petrol engine, dynamo, and storage battery automatically started and stopped. It was well on account of noise and vibration to install the plant in some room well away from the main building. Drainage, where possible, was best connected to a main drainage system, but in out-of-the-way districts it might be necessary to dispose of the sewage by other methods.

The lecturer then proceeded to throw on the screen slides illustrating the plans of various cottage hospitals, of which he gave details. Generally he praised; but there were sometimes points that might have been better otherwise, as, for example, in the case of a hospital where large verandahs were provided, but where the openings to these were too small to allow of the patients' beds being wheeled through. The following suggestions he had received, he said, from the Duchess of Bedford, who had had very considerable experience in the working of a hospital.

"Her Grace is opposed to any ward that by its plan entails the patient being in a draught; there should be plenty of fresh air, but no draught; she contends that all modern cottage hospital wards are wrong in principle, with their cross-ventilation and the beds placed between doors and windows, and the consequent despairing sequel of complaints, and that better results would be obtained by planning wards with large windows on the side facing south and small high windows above the beds on the north wall, which could be opened when the weather did not permit of the large windows being open, the doors in and out to be on the east and west side of the ward and opening near the windows, so that the beds are out of a draught. A small ward was formed on these lines at the Woburn Abbey War Hospital, and better results were obtained than from any other ward. An operating room in a cottage hospital should always have, if possible, a space set apart for a sterilising room, and as operations are carried out whenever possible with the windows open, these should be arranged to open to exclude the weather. Closed cupboards are preferable

to open shelves. No plant for generating electricity should be placed in a cottage hospital; the vibration and noise are very disturbing to both patients and staff. It is probable that in the future all cottage hospitals will require some room for X-ray work. It is unnecessary to provide any separate building for isolation if there is an infectious hospital in the neighbourhood; a room in the building is sufficient for the short time it is used."

Dr. Vere Pearson moved a vote of thanks to the lecturer. He said that the only possible criticism seemed to be that Mr. Adams had not sufficiently considered the question of cost. Thus he had spoken of teak floors, but the cost of these was prohibitive. He (the speaker) thought that very often instead of teak or patent terrazzo plain concrete with colour in it might serve. This should be smoothly finished, and where the traffic came there should be an area sunk $\frac{3}{4}$ of an inch, in which cork lino should be laid. For example, in a wide corridor all the traffic would be in the middle and, by the method he was proposing, half the expense of covering the whole floor with cork lino was saved, and one got a silent corridor. He had been particularly interested in the points that the Duchess of Bedford had brought forward. As a sanatorium manager and doctor he was always advocating fresh air, but knew it was very uncomfortable for the patients to be in draughts. He quite agreed that it was possible to give fresh air without placing the patients in draughts. He had been rather surprised that Mr. Adams had given the height of 11 feet for a small ward, for he had thought that the tendency for buildings nowadays, with the present cost of materials, was to keep the ceiling a little lower. With regard to the finish of walls, he thought that if you allowed the plaster surface to dry well it was worth while going to the expense of flat tone paints such as the lecturer had spoken of, rather than using washable distempers. With regard to sanitary annexes, heating, lighting and other matters, the lecturer had tackled these in a thoroughly practical way. But many cottage hospitals would have to be in districts where earth closets must be used, and in country sites he (the speaker) favoured that system, for it saved expense, and hygienically it could be made quite all right. In any case it would be expedient to have a sink for bed-pans, because cottage hospitals were largely used for surgical cases, and the patient was in bed most of the time he or she was in hospital.

Dr. Arthur E. Giles seconded the vote of thanks. He said he had long felt that in hospital work there was a tendency towards unnecessary elaboration, leading to unnecessary cost. For example, at the Charing Cross Hospital the operating theatre had been designed with doors consisting of solid marble slabs. It was true germs could not get through marble, but there were many other things that they could not get through either. In the same way, there was much unnecessary fuss over taps that could be turned on without the use of the hands. In every cottage hospital there should be from four to six private wards. Every cottage hospital should have a verandah, to which the doors should be sufficiently wide to allow of the beds being wheeled through them. He entirely agreed with Dr. Vere Pearson as to the extraordinary value of fresh air.

Mr. E. R. Dolby said he had come to the conclusion that before very long we should have an Act of Parliament prohibiting the burning of bituminous fuels in open fireplaces, and it behoved archi-

tecs and consulting engineers to prepare for that time. For the heating of a cottage hospital he suggested that a closed stove should be placed in the middle of the long side of one of the wards, and should contain a boiler. This stove should be entirely closed on the inside of the ward, all stoking, removal of ashes, etc., being done in the corridor or adjoining room. From the boiler there should be flow pipes up to the ceiling or roof space, running along and dropping down to feed radiators. The advantage of this method was great economy. There was no cellar to make for the boiler-house, and no loss from the boiler itself or the stove, because it gave off its heat into the ward. There was no need for a chimney-breast; a nine by three flue in the thickness of the wall was ample. If you wanted an exit for ventilation, you made another similar flue with an iron diaphragm between.

Mr. W. A. Pite said that in the planning of hospitals everything should centre round the bed. Conditions one found in an ordinary house must be entirely swept out. The architect must plan an absence of corners and as many flat surfaces as possible.

The President said they had been shown an example of a cottage hospital costing no more than £1,000: to-day we had to pay more than that for a labourer's house. One suggestion he had to make with regard to reducing cost, and this applied both to educational and hospital buildings, was that these might be more in the nature of temporary buildings. Every ten or a dozen years' experience suggested new methods: regard might be had to that fact, and the buildings erected in some light temporary material sufficient to keep out weather, and to keep the temperatures all right. Then, at the end of the ten or a dozen years, we could pull down and re-erect. He had been a little shocked to learn that the isolation of the w.c. block was no longer looked upon as so important as it had been; and he would be reluctant to accept that as a sound principle. He agreed that the cottage hospital might be made a great boon to the middle-class.

The lecturer briefly replied to points raised. In regard to linoleum sunk in a concrete floor, he said he had found that in Germany staircases in public buildings were all made according to that method. Every ten or fifteen years the linoleum was taken up and another strip put down. As to teak for flooring, he had mentioned other materials, but teak should be used if the money was available. He agreed with what had been said about open-air wards; the objection came from the patients: "I do not mind dying," said one of these, "but I would like to die warm." (Laughter.) Architects, in putting in taps that could be turned without the use of the hands, only did so in obedience to their instructions. As to Mr. Dolby's suggestion for warming the hospital, the patients liked to see an open fire.

Mr. Alex. Roche, R.S.A., died at Kingsknowe, near Edinburgh, on March 10, in his sixty-first year. He was elected an Associate of the R.S.A. in 1893, and an Academician in 1900, and had exhibited widely in this country and on the Continent.

The annual meeting of the governing body of the Caxton Convalescent Home, Limpfield, which was built at the cost of our late Chairman, Mr. John Passmore Edwards, was held at St. Bride's Institute on Saturday afternoon, Mr. C. J. Drummond presiding. A very satisfactory report of the year's work stated that, financially, the home was in a good position, the income for the year reaching £2,505, enabling the committee, after discharging all liabilities, to place over £600 in the fund for the extension of the building, which is nearly completed, and will be opened this summer.

Our Illustrations.

FARMHOUSE AT ELMBRIDGE GREEN, OXFORDSHIRE.

This small farmhouse is built of local bricks, pale and uniform in colour, and roofed with grey-green Welsh slates. It has been so designed as to come under the subsidy regulations of the Ministry of Health. The attempt has been made to give the building a slight "Waterloo" flavour, which is the character of the majority of buildings in the neighbourhood. The builders are Messrs. Benfield and Loxley, Bullington Road, Oxford. Messrs. Ernest Newton, R.A., and Sons are the architects. The sheet of working drawings from which the building was recently erected is supplemented by the pair of photographs showing the building as executed.

WAR MEMORIAL OF THE HONOURABLE SOCIETY OF LINCOLN'S INN IN NEW SQUARE, W.C.

The unveiling of this addition to the public memorials of the Metropolis was performed by the Rt. Hon. Herbert H. Asquith, P.C., M.P., on Wednesday last, the 16th inst. The work is of selected Whitbed stone, and has been admirably carried out by Messrs. F. and H. F. Higgs, the builders. The bronze panel has been executed from the architect's design by Messrs. H. W. Cashmore and Co. The illustration is reproduced from the working drawings, and is self-explanatory. Mr. John W. Simpson, P.R.I.B.A., is the architect to the society.

THE NEW COUNTY HALL: CENTRAL FACADE, BELVEDERE ROAD.

We are indebted to the editor of the *London County Council Staff Gazette*, and to Mr. R. B. Urquhart, of the Council's staff, for the spirited sketch of the Central Façade of the new County Hall in the Belvedere Road, from which the scaffolding has now been cleared, and of which a better view will be obtainable by-and-by when the present narrow thoroughfare is widened. Then, we hope, no such mistakes will be made as the one verbally conveyed to but "honestly vouched for" by the editor of our contemporary. At midnight one recent evening the night watchman at the New County Hall heard a loud knocking at the outer door. A rough-looking man stood outside. "I want to stay 'ere to-night," he said. "What do you mean?" said the night watchman. "I want to stay 'ere—I've got me money," and he displayed a shilling. "Where do you think you are?" said the night watchman. "This is the London County Council!" "Oh! I thought it was Rowton 'Ouse!"

At the last meeting of Leamington Town Council it was decided to proceed with the reconstruction of the Pump Room interior at an estimated cost of £10,000.

The address of Messrs. David Barclay Niven, F.R.I.B.A., and Herbert Wigglesworth, F.R.I.B.A. (Telephone 2055 Central) will be No. 7, John Street, Bedford Row, W.C.

Mr. M. A. Piercy, deputy borough engineer of Warrington, has been appointed engineer and surveyor to Prestwich (Manchester) District Council, at a salary of £500 a year.

In a Government building of no great age, says the *Engineer*, it was observed recently that the electric bells had become very uncertain in action. Various causes were suspected, and at length it was surmised that the defect might be due to mice. This proved to be the case, the insulation of the wires being gnawed away by the vermin. The premises were treated thoroughly with barium carbonate, and since then no further interruption of communications has been reported.

THE BUILDING NEWS, MARCH 18, 1921.

THE WAR-MEMORIAL OF THE HONOURABLE SOCIETY OF LINCOLNS' INN

Scale. 10 feet

FOR CORRECT INSCRIPTIONS SEE DRAWINGS NOS 8 & 9

FILIORVM PATRES DEDERVNT

right hand half of inscription

Details of all lettering to follow

DONVM SEDILLIVM MEMORIAE

RIGHT HAND
PIER TO BE
XIX

Vertical road

with lettering to correspond with the other side

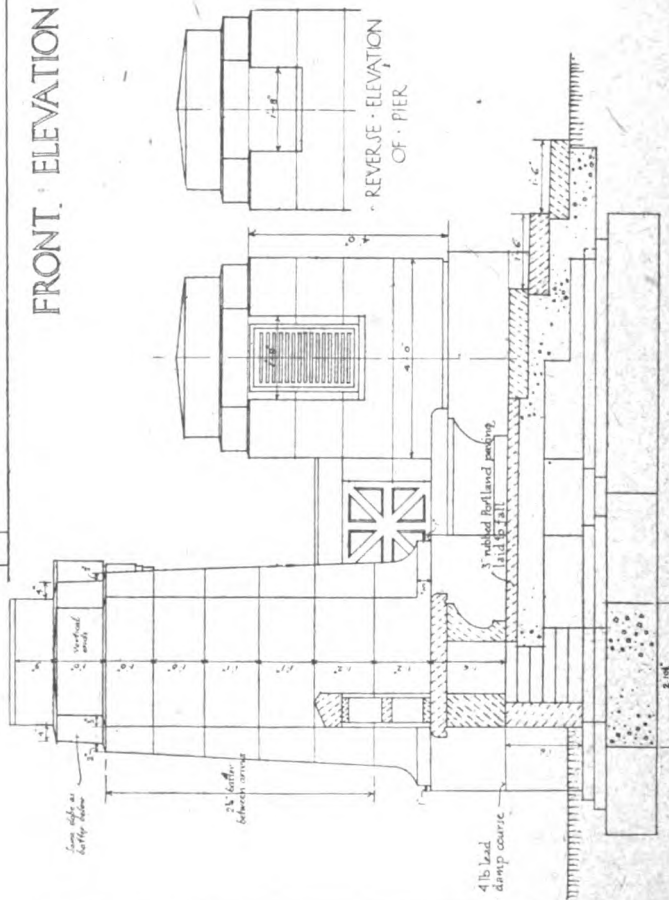
NOSTRORVM

AETERNAE

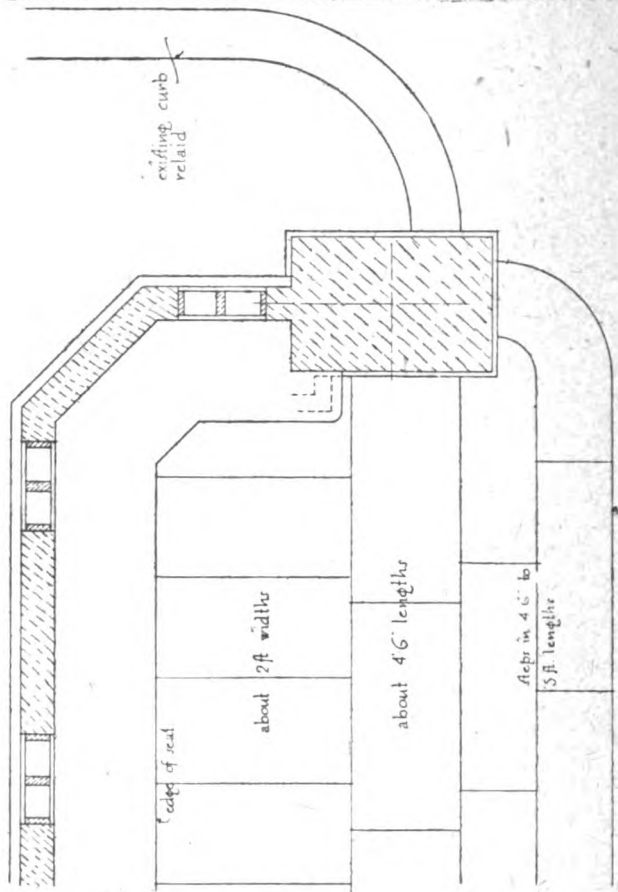
MEMORIAE

11'-0"

FRONT ELEVATION



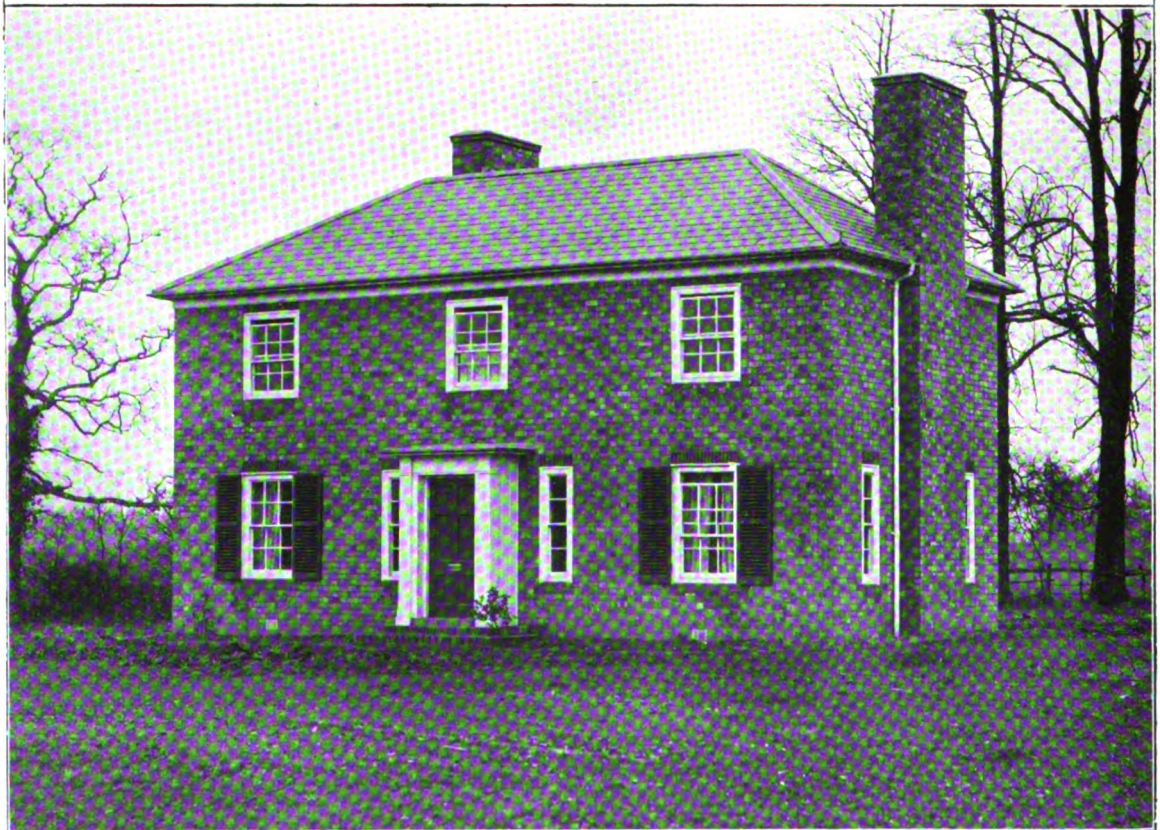
SECTION



PART PLAN

JOHN W. SIMPSON
architect to the Hort Soc
Dec 16 1919

WAR MEMORIAL OF THE HONOURABLE SOCIETY OF LINCOLNS' INN. UNVEILED MARCH 16, 1921.
Mr. JOHN W. SIMPSON, P.R.I.B.A., Architect.



FARMHOUSE AT ELMBRIDGE GREEN, OXFORDSHIRE.
Messrs. ERNEST NEWTON, R.A., and SONS, Architects.

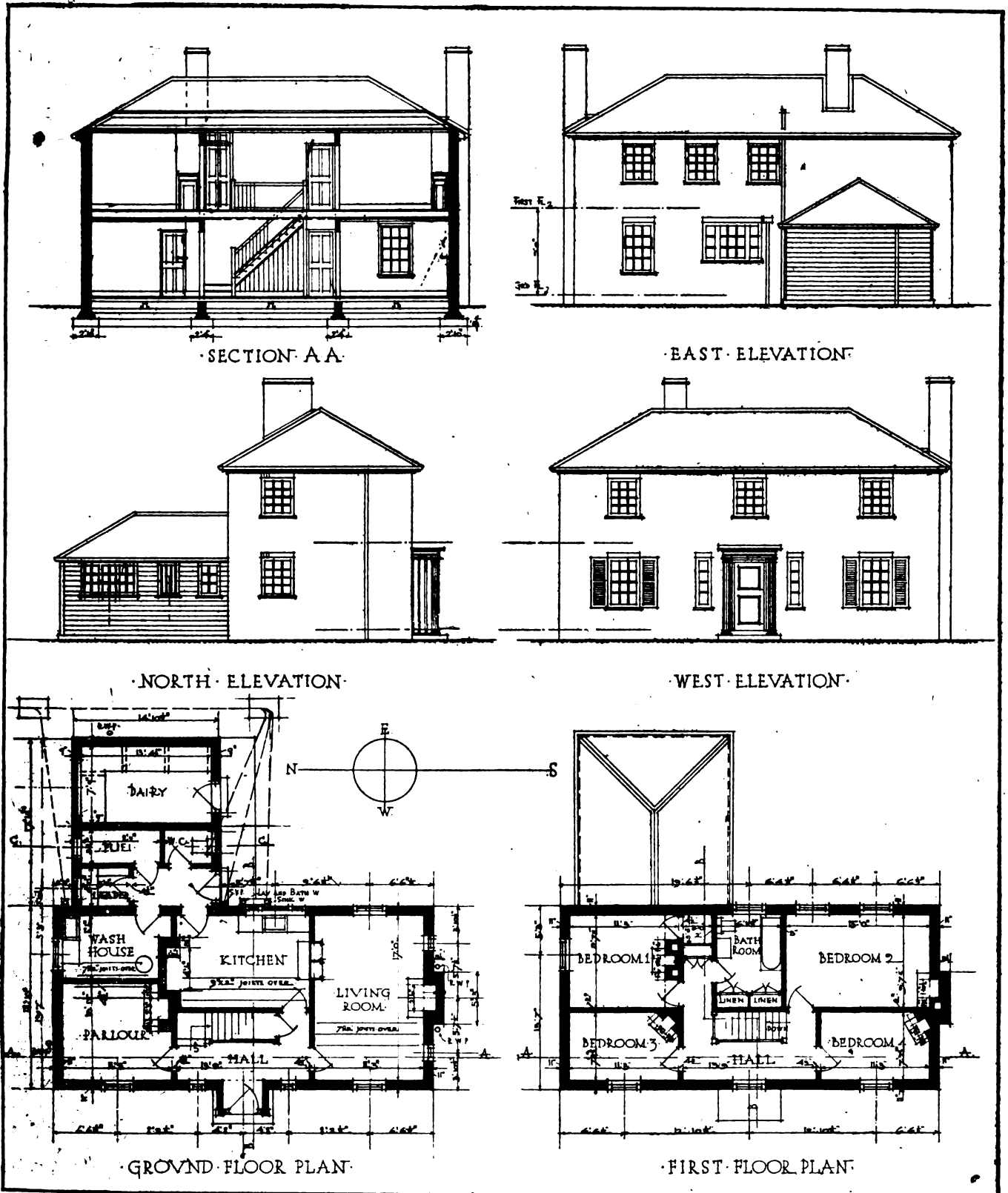
THE BUILDING NEWS, MARCH 18, 1921.

NEW HALL, LONDON COUNTY COUNCIL.



THE CENTRAL FACADE IN BELVEDERE ROAD, S.E.

From a Sketch by Mr. R. B. URQUHART.



FARMHOUSE AT ELMBRIDGE GREEN, OXFORDSHIRE.

Messrs. ERNEST NEWTON, R.A., and Sons, Architects.

THE REPORT FROM THE SELECT COMMITTEE OF THE HOUSE OF COMMONS ON BUSINESS PREMISES.*

By A. B. D. LANG, F.S.I.
(Continued from page 126.)

PROPOSALS.

The Tribunal.—Any form of tribunal in the ordinary acceptance of the word is bound to be slow, will probably be partisan, and certainly expensive.

The Arbitration Acts provide a simple, cheap, and effective means for the settlement of any disputes which may arise on the rent question.

My proposal is, therefore, that a panel of surveyors be appointed, from which each side in a dispute may choose his representative. Should these disagree, after negotiation, the matter would be referred to a sole arbitrator chosen by them. In the event of their failing to agree on this choice, the arbitrator should be appointed by the President of the Surveyors' Institution or some other impartial authority. This arbitrator's award must be final, and costs must be within his discretion. *A more unsuitable tribunal—hateful word—than a county court I cannot imagine.*

The framing of a Bill.—Some while back I remarked that the recommendation which I considered to be the most important was that which suggested the appointment of a small body of experts who should frame a Bill to deal with the whole problem. Herein—or so it seems to me—lies the opportunity of this Institution.

Prior to the appointment of the Select Committee, and after the Rents Restriction Bill had been introduced in the House of Commons, an agitation was on foot to include business premises within the scope of the Rents Restriction Bill. Day by day instances of so-called rapacity and extortion were quoted in the Press, invariably without details or corroboration. Not a word was heard from the other side, and I expect most of you have had the experience of being chaffed by friends on your moral obliquity in this respect.

Now, for every one landlord there are probably 10,000 tenants, and a very small percentage of these tenants—say, one-tenth of 10 per cent.—can easily make so much noise, if they all shout together, as to drown the feeble piping of the entire body of owners, even should these latter combine in their shouting. One individual, of a sufficient energy, may easily persuade a large number of men with fancied grievances to let him ventilate those grievances, and may even induce them to pay him for so doing. Incidentally, if he be a professional man, it may lead to a lot of business in his legitimate sphere. In any event, should the victim of his activities be a property owner, that owner's only hope of successful defence is prompt counter-propaganda. Whilst on this point I should like to refer to certain questions addressed to myself by the Select Committee (Nos. 3001 to 3018. See appendix to this Paper). I feel that the common opinion, which is undoubtedly widely held, that the interests of surveyors, as a professional class, are bound up with those of the landlord, and therefore inimical to those of the tenant, is a most dangerous one, and absolutely false.

For these reasons I consider that steps should be taken to educate not only this Committee or the House of Commons whose representatives they are, but the public as a whole. Advertising is an art

and propaganda in competent hands can work marvels. I wish, therefore, to make two proposals, one of which, at least, may appear to be somewhat revolutionary. Nevertheless, it is one which, if properly carried out, would redound to the credit and benefit not only of the profession—not only of that part of our *clientèle* which stands most in need of protection, by reason of their small numbers—I refer to the property owners—but also of the tenants.

I therefore propose that the Institution should immediately appoint a Committee, the stronger the better, and should engage Parliamentary counsel to draft a Bill giving such protection as may be considered necessary to tenants, subject to adequate safeguards for owners. The rough outlines of these I have sketched out in the Paper before you. Secondly, I propose that a campaign be initiated by the Institution to educate the public upon the difficulties and dangers of upsetting the natural law of supply and demand. This campaign would have to be a newspaper one principally. The dangers of such an act are manifest, but without the experience of those whose life's work it is to deal with such matters those dangers will be vastly magnified.

To sum up, we find that the recommendations of the Committee embody the following facts:—

The Committee realise that State interference is dangerous, and their recommendations for immediate legislation are both temporary and as small as possible. But the principle of interference has been recognised in the Rents Restriction Act, and has been, in a sense, confirmed by the Report we have considered.

I may be an alarmist, but it seems to me that we are now face to face with a new and dangerous state of things; it behoves the profession of which we are all members to walk warily, and to see that in whatever action we may take we give no opportunity to the extremist element in the country and the House to represent us as being utterly opposed to any sort of reform.

There are three points in the Report which inspire me with great alarm: (1) Tribunals; (2) Compensation for Improvements; (3) Compensation for Goodwill. It may be that my alarm is partly unjustifiable, but my feeling is this: the Report is a carefully considered one which inclines heavily and obviously to the side of the landlord, because of the danger to the community involved in leaning the other way. But the Town Tenants Bill has a very strong backing, and has always been supported by the extremists in the Commons. Their main points are security of tenure, compensation for goodwill and for improvements.

All through the Committee's Report and in the hearing of the evidence the word "tribunal" constantly occurs. This word means to the average member of the public a board such as the Profiteering and Military Service Acts have accustomed him to.

The Report recommends that in the framing of any temporary expedients for the protection of tenants account should be taken of improvements and goodwill with regard to the fixing of equitable and economic rent. True, the Report also recommends that a small committee of experts should draft the permanent legislation which will deal with the whole problem; but the last word lies with the House.

Business premises have already been dragged into the scope of the present Act in the teeth of strenuous Governmental opposition, and history is likely to repeat itself.

Once these two vicious principles are recognised, results in general are impossible to forecast; but one result is certain: the chief sufferers in the long run will be the tenants.

I say, therefore, that we, as fair-minded men, and as men who, on behalf of landlords, invariably give a tenant the right of renewal on equitable terms unless this course is obviously impossible, should accept and endorse the principle of the right to renewal of tenancy subject to reasonable safeguards. But I also say that we should resist with all the forces at our disposal any and every attempt to give statutory sanction to the pernicious doctrine that any tenant has any right whatever to compensation for so-called improvements voluntarily made or for goodwill built up on premises leased for a definite term.

I say, further, that as a profession we are suspect, though wrongly suspect, of having our interests bound up and identified with those of the landlords. This suspicion we must combat.

Finally, we must ask ourselves this important question: Has not a certain Parliamentary sanction of these two principles, vicious in their inception and worse in their inevitable results, been given by this Report?

APPENDIX A.

EXTRACT FROM THE EVIDENCE OF MR. C. T. GREEN, OF THE FIRM OF GREEN AND EDWARDS, LIMITED, DRAPERS, REPRESENTING THE DRAPERS' CHAMBER OF TRADE.

3131. With regard to your own case, your rent was put up from £350 to £750 after thirty years?—Yes.

3132. And you think that is about 25 per cent. too much?—Yes.

3133. On what grounds do you think it is 25 per cent. too much?—Because I have had a good deal to do with the valuation of the property in that neighbourhood. I know what other people are paying, and I know what can be obtained.

3134. That is your estimate as a matter of fact?—Yes.

3135. Did you take any expert advice?—No.

3136. That is simply your estimate?—Yes.

3137. You admit a rent of £570 would be justifiable but not £750?—Yes, I quite agree to that.

3138. I do not quite understand how you got at your opinion unless you took the advice of some expert on the subject?—Well, who is an expert?

3139. Men who are dealing with houses in a district?—Yes. Well, I know more about it than most of them.

3140. I suppose the landlord would be advised by someone when he put his new rent on, would he not?—I do not think he would. I do not think he would go for advice at all. He would get as much as he could, probably.

APPENDIX B.

EXTRACT FROM MR. LANG'S EVIDENCE.

3001. So far as a tribunal is concerned, you rather favour a panel of surveyors, I gather?—I do.

3002. You are not very keen on business men, and you do not want lawyers at all?—I think, from my experience in the past, that these things have been settled very much better by experts, and I think they always will be.

3003. I want to put something to you that I have heard in this case and elsewhere: supposing you have your panel of surveyors, have not you in fact got a number of gentlemen then the bulk of whose incomes come from landlords?—Certainly.

* Read at the Ordinary General Meeting of the Surveyors' Institution on Monday, March 7, 1920.

3004. Do you think that is a very happy position for the tenant?—Is it your suggestion that surveyors are less honourable men than any others?

3005. No, what I am putting to you is that you are selecting, for the tribunal to arbitrate between two parties, a panel from a profession which mainly depends on one of those parties. Do you not think that wants a little rectification?—No, I do not think you are right in your premises. I act as often for tenants as I do for landlords—just as often.

3006. I imagine that if you lost all your landlord clients it would be pretty bad for the firm?—Certainly.

3007. You could survive losing your tenant clients?—No, I certainly could not.

3008. Taking now, if people come to you for offices, you have got very little to offer them?—Yes.

3009. But you have big estates which are being managed?—Yes; but I am doing more purchasing and I am doing more selling. I am buying for tenants.

3010. Do you not think it would be just as well, if you are fixing up a tribunal, to have somebody who is not dependent on either one of the parties for a professional income?—If you will forgive me, I think that you do not quite understand what my suggestion is. Two men, a landlord and a tenant, disagree as to what the rental value of an office may be. A appoints a man whom he knows and believes to be honest and to know his job. That is the tenant. The landlord does the same thing. Those two men then settle, if they can, between them by argument what the proper rent should be.

3011. That is the Arbitration Act procedure?—Exactly. If they cannot agree, they appoint an arbitrator who should be a man entirely outside the profession, a man who is simply a good business man of high standing, to settle between those two. That is not a question of a man going before a court composed entirely of surveyors, as you suggest.

3012. I do not follow. This panel which you suggest, is that out of which the umpire should be chosen?—I suggest a panel of surveyors out of which both parties to the dispute can choose their representative; a man to represent each.

3013. And the umpire should come out of the same panel?—No, the umpire to come from anywhere you like.

3014. I do not think you made that clear. If you did I did not follow it.—The umpire to come out of anywhere, in London or the country.

3015. I do not disagree with that. I am only objecting to the panel coming from one profession.

It is said that the partial provision respecting rents of business premises under the Rents Restrictions Act expires on June 24, and the present intention of the Government is to let it run out, and not to adopt the proposals advocated by the Select Committee of the Commons for dealing with business premises. The members of the Select Committee, with Sir T. Bramson in the chair, have met and formed themselves in protest into a voluntary committee to watch the matter.—ED., "B.N."

Lord Leverhulme, speaking at the National Council of Evangelical Free Churches in Manchester, said some people seemed to think that the abolition of capitalism would bring about the millennium, but in countries where capital was least the wages were least and the squalid conditions of life were worst.

Robert McDonald, financial secretary to the Islington Unemployed Ex-Servicemen's Organisation, who pleaded guilty, was sentenced at the Old Bailey on Monday to six months' imprisonment in the second division for converting money entrusted to him to his own use. Handed 24s., which he should have given to the organisation's treasurer, prisoner spent some of it at a public-house. When arrested he was about to organise the Stepney unemployed. The judge described the offence as "despicable and contemptible."

COMPETITIONS.

THE BREWERS' COMPANY'S LICENSED HOUSE COMPETITION.—At their meeting on Monday last the Council of the R.I.B.A. received the report of the President, Mr. John W. Simpson, who was appointed assessor in the competition promoted by the Worshipful Company of Brewers for a type design for a licensed house in a large town. The assessor has awarded the premiums as follows:—Design placed first—premium of £300 awarded to the authors of design No. 14: Messrs. Curtis and Natusch, A.A.R.I.B.A., and Messrs. White and George, A.A.R.I.B.A., associated architects, 34, Bedford Square, W.C.1. Design placed second—premium of £150 awarded to the author of design No. 42: Mr. C. H. James, A.R.I.B.A., 19, Russell Square, W.C.1. Design placed third—premium of £50 awarded to the authors of design No. 72: Messrs. Blount and Williamson, A.R.I.B.A., 5, Duke Street, Adelphi, W.C.2. Special mention—design No. 1: Mr. L. G. Hannaford, A.R.I.B.A., and Mr. H. G. Cherry, Licentiate R.I.B.A. All the designs submitted are on exhibition in the R.I.B.A. Galleries to Thursday, March 24, inclusive, between the hours of 10 a.m. and 8 p.m. (Saturday, 6 p.m.).

OBITUARY.

The death has taken place, on March 12, at 12, Belgrave Crescent, Edinburgh, of Mr. John More Dick Peddie, a well-known Scottish architect, who was for many years prominent in the business life of the capital. Born in 1853, he was a son of the late Mr. John Dick Peddie, R.S.A.—at one time member of Parliament for the Kilmarnock Burghs—and he received his early education at the Edinburgh Academy. After spending some time in Germany, Mr. Peddie became assistant to Sir Gilbert Scott in London, and he subsequently returned to his native city, and joined his father in the firm of Peddie and Kiunear. Many prominent buildings were designed by him, including the Caledonian Station Hotel, the offices of the North British and Mercantile Insurance Company in Princes Street, the Bank of Scotland, and the Standard Insurance Company, George Street. He was also the architect for several large buildings in Glasgow. Domestic architecture claimed a considerable amount of his attention, and the results of his work in this department are to be found in many parts of Scotland. His attention was also turned from time to time to church architecture, and the redecoration of the interior of the Church of St. John in Princes Street was carried out according to his plans, in conjunction with Mr. Forbes Smith. We illustrated the work in our issue of January 9, 1914; and also St. Paul's Church, Edinburgh, similarly redecorated, in that of March 13, 1914. Latterly he acted as adviser to local authorities in connection with housing schemes in various Scottish counties. Apart from his profession, Mr. Dick Peddie was interested in several important undertakings in Edinburgh, including the tramways company, of which he was a director, and he was also on the directorate of the Scottish Equitable Assurance, the Scottish Investment Trust, and other concerns. A Unionist in politics, he was closely identified for some years with the party organisation in Edinburgh. Interested in several branches of sport, he was a keen angler and a good shot, and, as a member of the Burgess Club, he enjoyed a regular game of golf. Mr. Dick Peddie, who is survived by his wife, was twice married. The funeral service was held on Monday last in the Church of St. John the Evangelist, and the interment followed in the Dean Cemetery.

In connection with the recent architectural competition for designs for the Trinity College war memorial, Dublin, the Executive Committee have decided that the war memorial should take the form of a Hall of Honour, as shown in Sir Thomas Deane's plan, in connection with which it would be possible to erect a library reading room similar to that appearing on the said plan, it being understood the modification of the plan may be introduced if deemed desirable.

STATUES, MEMORIALS, ETC.

HARROW SCHOOL WAR MEMORIAL.—The Executive Committee have now acquired the whole site which, in their opinion, is necessary for the purposes of the memorial. It comprises the space lying between the chapel and the old school, at present occupied by Dame Armstrong's, Mosse's, and Cruikshank's houses. Under their instructions, their architect, Mr. Herbert Baker, F.R.I.B.A., has prepared sketch plans for the memorial buildings. These provided for (a) the laying-out in an architectural manner of the triangular piece of land at the south of the site; (b) the erection of the memorial cross immediately opposite the centre of the west end of the chapel; and (c) the construction of the memorial buildings. The elevation of the memorial buildings is designed to harmonise with that of the old school, and at the same time it is infused with a monumental character. On the ground floor there is a shrine, on the walls of which the names of those who have fallen will be inscribed; a columned and vaulted loggia, which will provide a ceremonial entrance to the speech-room, and necessary offices. In the centre of the loggia a dignified staircase, occupying the whole of the back of the centre block, ascends to the first floor in two easy flights of steps. The first floor is occupied by three large halls, which will serve the purpose of portrait galleries and meeting-rooms for the use of the school. The Executive Committee have recommended the General Committee to approve these plans and to authorise them to proceed with the laying-out of the triangular piece of land and the erection of the cross and the shrine, but not the hall over it. They are advised by Mr. Baker that no difficulty will be experienced in dividing the work as proposed, and that the effect of the shrine without the adjoining buildings will be quite satisfactory. They recommended that the rest of the buildings be postponed until further subscriptions have been obtained or until funds from other sources are available for their completion. The estimated cost of the work now proposed amounts to £30,000, and the funds at the disposal of the committee will be sufficient to provide for this. The recommendation was unanimously adopted. We illustrated Mr. Baker's design in our issue of July 5, 1920.

PARLIAMENTARY NOTES.

DILUTION BATTLE BEGUN ON BUNGALOWS.—The trade unions are trying to stop the employment of ex-Service carpenters on wooden bungalows at Tredegar. Dr. Addison, giving the facts in the House of Commons on Tuesday, said he had received representations from the contractor to the Tredegar Urban District Council. On these bungalows the contractor was employing a number of ex-Service men who were bonafide carpenters; but the trade unions termed them "dilutees," and had demanded their immediate dismissal or, in the alternative, that the urban council should cancel the contract. The model form of contract, on which the contract was based, contained nothing that would enable the council to prohibit the employment of ex-Service men, and he was informing the contractor and the council accordingly.

THE CADBOLL STONE.—Mr. Munro, Secretary for Scotland, on Tuesday informed Lieutenant-Colonel A. Murray that the Trustees of the British Museum told him that, inasmuch as Captain Macleod, of Cadboll, has informed them that great pressure has been brought to bear upon him to withdraw his offer of the Hilton-of-Cadboll Stone to the British Museum, and that he would not have made the offer had he realised the strength of Scottish feeling on the subject, they had decided to release him from his promise by declining to accept the stone. It was, therefore, again at the disposal of Captain Macleod, and he did not doubt that arrangements would be made for its retransfer to Scotland.

"The air of Whitechapel Road is more exhilarating than that of Brighton." So says the Bishop of London.

Our Office Table.

The following gratifying resolutions were passed in regard to the new Sessions House at Newington by the Court of Quarter Sessions for the County of London on January 11, 1921, and have been communicated to the London County Council:—"That this court desires to express to the London County Council its very high appreciation of such a commodious, well-planned, well-built, and handsome new Sessions House. That the London County Council be asked to convey the thanks of the court to their architect, Mr. Riley, for the great skill and ability displayed by him in the planning and erection of the building." It is not often that we have the pleasure of recording well-deserved approbation of the kind, and the members of the Court of Quarter Sessions are to be congratulated on their graceful recognition of the successful completion of the building mentioned, in which all Mr. Riley's professional brethren will cordially join.

Professor Keith, lecturing on the way man is built, dubbed him the sky-scraper of the animal world, since he is built on sky-scraper pattern; and referred to the extraordinary number of high cranes to be seen just now in London. An architect, says the *Morning Post*, speaking of the same thing, somewhat mystified a group of clubmen by remarking, "I never saw so many large Scotsmen in London in my life. One in the City has an arm 90 ft. in length, and can lift seven tons at a radius of 65 ft. at 40 ft. a minute." It turned out that "Scotsman" is the trade term for the crane.

The first of a series of lectures was given in the Hall of the Royal Society of Arts last week by Sir Whitworth Wallis on "The King's Pictures at Windsor Castle and Buckingham Palace." By permission of His Majesty many lantern slides of famous pictures, several of which are only to be seen by privileged visitors, illustrated the lecture. The story of the Royal collections, beginning with the time of Henry VIII., was sketched. The lecturer doubted if there existed a genuine portrait of Queen Elizabeth, who had many painted, but ordered most of them to be burnt, as they did not please her. He related that Holbein was appointed Court painter to Henry VIII. at a salary of £30 a year. It was related of Charles II. that his only art criticism was made when he said to Sir Peter Lely, who painted his portrait, "Is this like me? Then, ods-fish! I am an ugly fellow."

Mr. George Head (Past President of the Auctioneers' and Estate Agents' Institute) gave an address on "Post-War Valuations" to a sessional meeting of members at their headquarters, 34, Russell Square, on the 10th inst. Dealing with the question of house property, he observed that the old conditions of valuation had changed, and valuers were faced with the difficulty of having no former guide to work upon. Abnormally high prices had been paid, but some of the conditions that made the post-war values were altering. The high prices obtained were on the decline, and likely still to fall. The crest of the wave had been passed, and investment values, which had been depressed by the increased rate of interest yielded by other forms of property, would rise if money became easier. But the diminished purchasing power of money would probably prevent a permanent return to anything like pre-war values, and over the whole area of valuation hung the mist of uncertainty. For the layman the future was full of pitfalls.

The Office of Works has recently received from the respective owners offers to relinquish to the State quite a large number of historic buildings. The offers, in fact, are embarrassingly numerous, for the need for economy makes a heavy outlay impossible, and the cost of labour and materials precludes any programme of general restoration. But with the funds available the work most necessary for the preservation of the buildings can be carried out. It is understood that the Department has under consideration the taking over of Furness Abbey, and the Corporation of Barrow have expressed willingness

to assist in the work of preserving the ruins. The State has also been offered the following:—Norham Castle, near Berwick, the twelfth century stronghold of the Palatine Bishops of Durham; Huntley Castle, Aberdeenshire, thirteenth century, owned by the Duke of Richmond; Lincluden Abbey, Kirkcudbright, owned by the Duchess of Norfolk; Hermitage Castle, Roxburghshire, thirteenth century, owned by the Duke of Buccleuch; Helmsley Castle, Yorkshire, twelfth century, offered by the trustees of the Earl of Feversham; White Castle, Monmouthshire, ancient fortalice, on which the Office of Works is having a report made; Leven Castle, Loch Leven, where Mary Queen of Scots was imprisoned (it will probably be taken over by the State); Albury Church, the ruins of an early Norman structure, near Guildford; St. Catherine's Chapel, Abbotsbury, owned by Lord Ilchester; and Dunkeld Abbey, near Perth, owned by the Duke of Atholl.

The annual Assembly of the Royal Scottish Academy of Painting, Sculpture, and Architecture was held last week in Edinburgh. Sir J. Lawton Wingate, the President, occupied the chair. The ninety-third annual report, which was submitted, stated that both as regards attendance and sales the exhibition of last year was the most successful for many years past. The office-bearers and council for the ensuing year were elected as follows:—Sir J. Lawton Wingate, President; Messrs. J. Campbell Mitchell, Robert Gibb, E. A. Walton, H. S. Gamley, W. Birnie Rhind, John Kinross, W. D. McKay, LL.D. (Secretary), and G. Washington Browne (Treasurer), who form the Council; James Paterson, Librarian; J. Campbell Mitchell and H. S. Gamley, Auditors; J. Campbell Mitchell and Robert Gibb, Curators of Library; Alexander Roche, John Paterson, Robert Hope, and John Duncan, Visitors of Academy's School of Painting; and E. A. Walton, P. Macgillivray, LL.D., Sir Robert S. Lommer, James B. Dunn, and John Duncan, Art College representatives.

A "Dictionary of British Scientific Instruments," issued by the British Optical Instrument Manufacturers' Association (London: Constable and Co., Ltd., 10, Orange Street, W.C. £1 1s.), supplies a real need. The nomenclature of a science is one of the most important portions of its structure, and the science of instruments has long wanted a concise definition of such, together with good illustrations of the most useful types. No better guarantee of the value of the volume, which covers 335 pages and 313 illustrations could be cited than its compilation and publication by the British Optical Instrument Manufacturers' Association, which includes twenty-eight of the leading firms from whose houses have emanated in bygone years the original types of which the present developments, known all over the world, maintain the high excellence and fine working quality for which British instruments are famous. The Dictionary itself is prefaced by an interesting article on navigating instruments; a short history of the Royal Meteorological Society; some notes on the history and manufacture of British optical glass and its properties; and a description of the Royal Observatory at Greenwich and its work.

Stonehenge is now said to have been built on the site of a still earlier monument, of which the so-called "blue stones" remain as a testimony. Dr. Thomas, of the Geological Survey, has identified these stones with the formation in the Prescelly Mountains in Pembrokehire. This seems to imply that at a date far earlier than the erection of the present Stonehenge stones were transported from Pembrokehire to Wiltshire, and presupposes a higher stage of civilisation than was known to have existed in these islands at so early a period.

The question whether a borough councillor is disqualified from holding office if he compounds with the council for the payment of rates was discussed recently before Mr. Justice Astbury in the Chancery Division on a motion by three members of the Southwark Borough Council—Joseph Holden, Frank Percy Rider, and Thomas Wilmot—for an injunction to restrain the council from proceed-

ing to the election of councillors in the room of the plaintiffs, and from preventing them from acting as councillors. His lordship made the declaration, and granted the injunction asked for, with costs against the council, the parties agreeing to treat the motion as the trial of the action.

PROFESSIONAL AND TRADE SOCIETIES.

BIRMINGHAM ARCHITECTURAL ASSOCIATION.—The last general meeting of the session of the Birmingham Architectural Association was held at the Society of Artists' Rooms, Birmingham, on March 11. The President, Mr. H. T. Buckland, F.R.I.B.A., took the chair, and Captain G. Salway Nicol, F.R.I.B.A., read a paper entitled "The B.A.A. Excursion to Bourges." The lecturer said that people often wonder why architects travel long distances and spend their leisure in studying such old buildings as the Gothic Cathedrals, which seem to have no relation to the problems submitted to them by this material age. Stimulated by the enthusiasm of students, they sometimes visit an old city, and, fascinated by the glamour of age and the theories of archaeologists, they have some return for their trouble; but they return with the idea that making sketches of these old places is but an innocent hobby. This view is too superficial. They have not realised what a Gothic Cathedral means. A great building such as St. Etienne at Bourges is probably one of the finest flowers of human civilisation. The lessons which can be learnt from such buildings will bear fruit when the materialism of the present day can be shaken off, and it is our duty in the meantime to keep alive that appreciation and respect for the great achievements of the past. The architects who journeyed to Bourges from Birmingham in the early summer of last year combined the delights of living in a fairly modern town with sketching the many examples it contains of building of various ages. The Cathedral, which naturally formed the chief attraction of the pilgrimage, has an interior of five lofty compartments, arcaded and vaulted in stone with that skill and grace for which the masons of the thirteenth and fourteenth centuries are so famous. The West Front, in the evening sunlight, with its great stretch of steps, bearing its range of five open-armed portals and surmounted by two lofty towers guarding and supporting the great rose window, is a sight which cannot fail to impress the beholder. No finer opportunity for the display of stained glass can be found than the three continuous clerestories of Bourges, which stretch from west to east without any interruption, for the plan is based on the simple lines of a Roman Basilica. The whole of the windows are, unfortunately, not glazed with the original glass, but a considerable proportion remains and enables it to vie with Chartres in this glorious possession. Mr. Nicol illustrated his lecture with many water-colour drawings, sketches and photographs made during the visit, and also with a number of lantern slides. At the conclusion of the lecture a vote of thanks was proposed by Mr. Arthur Harrison, and seconded by Mr. J. Coulson Nicol, who himself showed a few lantern slides which he had obtained at Carcassonne and Albi during the visit.

Sir Aston Webb (President of the Royal Academy of Arts) and Mr. W. R. Lamb (secretary) were received in audience by the King on Tuesday morning, and submitted the business of the institution.

Mr. Henry William Bruton, J.P., F.S.I., of Berwick House, Gloucester, senior partner of Bruton, Knowles and Co., estate agents and auctioneers, Gloucester, a great book collector, has left £31,406.

At Tuesday's meeting of the London County Council it was stated by Mr. H. J. Greenwood, chairman of the Establishment Committee, that it was now anticipated that sections A, B, and C of the new County Hall, now in course of erection, would be ready for occupation before the end of 1922. Some 700 members of the Council's staff are already accommodated in the building.

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AND ENGINEERING JOURNAL.

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Currente Calamo.

The attempt of the National Federation of Building Trade Operatives to enlist the aid of the Triple Industrial Alliance in its revolt against the Government dilution scheme has, as we suggested it would last week on this page, been rejected. It was decided that it was not within the scope or province of the Triple Alliance to call a conference, and that the application should be referred to the Parliamentary Committee of the Trades Union Congress. As the Parliamentary Committee of the Trades Union Congress on Wednesday week decided against the calling of such a conference, the building trade operatives are just where they were, and, if they are wise, will recognise that discretion is the better part of valour, and no longer refuse the right to work of the ex-Service men which the other trade unions have recognised. Meanwhile, the ballot of the members of the National Federation of Building Trade Employers was concluded on Monday. On Wednesday the Administrative Committee of the National Federation of Building Trade Employers met to discuss the result, which is that 90 per cent. of the members are in favour of the course recommended, and are thus pledged, in the event of a strike, either sectionally or otherwise, to take such action in resistance, including a lock-out, as the Committee may direct. Armed with this mandate, the Committee will take steps to carry it into effect.

We congratulate the Birmingham Architectural Association, and its active honorary secretary, Mr. Bernard A. Porter, F.R.I.B.A., and other architects who have been working with him to get a panel of architects recognised and placed on a firm footing for housing work in the district, instead of all the housing being done through the Housing and Estates Department Staff of the City Corporation, on the success that has attended their efforts. At the last meeting of the Housing and Estates Committee, presided over by Councillor Siward James, it was decided to place in the hands of a panel of architects—mainly ex-Servicemen—the development of three estates: The Wakeman-Newport Estate, with sites in Sandbourne Road, Brook Hill Road, Moat House Road, Naseby

Road, Nansen Road, Ward End Park Road, and Lime Tree Road; the interior portion of the Farcroft Estate, Handsworth; and an estate in Linden Road and Manor Road, Stechford. It is possible that a further estate will also be handed over to them for development. We are sure the people of Birmingham will not be slow to perceive the advantage of the course adopted, and we believe that in other districts persistent pegging away by the local architectural associations would be similarly successful and for their own good and the public benefit.

The Bishop of London has addressed a letter to Sir Aston Webb, President of the Royal Academy, in reply to a memorial from representative societies and institutions which protested against the destruction of nineteen City churches. In his letter Dr. Winnington-Ingram says: "I can assure you that no wholesale demolition of nineteen City churches is contemplated. At the present time I am giving my mind to the question of grouping certain of the City parishes, or the possibility of uniting them with poor parishes in the suburbs. It is possible that some few may eventually have to be pulled down or removed, but this would only be done after grave consideration of every case and due regard to the general welfare of the Church at large. While I hate myself to remove any old church, I cannot shut my eyes to the pressing question of the poverty of the clergy and the provision of the spiritual needs of people who have at present no church at all and no means of providing one." That is a very partially satisfying reply, and all concerned will do well not to relax vigilance. In his letter to the Bishop Sir Aston Webb said: "We would venture to say that to recommend the destruction of any one of them can hardly conduce to their reverent treatment." We venture to add that neither will it promote the "general welfare of the Church at large."

The question of giving a local corporation power to control the erection of hoardings in large towns will come up this session before the Local Legislation Committee of the House of Commons, and, as it is an important matter, it will be fought tenaciously. The matter arises in connection with Leicester, but it will influence local legislation throughout the country. Some years ago Parliament

gave local authorities in all areas the right to make regulations with reference to unsightly hoardings that affected the beauty of the open country, and in many towns a power exists to control hoardings abutting on the road. There are some conflicting decisions as to the meaning of the word "abut," but it is agreed that where a hoarding is set back a sufficient distance the local authority has no control. If Leicester gets the powers now asked for, billposters will have to secure the corporation's permission to erect or retain any and every hoarding, and other municipalities, we trust, will soon secure similar powers.

Wall-paper, which has been accused in a lecture before the Design and Industries Association of "tending, when aggressive, to break up many an otherwise happy home," was unknown in England until the beginning of the eighteenth century. It was introduced here by the versatile William Kent, who, beginning life as a coach-painter, became eventually the most fashionable architect and landscape gardener of the day. George I. employed Kent to redecorate Kensington Palace, and, according to William Pyne, the historian of the Palace, "it was on the walls of the King's great drawing-room that the then new art of paper-hangings, in imitation of the old velvet flock, was displayed, with an effect that soon led to the adoption of so cheap and elegant a manufacture, in preference to the original rich material from which it was copied." Kent may possibly have derived the idea from George I., as a writer in the *Manchester Guardian* suggests, as wall-paper had long been used on the Continent. From researches made by Sir James Knowles, the architect-editor of the "Nineteenth Century," it appears that Herman Schinkel, citizen and printer, of Delft, belonging to the Reformed Religion, who suffered death in 1568 on the charge of printing and publishing books inimical to the Catholic faith, protested that they were printed by a servant in his absence, and when he came home and found they were not delivered he refused to deliver them and threw them into a corner, intending to print roses and stripes on the other side, to paper attics. This was the earliest reference Sir James could trace as to the use of wall-paper.

It is reported that the Mint has decided to suspend the issue of the new "silver"

coining, to give time for experiments that will produce a half-crown that may not be mistaken for a new penny within a fortnight of its appearance in public. It took longer to convince the authorities that a penny where the imprint of the "head" was stamped through on to the "tail" was not exactly a credit to the craftsmanship of a great country; and still longer for them to discover that our War Medal was a positively shoddy production. Evidently the pound note, on which, among defects of design or execution, the spear of St. George not only comes out of the dragon at a point which is not in line with the point of entry, but has its head not even parallel with its shaft, is to remain for the gratification of future collectors of oddities. A "clean withdrawal," as our contemporary the *Manchester Guardian* unkindly reminds us, was of the essence of bayonet-fighting as it was taught to the New Armies; St. George would have been eaten several times over before he got his pound-note spear out of his antagonist!

A novel method of underpinning employed where the weak footings of an old building were replaced and made continuous with the new footings for the adjacent columns of a new building, is quoted by the *Technical Review* from the *Engineering News Record*: The old building was a three-storey reinforced concrete structure. Its footings were found to be too thin and badly designed, and there were cracks in the superstructure. It was necessary to preclude any possibility of settlement during underpinning. The method adopted was to grip the basement columns with a reinforced concrete jacket, to support the jacket, and with it the column, the load being transferred from column to jacket by frictional resistance. The old columns were roughened, and horizontal V-grooves, 1 in. deep, 2 in. wide, spaced 12 in., were also cut in them. Corners were rounded, and a spiral of steel wire was wound round. Over this the concrete jacket 6 in. thick was cast. Each jacket was underpinned by two 15-in. I-beams, which in turn hung by twenty-four 1 in. rods from two 20 in. I-beams resting on temporary foundations. The weight was gradually transferred from the old footing to the beams by taking up on the suspension rods. The designed shearing stress between jackets and columns was limited to 30 lbs./sq. in., and the bearing stress of the jacket on the beams was limited to 500 lbs./sq. in.

The exhibition of the designs submitted for the Brewers' Company's Licensed House Competition, which is closed during the holidays, will reopen on March 30, and finally close on April 2.

The House of Lords has passed as an unopposed measure the Bill the Corporation is promoting to secure an extension of eight years for the construction of St. Paul's Bridge.

Benjamin Paul, an ex-soldier, who was said to have obtained over £60 from the Pensions Ministry by representing that he had attended hospital between August, 1919, and March, 1920, during which time he was at work and earning money, was sentenced to three months' imprisonment at Tower Bridge Police Court last week. A Pensions Ministry official, in answer to the magistrate (Mr. Bingley), said they had such a large number of cases to deal with that they had no time to make proper investigations. The defendant said that hundreds of other men did the same thing. They paid a man 6d. to sign their cards.

THE ROYAL SOCIETY OF PAINTERS IN WATER-COLOURS.

The Summer Exhibition of the Royal Society of Painters in Water-Colours—the 176th of the Society—shows no falling-off either in the industry or ability of its members. There are 219 exhibits, and of these some twenty exhibitors send round about half-a-dozen each, an output which we trust may prove as profitable to the producers as most of the work is well above the average.

Mr. H. Hughes Stanton, R.A., the President, sends six, four of them being Welsh landscapes (24, 68, 78, and 181). The others are "Poole Harbour" (49) and "Evening" (55). Mr. F. Cayley Robinson, the Vice-President, has two, "The Word" (4) and "Awakening Spring" (112). Mr. Arthur Hopkins, the Treasurer, contributes six, of which "When I was a Farmer—a Farmer's Boy" (63) will probably attract most notice.

Mr. Adrian Stokes, R.A., has the place of honour with his "At Arisaig" (1). Mr. J. C. Dollman is hung second with his "Wolstanbury Hill, Sussex" (2). Of his other five the "Moose at Bay" (106) is excellent. The rest are "A Nook in the Ouse Valley, Sussex" (135), "Morning at Middleton Hill, Sussex" (136), "Evening, Kingston Hill, Sussex" (142), and a delightful flower-piece, "The Kew Bluebells" (153). Mr. Nelson Dawson's five seascapes are all good, especially "The Cap Palos" of San Francisco, or Difficulties off Robin Hood's Bay" (3), and "Passing Flamboro' Head—News for the Captain's Wife" (137). Mr. Walter W. Russell, A.R.A., is perhaps most successful with "On the Adur" (5), but his view of "Shoreham" (114) and "Rievaulx Abbey" (115) are very good. Mr. R. Thorne-Waite's "Golden Light" is the best of his nine; of the rest we are most attracted by "Twickenham Ferry" (187). Mr. Albert Goodwin has a good view of "Oxford, from the Roof of the Radcliff Library" (13). The best of the other five is "Amalfi" (29).

Miss Eleanor Fortescue-Brickdale scores effectively with both her subjects. "And He was the Squire's Son" (16) is good, and so is "The Arrow" (212). Possibly the archer in the latter is a little too vigorously rendered, but the force and effort in the figure are well expressed. All of the nine sent by Mr. Henry S. Tuke, R.A., will maintain his reputation; the best is "Departure at Daybreak" (17). Mr. W. Eyre Walker's two views at Icombe (18 and 64) are the best of his eight, but his "Lantern of the Night" (88) will not be overlooked. Miss Katherine Turner's "Summer Stocks" (54) are nice, but "Silver and Gold" (9) will probably be preferred.

Mr. Robert Little, R.S.W., is at best with "Mount Pleasant" (14), and next thereto, we think, with "Winter Moonrise, Hemingford" (45). "The White Heifer" (22) is the most attractive of the six sent by Miss Mildred Butler, but her "Old Rose Peonies" are delicately done. Both of Mr. J. Walter J. West's "Chessplayers" (21 and 25) are expressive, especially "Black to Move." The five by Mr. James Paterson, R.S.A., will delight all lovers of his Scottish scenery, more particularly his "Galloway Landscape" (23). "Morning in the Mountains" (31) does Mr. Cecil A. Hunt most credit, but his other five only less so. "Pool Estuary" (34), by Mr. Oliver A. Hall, A.R.A., is excellent. Of Mr. William T. Wood's eight, "The Thames from Richmond Hill" (36) and "Earliest Spring—Avington Park" (37) most merit notice. Mr. Cuthbert Rigby's six will be liked; his

"Sour-Milk Gill, Easedale" (48), certainly.

Mr. T. M. Rooke is to the fore with six of his always welcome architectural subjects, "Bell Harry Tower, Canterbury" (62), "Back Lane, Ely" (85), "Cathedral and Café, Bourgas" (154), "Armour in the Tower" (158), "The Byward Gate, Tower of London" (179), and "The Coronation Chair" (191), which ought to find its way to Ottawa, if only to show the Canadians how well its reproduction for the Speaker of the Dominion Parliament has been executed. Mr. J. H. Lorimer, R.S.A., is perhaps at his best with "Earlsham Garden" (65), but his "Harbour Sentinels" (162) will add to his many admirers. Mr. Moffat Lindner's six seascapes are good, especially those from Venice (133 and 159).

Mr. A. J. Munnings, A.R.A., sends three of the best things in the exhibition, "The Piper" (77), "The Gypsies" (121), and "The Huntsman" (144); the first mentioned is full of life and colour. His only contribution, "An Old Practitioner" (86), by Mr. W. J. Wainwright will prompt regrets that he has not sent more. Mr. S. J. Lamorna Birch has seven, of which perhaps "The Willow Pool" (141) will be most liked, but all, as usual, admirably chosen and well rendered. Mr. Harry Henshall is at his best with "Her Only Friend" (92) and "The Little Mother" (97), but his "Meditation" (146) is an extremely good third. Mr. Colin B. Phillip is another single contributor, of whose such good work as "The Cloch Pinnacle, Coire Lagain, Skye," we hope to see more. Mr. George Clausen is at his level best with "Trees and Fields" (103), "Afternoon Sky" (123), and "Misty Morning" (168), and further commendation would be superfluous. Mr. Walter Bayes puzzles us a little with his two. The work, of course, is characteristically good in both, but in "Cavalleria Rustica" (127) the three Primitives seem to be enjoying themselves with somewhat unpleasant results, if their attitudes are any index to their feelings. In "Peninsular" (206) the somewhat large goat, if it is a goat, fails to convey to us any idea of the subject.

COMPETITIONS.

BREWERS' COMPANY'S PUBLIC-HOUSE COMPETITION.—In our review last week of the plans, to avoid tautology we used the terms "manager," "landlord," and "master" as interchangeable expressions, regarding the Brewers' Company's project as being intended for "tied" houses. Mr. G. H. James, the author of the second-prize plan, correctly assumes that this was our view. However, in remarking upon his plan, instead of describing the residential apartments as the "manager's flat," it should have been called the "landlord's flat," and the "master's sitting-room" should have been termed the "manager's." The descriptive remarks published were directly transcribed from our notes made from the exhibited drawings.

EAST HAM.—The competition held by the General Hospital Committee at East Ham has been settled. The scheme proposed the incorporation of an existing house facing the street in front of the site. The awards made by Mr. George Hubbard, F.S.A., V.P.R.I.B.A., are as follow:—1st—Messrs. F. E. Minnie and C. B. Smith, A.R.I.B.A., of Bishopsgate, E.C.; 2nd—Mr. H. J. Wright, F.R.I.B.A., Gosforth, Newcastle-on-Tyne; 3rd—Messrs. S. N. Cook, F.R.I.B.A., and W. Norman Twist, Licentiate R.I.B.A., Birmingham.

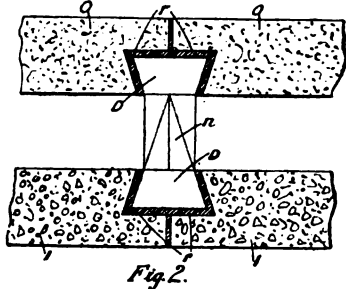
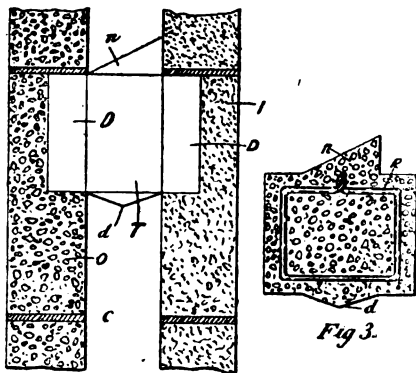
Dr. Waldo has decided that the relics discovered in Fetter Lane do not constitute a treasure-trove, and therefore are the property of the fortunate finder, Mr. Gordon.

IMPROVED METHODS OF CONCRETE CONSTRUCTION.

We are indebted to the courtesy of Sir James Bird, the Clerk to the London County Council, for the following particulars of five inventions devised by officers of the Council relating to improved methods of concrete construction applicable to cottages and the like. They are all likely to be useful, and will interest all readers concerned, and will doubtless be found of considerable service in the important and extensive schemes of housing which the Council is at present undertaking, which, as in the past, will well maintain its well-deserved credit as the pioneer in the work of municipal housing.

INVENTION NO. 1.

This invention relates to ties for cavity walls, and is particularly intended for application to cavity walls built of con-



Invention No. 1. Ties for Cavity Walls.

crete. The tie constructed in accordance with this invention is formed of concrete, cement, or similar moulded material adapted to resist both tensile and compressive forces, and is so shaped as to engage with the shells of the cavity wall in such a manner as to resist both separation and approach of said shells. The improved tie is preferably reinforced by metal reinforcement, and is preferably so shaped as to deflect on to the outer wall moisture collecting on its upper surface, and to prevent moisture reaching the ties from the inner surface of the outer slab from running across the tie. The tie is also preferably provided with a substantially central drip-edge on the lower surface.

The accompanying drawings illustrate the preferred form of the invention. Fig. 1 represents a sectional side elevation of a cavity wall showing one of the ties in position. Fig. 3 shows a sectional elevation of one of the ties. The cavity wall shown is formed of outer slabs or blocks O, and inner slabs or blocks I, which are built up so as to provide a cavity C between them. The outer slabs in walls of this type are conveniently formed of hard concrete, while the inner slabs are formed of soft concrete. It should be understood that the improved ties may be employed in cavity walls cast *in situ*; in this case the preformed ties are preferably cast into the concrete dur-

ing the operation of pouring. The ties T are formed of concrete reinforced with metal reinforcement R, and are provided with dove-tailed ends D which engage similarly shaped recesses r formed in the slabs. These recesses are preferably provided in the meeting edges of the slabs, and extend from the top to approximately half the depth thereof.

The upper surface of the tie is formed with a nose n of tetrahedral form; the purpose of this nose is to deflect towards the outer wall any water or other matter that may fall on it, and to prevent, so far as possible, any moisture which may run down the inner surface of the outer wall from creeping across the tie. The under surface of the tie is formed with a drip-edge d, to cause moisture coming on to the tie to be directed to the centre of the cavity.

The invention may be summarised as follows:—

1. For use in cavity walls a preformed tie constructed of concrete, cement or similar moulded material, so as to be capable of resisting both tensile and compressive forces, and so shaped as to engage with the shells of the cavity wall in such a manner as to resist both separation and approach of said shells.

2. The combination with a cavity wall built up of slabs, blocks, or the like, provided on their inner surfaces with undercut recesses, of ties of concrete, cement, or similar moulded material, provided with ends adapted to co-act with the undercut recesses so as to prevent withdrawal of the ties from the slabs, blocks, or the like.

3. The combination with a cavity formed of concrete shells cast *in situ* of ties of concrete cement or similar moulded material, provided with ends shaped so as to resist the withdrawal of the ties from the concrete.

4. A wall tie, as referred to in paragraph 1, provided on its upper surface with a nose or the like directed downwards towards the outer wall slab, and provided on its lower surface with a substantially central drip-edge.

5. A wall tie of concrete, cement, or similarly moulded material substantially as herein described and illustrated.

6. A cavity wall provided with outer shells composed of concrete tied together with dovetailed ties of concrete, cement, or similar moulded material substantially as herein described and shown.

INVENTION NO. 2.

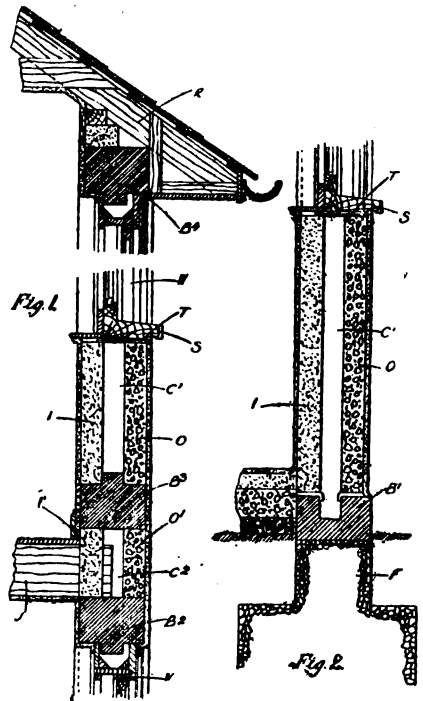
This invention relates to cavity walls employed in the construction of buildings and the like, and is particularly applicable to such walls when built of concrete or the like. Hitherto such party walls have been constructed mainly of two types, commonly known as the "closed cavity," and the other the "open cavity" respectively. The "closed cavity" wall has the advantage that it provides good heat-insulation, but has an attendant disadvantage in that timber running into the cavity is liable to rot, because damp, which finds its way into the cavity, does not always dry out. In the "open cavity" wall gratings or the like are provided for ventilating the cavity and drying up any moisture that may occur, but such cavities do not provide good heat-insulation.

The object of the present invention is to provide a form of cavity wall in which the heat-insulating qualities are maintained, but in which means are also provided for ventilating floor timbers so as to avoid the disadvantage first mentioned. The invention accordingly consists in a cavity wall constructed in the following manner. Open cavities are provided where floor joists or the like project into the wall, the adjoining principal wall areas

above and below the floor being formed with closed cavities.

In the accompanying drawings, which illustrate the preferred embodiment of the invention, Fig. 1 represents a section through the upper portion of the cavity wall of a two-storied concrete building.

Fig. 2 represents a continuation of the section below the portion shown in Fig. 1. Referring to the drawings, above the foundations F is placed a closing block B¹, upon which the inner and outer shells I, O of the wall are built. The upper end of the cavity C¹ so formed is closed at the level of the sill S by tiles or plates T, and is similarly closed around the vertical edges of the window opening by the window frame W. A block, or a beam, B², which also functions as a lintel, completely closes the cavity below the level of the floor joists J. Above the block B² are placed inner and outer wall shells I¹,



Invention No. 2. Cavity Walls.

O¹, which are provided at intervals with convenient openings, indicated in dotted lines, so that the cavity C² between them is ventilated, the air preferably having access also between the floor joists J. This open cavity C² is closed by an upper block B³; and the remainder of the wall in the upper floor is constructed with a closed cavity in the manner described for the lower floor. The closing blocks, or beam, B⁴ acts as a support for the timber of the roof R.

The invention may be summarised as follows:—

1. A cavity wall in which the joists of a floor projecting into said wall are received in one or more open cavities, the adjoining principal wall areas above and below said floor being formed with closed cavities.

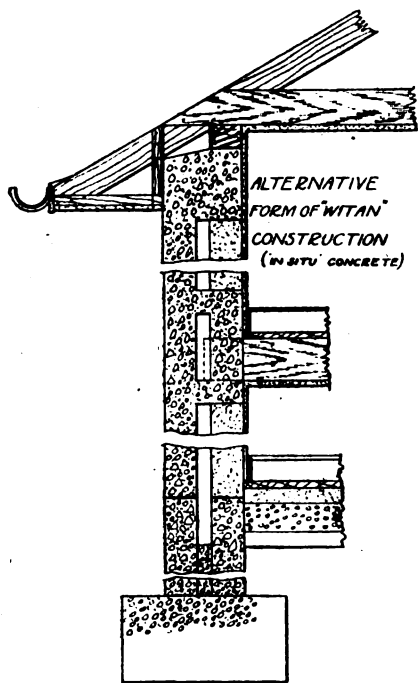
2. A cavity wall in which a principal wall area between successive floors is formed with one or more close cavities, the joists of the said floors being received in open cavities.

3. A cavity wall having closed cavities extending between the separate floors, ceilings, or the like and horizontally-extending open cavities at the levels of the said floors, ceilings or the like adapted to receive the joists thereof.

4. A cavity wall for concrete and like buildings substantially as herein described and shown.

The alternative form of the Witan system is devised to meet the following

special difficulties: (1) The shortage of bricklayers, (2) the shortage of plasterers, (3) the coldness of rooms having open cavity walls, (4) the liability to dry rot in the floors of rooms having closed cavity walls, and (5) the insanitary condition of walls having cavities in communication with the space between the floor boards of



Invention No. 2. Cavity Walls. The Witan System.

the upper story and the ceiling of the ground story. The effect of rough-casting is obtained by inserting cocoa-nut fibre matting in the shuttering, and removing the matting after the concrete has hardened sufficiently.

Hitherto cavity walls have been constructed mainly of two types, commonly known as the "closed cavity" and the "open cavity" respectively. The "closed cavity" wall has the advantage that it provides good heat-insulation, but has an attendant disadvantage because the timber running into the cavity is liable to rot, and the dry rot is liable to spread throughout the whole area of the floor. In the "open cavity" wall gratings are provided for ventilating the cavity and drying up any moisture that may occur, but such cavities do not provide good heat-insulation.

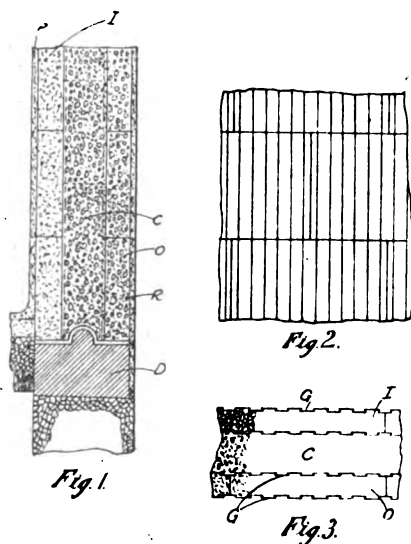
The object of the Witan construction is to provide a form of cavity wall in which the heat-insulating qualities are maintained, but in which means are also provided for ventilating the floor timbers so as to avoid the liability to dry rot. The Witan system consists in a cavity wall constructed in the following manner: Open cavities are provided where floor joists project into the walls, and the adjoining principal wall areas above and below the floor are formed with closed cavities. The through concrete which closes the cavities will also tie the inner and outer leaves of the wall when the metal ties shall have rusted away.

INVENTION NO. 3.

This invention relates to concrete walls and the like, and has for its object to provide a method of constructing concrete walls in which the advantages of monolithic construction can be obtained without the usual attendant disadvantage involved in the cost of timber or like temporary formwork. The method of building concrete walls in accordance with this invention consists in first making a cavity wall by aid of concrete blocks, provided

on their inside surfaces with undercut grooves or other means of securing adhesion, and then pouring concrete into the cavity. The poured concrete thus unites with the blocks, which first act as temporary formwork and then become permanently cast into the complete wall. The outer blocks of an external wall are preferably formed of hard concrete and the inner blocks of soft concrete. The blocks are preferably assembled one course at a time, the concrete being then filled to a level approximately to one-half the height of the course; in this way the horizontal joints become staggered through the wall. The outer surfaces are preferably formed with undercut grooves to facilitate keying of plaster or rendering.

In the accompanying drawings, which illustrate the preferred method of carrying the invention into effect, Fig. 1 shows a section through the lower portion of a wall constructed in accordance with the invention. Fig. 2 shows an elevation of a portion of the wall prior to plastering or rendering. Fig. 3 shows a sectional plan of a portion of the wall. Referring now to the drawing, inner and outer blocks or slabs I, O are first erected upon a damp-course block D. These blocks are provided on their horizontal surfaces with co-acting ridges and grooves G to facilitate assembly and to assist in preventing ingress of damp through the joints. A single course of these blocks I, O is preferably first erected and concrete C is then poured into the cavity to a height approximating to one-half the height of the blocks as indicated in dotted lines. Another course of blocks is then laid and concrete is poured into the cavity up to a level approximately half-way up the second course of blocks, and so on until the wall is completed, the topmost course being completely filled in with the poured concrete. The blocks, or slabs, I, O are provided on their inner and outer surfaces with dovetailed grooves G. The grooves on the inner surfaces act as keys for the cast concrete, and the grooves on the outer surfaces act as keys



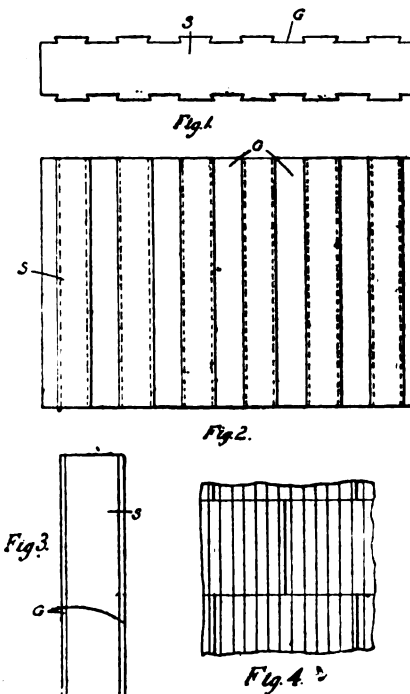
Invention No. 3.

for rendering R and plaster P respectively. The particular form of block which it is preferred to use for this purpose is that described in Invention No. 4. The invention may be summarised as follows:—

1. A method of constructing concrete and like walls consisting in forming inner and outer shells of similar moulded blocks and slabs, provided on their inner surfaces with means for securing adhesion to concrete, and in

casting concrete between the said inner and outer shells.

2. The employment as formwork for concrete or like walls of concrete or similar blocks or slabs provided on their inner surface with means for securing adhesion to concrete, the formwork being permanently cast into the wall.



Invention No. 4.

3. In a method of constructing concrete and like walls referred to in paragraph 1, breaking the joint between successive blocks or slabs and successive layers of poured concrete substantially as herein described.

4. Concrete walls constructed in the manner substantially as herein described and illustrated.

INVENTION NO. 4.

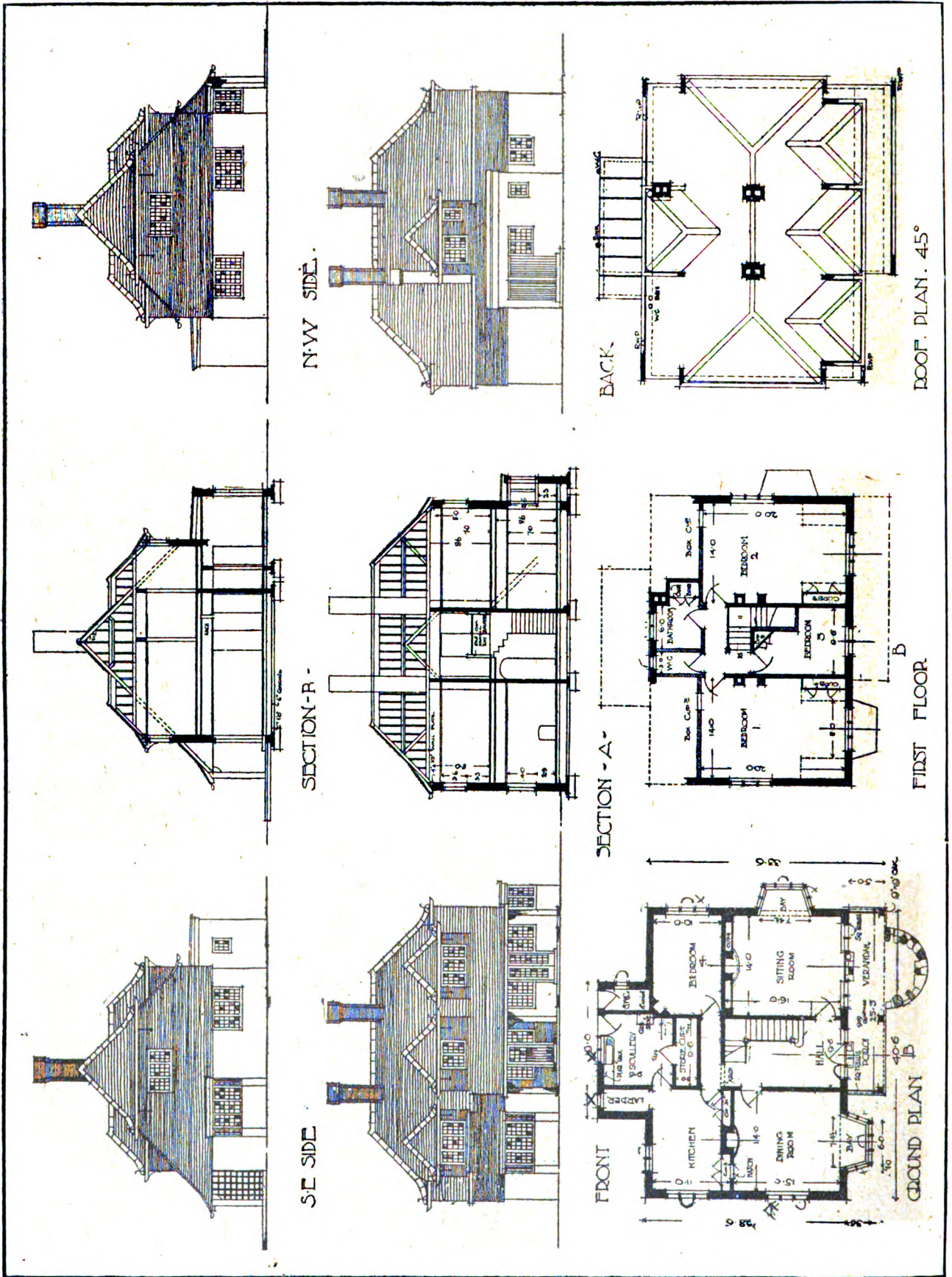
This invention relates to concrete and like moulded building slabs or blocks which are employed for building up walls, partitions, and the like.

Slabs constructed in accordance with this invention are of the kind provided on each side with grooves for securing adhesion to plaster, concrete, or the like, the characteristic feature being that the grooves on one side are so spaced that successive courses can be built up so as to break vertical joint and to form continuous vertical grooves in the wall.

In the accompanying drawings, which illustrate the preferred form of the invention, Fig. 1 represents a plan of an improved slab; Fig. 2 represents an elevation thereof; Fig. 3 represents a side view thereof; Fig. 4 represents to smaller scale a wall or partition built up of the slabs. Referring to these drawings, the slab S is formed on its two faces with undercut grooves G, which are so spaced that when successive slabs are built up to break joint in the manner indicated in Fig. 4, there will be a continuous groove down the slab.

The slabs are preferably formed on one horizontal face with a central channel C, and on the other horizontal face with a co-acting central ridge R. If, as is preferred, the grooves G on both sides of the block are exactly similar to each other, the slabs can be placed without the necessity of considering which side is to form the front and which is to form the back of the slab.

(Continued on p. 163.)



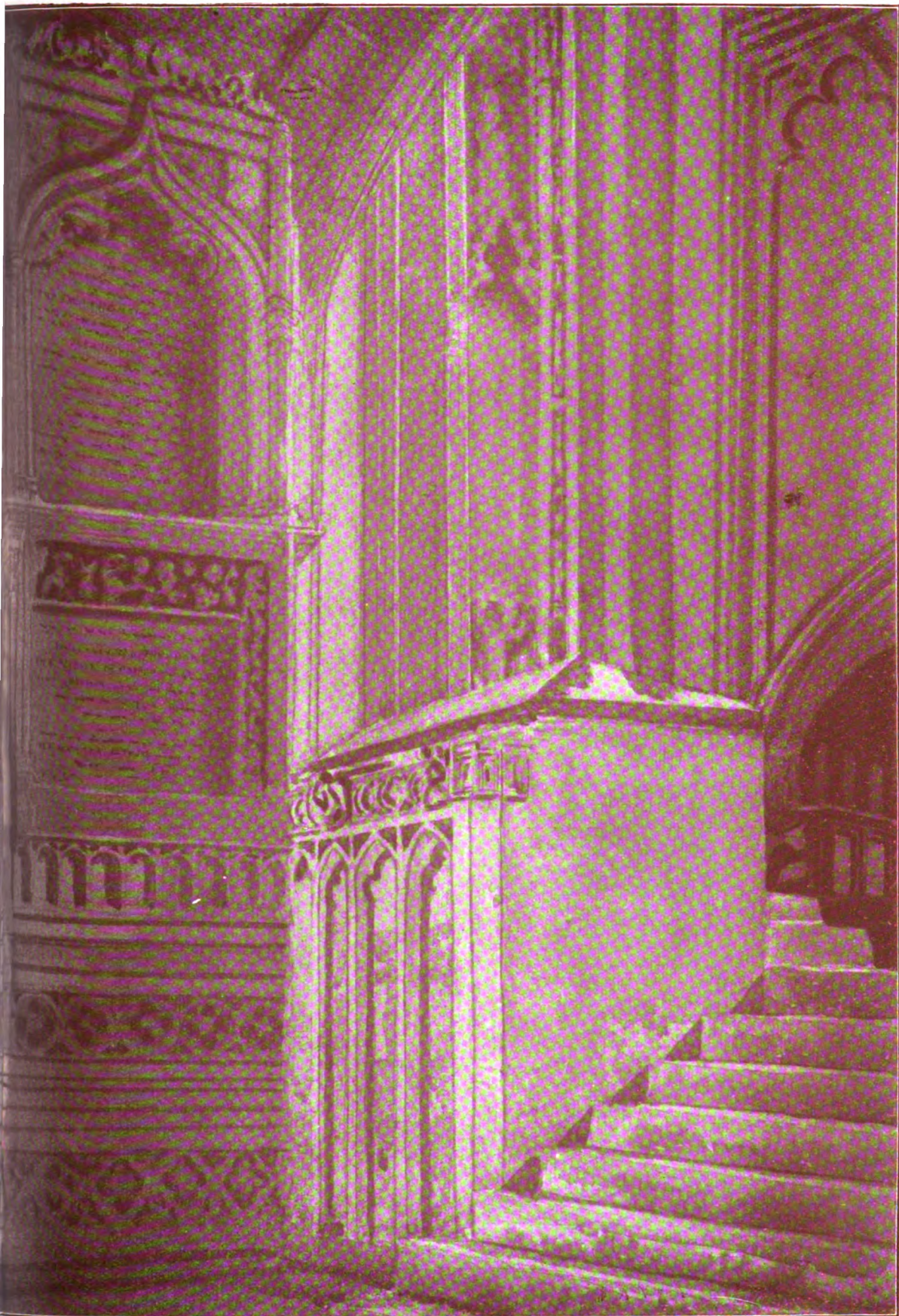
HOUSE AT GERRARD'S CROSS, BUCKINGHAMSHIRE.—MR. EDGAR RANGER, Architect.



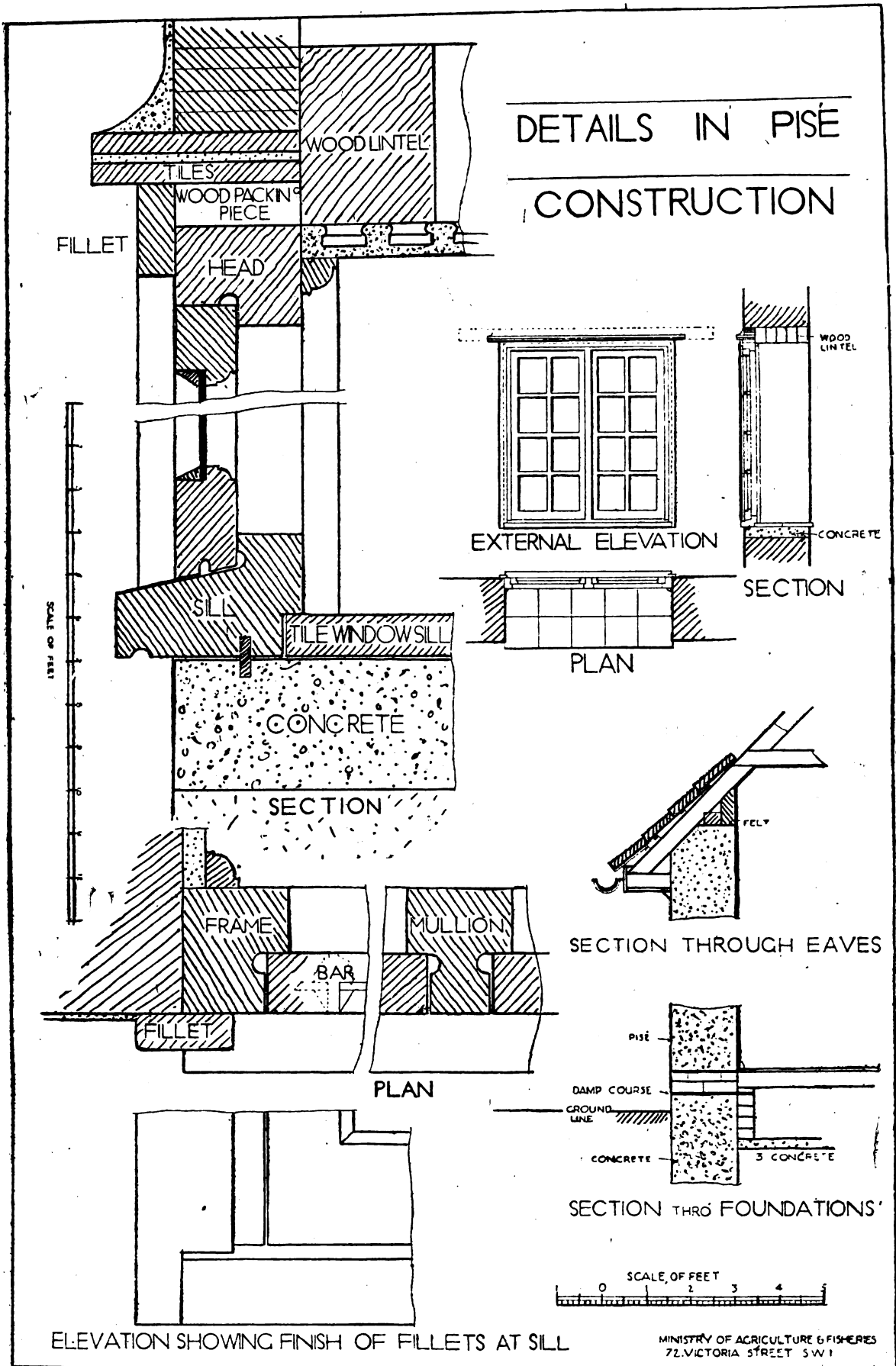
James D. ...

THE SALISBURY CHAPEL, CHRIST
From a Water-Colour Drawing

MARCH 25, 1921.



CHURCH PRIORY CHURCH, HANTS
by Mr. JAMES BURNS, I.S.O.



AMESBURY FARM SETTLEMENT, WILTSHIRE.

Ministry of Agriculture and Fisheries.

Major H. P. G. MAULE, D.S.O., M.C., F.R.I.B.A., Superintending Architect.

(Continued from p. 154.)

The invention may be summarised as follows:—

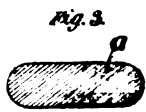
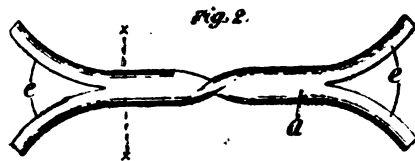
1. A building slab of concrete, or like moulded material, provided on both sides with grooves for securing adhesion to plaster, concrete, or the like, characterised in that the grooves on one side are so spaced that successive courses can be built up so as to break vertical joint and to form continuous vertical grooves in the wall.

2. A building slab referred to in paragraph 1, in which the grooves on both sides are exactly similar to each other, so that the faces of the slabs are reversible.

3. A building slab substantially as herein described and shown.

INVENTION NO. 5.

This invention relates to wall-ties, which are employed for maintaining at the requisite distance apart the shells of a cavity wall of a building or the like. The invention relates more particularly to metal wall-ties, in which a coating of enamel or the like is provided to protect the tie against corrosion by moisture and the like. Such metal ties are usually made from a metal blank of rectangular section,



Invention No. 5.

the ends being fishtailed or similarly extended to give a grip in the mortar or concrete of the walls in which they are embedded. When such ties are coated with enamel or the like there is a tendency for the coating to crack at the sharp edges, with the result that corrosion takes place. In accordance with the present invention, the blanks from which the ties are made are formed without sharp edges, so that the cracking tendency of the enamel or the like is minimised.

In the accompanying drawings, which illustrate the preferred form of the invention, Fig. 1 represents an elevation of a wall-tie; Fig. 2 represents a plan of the same; Fig. 3 represents to enlarged scale the cross-section of the tie taken along the line XX, Fig. 2.

The tie is formed from a strip (a) of metal, the edges of which are rounded. The degree of rounding may be varied, but it is preferred that the edges shall form semicircles. A twist (t) is formed in the usual manner in the centre of the tie to assist in overcoming the tendency for moisture to creep from one side of the tie to the other. The ends (e) are expanded or fishtailed. It is not essential that the edges of these ends be rounded, because they become embedded in mortar or the like, and so are protected from the action of moisture.

The invention may be summarised as follows:—

1. A wall-tie formed from a metal bar or strip, the cross-section of which pos-

sesses no sharp edges for the purpose described.

2. A wall-tie constructed from a metal strip or bar, of which the cross-section is a rectangle with rounded edges substantially as and for the purpose herein described.

3. An enamelled metal wall-tie substantially as herein described and illustrated.

Our Illustrations.

THE SALISBURY CHAPEL, CHRIST-CHURCH PRIORY, HANTS.

The chapel was built for her own last resting-place by Margaret, Countess of Salisbury, daughter of George, Duke of Clarence, and granddaughter of Richard Neville, Earl of Warwick and Salisbury, the king-maker. She was the mother of Cardinal Pole, and was involved in the ruin which destroyed so many of her family. She was beheaded in the Tower of London, and buried there in 1541.

The chapel is late Perpendicular, indicating the approach of the Renaissance period in its details. The coats-of-arms in the fan-tracery are all defaced, but traces of the "silver saltire upon martial red" of the Nevilles may still be detected by the heraldic eye. Her motto: "Spes mea in Deo est," is still legible below. Our illustration was reproduced from a water-colour drawing by Mr. James Burns, I.S.O., of Bournemouth. We published a drawing by the same artist, illustrating the Draper Chantry in the same building, in our issue for November 21, 1919.*

HOUSE AT GERRARD'S CROSS, BUCKS, FOR MR. STEPHEN.

This building is well set back from the road and situated in a cherry orchard. The arrangements are contrived so that all living rooms get the maximum amount of sunshine, as shown by the plans. The exterior walling on ground floor level is finished with a floated face of lime cement, which gives a pale yellowish shade, blending well with the surrounding fruit trees. The first-floor stage is hung with old dark tiles, same as the roofing. The bedrooms are lit by three dormer windows on the south side. Handmade local bricks are used for the chimney stacks and verandah walls. Inside labour-saving devices are provided, and simplicity of details, worked out on homely lines, supply the chief feature of the dwelling. Mr. Edgar Ranger, of Gerrard's Cross, is the architect.

DETAILS OF PISE-DE-TERRÉ CONSTRUCTION: AMESBURY FARM SETTLEMENT, WILTSHIRE.

On February 11 we published views and plans of houses on this property, and on March 11 gave a sheet of details for shuttering worked out on the most economical and advantageous lines after several experiments with the erection of pisé-de-terre walling. To-day we supplement these illustrations by a further sheet of drawings showing the contrivance in forming openings in dwellings carried out

* A complete set of measured drawings of Christchurch Priory Church, by Mr. G. J. Coombs, will be found in THE BUILDING NEWS for April 27, 1906, and Mr. Percy Stone contributed some geometrical drawings of the North Transept in our issue for October 29, 1883; in the same number a view of the exterior of this part was given by Mr. C. J. Irwin. A general view of the whole church was published by Mr. J. Donkin, December 8, 1893. Details of the North Porch, December 16, 1887. Bishop Flambard's Norman Stair Turret (National Gold Medal drawing, by Mr. George Marples), August 4, 1889. View from the triforium of choir (National Prize Water-colour Drawing, by Mr. H. Whitcomb), August 21, 1908, and another illustration, October 29, 1886, from the same building.

in this material. The following information is official:—

"It is essential that the design of all houses in pisé should be suited to this construction—square or oblong, plans without breaks being most suitable. Gables and high walls should be avoided, and bedrooms formed as much as possible in the roof.

"In forming lintels 4 in. by 2 in. timbers have been placed side by side through the thickness of the wall, except where the door or window head is to come. In the position to be occupied by this head a temporary support of the same length as the lintel, but rather less in depth, is put and strutted up from the sill.

"A simple method of constructing sills is either concrete 3 in. thick through the thickness of the wall, or brick with the oak sill projecting. For heads, tiles bedded direct on the wood head would appear to be the best method. An alternative would be to show the wood lintel externally with tiles above.

"The pisé work is continued above the lintel, its support and subsequently the strutting to the support is removed and the support taken out, leaving a cavity, which allows the frame to be put in and dropped down, so that the groove of the oak sill of a window may engage with the water-bar embedded in the concrete sill, or the foot of a door-frame with dowels in the step. The cavity over the head is then filled in with pieces of tile in cement, and two courses of projecting tiles are put to give a drip. Lintels are given a bearing of 1 ft. upon the jambs. Over a wide opening it is best to strut the lintel as well as the support, otherwise its vibration under the ramming may damage the jambs, and it is impossible to make solid work upon such a bottom. The attempt to build frames in as the work proceeds has not been successful, as the pressure brought against the frame by the ramming is apt to bend or displace it. The jambs of openings are formed by stops made of boards put inside the shuttering and stiffened by struts between a pair of stops or from the nearest pair of cross-stretchers. Eaves should be given a good projection, and, if roofs are of tile or slate, should have a plain elm board soffit and fascia left from the saw without any elaborate bracketing, and no painting whatever.

"Internally walls may be plastered in two coats with very satisfactory results, but where the pisé has been left with a good and fairly unbroken surface it will be sufficient to finish with a brush coat of chalk or ground lime and sand in all cases where exceptional wear is not expected. In the second single cottage built at Amesbury it was decided to treat the walls of the kitchen and living-room, after making good any inequalities, with lime and sand only, and in the scullery and on the stairs with cement and sand. The nature of the foundations is a considerable factor in the ultimate cost of pisé building. It is considered that the pisé work may be begun at 9 in. to 1 ft. above ground level; below this level brick, stone, or concrete must be employed. A good damp-proof course is essential, and the base of the walling should have a wide tarred plinth or skirting."

Owing to the Government's recommendation the programme for building 6,328 houses at Swansea is being curtailed to about 450.

At the annual meeting of the Westminster Hospital Ladies' Association, the Rev. E. Moradant Bisset told a story concerning Spurgeon, who had a great aversion to committees, and was one day asked to serve on one. "I don't believe in committees," he replied. "If Noah had had a committee he would never have built the ark, and he would have been drowned."

ACOUSTICS.*

By GEORGE C. HANNAM,

Manager, Dept. of Architectural Acoustics,
Junius H. Stone, New York City.

In the past it has been customary in the vast majority of cases to design theatres, churches and auditoriums in general, building them at considerable expense to secure strength, desired seating capacity, noble architectural lines, aesthetic illumination, wholesome ventilation, etc., and then gamble as to whether the acoustics in the resulting auditorium would be good or bad.

A DEFINITE SCIENTIFIC BASIS ESTABLISHED.

Before 1895 but little definite information was to be obtained by an architect on the subject. He was guided in large measure by his own limited experience or by studies made in existing buildings. Professor Wallace C. Sabine, of Harvard University, is to a considerable extent responsible for most of our knowledge on this subject to-day. He began his researches in 1895, and in 1900 published in the "Engineering Record" the results of his five years' work. This was the first real contribution on the subject, and due to the scope of the work and the fact that a mathematical basis was established, the former necessity of chance and guess work was done away with. For eighteen years after the publication of this paper he continued his researches, following the programme of investigations there outlined.

The knowledge gained from these researches and from their practical application, augmented by contributions from other physicists, has made it possible to determine from the plans of an auditorium, with a knowledge of the materials of construction, what the acoustical conditions in the finished building will be and to make such changes as might be necessary to overcome faults.

The simplest type of auditorium imaginable is a level plane with a single person as audience. In this case the sound spreads in a hemispherical wave, diminishing in intensity as it increases in size. If instead of one person there is a large audience, the intensity decreases more rapidly, due to the absorption occasioned by the clothing of the people. The upper part of the sound from the speaker in such an auditorium is entirely lost. The first improvement that suggests itself is to elevate the speaker. The next step is to have the ground or floor sloped so that each row of persons will be slightly elevated. Then a wall should be placed back of the speaker to reflect that part of the sound towards the audience. We now have the design of the old Greek amphitheatres. With the addition of a roof to prevent the loss of the upper part of the sound waves and the construction of galleries to elevate and bring further front part of the audience, we have the typical form of our modern auditorium.

FACTORS GOVERNING ACOUSTICS.

The size and shape of an auditorium determine the distance travelled by the sound between reflections; while the materials used in the construction determine the loss at each reflection, for which reason it is possible for two rooms designed exactly alike to have entirely different acoustics. An illustration of this is the well-known case of Sanders Theatre in Cambridge and the auditorium of the Fogg Art Museum of Harvard College. Sanders Theatre is an old building noted for its good acoustical properties. When the Fogg Art Museum was designed, the architect was instructed to make the auditorium a replica of Sanders Theatre. It

was taken for granted that similar design assured similar acoustical conditions. When the auditorium was completed, everyone was greatly surprised to find the acoustics almost impossible. As a result of the development of the subject since that time, the reason for the difference is well known. Sanders Theatre was constructed of comparatively soft materials. All seats were heavily cushioned. The other auditorium was of fireproof construction. The change produced in the absorbing power of the various surfaces was mainly responsible for the difference in acoustical conditions.

If a sound be produced in an empty room, having exposed surfaces that are absolutely rigid, it will last almost indefinitely—that is, if we disregard the loss due to the viscosity of the air, which in practical cases is negligible. The sound will travel back and forth from one surface to another, and if the surface were absolutely rigid, the original intensity of the sound would be maintained. Of course, no building materials are absolutely rigid. Taking an open window as being totally absorbent, and calling its co-efficient 1.00, Professor Sabine in his researches determined the co-efficient of sound absorption of most of the materials employed in building construction.

The co-efficients of some of the more common materials are given below:—

1 sq. ft. Open window	1.000
1 sq. ft. Wood sheathing (hard pine) .....	.061
1 sq. ft. Plaster on wood lath .....	.034
1 sq. ft. Plaster on wire lath .....	.038
1 sq. ft. Glass .....	.027
1 sq. ft. Plaster on tile .....	.025
1 sq. ft. Brick .....	.025
1 sq. ft. Concrete .....	.015
1 sq. ft. Glazed tile .....	.01

Following are some miscellaneous co-efficients which are of interest:—

1 sq. ft. Carpet .....	.20
1 sq. ft. Cheese cloth .....	.019
1 sq. ft. Cork 2.5 centimetres thick, loose on floor .....	.16
Audience per person	4.7
1 sq. ft. Hair felt 1 in. thick .....	.53

It is frequently of assistance to compare the reflection of sound waves with the reflection of light waves. A white ceiling will reflect about ninety-five per cent. of the light striking it. The same surface painted a dull black will reflect at the most but five per cent. of the light. A glazed tile ceiling will reflect ninety-nine per cent. of the sound striking it. The same surface covered with one inch of hair felt (the best sound absorber) will only reflect forty-seven per cent. of the sound. Increasing the thickness of the felt will further reduce the percentage of sound reflected.

ECHO.

Echo is a special case of reverberation. Ordinarily the prolongation of a sound after the source has ceased vibrating is continuous until it becomes inaudible. When the sound, instead of being maintained, is short and sharp, with a noticeable interval between the direct sound and the reflection, an echo is produced. It is necessary in the case of the average ear for the time interval to be greater than one-twelfth of a second. Professor Watson, of the University of Illinois, in writing about the acoustics of the University Auditorium, mentions an interesting condition that developed during a concert being given by the University orchestra. The number was a xylophone solo with orchestral accompaniment. The echo was so pronounced that at one time the leader of the orchestra beat time to the echo, whereas the players who were immediately around the xylophone kept time to it. Those farther away kept time with the leader, and the resulting confusion can well be imagined.

Curved surfaces should be avoided in the design of an auditorium as far as possible. When used, the centre of curvature should be located a considerable distance from the location of seats. The harmful effects produced by a dome, curved ceiling, pendentives, etc., cannot be entirely overcome by acoustical treatment, because such surfaces cannot be made totally absorbent. Surfaces covered with felt one inch thick will absorb 53 per cent. of the sound energy striking it. Forty-seven per cent. will still be reflected, which is sometimes sufficient to be a source of complaint.

INTERFERENCE.

So-called "dead" spots in an auditorium are caused by interference. A body in vibration sends off a wave of condensation, which is immediately followed by a wave of rarefaction. As long as the vibration continues these waves follow each other. Should sound waves travelling by different paths come together again, the condensation wave of one will meet the condensation wave of another, causing the sound at this place to be re-enforced; or, should one path be slightly shorter than the other, so that the condensation wave of one meets the rarefaction wave of the other, there will at this point be no sound.

REVERBERATION.

Of acoustical defects, the most common is excessive reverberation. A sound produced in a confined space will travel from surface to surface until it is either transmitted by the walls or is transformed into some other form of energy, generally heat. This process is called absorption. The duration of a sound after the source has ceased vibrating is called reverberation. When the duration of audibility of the standard sound used exceeds the ideal amount, the reverberation is excessive. By using the formula developed by Professor Sabine, it is possible readily to determine the reverberation for any room from the plans. From experience I know the desirable reverberation in various-sized rooms used for different purposes, and can readily figure by means of the same formula the number of sound-absorbing units it is necessary to introduce to obtain this condition.

In the average room used only for speaking, when the volume is approximately 150,000 cubic feet, the reverberation under average audience conditions should be not more than 1.9 seconds nor less than 1.3 seconds. For most forms of music it is desirable to have the reverberation exceed 2.1 seconds. When a room is to be used for both speaking and music, it is usual to compromise, having the reverberation slightly excessive for ideal speaking conditions, and slightly less than that demanded for ideal musical conditions. The solution can be varied, of course, to suit the special conditions presented by each case.

As the volume increases it is necessary to increase the duration of reverberation. Unfortunately, a reduction in the reverberation produces a corresponding reduction in the intensity. For this reason, in a room having a volume of, say, 400,000 cubic feet, it would not be advisable to reduce the reverberation below 2.7 seconds. This duration of reverberation is slightly excessive for an untrained speaker, but necessary to insure sufficient intensity in the furthest parts of the room.

A REVERBERATION PROBLEM WORKED OUT.

To illustrate the method of calculating the reverberation and the determining of

* A Luncheon Address at the Engineers' Club of Philadelphia.

the area of acoustical treatment required, I will take the case of a court-room, 60 ft. wide, 100 ft. long, and 20 ft. high. The following assumptions are made:—

- Floor, Concrete.
- Side-walls, Plaster on Tile.
- Ceiling, Plaster on metal lath.
- Area of glass windows, 500 square feet.
- 450 seats.
- Correct conditions desired when 70 persons are present.

Sabine's formula for reverberation is:

$$r = k \frac{V}{a}$$

where r equals reverberation in seconds; V equals volume in cubic feet; a equals open window units of sound absorption; k is a constant and is .05 when foot-second units are used. A sound is used having an intensity of 1,000,000 times the minimum audible intensity and of pitch one octave above middle "C" 2 on the piano.

- Area concrete floor $60' \times 100' = 6,000$ sq. ft.
- Co-efficient of absorption of concrete is .015
- $6,000$ sq. ft. $\times .015 = 90$ units.
- Area side-wall surfaces
- $(60+60+100+100) \times 20 = 6,400$ sq. ft.
- Area of glass windows = 500 sq. ft.

- Net area plaster on hollow tile = 5,900 sq. ft.
- Co-efficient of plaster on hollow tile is .025.
- $5,900$ sq. ft. $\times .025 = 147.5$ units.
- Area of glass 500 sq. ft.; co-efficient .027.
- 500 sq. ft. $\times .027 = 13.5$ units.
- Area of ceiling $60' \times 100' = 6,000$ sq. ft.
- Co-efficient for plaster on wire lath is .033.
- $6,000$ sq. ft. $\times .033 = 198$ units.
- 450 seats, co-efficient .1.
- $450 \times .1 = 45$ units.
- 70 persons, co-efficient .47.
- The co-efficient for one person is taken at 4.6, due to the fact that the chair occupied by each person has already been considered at .1 and when occupied its value as a sound absorber is almost nothing.
- 70 persons $\times 4.6 = 322$ units.
- Total number of units
- $90+147.5+13.5+198+45+322=816$

Volume of room $60' \times 100' \times 20' = 120,000$ cubic feet.

Substituting in formula $r = k \frac{V}{a}$, the following results are obtained:

$$r = .05 \times \frac{120,000}{816} = 7.34 \text{ seconds}$$

Experience has shown that the ideal reverberation for a court-room of this size is 1.5 seconds. A reverberation of 7 seconds is very excessive, and it would be difficult, if not impossible, to hold court in such a room. An increase in the number of persons present will accomplish a reduction in the reverberation due to the additional clothing introduced. The reverberation can readily be determined for all audience conditions.

Substituting 1.5 seconds—the ideal reverberation—for r in the formula and solving for a , we get:

$$1.5 = .05 \times \frac{120,000}{a}$$

$$a = 4,000.$$

This shows that 4,000 absorptive units are required in the room to have a reverberation of 1.5 seconds. There are 816 units already in the room, so that 4,000 minus 816 equals 3,184 additional units which are required. These additional units can be supplied by means of acoustical treatment, which consists of felt, usually one inch in thickness, fastened to certain of the available surfaces of the room. The felt is concealed by tightly stretching a cloth membrane one inch away from it. The cloth is painted or dyed the desired colour. Only special paints can be used for this purpose. Each square foot of treatment has a co-efficient of .53. Dividing the number of additional units required, 3,184, by the co-efficient of absorption for each square foot of felt, .53, we get the number of square feet of treatment required—namely, 6,007 square feet. The ceiling

area is 6,000 square feet, so that treatment applied to this surface will accomplish the desired results.

WIRE STRETCHING.

I am frequently asked regarding the value of stretching wires to overcome acoustical difficulties. The fact that they have been used so extensively misleads most persons into believing that beneficial results can be thereby obtained. There is no theoretical basis for their use, and to my knowledge there is no place where any improvement in the acoustics of any auditorium has been brought about by stretching wires in any shape, form, or manner.

It is claimed, e.g., that wires radiated from above a speaker's head to parts of the room will assist in carrying the voice to locations where it would otherwise be difficult to hear. A knowledge of the fundamentals of sound enables one to see that this is an impossibility. A wire can only be stretched so as to be in tune with one note, and there is only one note that will set it into vibration. It is, moreover, only possible to impart a microscopic vibration to the wire which is not audible. If the wire were connected in the proper manner to a relatively large sounding-board, it would be audible. Even if it were possible to obtain the desired vibration, it would be a decided disadvantage, because an undue prolongation of each sound would be produced. It is desirable in both speech and music to have each sound absorbed quite rapidly so as not to interfere with the proper hearing of succeeding sounds.

Sometimes it is claimed that an echo can be broken up by stretching wires in front of the offending surface. Experience proves this cannot be accomplished. The sound wave, due to its large wave front, passes through the wires with practically no change. The action can be studied by watching an ocean wave pass through a row of piles spaced at various intervals. There is some disturbance noticeable at the piles, but a few feet beyond the wave presents a united unbroken front.

The reason for the misunderstanding regarding the use of wires is probably due to the fact that they have been used for years as a means of support for bunting for decorative purposes. An improvement in the acoustics has frequently been noticed, and the credit for the change has been given to the wires instead of to the flags and bunting. It is simply the presence of additional sound absorptive materials, placed in usually a particularly desirable location, that causes all sounds to be absorbed more rapidly, thus reducing the period of reverberation or making a surface almost totally absorbent, which otherwise would produce an echo.

I know a court-room where wires were stretched the length of the room and connected with cross wires that were attached to ventilator grills. The clerk of the court told me they thought the undesirable reverberation would be carried by the wires to the ventilators and then out of the room by the current of air. "It seems plausible," he added, "but, unfortunately, it doesn't work."

OTHER FALLACIES.

There are many features of the design of a room that are erroneously blamed for the faulty acoustical conditions. A suspended ceiling, e.g., is thought by some to be set in vibration by the sound waves, thus producing the undesirable reverberation. While making an examination of a council chamber, I was told by the Board in charge that they thought the trouble was produced by the barrel vault ceiling, which, due to the suspended construction,

was set into vibration by the sound waves. They showed me bags filled with sand which they had placed on top of the ceiling to stop the supposed vibrations. No benefit was obtained. The force of the sound waves produced in this room was actually too feeble to produce even a microscopic vibration. The trouble was due to the use of hard, fireproof building materials, without the introduction of sufficient sound-absorbing materials to neutralise their effect.

Sometimes the fact that a ceiling is beamed will be blamed; other times where the ceiling is unbroken, that will be considered the cause. Except in the case of a low ceiling, where the presence of beams prevents the reflection of sounds to the rear of the room, this is not a factor.

PROFESSIONAL AND TRADE SOCIETIES.

NATIONAL FEDERATION OF HOUSE BUILDERS.—The National Federation of House Builders assembled for their annual conference in Birmingham on the 16th inst., and the opening meeting at the Midland Hotel was attended by a large number of delegates from all parts of the country. They were welcomed to Birmingham by Alderman Sir David Brooks on behalf of the Lord Mayor. Sir David Brooks said his view had always been that municipal house building was slow and expensive, and did not produce results so good as those which could be obtained by the ordinary orthodox method of committing the work to the men who thoroughly understood it. Mr. H. M. Grant, in proposing a vote of thanks to Sir David Brooks, said that in two and a-half years only 17,505 municipal houses had been erected in the country, whereas in about three-quarters of that time 9,673 subsidy houses had been erected by the members of the Federation. If they could get at all the figures he thought they would be able to prove that they had actually erected more houses than the authorities. The annual report and financial statement were approved, and Mr. H. M. Grant was elected President. At the dinner in the evening, Mr. H. M. Grant presiding, the toast of "The Federation" was proposed by Mr. A. W. Shelton (President of the National Federation of Property Owners and Ratepayers). Mr. H. M. Grant, replying, said that present that evening were the men, or the sons of the men, who had built over 80 per cent. of the houses that had been built in the Birmingham district during the last thirty years. Urging that private enterprise would provide the only solution of the housing problem, the President said that if the Government were prepared to increase the subsidy by £100 and to advance the rest of the money on mortgage at 6 per cent. they would find house-building going on all around the suburbs of Birmingham as it did twelve years ago. There would be no trouble in getting houses if the builders were only given the consideration they ought to have. Mr. A. Waddington, also replying, said every house that was being built by local authorities was costing the public something like £800, whereas if the Government would make a sufficient subsidy the great bulk of that money could be saved. The public must be made to realise the amount of money that was being wasted, and the Government forced to drop housing altogether. The first step towards a solution was for the Government to throw over housing altogether.

SOUTH WALES INSTITUTE OF ARCHITECTS.—The annual dinner of the South Wales Institute of Architects was held at Cardiff on March 10. Mr. Ivor P. Jones, A.R.I.B.A., (President of the South Wales Institute of Architects), was in the chair, and the guest of honour was Mr. J. W. Simpson, F.R.I.B.A. (President of the Royal Institute of British Architects), supported by Sir Charles Rathen, F.R.I.B.A. (President of the Society of Architects), Mr. F. R. Yerbury (Secretary of the Architectural Association), and Mr. T. Taliesin Rees, F.R.I.B.A. (President of the Liverpool Architectural Society), who were the responders to the President's toast of "The Royal Institute of British Archi-

sects," "The Society of Architects," "The Architectural Association and the Allied Societies." Mr. Ivor Jones reviewed the recent work of the South Wales Institute of Architects, pointing out the great increase of membership and the genuine awakening of interest in architectural matters in South Wales, and emphasising the fact that but for the wise guidance of the Royal Institute of British Architects, the sympathetic help of the Society of Architects, and the interest of the Architectural Association and the Allied Societies, the South Wales Institute could not possibly do the work it had done in the past and hoped to do in the future. Mr. J. W. Simpson, in responding for the R.I.B.A., pointed out that architects needed to keep before them the ideal of "good building" to be attained by a high standard of practice, and that they could, by seeking election on Municipal Councils, do a great deal for the community with their special knowledge, and also for the profession, by showing the public that architects, because of their training, are practical men. He also laid stress on the need for a proper understanding between architects and builders, resulting in good work, which would in its turn win the approval of the general public, and so gain for architects generally the credit to which they were entitled. Sir Charles Ruthen, in responding for the Society of Architects, pleaded strongly for registration, pointing out that other professions did not allow anybody to practise until he had proved himself capable and efficient, whereas the so-called architect was often an individual possessing no architectural qualifications, the result being a general lowering of the high standard aimed at by the profession. Mr. F. R. Yerbury, in responding for the Architectural Association, referred to the educational work of the Association and the South Wales School of Architecture, predicting a successful career for the latter under its able head, Mr. W. S. Purchon. Mr. Taliesin Rees, responding for the Allied Societies, spoke of the new resolution of the R.I.B.A. to hold

their Council meetings periodically in the provinces, a movement which would give the allied societies more prestige locally, and greatly encourage them in their work. The toast of "The South Wales Master Builders Employers' Federation" was proposed by Mr. H. C. Portsmouth, F.S.A., in which he referred to the danger to the architectural profession through the activities of the Office of Works, and the further waste of public money by a Government Department endeavouring to perform the impossible by acting as its own architect and contractor. Mr. E. W. King, the President of the Federation, responded. Councillor E. C. M. Willmott, A.R.I.B.A., proposed the toast of "The Guests," responded to by Dr. W. Evans Hoyle (Director of the Welsh National Museum) and Mr. R. O. Saunderson (President of the Cardiff Chamber of Commerce).

Sir Hedworth Meux objects to return Temple Bar. He writes: "In asking me to return Temple Bar, the London Society shows more than an Ahab-like covetousness, for Naboth was offered compensation for his property. As Temple Bar was pulled down in 1878—forty-three years ago—there cannot be very many who remember it in its original site."

It appears that the agreement between the Duke of Bedford and the Office of Works contains a clause that the University buildings at Bloomsbury must be put up before April, 1926, and if not by that time the Duke of Bedford is to have the option of re-purchasing the property at the price he has been paid for it. If he does not exercise this option within six months of the stipulated period the property will revert to the Government.

The London County and Westminster and Parrs Bank has chosen the plans for a new building on its site in Lothbury, which runs from Tokenhouse Yard to Angel Court. Four architects were invited to send in designs, and the successful competitor is Mr. A. J. Davis, of Messrs. Mewes and Davis, the architects of the Ritz Hotel. The new building will be in the Palladian style. The present building was designed by Cockerell and Tite in 1842.

STATUES, MEMORIALS, ETC.

CARSHALTON WAR MEMORIAL.—On the 13th inst. Major-General Sir John Longley, K.C.M.G., C.B., unveiled the Carshalton War Memorial, which takes the form of a cenotaph surmounted by a tomb from an eighteenth-century example, is excellently placed on a site between Honey-Wood Walk and the Carshalton Pond. It has been executed in Portland stone by Messrs. A. Burslem and Son, of Tunbridge Wells, from the designs and under the supervision of the architects, Messrs. Bouchier, Tatchell, and Galsworthy, F.F.R.I.B.A., of London.

EDINBURGH.—The war memorial erected by the directors of the Commercial Bank of Scotland in memory of the members of its staff who lost their lives in the war was unveiled last week by the Earl of Mar and Kellie, K.T. The memorial, designed by Mr. Balfour Paul, takes the form of two large wall tablets on which are inscribed the names of those commemorated. Each of the tablets consists of a slab of Greek statuary marble. The names commemorated, along with their rank and regiment, are cut in Roman lettering on the marble panel and gilded, and the dedicatory inscription in raised bronze letters, gilded, is set out on the lintel and aill.

"Like the sewers beneath London," says the Bishop of London, "there is a river of poison running under the surface of London life, and into it some of the fairest sons of the country fall from time to time."

The death is announced of Sir Arthur Lewis Webb at a nursing home in London on Tuesday, March 15. Born in October, 1860, he entered the Public Works Department of India in 1881. In 1894 he was transferred to the service of the Egyptian Irrigation Department, and was, in turn, Inspector-General of Irrigation, Director-General of Reservoirs, Under-Secretary for Irrigation, and Advisor to the Public Works Ministry. He was created K.C.M.G. in 1912.

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OUR ILLUSTRATIONS.

A Street in Bruges. A sketch recovered from Germany and recently exhibited at the British Institute of Industrial Art by Mr. Frank L. Emanuel at Knightsbridge.

Strand, W.C.2.

"The Mendicants," a decorative panel and pen study in black and white. Exhibited at the British Institute of Industrial Art by Mr. Morris Meredith Williams.

Village Hall and Club to be built in Surrey. Elevations and plans. Mr. Baillie Scott, architect.

City of Leicester, Coleman Road Housing Estate. Working drawings of agreed price houses, type C, facing north. Mr. Arthur J. Wood, A.R.I.B.A., architect.

Currente Calamo.

Those who know the facts have, of course, discounted the disclaimers of the trades unions of any obstruction of building by ca'canny, but any who may still believe the charges have been exaggerated should study the too-solid facts given by Mr. Thomas Dinwiddy, F.R.I.B.A., F.S.I., a well-known London architect of more than fifty years' standing. Here is his evidence as given in a letter to the *Daily Telegraph*:—"Erecting a dwarf wall, a bricklayer and labourer contrived in two days of 8½ hours to limit the bricks laid to 125. Their joint wages amounted to 25s. 6d. a day; the cost, therefore, of labour was 5d. for every brick. The standard of value is at per rod of 272 ft. super 1½-brick thick, or about 4,200 bricks. At this rate of 5d. a brick, labour per rod would exceed £80. Fifty years ago labour was taken piecework (including erecting scaffolds) at 50s. a rod, the men laying about 1,000 bricks a day. As recently as the date of the war brickwork with all materials and profit was about £15 a rod; it has now increased threefold. As to the causes, beware of being put off the labour scent by the hue and cry after alleged merchants' rings and profiteering. Inflated wages and shackled output figure in all materials. For example, the bed-rock of bricks is a few yards of clay costing shillings; from that stage all is labour, handling, and wages, until about £5 a thousand is reached for the finished article. Labour takes toll again on the building, and assuming an average of 300 bricks a day (as against the no doubt abnormal sixty vouched for), takes £19 a rod for a further share. The same methods rule in other trades, where they are not so easy to test. The outside painting of a villa took 97½ hours before the war. Done since the war by the same firm, it took 160 hours, while cost rose from £9 to £23. Humiliating evidence of the decadence of British labour was shown by a recent table of nineteen kindred industries proving that the output of one American equalled that of three Englishmen. Consider the effect on the 'homes for heroes' crusade, with the municipalities scrambling over each other in a squandermania, while labour exploits it to its own advantage. The cost of the ideal dwelling is soaring to £1,100

and over." Mr. Dinwiddy, to clear an estate, has sold newly built suburban houses of 19 ft. frontages, with three bedrooms, two sitting-rooms, bath, etc., at £220 each, and there has been no loss.

The wisdom of the cry for model homes when the country is drowned in war debt and taxes may be questioned. The obvious common-sense course would have been to say to the Labour "heroes": "The country is bankrupt, and the only condition on which this housing burden can be added is that the union restrictions are scrapped." Failing that, tell the people where the fault lies, and dare the votes. The nation want the houses to go round, but the unions say "No; make the work go round, and spin out on one house the time that should serve to build two or three." When confidence in the housing bonds ceases and the State turns rent collector, we shall, as Mr. Dinwiddy says, realise that rate aid for practically almshouses involves an annual subsidy of £40 to £50 a house. On top of our present crushing debt it will end more disastrously than the Land Budget of 1909, which killed private enterprise, and has driven us to State building.

The new Delhi seems to be growing slowly. Sir Edwin Lutyens, who has returned to England from India, in an interesting communication in the *Times* of Wednesday, doubts whether his plans will be carried through in their entirety in less than ten years unless the Indian Government accelerates progress. Meanwhile Government House and the buildings for the Secretariat are progressing, the structure in each case now being at least 30 ft. high. The foundations have been laid for the Legislature Building, and work has been started on a temporary museum. The great waterways on either side of the long avenue have been formed, the Grand Place is practically finished, and two of the fountains have been constructed. Tree-planting has been retarded by the high cost of water pipes, but the planting is going on. In addition, about 150 bungalows have been erected. Sir Edwin Lutyens is inclined to think that the new Government in India will be more anxious to get on with Delhi and make of it a worthy city than the old Government, which has been troubled by its position of trustee

of Indian money. "The Englishman in India," he says, "is very conscious of the national purse." Asked by the *Times* interviewer for his opinion of our buildings here, Sir Edwin said they are too often dominated by the spirit of advertisement. "Take a picture of Nash's Regent Street," he said, "and see what they are making of it to-day. I much prefer the old idea."

Every Scottish architect will read with avidity "The Story of the Glasgow Institute of Architects" during its first fifty years, just published by James C. Erskine and Sons, 140, Hope Street, Glasgow, at half-a-crown, and their brethren of the sister kingdoms and the Dominions will miss a good deal if they neglect the small investment. The booklet is the sum and substance of two lectures delivered by the author as President during the sessions of 1919 and 1920, and the Council have very wisely decided that the results of its author's researches should be printed to stimulate interest in the Institute's present affairs and inspire the members of to-day to emulate their predecessors in promoting its prosperity. It most certainly should, for the activities of the Institute will bear comparison with the record of any similar society for pertinacity of purpose, and the inclusion amongst its members of the leading architects of their day. Founded in 1868, the Council consisted of ten architects: Jas. Salmon, Alex. Thomson, John Burnet, Geo. Bell, John Baird, James Boucher, Campbell Douglas, John Honeyman, and David Thomson, and the first office-bearers were Jas. Salmon, President; Alex. Thomson, Vice-President; James Boucher, Treasurer; Wm. MacLean, Secretary; and Geo. Bell, auditor. The membership numbered 31, of whom the only survivor is Mr. Horatio K. Bromhead, F.R.I.B.A., of 243, St. Vincent Street, Glasgow, who "is still fit, able to favour his brethren with his tenor songs, and who in spite of his long residence in Scotland, has not yet lost his English tongue." Association with the R.I.B.A. seems to have been first established in 1870 in connection with right of property in drawings, the opinion being conveyed that clients had no right to them. From thenceforward, up to 1919, when the Constitution of the Institute changed on its becoming a Chapter of the Institute of

Scottish Architects, the history of the Society is that, of the foremost architects north of the Tweed, and embracing many personal reminiscences of them and their contemporaries in other sections of the Empire, into which none will dip without recalling pleasant memories of the past, with here and there a good story—see p. 27 for a couple of the best—adding to the many proofs that, contrary to the delusion of the ignorant, no Scotchman fails to appreciate good fun.

A correspondent of the *Scotsman* comments reasonably, we think, that while the University of Edinburgh well maintains its reputation in other respects, one, and in many respects the most important branch of art and science, is being neglected—namely, architecture. London, Sheffield, and Manchester provide for a very wide field of training, supplemented by outside office practice, in the faculties of Arts and Science, while Liverpool grants a special degree (B.Arch.). Glasgow also provides a very complete course at the Royal Technical College. Certainly, if Edinburgh University is anxious to keep pace with other abodes of learning, she cannot afford to neglect Architecture. The question of additional expenditure need not be a stumbling block to the creation of a definite course of training leading to a degree in the "Mistress Art," as there are educational facilities in the College of Art, Heriot-Watt College, and also the University itself. All that is required is to link up these institutions, a common expedient at other centres of learning. Dentistry, commerce, education, etc., all receive academic consideration now, so why not architecture? It is quite true that the public realise but little the amount of thought and knowledge which lie hidden within the structure of a really fine modern building, be it public, commercial, or ecclesiastical. No educational body to-day is up-to-date that does not recognise its obligation to cherish better recognition by the public of the claims and responsibilities of architects, and, indirectly, to elevate public good taste.

Copies sent to us of recent correspondence between Mr. Walter Burley Griffin, of Chicago, who, it will be remembered, was selected in world-competition to carry out his own chosen design for the Australian Federal Capital, and Mr. Hughes, the Australian Prime Minister, seem to us to establish without doubt the fact that Mr. Griffin has been very badly treated. That, at any rate, is the opinion of the architectural and engineering professions of Australia. It may be remembered that after accepting Mr. Griffin's design, the Government appointed a "Departmental Board" to prepare "a composite plan," condemned by all experts who saw it, and that an appeal by them to the then Prime Minister resulted in the appointment of Mr. Griffin to carry out his own plan as "Federal Capital Director of Design and Construction." Now, it appears "as there is a competent staff in the employ of the

Works Department . . . there is no necessity to duplicate the machinery of Government," and Mr. Griffin is therefore dismissed at practically a few hours' notice. Not belonging to a trade union, Mr. Griffin will probably get little sympathy of the sort that would at once be followed by a huge strike, had similar treatment been meted out to the humblest member of any of the building trade operatives. He has ours, anyhow, and probably those of some of our readers not unfamiliar with past and present similar treatment by British "Ministries."

The Bolt-in-Tun, another relic of pre-newspaper times in Fleet Street, is being swept away. A railway company took over the booking-office of the old inn, the Bolt-in-Tun, which had a history dating back to the fifteenth century. Bolt-in-Tun was the rebus of Prior Bolton, of St. Bartholomew's Priory; and the same sign may be seen under the Prior's window in that beautiful church in Smithfield. The front of the booking-office and the arched entry is not very much changed from the days when Serjeant Ballantine, then a boy living in Serjeant's Inn, came out in the mornings to see the coaches start. The entry has two huge oaken storey-posts, each with a bulk at the bottom as a guard against the grinding of the wheels of coaches. These bulks are very old, and almost as hard as iron. The old sole-pieces protecting the sides also are still in the passage. The shop front is of the same period, with its shallow bow structure of the window opening.

Sir William Orpen's delightful book, "An Onlooker in France," in which he gives his experiences as an official artist on the Western Front, gives some interesting character sketches of some of the big men with whom he came into touch, and of one who was evidently big in his own estimation, whoever he was. Sir William had not been long in Amiens when he was summoned to the telephone, when the following conversation occurred:

"Is that Orpen?"—"Yes, sir."
 "What do you mean by behaving this way?"—"What way, please, sir?"
 "By not reporting to me."—"I'm sorry, sir, but I do not understand."
 "Don't you know you must report to me and show me what work you have been doing?"—"I've practically done nothing yet, sir."
 "What have you been doing?"—"Looking round, sir."
 "Are you aware you are being paid for your services?"—"Yes, sir."
 "Well, report to me and show me your work regularly."

"This wonderful colonel," Sir William Orpen remarks, "expected me to work all day and, apparently, in the evening to take what I had done and show it to him—the distance by motor to him and back was something like 110 miles." To Lord Haig a touching and true tribute is paid. Says Sir William: "He was a strong man, a true Northerner, well inside himself—no pose. It seemed it would be impossible to upset him, impossible to make him show any strong feeling, and yet one felt he understood, knew all, and felt for all his men, and that he truly loved

them; and I knew they loved him. Never once all the time I was in France did I hear a 'Tommy' say one word against 'Aig.' . . . When I started painting him, he said, 'Why waste your time painting me? Go and paint the men. They're the fellows who are saving the world, and they're getting killed every day.'"

"Artificial Light: Its Influences on Civilisation." by M. Luckiosh (London: University of London Press, Ltd., 18, Warwick Square, E.C.4, 12s. 6d.), is a most readable appreciation and explanation of the magical wonders wrought by artificial light. Starting with the primitive man huddled with fear and cold in his cave as the last rays of sunset are extinguished by darkness, the author traces human progress as man learned how to kindle a fire, and, later, to adapt it to the illumination of his dwelling. Then the ceremonial use of light is discussed, and, coming down to our own times, the utilisation of oil, the discovery of gas, and the rise and progress of best of all illuminants, the electric light, are interestingly described. Doubtless, as is observed, the effort to escape from the bondage of Nature is not solely a human instinct, for animals burrow or build retreats, aided by the instinct of self-preservation. But that instinct in animals is soon satisfied; whereas, in human beings it has ever led them onward toward complete emancipation. Without artificial light men would be inactive half their lives. To it they owe the welcome eight hours' leisure and recreation it gives; facilitating the efforts of eight hours of work, and withdrawn at will during the eight hours of sleep, with the consciousness of ability instantly to rekindle light if threatened with danger, or visited by sickness. Truly, the lighting expert to-day seems the pioneer of progress along the byways and highways of enterprise, ever more and more revealing possibilities limited only by the boundaries of human endeavour, and even extending them, for light was the most prominent agency in the scheme of creation. We must not omit to mention that this fascinating volume is made more so by some forty excellent illustrations.

At a meeting of Rowley Regis Urban Council last week, the surveyor reported that he had prepared out-of-work schemes at a cost of £2,766, and it was decided to apply to the Unemployment Grants Committee for £1,000 towards the work. The work of cinder breaking had been commenced, but a number of the unemployed would not look at it because they wanted day-work rates and not piecework.

The war memorial in St. Oswald's Parish Church, Edinburgh, was dedicated on Easter Day. The memorial is executed in fine sandstone, and takes the form of a recess in the wall of the aisle with moulded arch. It contains four panels, on which are carved the names of 28 men who gave their lives in the war. The architect is Mr. Henry F. Kerr, A.R.I.B.A., and the work was carried out by Mr. Thomas Beattie, sculptor.

A stained glass window of two lights has been placed in Newington United Free Church as a memorial to those who gave their lives in the war, and was dedicated on Easter Day. The subject, which is from the design of Mr. James Ballantine, F.S.A.Scot., shows on the left a soldier in armour clasping a banner bearing the emblem of the Cross, supported by an angel, and on the right a figure of a fallen warrior receiving a celestial crown.

THE BUILDING TRADES AND THE EX-SERVICE MAN.

The Administrative Committee of the National Federation of Building Trades Employers meets to-day to settle administrative details of the scheme arranged with the Ministry of Labour to put into operation their scheme for the absorption of 50,000 ex-Service men in the building industry, to relieve unemployment by training these men in the crafts of the industry that require augmentation. The responsibility of the Government in the scheme is confined to ex-Service men. It is intended to apply mainly to young ex-Service men who have been for some time out of employment, and have no regular occupation to which they can return when the present industrial depression is over. In addition, it is to apply to ex-Service men now employed in the industry as builders' labourers. For the time being the deficiency in labour is most acute among bricklayers, plasterers, slaters, and tilers. The total number of men to be admitted under the scheme is 50,000.

The scheme will be worked through local committees composed of representatives of the Associations of Master Builders, and, it is hoped, of representatives of the trade unions. If it is found that the trade unions do not co-operate in the formation of a joint committee, the National Federation of Building Trades Employers will arrange for their local affiliated associations to appoint committees in each district which will be responsible for the selection of the men and the general supervision of the scheme in the area. The district committee will, from the register of unemployed ex-Service men kept by the Employment Exchanges, or from other sources, select suitable ex-Service men for training, and will advise the craft in which the man can be most suitably trained.

A contract of service, valid for two years, will be entered into between the employer and the accepted candidate. The contract will be subject to a break at the expiration of a probationary period of three months, and to termination thereafter on the ground that either party is not observing its provisions. Provision will be made for assignment of the contract from one employer to another with the consent of the employee, if, for any reason, continuous work with one employer for two years is not possible. The district committee will exercise a general supervision in this matter.

The contract will provide that at any time during its currency an employee will have the right to apply to his employer for a certificate of proficiency entitling him, on the ground of his qualifications, to a higher percentage of the district rate of wages than that laid down. The district committee will supervise generally the execution of the contracts of service, and will deal with complaints by either party.

Ex-Service men accepted under the scheme will be paid by the employers at the following rates:—

	Percentage of skilled men's rates.
(a) For the first six months..	50 + 10s. per week
(b) For the next six months..	65 + 5s. per week
(c) For the next six months..	80
(d) For the next six months..	90
Thereafter	100

Towards the payments made by the employer the Government will contribute in respect of each man accepted for training under the scheme:—

(a) For the first 26 weeks.....	10s. per week.
(b) For the second 26 weeks	5s. per week.

The State contribution will be paid for a full week, even though the firm by whom the man is employed may, in fact, be working short time (provided that the man attends for duty on the days on which

the firm requires him), but will not be paid for any week in which a man does not work at all. Provided that if, during the first twelve months, the employee receives from his employer a rate of more than 65 per cent. of the district rate, the State contribution shall cease from the date of receipt of the increased rate.

The scheme is a sound business-like one, and is in no way hostile to any wholesome principle of trade unionism. But, at the moment, the building trade operatives seem determined to prejudice its success by a repetition of the same miserable tactics which have hindered its adoption for nearly four months, and, consequently, hindered housing all over the country. It is altogether false that the masters are attacking wages, or that the scheme seeks to enforce "payment by results." At its meeting on Tuesday the Emergency Committee of the National Federation of Building Trade Operatives decided to invite to a conference representatives of the Amalgamated Engineering Union, the Boilermakers' Society, the National Union of Ironfounders, the Patternmakers' Society, the Iron and Steel Trades Confederation, and all unions affiliated to the National Federation of Building Trade Operatives. The conference, it was said, would probably be called within fourteen days, and from it there will go out a request for the co-operation of other unions.

Co-operation for what? Simply to ensure more delay and add more and more to the unemployed. It is preposterous to suppose that the Government or the Master Builders will tolerate obstruction of the sort foreshadowed. If the operatives selfishly shirk their duty to the ex-Service men, and decline the co-operation with the scheme they have been invited to share, and strikes follow sectionally or generally, we hope no hesitation will prevent a prompt lock-out. The fight will be a short if sharp one; the Government is pledged to support the employers, public opinion will as certainly endorse its action, and the rest of the trade unions which have recognised their obligations to the men who kept the flag flying are not likely to play into the hands of a mischievous minority of agitators.

THE CONVERSION OF BUILDINGS TO MEET MODERN REQUIREMENTS.*

Mr. Stanley Hicks (Professional Associate Member of Council) was in the chair.

We are all familiar with the classes of buildings affected, namely: Large town houses, blocks of terrace houses, shop property from which the market has removed; large villa residences built in Victorian or pre-Victorian times; country houses erected prior to the advent of motor cars. To all these classes of property certain general principles can be applied; the chief of these is that the larger the amount of property concerned the easier becomes the conversion scheme. Assuming, therefore, that we have a block of, say, three or four houses, either semi-detached or built in a terrace, what are their possibilities with a view to conversion into flats? The flat most in demand has three bedrooms, two sitting rooms, a kitchen and a bathroom. Assuming that we have three terrace houses, the first effort should be made with a view to doing away with two entrances and two of the staircases, the three ground floors being made inter-communicating through openings in the party

walls. The space formerly occupied by the halls can be utilised for bathrooms and kitchens, and probably we shall find, with a certain rearrangement, that we have two flats on that floor, all rooms being on the same level. The upper floors can be treated in the same way. In the case of a large block of property, say six or eight houses, with gardens at the rear, and access through these gardens to some road frontage, also at the rear, it may be profitable to scrap all existing entrance halls and staircases, and to build or arrange for a fresh staircase and entrance at the rear of the property. People do not spend a great deal of their time on the staircases, and it seems a pity that valuable space, probably looking out on to a good road, should be wasted.

One of the chief difficulties in the conversion of buildings lies in the basement. People do not like basement flats. If there is a wide forecourt or front garden, it is generally possible, however, to slope the ground from the garden wall right down to the level of the basement. If this method is adopted, the disadvantages of the basement are largely minimised. In the case of houses where this is impossible it will be cheaper in the long run to leave out the basement entirely and use it for cellarage.

If a block of houses such as we have here considered is to be dealt with for residential purposes, it will probably be found that if the party walls between six gardens are taken down there will be room for one, if not two, tennis courts. This is another attraction which will help to outweigh many of the disadvantages in an adapted building.

The author proceeded to make suggestions for reducing cost of repairs, pipes and access to roof, internal fittings, water supply, drainage and lighting, and to deal with the advantages of flats with service, in connection with which he said: "There is, moreover, a way of dealing with large houses in London in an inexpensive manner with but few structural alterations. The method is to make the upper floors into bed-sitting rooms, with proper bathroom accommodation, and to utilise the whole of the ground floor as a common dining room and lounge. I am quite aware that this method is open to the suggestion that this is getting very near to turning the premises into an ordinary boarding house, but from actual experience one has found that one can let rooms under three-years' agreements on this basis and save one's clients the cost of a very heavy builder's bill for alterations, and it seems to me that such a scheme has possibly more elements of permanence in it than possibly a badly converted flat."

Rating was a point to be carefully kept in mind in letting flats, and in some London boroughs it was suggested that in the case of converted houses half the gross rental be adopted as rateable value, but with the continually increasing rates it would appear to be better, if possible, to have the flats separately rated, with a proviso in the agreement that should the rates exceed so much in the pound the rent is to be automatically increased.

The question of cost in relation to rental values, continued Mr. Elsworthy, governs all other considerations. In relation to the cost, I am afraid this frequently greatly exceeds the original estimates, and it is necessary to consider whether in years to come the high rents obtainable for housing accommodation now will be maintained. It is not difficult at the present time to get 150 per cent. on pre-war rents for housing accommodation, but it is quite obvious that if this 150 per cent. eventually settles down to an average of 60 per cent. or 70 per cent. over the pre-war

* From a paper by Mr. J. G. Elsworthy, F.S.I., read before a Junior Meeting of the Surveyors' Institution on March 14.

standard, one's clients will not only be faced in the future with a serious loss of income but also with a corresponding loss of capital, as it must be borne in mind that the investing public do not care for converted houses as investments, and will only take them on figures which show very high percentages indeed.

The conversion of private dwellings into business premises presents a problem peculiar to itself. In the first place, under the Act passed last year, any building which has been used up to December, 1919, as a private dwelling house cannot without the express consent of the local authority be converted into business premises. Assuming, however, this difficulty has been overcome, and it is not easy to do so, it would generally seem advisable to endeavour to show as much clear floor space as possible. Any temporary partition on the ground floor should be removed, and if it is desired to use such as showrooms, it may help to remove even a party wall. Intending tenants are generally somewhat deficient in imagination, a quality which surveyors seem to find it very necessary to have in a large amount, and it is not much use to tell a man that he has got 2,000 ft. of floor space on the ground floor when, on the evidence of his eyesight, he can see only about 600 ft. A problem which must be very carefully considered in this connection is the problem of the sanitary arrangements, which may have been quite adequate and efficient for a private house, but are hopelessly inadequate and inefficient for a building to be used as offices.

Both in the cases of flats and offices it is almost always necessary to draw up an agreement on the basis that you are going to get the most objectionable person for a tenant you could possibly find, and very clearly to define not only the privileges of the tenant, but the rights of his immediate neighbours. A limitation in the case of flats, as to the time until which the staircase and hall lighting is to be maintained, and a limitation of the hours and times when parcels are to be received, and also of the hours during which a piano or any other musical instrument may be played, are eminently desirable not only for the peace of the tenants themselves, but for the peace of mind of the surveyor who manages the property.

There are, of course, other points to be considered before embarking on an extensive conversion scheme. As a whole group of Acts are concerned, it may be desirable to mention some of them:—London Building Act, Public Health Acts, orders of the L.C.C. under recent Housing Act, and last, but not least, the Rent Restriction Act.

In conclusion, there is one other class of building to which I should like to allude; I refer to the conversion of stables and outbuildings. In a few cases, particularly in the South Kensington district, the end houses of a mews have been converted into excellent small residences, and it seems there is no reason why this plan should not be adopted to a far greater extent. I have in mind a mews situated in the heart of Mayfair, which is wider than many of the Mayfair streets, and which, properly altered, would make a very charming street of small houses. It surely would not matter much if the motor-cars which are now kept in the mews were kept half a mile away, as in these days of telephones there would be very little difference in the time taken to get the car from the garage to its owner's house. The rental value of the property, if such conversion scheme were undertaken, would certainly be more than doubled, and this result would be obtained with not too great an outlay. Isolated blocks of stables and outbuild-

ings in the suburbs and in country towns can also frequently be made into quite satisfactory small residences. I would end, if I may, by again striking the warning note that the first consideration on any conversion scheme is "Is it worth while?" having regard to the cost, and, secondly, "Will it pay in the long run?" If these two questions can be answered satisfactorily, there is no doubt that a well-considered scheme is not only beneficial to the owner of the property, but to the community as a whole.

Our Illustrations.

SKETCH OF AN OLD STREET IN BRUGES.

This drawing by Mr. Frank L. Emanuel was seized by the Germans at Leipzig with several others of his pictures on view in that town at the outbreak of the Great War, but was retrieved when hostilities terminated. Bruges in the meanwhile suffered much damage at the hands of the enemy. This study was selected by the British Institute of Industrial Art for the recent exhibition of black and white work held at Knightsbridge. The subject shows a typical street view in Bruges with its picturesque Flemish buildings, with their varied skylines enhanced by the unpremeditated irregularity of the streets, which gives the place so much architectural variety and charm.

"THE MENDICANTS," A PEN STUDY OF A BLACK AND WHITE DECORATIVE PANEL.

The treatment of this subject is so direct as to be self-explanatory. The importunate insistence of the beggars is depicted in an amusing manner, and in marked contrast with the lady as she enters the church. Mr. Morris Meredith Williams lent us this drawing from the recent exhibition of the British Institute of Industrial Art held at Knightsbridge.

A VILLAGE HALL AND CLUB IN SURREY.

The buildings illustrated have been designed for a country site about twenty miles from London, to meet the needs of the local village club as well as to form a war memorial.

The plan comprises a hall for kinema and other entertainments (to accommodate 300-350 persons), with an open timber roof and end gallery. The necessary dressing-rooms and cloak-rooms, etc., are connected by a covered verandah in the clubhouse proper, with billiards, games and reading-rooms provided, and kitchen premises for the provision of light refreshments. The building is designed on the simplest and most economical lines, with local bricks and tiles; and the ground is laid out around the building to form a bowling green and gardens as indicated. The architect is Mr. Baillie Scott, of Gray's Inn Square.

CITY OF LEICESTER, COLEMAN ROAD ESTATE HOUSING SCHEME.

We illustrated some of the houses on this estate in our issue for February 18 designed by Messrs. Pick, Everard, and Keay, architects. To-day we give working drawings of some other types designed by Mr. Arthur J. Wood, A.R.I.B.A., also of Leicester. The site is situated in fine open country, within three minutes from two important tram routes. The Coleman Road, improved and widened to 110 ft., forms the main artery of the scheme. This road is later to become part of a great ring road encircling the city, and connecting up the outlying districts, so that the estate

in future years will become an integral part of the lay-out of the town. Mr. Arthur J. Wood, A.R.I.B.A., is the architect of one section, the estate being divided up into three sections, and Block No. 1, consisting of 126 houses, placed in his hands; this block is sub-divided and let to three contractors, Messrs. Bosworth and Lowe, Haydn Road, New Basford, Nottingham; Messrs. W. M. Sharp and Son, East Short Street, Leicester (provisionally); and the third, at a schedule of prices agreed upon between the local Builders' Federation and the local authorities, to four local contractors, Mr. Bert W. Cole, 129, Bridge Road, Leicester; Messrs. A. and W. Jarvis, 30, Crafton Street; Mr. John Bailey, 39½, Brougham Street; and Mr. Leonard Tyler, 12½, Gladstone Street. We illustrate to-day the type "C" houses, with north aspects, and shall give drawings of type "A" at an early date. An "L" type plan was adopted for the scheme throughout. All the rooms are as large as the minimum required by the Ministry of Health. Doors are grouped in such a way as to leave as large an area of the rooms as possible free for the comfortable use of the occupants. Passages are eliminated altogether, and the rooms are grouped so as to minimise labour entailed in management. Winders to the staircases have been avoided, and the rise and going of stairs made easy. Ample light has been provided to stairs, landings, and all rooms.

COMPETITIONS.

CHATHAM.—Sir Reginald Blomfield, R.A., is the assessor in the R.E. War Memorial at Chatham to be erected between the Crimean Arch in front of Brompton Barracks and the South African Arch in the open space facing the entrance to the R.E. Institute. A part of the memorial is to be specially commemorative of the late Lord Kitchener. The scheme to be provided for the lay-out of the surroundings and the total cost must not exceed £9,000. £200, £125, and £75 are the premiums offered. One hundred and one designs have been sent in.

STATUES, MEMORIALS, ETC.

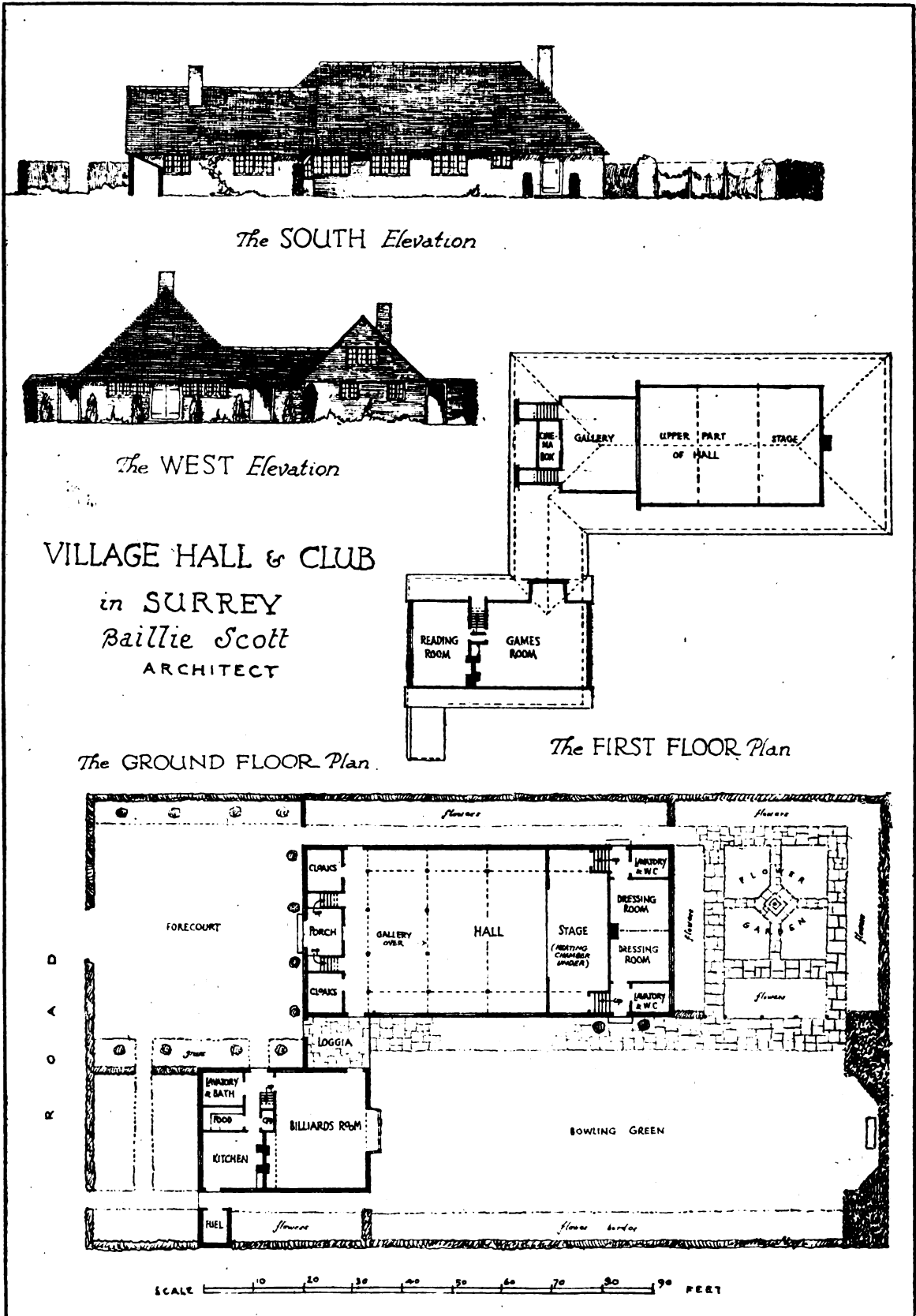
GLASGOW.—The dedication of the war memorial in connection with St. Margaret's Parish Church, Polmadie, Glasgow, took place last week. Dr. Macgregor Chalmers, the architect, unveiled the memorial, which is erected within the church, and takes the form of a cenotaph, with moulded cornice, and inscribed with the text, "Greater love hath no man than this, that a man lay down his life for his friends," and a beautiful enamel of St. Margaret's arms. A deeply recessed archway, built into the wall above the cenotaph, bears on the centre panel a large bronze cross, with an inscription, "To the glory of God and the memory of those who gave their lives in the Great War, 1914-19," and the names—nineteen in number—specially commemorated.

Mr. Peter Balmer, of Ivy Lea, Higher Lane, Fazakerley, Liverpool, contractor and road-maker, has left £39,317.

The Council of the Royal Institute of British Architects have decided to revive the conferences formerly held in provincial centres, and the first of the new series will be held in Liverpool on June 23, 24, and 25.

Beersheba municipality has decided to erect a bust of Lord Allenby in Beersheba to commemorate the first victory of the Allies in Palestine. The bust will be the work of Melnikoff, a Jerusalem sculptor, and will be in Palestinian stone.

Sir Aston Webb, P.R.A., will preside at the dinner of the Royal Academy, to be held on Friday, April 29. Invitations "to have the honour of meeting H.R.H. the Prince of Wales" have been sent out, this being the first time they have been issued in this form. The exhibition will open on Monday, May 2, and close on Saturday, August 6.



VILLAGE HALL AND CLUB TO BE BUILT IN SURREY.

Mr. BAILLIE SCOTT, Architect.

THE BUILDING NEWS, APRIL 1, 1921.



A STREET IN BRUGES (SKETCH RECOVERED FROM GERMANY).

(Exhibited at the British Institute of Industrial Art.)

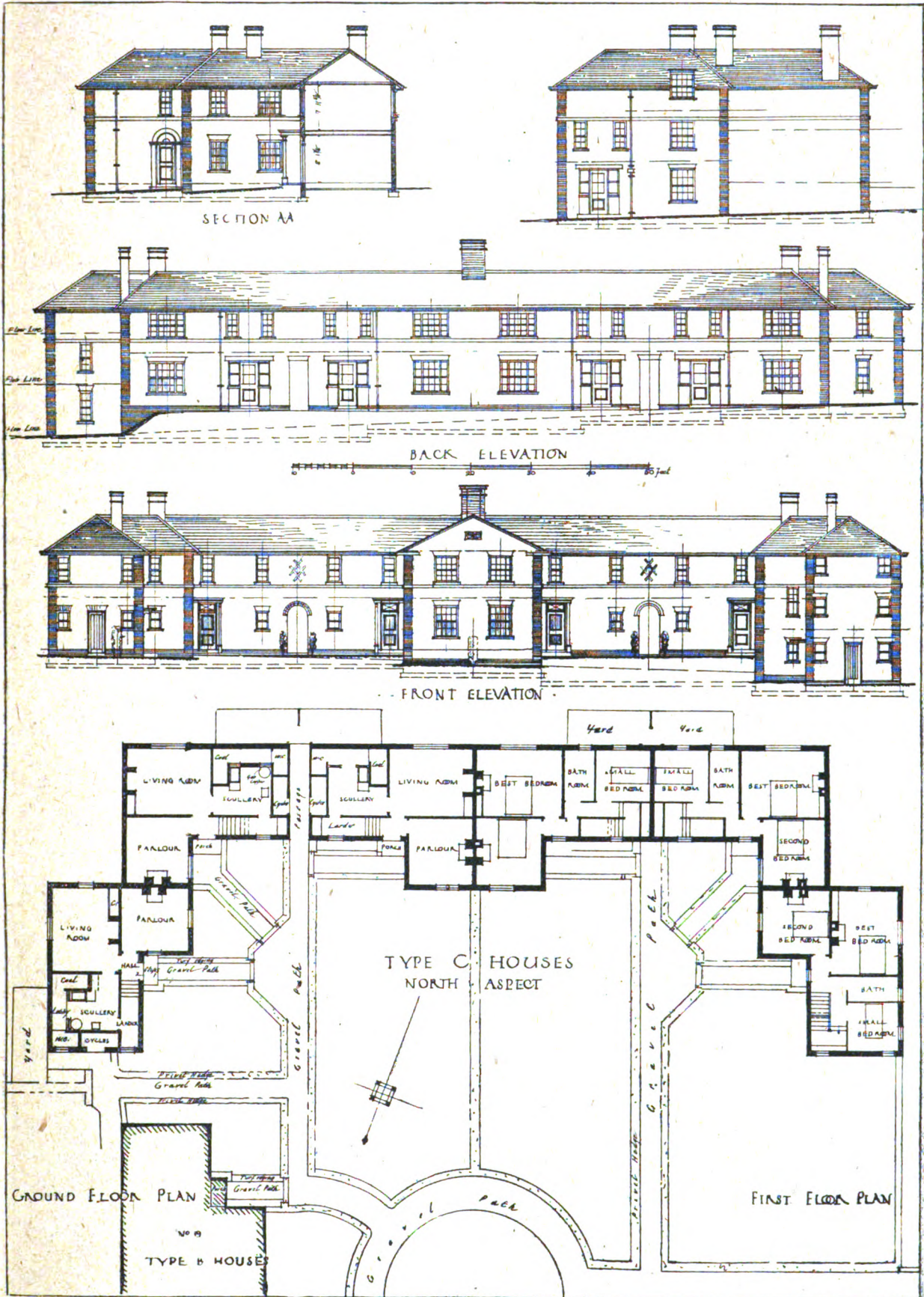
Drawn by Mr. FRANK L. EMANUEL.



"THE MENDICANTS": A PEN STUDY OF A BLACK-AND-WHITE DECORATIVE PANEL.

(Exhibited at the British Institute of Industrial Art.)

Designed and Drawn by Mr. MORRIS MEREDITH WILLIAMS.



CITY OF LEICESTER COLEMAN ROAD HOUSING ESTATE.

Mr. ARTHUR J. WOOD, A.R.I.B.A., Architect.

ARCHITECTURAL COPYRIGHT.

COUNSEL'S OPINION.

The Practice Standing Committee of the R.I.B.A. had before them recently a case in which the circumstances were as follows:—

In 1919 a firm of architects, members of the Institute, prepared plans for a house which was duly erected; they subsequently noticed another house being erected to the same design, and on inquiry found that the plan for the second house had been submitted to the local authority by another firm of architects, not members of any professional body, and that, with slight alterations, it was a tracing from their drawing.

As the Practice Committee were not aware of any decisions yet existing for guidance in this matter, it was decided to recommend the Council of the Institute to obtain counsel's opinion. This has now been received, and on the recommendation of the Committee the Council have ordered it to be published in the *Journal* of the R.I.B.A. for the general information of members.

OPINION.

An architect has copyright in:—

1. His original drawings and plans.
2. The building or structure constructed therefrom.

No registration is necessary in order to secure this copyright. Copyright may be infringed by

1. An unauthorised reproduction of the drawings and/or plans.
2. An unauthorised construction of a building which reproduces in whole or in part the original artistic character or design of the copyright drawings and/or plans and/or building or structure.

The remedies for infringement are:—

1. An injunction to restrain the erection of any further building or structure not yet commenced which shall infringe the copyright. No order will be made to restrain the completion or order the demolition of a building already commenced. (Copyright Act 1911, Sec. 9.)
2. An injunction to restrain any further reproduction of the drawings and/or plans.
3. Delivery up of all infringing drawings and/or plans.
4. Damages or an account of profits. These are alternative remedies, and a plaintiff must elect which to take. The measure of damages would be an amount equivalent to the architect's fees which the plaintiff would have been entitled to if he had been employed in connection with the building.

An account of profits would, in my opinion, entitle the plaintiff to recover the net profits earned both by the architect and the builder in connection with the erection of the infringing building. A plaintiff would probably elect to take an account of profits.

The relevant provisions of the Copyright Act, 1911, are Sections 1 (3), 2 (1), 9, 35 (1), "artistic work," "architectural work of art."

If the facts are as stated in the plaintiff's letter, and if their plans had, as I assume they had, an original artistic character or design, an action lies at their instance against the firm of architects and the builders for an injunction, delivery up of plans, and an account of profits.

The Irvine war memorial was unveiled on Saturday last. The memorial, which was designed by Mr. Balfour Paul, Edinburgh, is erected in front of the town's buildings in High Street, opposite the municipal buildings, and is intended to restore the old Mercat Cross, which was removed from an adjacent site in 1694.

The Selborne Society announces that it has succeeded in raising the amount necessary to save the Brent Valley Bird Sanctuary, which, it is stated, will form a fitting memorial to Gilbert White. The committee still require money to fence some extra land which the Ecclesiastical Commissioners are offering at a special price.

THE FIRST POST-WAR VILLAGES TO BE COMPLETED IN ENGLAND.

We are glad to learn that Bulwark and the other garden villages which have grown up round Chepstow, in the beautiful valley of the Wye, are not destined to fall into decay as a result of the Government's abandonment of its ambitious scheme of national shipyards. These charming groups of cottages show more thoroughly perhaps than any other post-war housing schemes what can be done with new methods to improve our domestic architecture for the working classes, both in regard to comfort and picturesqueness.



In Bulwark Village.

They have all recently been bought by the Monmouth Shipbuilding Company in connection with its plans for developing the shipbuilding programme at Chepstow, which originally formed part of the Government's scheme.

These model villages, clinging to the slopes of the old market town, and just outside the ancient city wall, are worth a visit by everyone interested in the problem of modern house construction. Like all the new housing schemes in the district, Bulwark has been constructed throughout with "Winget" blocks and slabs. After two years—and some of the houses have been finished longer than that—the blocks where not rendered and lime-washed have taken on a warm subdued colour not in the least like the cold grey usually associated with concrete, and look like lasting at least as long as the ancient wall which still encircles the town. The workmanship throughout is a credit to the contractors, Messrs. Henry Boot and Sons, of London and Sheffield, who also built the handsome military hospital at Chepstow, now used by the Ministry of Pensions, chiefly for the treatment of shell-shock cases. Mr. H. E. Farmer, F.R.I.B.A., now Housing Commissioner for the Birmingham area, was the chief architect for the whole scheme.

Bulwark Avenue, the main thoroughfare through the village, is 50 ft. wide. It projects at one end a splendid old oak tree round which has been erected a raised circular bank with steps leading up, and it ends in an open space commanding a wonderful view of the Wye Valley with the broad waters of the Severn in the distance. Midway a striking architectural effect is obtained at the Octagon, where the concrete block work is seen to the best advantage. All the better class of houses are arranged so that a clear view is obtained from each of the gorgeous panorama below. The rents at Bulwark range from 9s. to 25s. per week, including rates. All include good gardens, of which excellent use is being made.

OBITUARY.

We regret to record the death of Mr. Arthur Hill on February 24, having finished his last drawing only five days before. Born on June 8, 1846, he graduated at Queen's College in 1869 as Bachelor of Engineering, and went soon after to London, where he joined the office of Thomas Henry Wyatt, and went to University College, where he won the Donaldson silver medal, and in 1871 the Silver Medal of the Royal Academy for a measured drawing of the round portion of the Temple Church. After several Continental trips under the guidance of Edmund Sharpe, he commenced practice in Cork with his father Henry Hill, who died in 1887. From then till 1909, when he took his son, Mr. Henry A. Hill, into his office, he carried

out many of the most important works in the south of Ireland, and held for many years the post of Lecturer at the Queen's (now University) College, Cork. In 1917 a very severe paralytic seizure compelled his retirement from practice, but after a slow and tedious recovery he again took up his pencil, and till the end delighted in design.

We regret to record the death, which occurred suddenly at Bournemouth on the night of the 21st ult., of Mr. Thomas William Twyford, J.P., D.L., of Whitmore Hall, Newcastle-under-Lyme, in his seventy-third year. Descended from Joshua Twyford, the seventeenth-century Staffordshire potter, he was a pioneer of the sanitary earthenware industry, and was the founder and chairman of Twyford's, Limited, Hanley. Mr. Twyford was also chairman of the *Staffordshire Sentinel*. In 1916 he was High Sheriff of Staffordshire. Previous to the war he established a factory at Dusseldorf for the production of sanitary ware, in order to avoid the German import duties. In politics he was a Unionist, and the leader of the Unionist party in North Staffordshire, and in 1907 unsuccessfully contested the North-West Staffordshire constituency against the late Mr. Albert Stanley. Mr. Twyford was a lover of music, and was famous for his breed of Labrador retrievers, his dog, "Tag of Whitmore," last December winning the field trial championship, which is the Blue Riband of the retriever world. He was a collector of old Staffordshire pottery, and at Whitmore Hall had some of the finest examples of the work of pioneer craftsmen in the industry. Mr. Twyford is survived by his widow, by his only son (Mr. Harold Twyford), who is at present on a big-game shooting expedition in South Africa, and by his only daughter, Miss Dora Twyford.

Mr. Marcus Stone, R.A., died on the 24th ult. in London suddenly. He was in his eighty-first year, and for the sixty-three years since 1858 exhibited without a break at the Royal Academy. His first picture in the Royal Academy was exhibited when he was seventeen years old. Later historical and Shakespearean subjects inspired him, and "Claudio's Accusation of Hero" was adjudged to be the best dramatic painting of the year (1861) and awarded a medal by the Society for the Promotion of the Fine Arts. In 1876 he changed his subjects to the class

of love dramas which has ever since supplied him with his most successful themes. His "Il y en a Toujours un Autre" represents him in the Tate Gallery. Mr. Stone had received medals at many international exhibitions. He was a member of the Athenæum and the Arts Clubs. The funeral service was held at St. Mary Abbott's Church, Kensington, on Tuesday, followed by the cremation at Golden's Green.

PROFESSIONAL AND TRADE SOCIETIES.

INSTITUTE OF SCOTTISH ARCHITECTS.—The monthly meeting of the Council of the Institute of Scottish Architects was held at 117, George Street, Edinburgh, on the 24th ult. Mr. A. N. Paterson, president, who presided, referred to the death of Mr. J. M. Dick Peddie, and spoke of his work as an architect and of his services to the Institute as a member of Council since its foundation. It was agreed to record in the minutes their sense of the loss sustained, and send an excerpt to his widow. In regard to the protest made at a previous meeting regarding the removal of the Hilton of Cadboll stone and the letter sent to Colonel Macleod, a reply was read from Colonel Macleod expressing his appreciation of the Institute's action in the matter, and stating that it was his desire that the stone should be returned to Scotland, and further asking the Institute to inform him when they had formal intimation from the museum. Preliminary arrangements were made for a joint conference between the heads of the Central Institutions and the Institute on the matter of the education of the architect in Scotland with the view of raising the present standard and linking up, if possible, the present curricula with the University. The date of the next annual convention, which is to be held in Dundee, was fixed provisionally for June 21.

PROPOSED BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION.—For some time many architects in the three countries have felt that there should be a Berks, Bucks and Oxon Architectural Association. The Council of the Reading Society of Architects considered the matter at a recent meeting, and it was resolved to invite all architects in the three counties to attend the next general meeting of the Reading Society of Architects to discuss the formation of such an Association, which will be held on Wednesday, April 6, at 3.30 p.m., at the Chamber of Commerce Meeting Room, No. 156, Friar Street, Reading. Mr. MacAlister, the Secretary of the R.I.B.A., will be present and explain the object, and the best way of forming such an Association. The Council of the Reading Society of Architects extend a very hearty invitation to the meeting.

RENAISSANCE ARCHITECTS.—"The war has made many of us forget architectural history," said Mr. J. Hubert Worthington, of Manchester, in a lecture before the Liverpool Architectural Society on the 22nd ult., on the great San Gallo family, whose work covered the whole field of Renaissance architecture in Italy. That period—the close of the fifteenth century and the early part of the sixteenth—had been described as one of the most wonderful in the history of the mind, and the lecturer was anxious that his audience should realise what a very human thing the Renaissance was and how full of lessons it was for present-day practice. The architectural work of the period was, he said, modern in feeling, although based on classical style. The San Gallo family were great military engineers as well as architects, and took a leading part in the wars of their day. Their patrons were the famous Popes of the Renaissance—Alexander VI., Julius II., and Paul III. The lecturer referred to the amazing galaxy of geniuses in all branches of art who flourished at the time and to the comradeship which existed among them. A feature of the Renaissance was its extraordinary concentration, the careers of artists and their patrons being closely interwoven.

The death occurred during the night of the 22nd ult. of M. Jean Paul Lauriens, the well-known French artist, who, had he lived till Wednesday last, would have been 83 years of age.

PARLIAMENTARY NOTES.

HOUSING RENTS.—The Ministry of Health has issued a return of weekly rents proposed by various local authorities and assented to by him in respect of houses erected under assisted housing schemes. The rents vary from 23s. for a dwelling with parlour, living room, scullery, and four bedrooms to 4s. for a house having living room, scullery, and three bedrooms in a rural district. There is a wide variation in the rents charged for houses of similar type in different districts, but it is noted that 139 authorities propose to let houses of the "A 3" type (living room, scullery, and three bedrooms) at rents of 10s. to 11s. a week, and that for houses of the "B 3" type (parlour, living room, scullery, and three bedrooms) 151 authorities intend to charge rents of between 12s. and 13s. a week. The figures are exclusive of rates, taxes, and water charges.

LUXURY BUILDING RESTRICTIONS TO BE WITHDRAWN.—The Housing Bill which was introduced in the House of Commons on the 23rd ult. by Dr. Addison is a short measure, the main feature of which extends the payment of the housing subsidy until June, 1922. The other clauses mainly consist of the housing clauses in the Scottish Act passed last session, except that the provisions relating to restrictions on luxury buildings are withdrawn, the depression in trade now rendering this unnecessary. The clause enabling local authorities to hire houses compulsorily that have been empty for three months remains, but the rental limit for such houses is reduced to £50 per annum. With a view to further encouraging private enterprise, power is given to local authorities to make loans to garden city companies for housing purposes.

THE EX-SERVICE MEN AND THE BUILDING TRADES.—In the House of Commons last week Mr. Macnamara, the Minister of Labour, after a statement with regard to labour, wages, and unemployment, said: I am happy to say we are on the eve of finding useful productive work in another direction. Satisfactory progress has at last been made with a scheme for the absorption of ex-Service men in the building trades. After the National Federation Building Trade Operatives, to whom we first went, refused to co-operate with the Government, a scheme was put before the National Federation of Building Employers, and I have been informed that they have accepted a scheme to provide for young ex-Service men now unemployed, who have not had an opportunity, owing to the war, of learning a trade, to be trained in the skilled crafts of the building trades, which require augmentation, and, in addition, ex-Service men employed in the trade as labourers will have an opportunity of being up-graded. The total number of men we hope to enter under this scheme is 50,000. The employer will pay standard wages, according to efficiency, to the trainee, who will receive in addition 10s. a week for the first six months and 5s. a week for the next six months, these additional grants being recoverable from the Government. The National Building Trades Employers' Federation have accepted general responsibility for the success of the scheme, which will be operated through the instruments of Employers' District Associations and the Employment Exchanges. The men will be taken on for service with the employer for two years. I have no doubt this will be a great success. I want to take this final opportunity of making an appeal to the Building Trades Unions to come into the scheme for providing a career and comfort for these ex-Service men. We would be glad even now to secure the co-operation of the building trade. There are quite a number of ex-Service men who are builders' labourers, and we thought it right they should have a chance under the scheme of being up-graded so as to become full craftsmen. Major Nall (U., Hulme).—Will the Government pay the unions the £5 a head bribe? A Labour Member.—They would not have it. Mr. Macnamara.—That is the answer. (Cheers.) That scheme has gone. (Renewed cheers.)

A chapel is to be erected in Harrow parish church, designed by Sir Aston Webb, as the church's war memorial.

Our Office Table.

During the demolition of the old portion of Gresham House, Old Broad Street, on Wednesday, the ground floor collapsed under the weight of the old bricks from the walls above that level, and the whole mass fell into the basement, killing two of the workmen. After the collapse occurred it was found that three of the men employed on the demolitions were missing. While the fire brigade, the salvage corps, and the police were all working energetically in an attempt to dig out the three from beneath the débris, one of them managed to extricate himself. He was out about the head, but was able to go home after hospital treatment. The other two, when found, were dead. The body of one showed that he had received some injuries, but the other appeared to have died of suffocation. Their names were Stephen John Hockley, of Ridport Road, Upper Edmonton, and John Lawrance, of St. Peter's Road, Lower Edmonton.

The final report on the stone, brick, and clay-ware trades prepared by a sectional committee of the Sub-Committee on Building Material appointed by the Standing Committees on the Investigation of Prices and Trusts was issued last week. The report with reference to bricks has already been published. The sub-committee find that the Midland Pipe Association fixed minimum selling prices and maximum discounts and rebates to be allowed by its members. They are of the opinion that the system of increasing prices proportionately with costs of labour, fuel, and materials might have a tendency to increase prices unduly, having in view the possibility of reduced costs accruing to manufacturers in the form of improved output, methods of manufacture, etc. As the manufacture of drain-pipes was carried on in conjunction with many other commodities, the trading account figures for the many departments were not segregated, and the committee were, therefore, unable to report as to profits made in this particular branch of the industry. After discussing the flooring and roofing tiles trade, which is largely controlled by the Glazed and Floor Tile Manufacturers' Association and the National Association of Roofing Tile Manufacturers, the committee state they are of opinion that where in any trade there are associations controlling 60 per cent. or more of an industry steps should be taken to safeguard the interests of the community, and suggest that every such association should be required to obtain from its members, and at the end of each twelve-monthly period publish, a statement showing the average trading profit and the average net profit in relation to the turnover of the industry in so far that it is covered by such association; the average ratio of turnover to capital, and the average wages earned per hour of skilled, semi-skilled, and unskilled labour. Discussing the Department of Building Materials Supply, the committee find that the original prices to the Department of Building Materials Supply were agreed upon without proving by costings that the basis of prices was reasonable, and while that Department may have secured building materials at a lower rate than current in the initial stages of its operations, they are of the opinion that this does not now apply. On the other hand, it has the tendency to keep prices firm at the highest level.

All the quaint charms of the old pueblo style of architecture is preserved in concrete in a series of little cottages now under construction in Monrovia, Cal., says *Popular Mechanics*. The one-storey buildings are most remarkable for their complete use of cement, woodwork being practically eliminated. Even the roofs are concrete, and the doors are made of magnesite. The poured walls, 5 in. thick, enclose a web of waterproofing material, while the cement floors are stained in Spanish leather effect, waxed and polished. The little structures are wholly fireproof, and easy cleaning is assured by the absence of mouldings, casings, and baseboards. Enclosed courts off the kitchen and sleeping chambers, partly roofed and partly screened, provide outdoor protection and privacy.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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OUR ILLUSTRATIONS.

Housing Scheme, Camberwell, S.E., at Herne Hill and Nunhead. Being erected by direct labour under the supervision of H.M. Office of Works for the borough council. Sir Frank Baines, Director of Works. Two sheets of working draw-

ings of Types A3, B3, and B4. Plans, elevations and sections.

New Offices at Exeter for the Prudential Assurance Co., Limited. Mr. J. H. Pitt, F.S.A.R.O., F.S.I., Architect.

The Speaker's Chair, Westminster. E. Welby Pugin, Architect. A replica by Sir Frank Baines, H.M.O.W., for Ottawa Parliament House. Made by Messrs. Harry Hems and Sons.

Currente Calamo.

Probably the most welcome changes in the Cabinet, as the Times says, are that Mr. Illingworth, who cedes the Post Office to Mr. Kellaway, is not on the list at all, and that Dr. Addison departs at last from the Ministry of Health and becomes Minister without portfolio. That, we trust, will mean a diminution of his opportunities to foist upon the public fresh bureaucratic measures involving further needless expenditure. Sir Alfred Mond replaces him. The chief recommendation of this appointment is that Sir Alfred Mond is not Dr. Addison, though what his special qualifications may be to watch over the public health we do not know. Anyhow, he cannot muddle housing worse! The Earl of Crawford and Balcarres, who becomes First Commissioner of Works, is a man of parts, and may safely be trusted to give Sir Frank Baines a free hand in the beneficial exercise of the skill and energy with which he discharges the many functions of a post that seems likely to broaden its responsibilities considerably in the near future.

Notwithstanding the scare caused by the coal strike and its kindred disturbances, we are glad to know that the arrangement between the Government and the National Federation of Building Trade Employers for the employment of ex-Service men in the building trades is being steadily organised, and we hope ere long to be able to give some instructive details of the benefits accruing to the ex-Service men and to the building industry generally, more especially in regard to the prospect of much better work resulting from the infinitely better training the men will get in some of the trades, where its non-existence to-day, as a matter of fact, has been followed by the deterioration of work too evident during the last few years in some of the trades. Those who have read De Morgan's story, "Joseph Vance," know that the sketch given of the "jobbing builder" and his quondam incapables was no exaggeration; and will joyfully welcome a change for the better. We learn from

paragraphs in the daily papers which appear from time to time from "Our Labour Correspondents," that "The ballot of building trade operatives on the proposed regulation of wages by a sliding scale based on the cost of living has been completed, but the full returns will not be issued until the end of the week. It is learned unofficially that it is 'probable' the sliding scale proposal will be accepted, by both the master builders and the men." We remind readers that the regulation of wages is in no way mixed up with the Government scheme for the employment of the ex-Service men, and that acceptance of the talked-about "sliding scale" will "probably" depend on its equity as far as the master builders are concerned.

An article, written by the President of a leading firm of American engineers and contractors, quoted by the *Technical Review* from the *Engineering News Record*, embodies a discussion of tests supporting the principle that earth under load behaves as an elastic solid of low strength and low shearing value, together with a description of the application of this principle in developing a system of foundation construction. The writer publishes graphs of various tests which were made by loads applied by hydraulic jacks. The curves show distinct elastic properties, including rebound on removal of load. An important effect also observed was settlement, on re-application of the load, to a greater amount than the rebound. In some tests the pressures were measured at various distances and depths from the load, and the "bulk of pressure" plotted under a 14-in. pile is illustrated. It is considered that when pressure is removed the bulk expands, and in doing so partly breaks down, but it is formed again lower down by re-application of the load. This would explain rebound and resettlement. The above conclusion has been practically applied in several large underpinning jobs, which are briefly described. The object desired was to eliminate rebound and retain the bulk of pressure intact beneath each pile. To do this the load of jacks was maintained on the piles until the wedging beams were securely placed. In a case cited rebound was held down to 1-16 in., whereas full rebound would have been 3 in. The method has been successfully used in underpinning a 20-storey

structure, and also in a new 12-storey building where, for special reasons, the erection of superstructure and construction of foundation had to go on simultaneously.

The annual meeting of the Cremation Society of England will be held at the Society's offices, 52, New Cavendish Street (five minutes' walk from the top of Bond Street, northwards), on Wednesday, April 13, at 3 o'clock. The total number of cremations for Great Britain during 1920 was 1,796, against 2,031 in 1919, whilst those at Woking numbered 149, as compared with 181, and at Golder's Green 851, as compared with 919. The figures of 1920 are below those of 1919, which was the year of the great influenza epidemic, but they are still in advance of those for any year up to 1919. The Council report a very gratifying increase in the membership of the Society, particularly of those who have taken advantage of rule 6 and qualified as life members, whereby they become entitled to have their bodies cremated after death, without further fee, at any crematorium in Great Britain. The Council point out that the wish of a person to be cremated at death is more likely to be fulfilled if a life member. The fee for cremation having been prepaid, the survivors are thereby relieved of a portion of the funeral expenses, and the Society's certificate of membership, especially where signed by the holder, relieves executors and others of much responsibility. The Council have recently instituted a system under which a person desiring the cremation of his body but not prepared to become a life member may record his desire with the Society. In such case the Society endeavour to give effect to this request, which they register in a special book kept for the purpose without charge. We have done this ourselves, and advise all readers to do it and avoid the horrors of burial. Through the courtesy of Mr. E. P. Samson, of Pittsburg, the Council are able to publish the latest cremation statistics relating to the United States of America. From these it appears that there are 73 crematoria, and the average number of cremations in a year is 17,000 and upwards. The first crematorium opened in the United States was at Buffalo, N.Y., in 1885, which was the year in which the Woking Crematorium commenced operations.

THE BUILDING EXHIBITION, OLYMPIA, 1921.

The exhibition opens on April 12 and closes on April 26, and during that period the Architects' Welcome Club, under the management of the Royal Institute of British Architects, the Society of Architects, and the Architectural Association, will be available for the use of members and their friends. The social functions include a reception by the presidents and councils of the three bodies on April 16, and a public dinner in the Pillar Hall on April 22. There will also be exhibitions of students' work, popular public lectures, and cinema films illustrating building processes and manufacture.

Following our usual practice, based on the desire to give intending visitors some idea of the best things to look for, we give particulars of the leading exhibits. As the exhibition only lasts a fortnight it is of comparatively little use to do this when half the time has elapsed, but we shall be glad to include any other exhibits worth notice in our next two issues.

MESSRS. F. MCNEILL AND CO., LTD., will demonstrate most effectually the manifold advantages and varieties of their Lion brand roofing and roof-lining felts. Models of buildings will also be shown exemplifying McNeill's Combinite system of roofing and the many advantageous uses of Slagbestos, the most effectual material that can be specified for fireproofing, the isolation of objectionable sounds in buildings of all descriptions, and for cold storage, insulation, in the huge stores and on battleships, etc. They will also show specimens of their pure bitumen damp-proof coursing, so largely used, and which comply so completely with the specifications of the Ministry of Health for housing schemes, so generally specified by the leading architects throughout the kingdom. A noteworthy proof of the fire-resisting qualities of the firm's Slagbestos, or perfected slag wool, is afforded by a small stack of the material in the interior of which a small Bunsen burner is kept alight, with the result that the perfected slag wool is proved to be absolutely indestructible, and that the hand may be kept almost alongside the flame with perfect impunity. Another attractive little exhibit will be repeated, in which Princess Louise was much interested last year. In a small box lined with two-inch thick perfected slag wool an electric bell is placed which rings as usual, but when on the open top of the box a thick lid of the slag wool is placed the sound absolutely ceases.

MESSRS. KERNER-GREENWOOD AND CO., LTD.,
STAND 43, ROW C.

The world-wide known cement water-proofer "Pudlo" will be well in evidence, including: Apparatus for testing the resistance of cement to permeation by water under pressure. This apparatus is similar to that in use at their works for making the daily tests. A full-size section of solid concrete floor, with 1-in. waterproofed cement topping is shown. The lower edge of the concrete is immersed in water, and the perfect dryness of the upper surface is proof of the power of a topping waterproofed with "Pudlo" brand powder to keep down rising dampness. A short length of stoneware drainpipe charged with water. The joints are made with three parts of sand, one part of Portland cement, and "Pudlo" brand powder. They are cheaper and more efficient than neat cement joints. Also a good joint for iron pipes, instead of lead joints. A water tank constructed of thin porous concrete

blocks to which a ¼-in. facing of cement, waterproofed with "Pudlo" brand powder, has been applied during the process of manufacture. No one could devise a more stringent test of the waterproof properties of cement treated with this remarkable powder. There are also shown concrete tanks, dampcourses, etc., and details of the application of cement waterproofed with "Pudlo" brand powder to the cure of flooded cellars, damp walls, etc. This firm is noted for the artistic merit of their advertisements, and it was a happy thought to display some of the original sketches of advertisements by the following artists: Chas. Shepperson, R.A.; Stephen Reid, R.E.; H. M. Brock, R.I.; L. R. Squirrell, R.E.; Oswald Cunningham, James Cuthrie, and Mrs. Nesbit, as well as some remarkably clear "Commercial" lettering. This section will attract architects and architectural students, who will be interested in the technique of the drawings.

BEAVER BOARD FOR WALLS AND CEILINGS.

The Beaver Board Co., Ltd., whose exhibition last year probably many will remember for its excellence and variety, yet further bases its display on the basic idea that it is not so much the product itself the company have to sell as the profit of using Beaver board in place of lath and plaster. Therefore, in planning the stand this year, they are making a point of convincing everyone not so much as to the sterling qualities of Beaver board itself, but rather of the advantage of building better walls and ceilings in the Beaver board way. They are accordingly showing the various steps in the application. First, on the brick walls; second, on the studdings; third, on the ceiling joists; fourth, on old cracked plaster; and fifth, for partitioning. Having convinced everyone, they clinch the argument by showing the finished Beaver board room, completely finished and decorated, and demonstrating the attractiveness and permanency of Beaver board. In addition, other Beaver quality products will be shown, including Beaver board tiled, Beaver black board, Beaver green board, "Qualitone" paints, and Beaver quality roofing.

"WINGET'S" STAND, 123, ROW G.

The "Winget" Stand bears witness to the enterprise and efficiency of the firm which has supplied the machinery for big and little housing schemes on the concrete block system all over the kingdom. The "Winget" Works at Warwick—the only engineering works solely devoted to the manufacture of concrete machines—has been equipped with improved plant which, with mass production and modern methods of organisation, enables the firm to bring prices down to a minimum. Every class of builder and contractor is now provided for, not only with concrete block and slab making machines, concrete roofing tile machines, and concrete mixers, but also with the latest labour-saving appliances in the shape of wagon-loaders, elevators, and crushers. The latest novelty from the "Winget" works is a cheap handy machine called the "Westminster," which makes blocks, slabs, and bricks. The "Westminster" brings concrete construction within the reach of the smallest builder or estate owner, and can be operated by one man. Slightly smaller than the "Winget" roofing tile machine, it is fitted on a braced cast-iron stand, and, with the combined outfit, will manufacture any of the following:—Single blocks, 18 ins. × 9 ins. × 4½ ins.; single slabs of the same dimensions, 2 ins., 2½ ins., or 3 ins. thick;

half-blocks, 9 ins. × 9 ins. × 4½ ins., two at a time; half-slabs, 9 ins. × 9 ins. × 2 ins., 2½ ins., or 3 ins., two at a time; or six standard size bricks at one operation—all on one pallet. It is also supplied, if desired, with accessories for manufacturing bricks only, or blocks and slabs. The pallet employed in each case (the "P.L." pallet) is exactly the same as that used in connection with the well-known "Winget" pressure machine, which, with the standard 32-in. block-making machine, together with "Winget's" other plant, will be seen in operation on Stand 123, Row G.

IRONITE, STAND 100, ROW F.

At this stand, Messrs. S. Thornely Mott and Vines, Ltd., of 11, Old Queen Street, Westminster, S.W.1, will assuredly rivet the attention of all grappling with the grave problem of constructional costs in various materials. "Ironite" has been tested by many of our readers, to whom it is unnecessary to recapitulate its distinctive merits as a flooring, a roof covering, and walling material. To any who may visit the exhibition for the first time we may mention that there are in very successful use to-day two different kinds of "Ironite": "Ironite" brand cement for flooring and "Ironite" brand cement for waterproofing. The former is especially manufactured for being mixed dry with cement, and is used for flooring and also for waterproofing walls, etc., in combination with Portland cement in the form of an "Ironite" cement slurry or grouting, thereby saving the entire cost of rendering. "Ironite" brand cement for waterproofing differs in that it is not intended for use with Portland cement, except in rare cases, as ordinarily it is mixed only with water and applied with a brush. Another feature at this stand is the "Aero-Block" system of concrete construction, which most effectually avoids the serious defect in many systems, viz., their lack of isolating properties, and consequent dampness and non-resistance to cold and heat. The numerous cottages that have been built of Aero-Blocks have undoubtedly proved their value in this respect. Of their strength and resistance to compression there is equal assurance. Tests have proved the smaller blocks to have an average resistance of 37.32 tons per sq. ft. on the net area, and 22.78 tons per sq. ft. on the gross area, the average resistance of the larger block being 36.9 tons net and 21.16 tons gross respectively. Another welcome exhibit of very timely interest to all who seek for labour-saving devices wherewith to avoid the unconscionable demands of hand labour will be examined with close attention by contractors, builders, roadmakers, farmers, and any individual company or corporation interested in excavating and material moving, with a view to cutting down costs. The results achieved by the "Watson Dumping Wagons" and the "Marion Revolving Steam Shovels" are wonderful, especially in regard to low maintenance charges and reduction of operating costs. The telephone number at this stand is Hammersmith 2127.

WILLEDEN PAPER AND CANVAS WORKS, LTD.,
STAND 104, ROW F.

On the stand of the Willesden Paper and Canvas Works, Ltd., will be demonstrated the principal uses of Willesden paper as underlining and underslating. On one end of the stand will be shown Willesden paper underlining on boards, on the other side will be shown the Willesden paper underlining under slates or tiles. The one side shows the open rafters and the uses to which the paper is put to

ensure absolute weatherproof and water-proof results. It will be seen that even if a slate blows off, yet the roof is protected and water cannot get through. There will also be demonstrated the use of the 4-ply Willesden paper in the place of tin, sheet iron, or other substances. This, when painted, has a handsome appearance, and is guaranteed to last for very many years. A light-green paper in 2-ply and 1-ply will be shown, which can be used for panelling or for building purposes, or for stenciling. It is used as stencil plates, and is infinitely better than metal stencils. Well-known makes of Willesden canvas will be shown in various qualities, and none should fail to examine the models of tents and tenting in the company's well-known and standardised designs.

WAYGOOD-OTIS, LTD.

Messrs. Waygood-Otis, Ltd., show a full-size working passenger lift which travels from the ground floor to the gallery, and is capable of taking ten passengers at a speed of 175 ft. per minute. This lift is fitted in self-contained steel structure, which is suitably enclosed, and fitted at each level with collapsible gates of top-hung pattern. The winding machine is fixed at the side of lift at ground floor and is of their standard design. The motor is built to their own design for lift work, which is, of course, quite different from the duty which comes upon a motor for driving shafting or ordinary machinery. In actual practice it is generally found best for the working of the lift if the machine can be fixed directly overhead, but this is not suitable in the present case. A powerful automatic electric brake is mounted on the coupling between the motor and winding machine. The controller is designed to give smooth starting and stopping. This lift is arranged with special controlling apparatus, so that it can be operated from inside the car by an attendant or on the full automatic push-button system from the landings. The car is carried in steel suspension frame, which is fitted with safety apparatus arranged underneath the car, and designed to prevent the descent of same in case of failure of suspension ropes. The car body is of steel, with upper panels of glass, finished in enamel, giving a quite pleasant effect. They are also showing samples of their various sizes of electric machines, from small service lift suitable for carrying a load of 1 cwt. up to the largest machine, which will take a load of 20 cwt. at a speed of 400 ft. per minute. This large machine is being fitted for Messrs. Selfridge, Messrs. Harrods, and other important installations. Controlling apparatus and brakes suitable for operating lifts from alternating currents are also exhibited. A working model is also shown of automatic push-button lift, illustrating the methods of working a lift of this kind with safety interlocking arrangements to landing gates. Hand-power lifts are also shown, one fitted with spur gear suitable for raising loads up to 10 cwt., and others for light service worked either by hand rope or by winding gear with handle and foot brake. They are showing a number of fittings and accessories suitable for electric or hydraulic lifts mounted on a board, so that they can be easily inspected.

THE CEMENT MARKETING CO., LTD.,
STAND 110, ROW F.

The selling organisation of the Associated Portland Cement Manufacturers, Ltd., the British Portland Cement Manufacturers, Ltd., Messrs. Martin Earle and Co., Ltd., and the Wouldham Cement Co.,

t.Ld., will show samples of the companies' well-known brands of Portland cement. Cement at various stages of its manufacture. Samples of cement ground to various degrees of fineness. Neat and sand briquettes of various ages for testing tensile strain. Cubes of various ages and mixtures for testing crushing strain. Aggregates of various description, both suitable and unsuitable for mixing with Portland cement. Complete set of testing apparatus used in connection with the requirements of the revised British standard specification. Practical tests will be carried out on the stand. An hydraulic crushing machine (for cubes of 50 sq. cm. area), reading up to 50 tons, made at the A.P.C.M. engineering shops, from their own designs will be shown and other kindred apparatus. Samples of lime, whiting, superfine Keene's and Parian cements, and specimens of sacks, casks and drums. Every visitor will do well to carry away the fourth edition of "Everyday Uses of Portland Cement," a most practical handbook on the economical employment of Portland cement, on sale at the stand. Price, 7s. 6d.

MESSRS. VICKERS, LTD.

One of the best assemblies of concrete block machines will be that at the stand of Messrs. Vickers, Ltd., and at which the working of their well-known portable concrete block machine, their concrete roofing machine, and concrete partition slab machine will be displayed, showing the ease and precision with which all types of bricks, tiles, hollow or solid slabs, and partitions can be rapidly and economically produced.

THE CARRON COMPANY.

The Carron Company's world-wide reputation and extensive range of production of all that its sphere covers will show their excellent Stenhouse grate in action, together with a good selection of Carron electrical fires, cooking and heating apparatus.

JOHN TANN, LTD., ROW C., STAND 43.

At this stand will be seen the fire and burglar proof safes, doors, and other indispensable guarantees of invulnerability against loss or damage, guaranteed by the makers' patent anti-explosive and anti-blowpipe devices, which have foiled the most daring and skilful burglars.

THE CRITTALL MANUFACTURING CO., LTD.

This well-known firm, which has established the leading position as the makers of metal windows, and has recently opened new works at Witham in order to cope with the large and continuously increasing demand for them, will show the same, together with their folding bronze doors, ventilators, etc. All interested in housing schemes will not forget that their standard metal windows have been reduced lately in price by 20 per cent., and that a set for an average six-roomed house which three months ago cost £25, can be now had for £20, while the cost of wooden windows for the same house is from 10 to 20 per cent. higher. Moreover, Crittall's metal windows are absolutely watertight, deliver from 15 to 20 per cent. more light through a given opening than wooden windows, won't warp, and need no joiners to hang them.

MESSRS. BOULTON AND PAUL, LTD., ROW J.,
STAND 174,

whose standard wood-framed house was approved by the Ministry of Health, will exhibit a portion thereof, and a large selection of joinery suitable for housing schemes, together with mahogany, oak,

and other doors made for work of a superior class.

MESSRS. WM. OLIVER AND SONS, LTD., will welcome their friends in an attractive guest-room fitted throughout in English walnut, convincingly manifesting the value and beauty of our home-grown timbers. They will also show a more than usually good collection of very fine European wainscot. No firm has done so much to promote the use of seasoned hardwoods constructionally and decoratively, or more deservedly merited the support it has secured of all architects.

ROYAL INSTITUTE OF BRITISH
ARCHITECTS.

LAND SETTLEMENT AND BUILDING WORK OF THE MINISTRY OF AGRICULTURE AND FISHERIES.

A meeting of the Royal Institute of British Architects was held on Monday at No. 9, Conduit Street, London, W., the principal business being to hear a paper read by Sir Lawrence Weaver, K.B.E., F.S.A., on the land settlement and building work of the Ministry of Agriculture and Fisheries.

Previously to this the announcement was made of the decease of a Licentiate, Mr. James Thomson, of Airdrie.

The President further announced that H.R.H. the Prince of Wales had graciously accepted the nomination which the Institute had offered him to an Honorary Fellowship. (Applause.) The Prince had done this as an indication of his desire to encourage and assist the art of architecture and the Royal Institute of British Architects. The various processes and formalities enjoined by the charter had been duly complied with, and he (the President) now put the name formally to the assembly and asked them to accept it by acclamation. This was done by a hearty round of applause.

Sir Lawrence Weaver said that under the Government's Land Settlement scheme the total number of applications received between January 1, 1919, and the date when the list was closed had been 48,340. This figure related to ex-Service men only, for the settlement of civilians had been to all practical purposes suspended. Of the number stated it was expected that about 30,000 would prove to be effective, persistent applicants, and of this number some 11,000 had been satisfied up to date. Including a limited number of civilians provided with small holdings by county councils since January, 1919, the grand total up to date was 13,314. When the work was finished about 410,000 acres would have been acquired, and about 30,000 men given a stake in agriculture. The settlement of these 30,000 men did not, however, mean building 30,000 new cottages, for the term "small holding" covered very widely different things, from a bare plot of land of an acre or two and used for market garden or fruit growing, to a dairy holding of 50 acres equipped with a seven-roomed cottage, dairy and complete range of farm buildings. The small holdings hitherto supplied had ranged in capital cost from £100 to £5,000, but the maximum had lately been reduced to £2,500. The practice had been as far as possible to provide would-be small holders in the different districts with the sort of buildings they wanted and were accustomed to work in. Taking England and Wales as a whole the average holding was 13½ acres.

Coming to the building problem, the speaker said that under the provisions of the Land Settlement (Facilities) Act

the creation of a small holding for an ex-service man was a wholly uneconomic proposition. With loan money costing the Government 6½ per cent., and with cottages costing from £750 to £1,000 each and farm buildings in proportion, the annual cost to the Government of an equipped holding was largely in excess of what any small holder could afford to pay in rent and make a living. He (the speaker) estimated that £8,000,000 was the measure of the irrecoverable expenditure which would not be represented by rentals in 1926 when the small holdings undertakings of the councils would be valued; and maximum scales had been established by the Ministry in 1920, when it became obvious that the cost of building was not likely to drop, of capital cost, and of annual loss to which every scheme submitted by the county councils was required to conform before it could be approved. In the beginning of 1919 he had been asked to take in hand the supervision of the building programme of land settlement, and had found the Department without a single architect to supervise the spending by county councils on building for this purpose. His first list of superintending architects had included the names of Maxwell Ayrton, Oswald Milne, Clough Williams Ellis, John Lee, and H. P. G. Maule. (Applause.) Captain John Lee and Major Maule were now superintending architect and chief architect respectively, and he hoped to retain them until the work was over. With them there was a staff of about twenty; it was a superintending staff, the duty of designing and building falling upon the county council. Previously to the war the county architect who did the schools, police-stations, etc., had sometimes undertaken the small holdings work, though occasionally an architect in private practice had been commissioned. Some of the work had been ill done. The bulk of it had consisted of adaptation, the number of new cottages built between 1908 and the war being only about 770 for the whole of England and Wales. When the task of settling ex-service men had been presented there was some difficulty in getting the county councils to face the fact that cheap architects meant dear building; and it had been the task of himself in this connection to urge the engagement of men with proper qualifications at adequate salaries. Full opportunity had been given for the employment of architects in private practice, but the best solution of the difficulties that the problem presented had been found to lie in the appointment of architects expressly for the small holdings work, or the employment of the existing county architect whenever he had experience of farm buildings. Small holdings work was a special branch of architecture presenting very different problems from those of ordinary housing. First the farm buildings were an exceedingly important part of the task, and as each agricultural district had its own traditions and practices in the housing of stock and crops intensive local knowledge was of great value. Secondly, the proportion of alterations was abnormally high, and demanded, therefore, an abnormal amount of supervision on the spot. Thirdly, the work was so scattered over the country that the actual organisation of building represented a far larger proportion of the whole task than in any other sort of work. The best results had been obtained when there was intimate and continuous association of the county land agent and architect, both whole-time servants of the Council, working in the same building and visiting the work together. It was rare to find a man with the required knowledge of both sides

of the small holding problem and able to tackle both land and building.

Alluding to the building methods employed, the lecturer said that until lately the difficulty which everyone had experienced since 1919 of getting a firm tender had been peculiarly intense in the case of small holdings work, on account of the inaccessibility of the sites and the smallness of each contract. In many cases the only chance of getting anything started had been for the Council to set up a small works department. There was nothing either moral or immoral in such action, though from the financial point of view it might be bad in principle; the need was urgent. The work had to be done. Moreover, in the large amount of adaptation work no sort of estimate was obtainable, and real economies were effected by employing labour direct. Throughout its task the Department kept in view the need of employing local materials, and built in timber wherever local timber was available. In many cases there was a lot of standing timber on the estates; this was cut and converted and used in farm buildings, fencing, etc., and even for rough house carpentering; the men employed being in some cases the small holders themselves. When the Department had got to grips with the problem in 1919 two things had become clear. One was that old ideas as to costs must be scrapped, the other was that the best use must be made of a limited range of building materials. The policy that had been advocated of turning Army huts into houses was the most unsatisfactory and in the long run the most costly expedient that could be devised. But what permanent material was to be used—brick, timber, or ordinary concrete blocks? Stone was obviously impossible, save in rare cases. Was salvation to be sought in cob or pisé, or in metal-framed cottages, or in new sorts of fancy concrete, whether blocks or monolithic, reinforced or not? The Government's principle was that the building work required by all Government offices should be undertaken by H.M. Office of Works, but sanction had been obtained for the building branch of the Ministry of Agriculture to undertake the equipment of the farm settlement at Amesbury in Wiltshire. There 32 cottages had been built to every sort of plan and in every sort of material; five of them to the specifications of the building experts of the Department of Industrial and Scientific Research. The result of these experiments had been to show that traditional cob was hopelessly expensive unless you had a group of men who were familiar with it, though it gave an admirable house.

The lecturer illustrated this part of his remarks with lantern slides. Calling attention to the deep reveals allowed by the 18-in. walls of the cob building, he said that in some ways this was the most attractive way to build. It produced a most satisfactory cottage; he could not imagine anything warmer or pleasanter; but it was distinctly expensive. Pisé also had 18-in. walls, and the illustration he showed was interesting because it was of the first two-storied pisé cottage built in England within the memory of man. It was an exceedingly strong and admirable building, nothing like so expensive as cob, but a little bit more expensive than brick. The chalk soil at Amesbury had proved very satisfactory for pisé work. The trouble with this method of building was that people who knew nothing about the subject thought that any sort of soil would do; but sand would not do because it disintegrated, and clay would not do because it cracked.

Another illustration showed a cottage with pisé walls for the lower floor and above this weather-boarded gables, the

bedrooms being built in the roof. This the speaker said was about as expensive as building in brick. It was necessary with pisé buildings to have efficient shuttering, and, as with cob, the plan must be very plain and square. If you could not get brick or stone and had really good pisé earth, this way of building might be adopted.

Another slide showed a cottage built in chalk concrete, twelve to one. This, the audience was told, had proved thoroughly satisfactory, but not materially cheaper than brick.

A novelty devised by the Research Department was among the illustrations. It was a cottage built of a concrete of chalk and cement, twenty to one, mixed quite dry and rammed between shuttering. This, it was stated, had proved very satisfactory but no cheaper than brick.

Of timber houses, the lecturer said that if well built, they had not been found any cheaper than brick. Various proprietary methods of concrete block buildings showed no particular advantage in price; in some cases cottages had been built of concrete made *in situ*, and in other cases concrete blocks had been made at the quarry and brought to the site of the building and erected. In no case had any great saving as against building in brick been effected, and the practice of the Ministry now was to build either in timber, brick, or continuous cavity monolithic concrete walls erected with simple shuttering, its policy being dictated solely by the varying types of building labour available. So also with roofing, every sort of material was used. Thatch was preferred, but, failing this, tiles would be used, and failing tiles, slates. In Essex very small cottages were being built entirely in timber weather boarding, and roofed with thatch, at a cost of about £550.

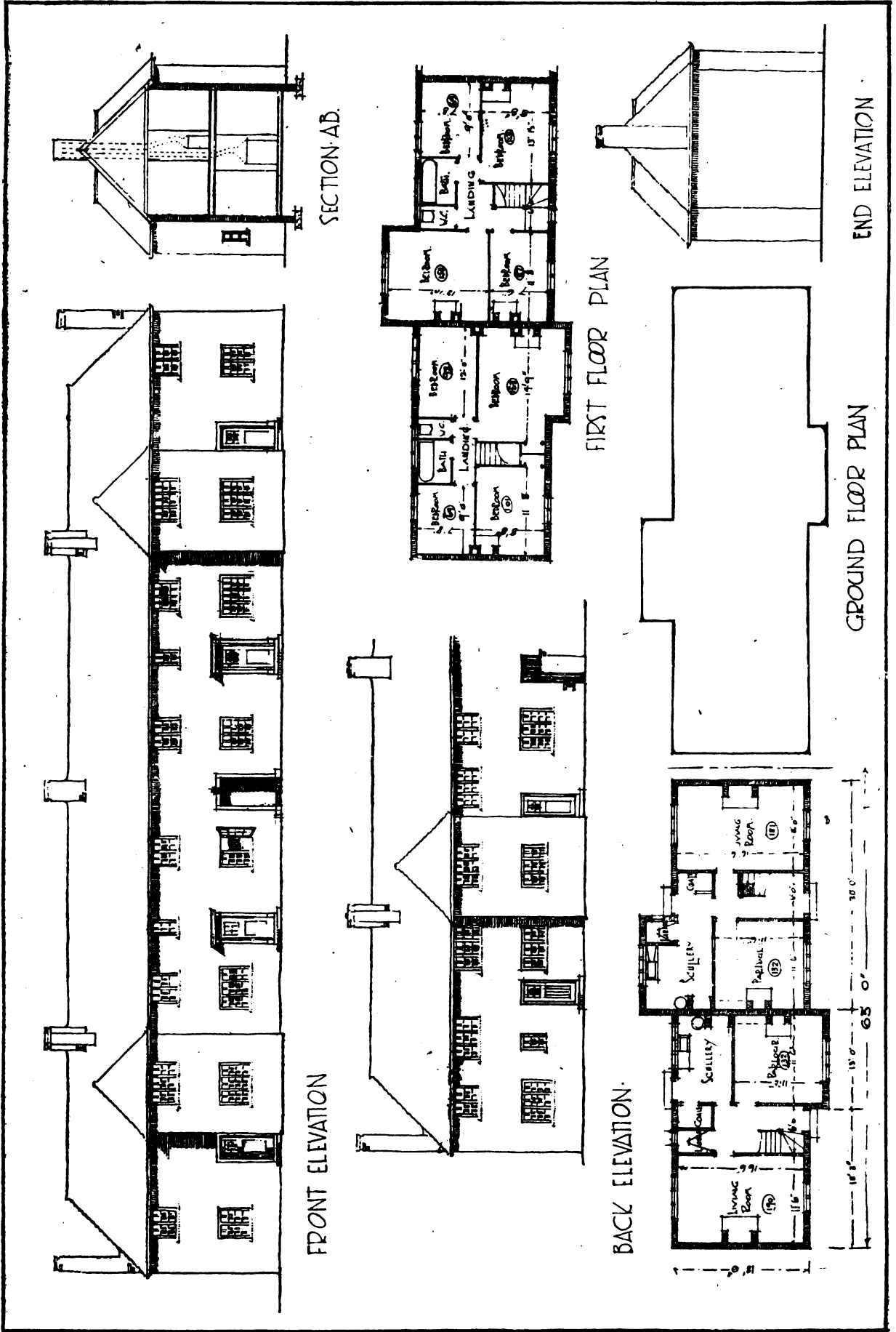
Of bathrooms, the lecturer said that the Department believed in them absolutely, although some county councils did not, and tales were told about people keeping their coals or ducks in the bath. Major Maule had got out an exceedingly good 4 ft. bath in fireclay, which, besides being useful as a bath, could be used for washing clothes. It was very much appreciated. Being only 4 ft. long it took comparatively little water, which was an advantage in rural areas where water was often short.

Speaking of the total achievement of the Department to date, the lecturer said that it seemed small when compared with the vast schemes of urban housing that were in hand. An expenditure had been sanctioned of £366,500 on the adaptation of existing buildings, and £1,636,000 on new work—a total of £2,002,500. The Ministry had begun with hopes of maintaining a very high standard of dwellings for small holders. Rising costs had rendered the carrying out of its original intentions impossible; but the level maintained had been reasonably high, and a good proportion of the work conspicuously successful having regard to economic limitations. Before the work was completed the Ministry would have to approve an expenditure between £7,000,000 and £8,000,000 as compared with the £2,187,000 on schemes already sanctioned.

The Right Hon. Lord Riddell moved a vote of thanks to the lecturer. He had been very much interested when listening to what Sir Lawrence had said about economy, and was glad to think that architects were not so much for economy usually as most other people. Perhaps they recognised more than anyone else that buildings when erected were permanent things. It was a horrible thought

(Continued on page 193.)

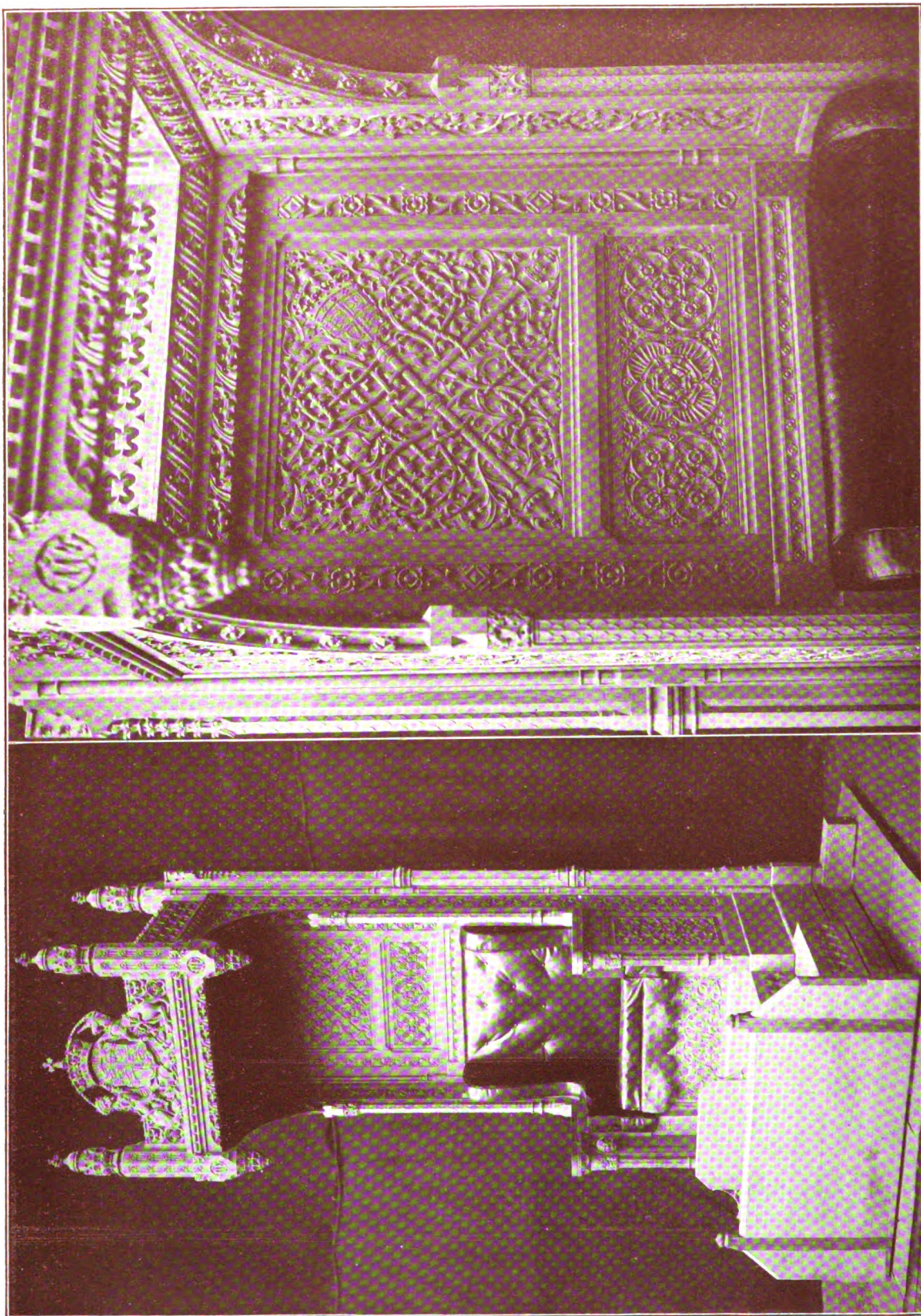
THE BUILDING NEWS, APRIL 8, 1921.



HOUSING SCHEME AT HERNE HILL, CAMBERWELL, S.E.: TYPE B4 HOUSES.

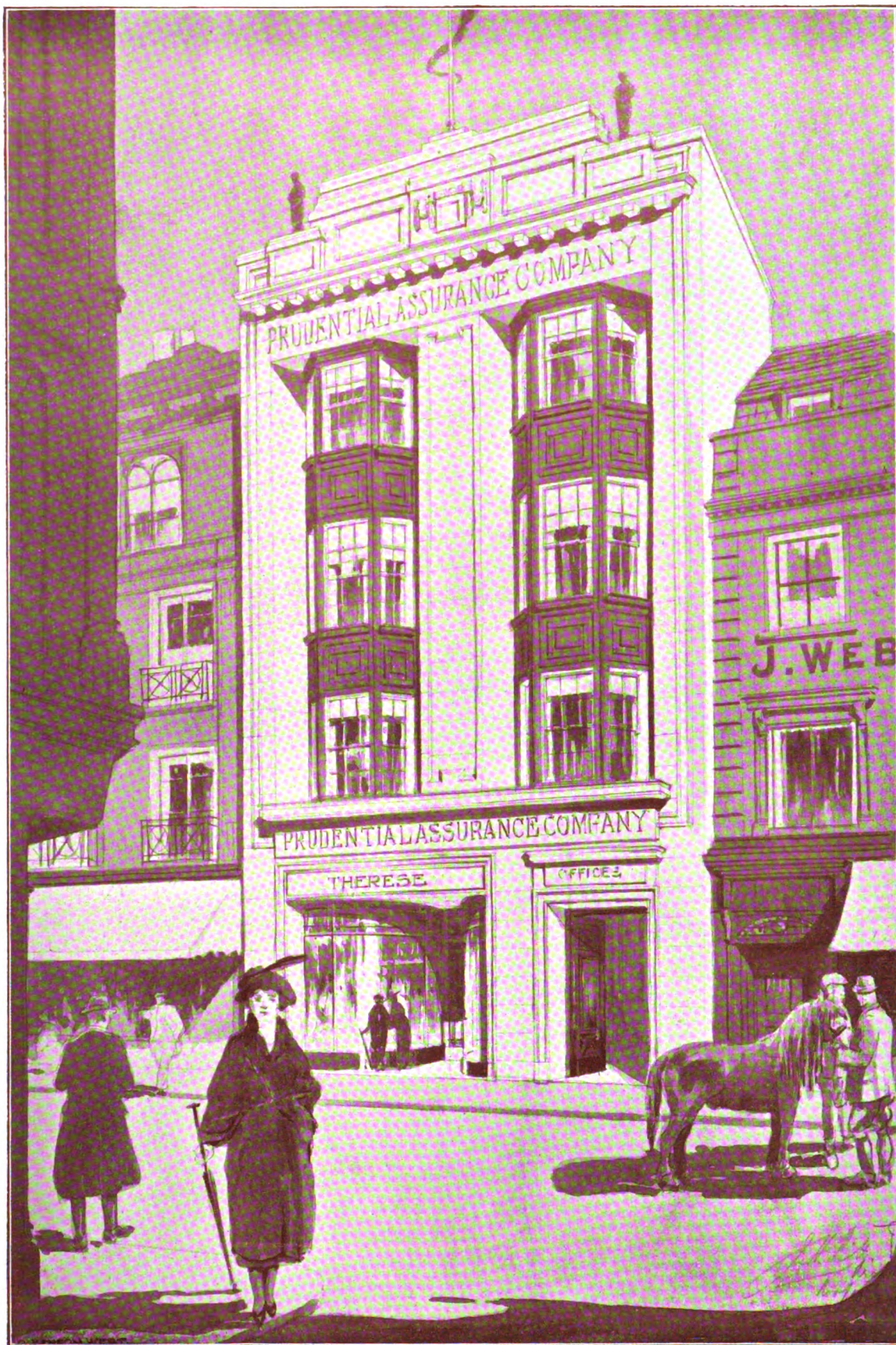
Sir FRANK BAINES, Director of Works, H.M.O.W., King Charles Street, S.W.

THE BUILDING NEWS, APRIL 8, 1921.

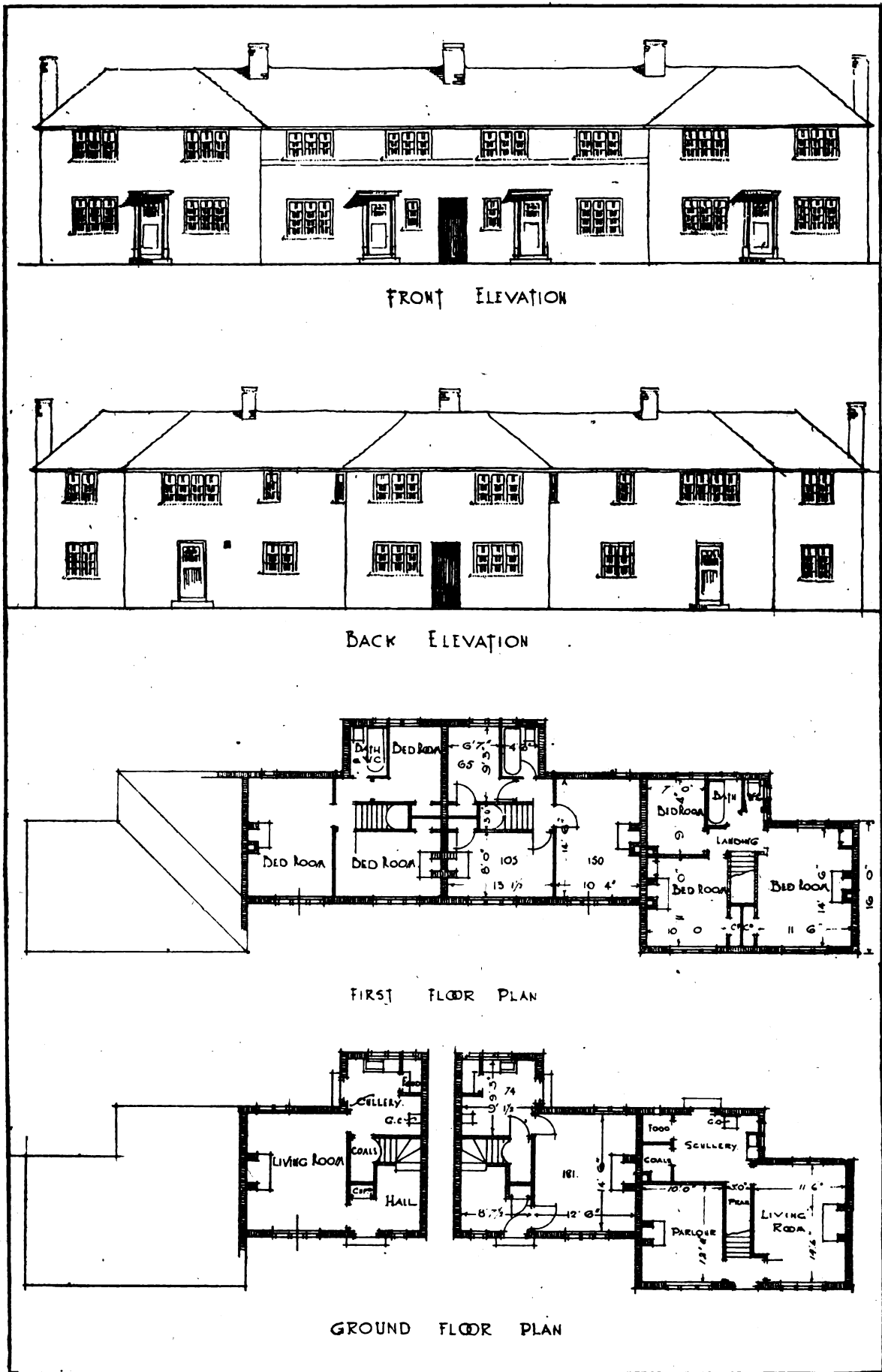


THE SPEAKER'S CHAIR, WESTMINSTER; WELBY PUGIN, Architect.
REPLICA BY SIR FRANK BAINES, H.M.O.W., FOR THE OTTAWA PARLIAMENT HOUSE.

Made by Messrs. HARRY HEMS AND SONS.



NEW OFFICES AT EXETER FOR THE PRUDENTIAL ASSURANCE CO., LTD.
Mr. J. H. PITT, F.S.Arc., F.S.I., Architect.



HOUSING SCHEME, CAMBERWELL, S.E. : HOUSES TYPE A3 AND B3.
Sir FRANK BAINES, Director of Works, H.M.O.W.

(Continued from page 184.)

that England should be rendered less beautiful for the sake of a few million pounds. He was a professional man himself and realised the feelings of professional men and professional societies; but, at the same time, the service of the public good was the main thing; and as a general rule professional men were prepared to subordinate their own feelings when they were satisfied that a certain course should be taken in the public interest. He thought there were occasions when it was essential that a public department should engage its own architects. In this case it had been found necessary to experiment as to various methods of construction, and it would have been a very difficult thing to do that if the work had been done by a number of segregated architects.

Sir Douglas Newton, K.B.E., seconded the resolution, asking how many of those present realised the powers given under the new Land Settlement Act to Sir Lawrence Weaver's Department. Under the provisions of that Act, on fourteen days' notice, a man might be turned out of the farm which he had held all his life and his father before him. Sir Lawrence had referred to the employment of architects by County Councils. This had been a hotly debated question at one time, but now it was admitted that expert advice of a qualified character was essential. Most County Councils employed an architect, many employed two, one for the educational side of their work and the other for Land Settlement. Close and whole-hearted co-operation between the professional architect and the land agents changed with the provision of the land and the most suitable buildings for working the land, gave very great advantages. Another aspect of the question was that as to the advantage of men living in villages. In Cambridgeshire, where he came from, the majority of small holders greatly preferred to live in a village, and he hoped that as much advantage would be taken of that feeling as was possible; because it enabled the development of community life. He viewed with some alarm the development of small holdings on uneconomic lines.

Sir Sydney Olivier, K.C.M.G., said that as one who had formerly been Permanent Secretary of the Board of Agriculture, it gave him very great pleasure to hear Sir Lawrence's account of the work that the Department had been able to do since the war. It had been a great relief to him to see that the work was good and sound, and in many cases quite handsome; for at one time he had feared that the country might be disfigured by cheap and nasty building. He had noticed that Sir Lawrence said he had found that on the whole the cheapest thing was brick; but he (the speaker) was not enamoured of plain brick cottages, and was pleased to see that in stone building counties, building continued to be in stone. He lived in North Oxfordshire, and would be sorry to see the stone which was used there superseded by brick.

Mr. Wm. Patrick Black said he had been in a number of Colonies, the last being South Africa, and had viewed the methods by which in those Colonies settlement was made on the land. The illustrations given on this occasion had afforded him very great pleasure, because they showed a substantial class of building, such as in Canada, Australia, or the other Colonies, was not attempted.

The President said there was one point on which he would like to say a word, and that was the carrying out of work by Government Departments which it might justly be considered could be done by private enterprise. Sir Lawrence had

said that he saw nothing moral or immoral in such a practice, but it might at least be considered to be a matter of very doubtful morality to tax His Majesty's subjects to keep up a Department which deprived them of their own means of livelihood. This remark was as to the question of policy; it did not apply to the official architects, who were in many instances members of the Institute and entitled to all its privileges, protection, and affectionate support, provided always they themselves walked within the clearly laid down lines of professional morality.

Sir Lawrence Weaver briefly replied to some of the points raised.

Our Illustrations.

THE SPEAKER'S CHAIR, WESTMINSTER: A REPLICA FOR THE OTTAWA PARLIAMENT HOUSE.

The United Kingdom Branch of the Empire Parliamentary Association has had a replica made of this famous chair, occupied by the Speaker in the British House of Commons, and this facsimile is a gift of Canada. Welby Pugin, the celebrated architect (who so materially assisted Sir Charles Barry in detailing and furnishing the Houses of Parliament), designed it, and no richer or more handsome example of Victorian cabinet work and wood-carving could be named. The chair in every way harmonises with the interior of the building, and ranks as a fine typical piece of the Gothic Revival, in which Pugin was the foremost pioneer. The material is English oak, and the total height measures 13 ft. 6 ins. The copy of this chair, which we illustrate by a pair of photographs to-day, has just been carried out under the direction of Sir Frank Baines, of H.M. Office of Works, by Messrs. Harry Hems and Sons, of Exeter, who have most carefully reproduced the original in every particular. The Royal Arms surmounting the canopy are carved out of an old oak timber taken from the historic fourteenth-century roof of Westminster Hall. The chair will be presented to the Ottawa Parliamentary Buildings. On the right-hand main upright standard of the body of the chair the following inscription occupies a ribbon scroll, intertwined with foliage:—"MANUS JUSTA NARDUS MEMOR ET FIDELIS MENS CONSCIA RECTI," and on the reverse jamb "NEC PRECE NEC PRETIO LIBERTAS IN LEGIBUS HOSTIS HONORI INVIDIA LAUS DEO." (*The hand that deals justly is a sweet smelling ointment. A heedful and faithful mind is conscious of righteousness. —(Justice is influenced) neither by entreaties nor gifts. Liberty lies in the laws. Envy is the enemy of honour. Praise be to God.*) The back elevation contains linen-fold panels of delicate patterns with the monogram "V.R." and the wreath and encircling cords introduced as enrichments.

NEW OFFICES FOR THE PRUDENTIAL ASSURANCE CO., EXETER.

This new building is to be shortly erected at 48 and 49, High Street, Exeter, for the Prudential Assurance Co., Ltd., from the designs of Mr. J. H. Pitt, F.S.Arc., F.S.I., the company's surveyor. The front, which has been designed on very severe lines, is to be of stone, with cast-iron cant bays on the upper floors between the piers. The entrance not only provides access by stair and lift to the suites of offices on the three upper floors, each of about 1,200 ft. super, but forms also the entrance from the High Street to the company's district office, situated at

the rear of the site fronting Cathedral Yard. A shop, with a basement entirely separate from the offices, is also arranged for. The building is to be of fireproof construction, with steel and concrete floors and roof. Central heating is to be installed, and the internal finishings and decorative treatment have been carefully studied with a view to the use of the offices by professional men.

HOUSING SCHEME AT CAMBERWELL, LONDON, S.E.

Sir Frank Baines, the director of works, has lent us these working drawings, and the following particulars of the examples illustrated have been received: The Camberwell housing scheme, which is being carried out by H.M. Office of Works for the Borough Council by direct labour, comprises three sites, namely, the Casino House site at the corner of Herne Hill and Red Post Hill and the Hawkeslade Road and Lanbury Road sites in the Nunhead district. The most important of these, the Casino House site, is hilly and well wooded, and in laying out the scheme the trees have been preserved wherever possible. A very beautiful area has been allotted to recreation at the lower end of the site. The houses, which average 12 to the acre, number 154 on the Casino site, comprising 30 of Type A, 100 of Type B, and 24 flats. On the Hawkeslade Road site there are 84 dwellings, namely, 24 of Type A, 52 of Type B, and 8 flats; while at Lanbury Road there are 52 houses, 16 of Type A and 36 of Type B. The total number of dwellings in the scheme is, therefore, 290. The illustrations show Types A3, B3 and B4. The end houses of Types A3 and B3 give 907 sq. ft. and the intermediate houses 785 sq. ft. area. The Type B4 end houses have an area of 1,034 sq. ft. and the intermediate ones 1,088 sq. ft. each. The Casino houses are built of Fletton bricks, rough-cast on the exterior, with tiled roof at a 45-deg. pitch, and with casement windows. On the other sites stock bricks are used throughout for the walls, the roofs being slated at a 30-deg. pitch, and sash windows are employed.

Mr. P. F. Huddleston, Finsbury Pavement, E.C., and Bedford, auctioneer and valuer, has left £38,876.

The admission fees to the Tate Gallery on Tuesdays and Wednesdays have been increased from last Tuesday from sixpence to one shilling.

Mr. A. A. Ospaluk, the architect, who has acquired the Westminster Palace Hotel, says the purchase price was in the neighbourhood of £500,000. To this a large sum will be added to cover the cost of reconstruction.

A Commission has been appointed to consider the best means of preserving the ancient building of Jerusalem. The restoration of the Damascus Gate has been completed at the expense of the Pro-Jerusalem Society. The restoration of the Roman masonry in the walls of the Citadel (Tower of David) is nearing completion.

The Times of April 1 gives a photograph of a piece of black belting sold to an Englishwoman in Cologne on which is figured the sinking of the Lusitania by U.21. Possibly we shall find them here soon in the drapers' sales. Some "Englishwomen" do not seem particular as to the origin of some of the bargains they scramble for!

At last week's conference of members of the Spalding Building Trades Employers' Federation and of the Building Operatives' Union, the local operatives declined to entertain the scheme of dilution as put forward by the Government and refused to work an extra hour per day (nine hours instead of eight) as proposed by the employers, with a view to speeding up housing. It was stated that 90 per cent. of the men would have agreed to the extra hour but for the instructions of their union, and in view of the scarcity of bricklayers and joiners in the district this would have helped the housing schemes materially.

Building Intelligence.

CARDIFF.—An immediate start will be made of the work of erecting the Edward Nicholl Homes for Babies at Penylan, Cardiff, the foundation of which was made possible by the recent munificent gift of £20,000 by Sir Edward Nicholl, M.P. A meeting of the committee was held at the Lord Mayor's parlour, City Hall, last Wednesday week, when the following remarkably close tenders were opened and considered:—

	£
Messrs. William Thomas and Co., Cardiff	28,560
Messrs. D. Davies and Sons, Cardiff	23,990
Messrs. Tucker Bros., Cardiff	22,650
Messrs. John Jenkins (Ltd.), Newport	22,625
Messrs. Henry Billings and Sons, Swansea	22,600
Mr. A. W. Julian, Pontypridd	22,548
Messrs. Knox and Wells, Cardiff	22,539
Mr. W. T. Morgan, Cardiff	22,449
Messrs. Williams and Hoare, Cardiff	22,199
Messrs. W. Symonds and Sons (Ltd.), Cardiff	22,000
Mr. E. J. Thomas, Cardiff	21,944

The tender of Mr. E. J. Thomas, of Cardiff, was accepted, and the work commenced at once. The building will be erected on the plans of Messrs. Ivor Jones and Percy Thomas, A.A., A.R.I.B.A., of 6 and 7, St. John's Square, who were the architects of the Technical College, Cathays Park, the Louis Café, Hallinan's Hotel, and many other well-known buildings in Cardiff. The site is an ideal one. The building will stand in its own grounds, and will command an extensive view of the Bristol Channel. It is designed to house 65 babies, divided into three classes: Up to 1½ years, 1½ years to 2½ years, and 2½ years up to 5 years. The homes have been planned in the form of the letter T, and the whole of the rooms occupied by the children are arranged on the top of the T facing south, and the staff of 23 are accommodated in the north wing. The younger babies, about seventeen in number, will be accommodated on the ground floor, which will contain a nursery with a babies' bath and dressing-room adjoining. Lavatories are provided at opposite ends of the building for the older children, who will have two day rooms on the ground floor. Wide and easy fireproof staircases at each end of the building allow for ample exits in case of fire. The staff wing contains an entrance-hall, matron's room, a large staffroom, kitchen, scullery, larders, storerooms, etc., and there is a special milk-room with external access. The building will be heated by the low-pressure hot water system, in conjunction with the ventilating scheme. The first floor contains three large dormitories, each accommodating sixteen cots, a large bathroom with three baths, cupboards, and separate w.c.'s at each end of the building. The staff wing contains the matron's bedroom, six bedrooms for nurses, night nurses' room, isolation room, bathrooms, w.c.'s, boxrooms, linen-rooms, etc. The second floor contains seven bedrooms for the staff, bathrooms, and lavatories. The two main staircases run right up to this floor. The elevations have been treated in a broad and simple way, after the manner of the French convent schools. A high-pitched roof has been adopted, which, while giving a distinctive character to the building, avoids the institute look and is quite suitable for the accommodation of the small bedrooms required for the staff.

The City of Birmingham Museum and Art Gallery have issued an excellent set of post-cards of the chief exhibits in the gallery.

Employers in the general sawmills industry in the Birmingham area have given notice of their intention under Clause 3 of the wage agreement of May, 1920., to invite the representatives of the workpeople to a conference on the wages question. The clause referred to provides that an alteration in the terms shall take place only by the giving of one month's notice on either side. The proposal affects 1,000 workpeople in Birmingham, Walsall, Oldbury, West Bromwich, and Smethwick.

Our Office Table.

The returns to the Registrar-General for 1920 show that there was a great increase in the number of deaths from cancer last year. There were 1,533 more deaths in 1920 than in 1919, an increase of 926 of males and 607 of females. Among males the greatest increase was at the age of 45—400; and 261 more males died at the age of 41, 118 at the age of 40, and 62 at the age of 39. Among females the largest increase was at the age of 40, the figure being 187; and there was an increase of 179 at the age of 43, and 163 at the age of 41. As compared with 1919, an increase in the death rate among males is shown at the age of 45 of 13, at 41 of five, and at 40 of three, while a decrease of two was marked at the age of 39 and three at 44. Among females the increase in the rate at the age of 40 was eleven, at 41 and 43 six, at 44 two, and at 45 one, while there was a decrease of three at 42.

The decreased cost of building materials, and an offer by the men employed by the contractor for the Chertsey housing scheme to do more work, has been followed by fresh estimates. The Urban Council originally accepted a tender of £1,100 per house for fifty houses, but ensuing modifications brought this down to £1,061. This figure the Ministry of Health refused to sanction, necessitating a fresh start after over £2,000 had been incurred in architects' fees. The contractors last week wrote to the Council that as their workmen had agreed to increase their output by 10 per cent., and as building materials were cheaper than formerly, they were prepared to reduce their tender by 7½ per cent. This might, they thought, facilitate the houses being immediately put in hand. The Council have sent the letter to the Housing Commissioners.

At Edinburgh, on the 31st ult., Lord Ashmore issued judgment in the action by the Air Council against F. D. Cowieson and Co., contractors, of Glasgow, for £49,908 alleged to have been overpaid to defendants in respect of the construction of Renfrew Aerodrome. The case lasted twenty-six days. His Lordship found that, allowing for fair measurement and for fair prices, Messrs. Cowieson had not been overpaid to any extent whatever. Plaintiffs' allegations of waste and want of sufficient oversight failed in regard to the use of fictitious names in payment of extra or "dirty" money. His Lordship held that dishonest appropriation of money did take place on the part of some of Cowieson's employees, and assessed the sum at £1,000, for which he gave a decree.

Mr. C. T. Alexander, the City of Liverpool building surveyor, retired on superannuation on March 31 from the service of the corporation, and a cordial leave-taking took place between him and the Health Committee. The chairman (Alderman Muirhead) and several members of the committee bore testimony to Mr. Alexander's high-minded and efficient discharge of his duties, and a resolution was passed placing on record the committee's appreciation of his work and best wishes for his future. The staff of the department also expressed their good wishes for Mr. Alexander by presenting him with a handsome silver cigarette case and matchbox. Mr. Alexander, who is going to reside in the South of England, has spent close on thirty-five years in the municipal service, and has been building surveyor of Liverpool since 1906.

Sham Castle, on Bathwick Hill, outside the City of Bath, which has just been sold, is a typical product of the middle of the 18th century. It was built by Ralph Allen to improve the view from the windows of his town house. It has been described as a "genuine sham," and is one of the chief landmarks in Somerset. Allen was a pioneer of our present-day letter postage system, and made a fortune out of the cross posts which he established. He erected Sham Castle in 1760, and four years later the architect Wood built for him the house known as Prior Park, on Coombe Hill, Bath.

An interesting meeting has just been held at the works of Messrs. Waygood-Otis, Ltd., Falmouth Road, London, to wind up the affairs of a fund which was started in the early days of the war to provide assistance for employees and their families who might suffer in connection with the war. The money was raised by collections in the offices and works, and reached the total sum of £1,014, which, with interest on investments, allowed of a distribution of £1,097 13s. This money was expended in giving assistance to men who were wounded and to the widows and orphans of those who fell in the war. The expenses of administration amounted to only £2 1s. 4d. for postage, the whole of the work having been done voluntarily by the Committee who carried out this very successful enterprise.

The British Portland Cement Manufacturers, Ltd., will hold their tenth ordinary general meeting at River Plate House, Finsbury Circus, London, E.C.2, on Tuesday, April 12, 1921, at 12 o'clock noon. The directors' report states that the balance brought forward from 1919 was £136,264 15s. 4d. The revenue for the period ending December 31, 1920, after providing for taxation, amounted to £558,839 16s., against which has been charged directors' and trustees' fees, £4,205 6s.; debenture stock interest, £57,940 14s.; debenture stock redemption account, £18,287 6s. 4d.; general depreciation reserve account, £150,000; barge and rolling stock depreciation account, £5,000—total, 235,433 6s. 4d.; leaving a balance of £323,406 9s. 8d., which, including the balance forward, makes £459,671 5s. The interim dividend on the preference shares to June 30, 1920, paid September 30, 1920, absorbed £35,400, and an interim dividend on the ordinary shares at 7½ per cent., paid November 30, 1920, absorbed £103,696 13s., leaving £320,574 12s. From this has to be deducted the final dividend on the preference shares to December 31, 1920, paid March 31, 1921, amounting to £35,400, making a total preference dividend for the year of £70,800. The directors now recommend the payment of a final dividend of 7½ per cent. less income tax on the ordinary shares (making an ordinary dividend of 15 per cent. for the year), amounting to £103,696 13s., and making £139,096 13s., leaving to be carried forward £181,477 19s.

"Municipal Engineering," by H. Percy Boulnois (London: Sir Isaac Pitman and Sons, Ltd., 2s. 6d.), is a useful introductory by a reliable authority for all aspiring to discharge the increasingly onerous and paramount responsibilities attached more and more to the discharge thereof by the men qualified—there are not a few yet who are not, thanks to the failure of the people who select them—to realise its importance in connection with the health and amenities of our cities and rural districts. Not only of value to the student and the men who are in some cases doing their duty in the face of difficulties due to ignorance and nepotism, it should be read with profit by all citizens, and especially by those who, as members of local councils, should learn more and more to realise their duty to support and encourage the men who deserve the best encouragement in their often thankless task of securing efficient sanitation and the amenities of our towns and villages at reasonable cost to their inhabitants.

A sessional meeting of the members of the Auctioneers and Estate Agents' Institute of the United Kingdom will be held at 34, Russell Square, W.C.1, to-day, at 7.45 p.m., when Captain Montague Evans, M.C. (Fellow), will deliver a paper entitled "Building-land Values."

The next ordinary general meeting of the Surveyors' Institution will be held in the Lecture Hall of the Institution on Monday, April 11, 1921, when a paper will be read, entitled "The Forestry Directorate in France," by Mr. Leslie S. Wood (Fellow). The chair will be taken at eight o'clock.

The lock-out in the Bath building trade has ended. At a general conference between the Emergency Committee of the Operatives' District Council and the Bath Master Builders' Committee both sides referred the dispute as to the legality of the "country money" award to the Area Council to decide, and work was resumed last Monday.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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Currente Calamo.

At the Building Exhibition which was opened at Olympia on Tuesday Mr. J. W. Simpson, the President of the R.I.B.A., advocated that a man should be paid for the work he did, not for the time he took to do it. That grain of good counsel, worth millions of bushels of the worthless chaff that has been scattered by the windbags during the past fortnight, will one of these days yield the only possible crop of wisdom that will save us from ruin. The slackers of all sorts will, of course, never see it. From the politician who wearies his fellows with miles of verbiage; in order to conceal his own ignorance or to delay the inevitable revolt against his treason or stupidity, to the municipal scavenger now on the streets of London playing ca' canny at four pounds a week, the cardinal commandment in their duty towards their neighbours is to spin the job out by the day and hour and extort the biggest time-wage that can be piled up on the ever-increasing prohibitory prices of everything, while meanwhile the quality of everything produced sinks to worthlessness.

In a letter to the *Times* of Wednesday, Mr. Eden Phillpotts opportunely reminds us of the sources whence spring the immense power held by the elected leaders of Labour. From where comes, for example, the authority which permits a Mr. Cramp to determine that hundreds of thousands of his fellow men shall "have a shot" at revolution, though their own reason and common sense strenuously oppose him? The cause is to be found, as Mr. Harold Cox has indicated, in the Trade Disputes Act of 1906, a Liberal measure under which any trade union can practically abolish freedom of action for all its members and create a Soviet. The result is the present grotesque situation, wherein a handful of men—many declared revolutionists—suspend the industrial life and squander the means of a nation. It is not Labour that holds a pistol to the head of the people; it is not two and a-half millions who seek to confound fifty millions; it is the Trade Disputes Act, which permits a few thousand men to embroil many hundreds of thousands and dictate an ex-

treme and irresponsible policy to responsible masses, who, if they were permitted to vote upon it, would certainly declare for constitutional action. The men who fought conscription are themselves the instruments of a tyrannous and unscrupulous conscription; and until Labour, as a whole, is set free, the majority of workers will be dragged at the heels of leaders whose policy, since 1906, has radically changed, who are now largely Bolshevik at heart, and whose moderate and more statesman like units are in a growing minority and called to "get on or get under."

The 155th exhibition of the Royal Society of British Artists, Suffolk Street, is not a very good one. About the best thing shown is the single contribution by the President, Mr. Solomon J. Solomon, R.A., "Eros" (126), but it is not his best work. Mr. Hely Smith, the Treasurer, is well placed with "The Upper Mall, Hammersmith" (11), and his "A Breaking Wave" (128) is good. Mr. Alex. Maclean, the Vice-President, scores with "The Daylight Lingers, as Tho' to Greet the Moon" (122), and, if with less reason, with "Over the Moonlit Sea" (103). Mr. Charles Ince's best of his four, we think, is his attractively bright water-colour "A Fen Ferry Hovel" (173). Miss Mabel Bruce Low's "Winter" (174) is small, but will not be overlooked. Two portraits of "Mr. and Mrs. Ernest Fowler" (107 and 109), by Mr. J. J. Alsop, deserve mention. Mr. John Muirhead's "Market Day, King's Lynn" (134), is perhaps the best of his four. Mr. W. E. Riley, F.R.I.B.A., sends "The Village Cross, Corfe" (150), excellently rendered, and "The Shelter of Beer Cliff" (235). There are a few good architectural subjects, including the three interiors of St. Paul's (190, 238, 241), by Mr. J. Frederick Wilson, A.R.I.B.A.; "Salisbury Cathedral" (244), by Mr. W. T. M. Hawksworth; the "South Porch, Boston Stump, Lincoln" (289), by Mr. Charles Ince, Captain Borlase Smart's "Jordan's Barn, Buckinghamshire" (302), and a small but very good pencil drawing of some "Romanesque Caps, Villefranche-le-Conflent, Pyrenees" (163). Mr. F. Hamilton Jackson has also a well-drawn, if somewhat sad, subject in the South-East Gallery, "Hail and Farewell" (143). On the whole the water-colours are the best things shown this year. The average of

the oils is low, and there are several which prompt wonder however they got there.

The difficulties which nowadays confront the valuer in his dealings with building land were made very clear by Captain Montagu Evans, M.C., in the paper on "Building Land Values" which he read last Friday evening before the Auctioneers' and Estate Agents' Institute. The first, of course, is, little building development is going on, and, as Captain Evans said, very little can happen in that direction until we get rid of some of the stupid legislation of recent years. Captain Evans, speaking about the system of building leases, is doubtful if it will survive, save in the immediate vicinity of town, while even in urban districts the present state of the ground rent market is not encouraging. In large towns the leasehold system has its obvious value, since it relieves the building owner from a capital expenditure which would often heavily strain his resources. Money for financing building operations can only be obtained to a limited extent, and then only upon terms which weigh heavily upon the builder—still a further discouragement to building. The almost total absence of funds for mortgage purposes, either by way of private loan or building society advance, has proved perhaps one of the most deterrent factors to private enterprise in building. Until the Government, instead of discouraging banks to advance money, urge and help them to do so, especially to building societies, private enterprise in building will continue stagnant. Without the help of the banks, building societies can only advance out of income, and this means restricting to a minimum the number of purchasers for private occupation, and without purchasers a builder is lost. Of the pernicious effect on general building of the Government's housing policy the signs are but too visible. As Captain Evans said, to put local authorities in the position of being able to undersell a private builder whose building operations may adjoin one of their schemes, and, worse still, to allow the local authorities to build a similar class of house and let it, whereas the private builder can only sell if he is to succeed, is a procedure that has, to all intents and purposes, killed private enterprise in building. It is simply ridiculous to say that it does not matter who builds, so long as building actually proceeds. The value

of building land is seriously affected when only one purchaser is in the market, and this, as Captain Evans said, is, in point of fact, the position.

At the Bradford City Council on Tuesday another discussion took place with regard to the projected piece of statuary by Mr. Derwent Wood, symbolising Humanity overcoming War. The model submitted by Mr. Derwent Wood represented two female figures, the upper one with her right hand strangling the prone figure. The Art Galleries Committee decided to ask the sculptor to submit an alternative design, but on receiving this the Committee reaffirmed its choice of the original model. At the meeting on Tuesday it was moved that the Committee's decision be rejected. Mr. M. F. Titterton, in moving the amendment, said the Committee wanted a piece of statuary to depict the abolition of war and the spirit of the new age, but it entirely failed to do so. Mr. T. W. Stamford described the symbolism as crude and primitive and perpetuating the idea that peace would be established by the exercise of force. Other speakers contended that the idea was too complex to be expressed in stone, that the symbolism was pagan, and that the idea of one woman strangling another who typified war was repulsive. It was suggested that the statuary ought to be renamed "The Pugnacious Pacifist" or "The Virtuous Virago." On a vote being taken the amendment was defeated by 26 votes to 25, and the Committee's acceptance of the model therefore stands. That, if only by one vote, Bradford is saved from being made to look ridiculous is, perhaps, as much as it can be congratulated about!

There seems likely to be a considerable expansion in the trade relations of Italy and this country, especially in some of the specialities of the northern Italian factories. One speciality, the fruit of a Genoese company, the "Eternit" Pietra Artificiale Società Anonima, whose factory in Italy is one of the largest, has opened a branch office here at 27, Old Jewry, E.C.2, more especially for the supply of "Italit" corrugated asbestos cement sheets, which are likely, we think, to find favour for permanent pitch roofs in all climates, and especially for buildings of large area. They are unaffected by fluctuations of temperature, sea air, or such acid fumes as are common in manufacturing centres. The sheets are less expensive than galvanised corrugated iron sheets, and they prevent condensation. The inherent tenacity of the material coupled with the large pitch and depth of corrugation permit of their resisting exceptionally high transverse stress, and of their being fixed at a low pitch, thus restricting the cost of the roof covering. The sheets weigh only 48 lbs., and are therefore easily carried and cheaply fixed, while, by the use of special bolts, the fixing on steel-framed roofs is carried out without any internal scaffolding. Thanks to the unique and ingenious method of manufacture, the corrugations fit closely into

one another, thus the crated sheets resist shocks as a homogeneous block, and hence damage and breakage in transit are eliminated. The co-efficient of expansion of "Italit" is .000242 for 212° Fahr., or about the same as steel. The prices are very moderate, and the material is likely to be extensively used by all desirous of securing rapid, durable, and weather-proof construction, economical initial cost and maintenance, fire resistance, and the elimination of breakages and necessity for repairing.

The programme of the London conferences of the Royal Institute of Public Health, the recognised representative Institution of Sanitation and Hygiene, which are to be opened by the Duke of York at the Guildhall in the first week of June, covers a wide field of urgent questions, and the discussions will be taken part in by a very distinguished array of experts, both professional and municipal. On the first day the delegates are to devote themselves to the problem of municipal hygiene and its suggested connection with the administration of the poor law and the future of voluntary hospitals, and to the housing problem in its various bearings. The second day is given to consideration of the maintenance of efficiency and the prevention of ill-health in industry, and to measures for combating venereal disease, and the closing session has for its subject the efficiency of the present machinery for dealing with tuberculosis. On all these topics the accumulated experience of the leading authorities of the country will be available, among them Sir Napier Burnett, Sir Alfred Fripp, Professor Abercrombie, Professor Adshhead, Mr. John Hodge, Lord Leverhulme, Sir Robert Hadfield, Mr. Seeborn Rowntree, Professor Hope, Professor Lyle Cummins, Major David Davies, and Lieutenant-Colonel Nathan Raw. At the close of the conference business Lord Leverhulme is giving a reception to the delegates at his house in Hampstead.

WAR FORESTRY WORK IN FRANCE.

Mr. Leslie S. Wood's paper on the Forestry Directorate in France during the war, read at the Surveyors' Institution on Monday night, was so interesting from many points of view that we regret our space will not run to a full report. Few of us, we imagine, are aware that Lord Lovat, who took up the Directorate of Forestry on April 10, 1917, had to organise such a big staff and a force of over 19,000 men, with 2,105 horses and 363 motor vehicles, divided into three main groups, the Armies Areas, that of the Lines of Communication, known as the L. of C., and the Central Canadian, besides other groups operating on the Jura, the Vosges, the Landes, and other places.

The operations of the three main groups were somewhat different in character. Those of the Armies Areas included a certain amount of work in private forests; and after the German advance in 1918 it included the Government Forest of Crécy, but much of their work was made up of small areas and clearances, with a great variety of timber. On the L. of C., on the other hand, the work was almost entirely confined to the French Government forests, the greater part of which were beech woods

under natural regeneration. There was a certain amount of conifer; but, whether it was hardwood or conifer, the forestry operations had to be carried out to a complete finish to the satisfaction of the forest officers. The Canadians were more particularly engaged in the conifer woodlands, which were more suited to their methods and temperament, for they were not men of small detail such as the bulk of the work in the Armies Areas required. Nor were they accustomed to work under the restrictions which operations in the beech woods entailed.

The direction of the labour employed must have taxed the energy and tact of the Forest Control Officer pretty severely. At one time he had been struggling with Kaffirs, who were only suited to work that could be harmonised to one of their native ditties; at another time to carry on with Chinese, who spoke no language but their own; or to rely upon the services of Lushai Indians, who seemed to treat it all as a joke, and whose chief ambition was to appear in some striking headgear purchased from a French millinery establishment. They all seemed cheerful when compared with the Germans, and even the West Indians, who repaired our roads and who never learnt that work stimulates the circulation, cheered up when the sun shone. The pick of all the labour, outside the British units, were the Cape boys serving in the Horse Transport. They were well officered by men who knew their work; their discipline was good; and they always handled their horses with skill and treated them well.

Naturally the French were loth to see their woods cut more than was absolutely necessary, but no friction seems to have occurred; indeed, the thinning of the beech areas, stocked too heavily, seems to have been beneficial, while in certain areas of the Government forests the land was resown in certain areas. In the early days of the Directorate timber was fairly plentiful, and the standard prices that had been fixed still formed a basis for negotiation, so that the arrangements for the purchase of timber from the French Government were not attended with much difficulty; but after fifteen months of hard cutting, with a greatly reduced stock and a rising market, the French forest authorities became more cautious, and the negotiations became far more difficult. The price paid for the timber, considering its excellent quality, was certainly by no means excessive when compared with English prices. It is estimated that the average price standing of the timber in the Forêt d'Eawy was, beech 54.38, oak 68.20, and pine 63.54 francs per cubic metre quarter-girth. With the exchange at 27 this represented a price of 1s. 2d. per foot for beech, compared with a controlled price in England of 1s. 6d.; in the case of oak the price was 1s. 6d., compared with 2s. 3d. for similar quality, and pine was 1s. 4d., compared with 11d. Prices went up later, naturally, as timber became scarce, but even they do not seem to have been as bad as here. Measurements, indeed, must have been a trial of the Control Officer's life. In many cases in the early days the trees were measured by putting a stick across the log to judge the diameter, and the contents calculated by tables that had been constructed for the purpose; apart from the inaccuracy of this system, it was not unusual to find when checking the rod that it had been used as a walking-stick, and had lost an inch, or that the rod was based on a German tape which reckoned a yard as the same as a metre. Some company commanders measured the full contents and some the quarter-girth. There were no such things as Hoppus' Tables, no tapes

or girthing cord, no girthing needles, and at one time even paper for recording the measurements was a great consideration. But by a gradual process all these difficulties were overcome, until at last the gangers and the Germans in the Forêt d'Eawy were so accurate that in the process of checking the measurements, which was carried on continually, the average error did not exceed 1 per cent.

Charcoal-burning was an important variation of the work. In this country it is difficult to find a charcoal-burner, and he is regarded as being the possessor of a great secret which is known to a very limited few. During the height of the charcoal-burning period in France we were employing on the L. of C. group on an average about 1,200 men, and as every man usually took his turn at the various operations, such as building, burning, and extracting, we had a very large number of trained men. In 1918, in preparation for the winter campaign, we commenced to burn on September 1; the work was stopped soon after the armistice, and by November 30 the bulk of the kilns had been drawn. During that period the number of men employed on the L. of C. gradually increased until we had 1,216 for the week ending November 2, and the quantity of charcoal produced also rose weekly until we extracted 589 tons in the week ending November 23.

After the armistice, when an effort was made to organise educational work throughout the armies, the Director of Forestry arranged for a forestry school at the Forêt d'Eawy. Men attending the course were selected from headquarters and Lovat's Scouts and from the Five Armies, and in all some 130 officers and men attended. Each group of men spent a week at the Forêt d'Eawy and then passed on to the Forests of Brotonne and Lyons, making a three-weeks' course in all. Although there are men who are strongly opposed to any instruction in homœopathic doses, Mr. Leslie Wood is convinced that these classes were of very material advantage to many of the men who attended them, and that if classes on similar lines were established in this country they would be popular amongst owners, agents, and foresters, and do more to stimulate an interest in forestry than any movement that has yet been initiated.

THE BUILDING EXHIBITION AT OLYMPIA.

Mr. J. W. Simpson, P.R.I.B.A., opened the Building Exhibition at Olympia on Tuesday, and was supported by Mr. A. J. Forsdike (President of the National Federation of Building Trades Employers of Great Britain and Ireland), Sir Charles T. Ruthen (president of the Society of Architects), Sir Thomas Bramsdon, Sir John Burnet, Mr. Ernest Newton, Mr. W. D. Caroe, Sir Ambrose Poynter, and others.

Mr. Simpson said it would be idle to pretend all was well with the industry, but signs of improvement were not wanting. One of the chief obstacles in the way of better labour conditions was the hopelessly illogical and unsound system of paying a man, not for the work he did, but for the time he took to do it. The remedy lay in a system of fixed rates for piece-work. He was well aware of the great objection of the unions to such a system, based on its abuse by contractors cutting competitive rates in times past; but they had now to recognise the advent of a different class of employer, animated by other motives than those of mere profit, and worthy of the operatives' confidence. The actual rates should be determined and revised annually, and they should be formally

approved by the Government as the standard of payment. The most important thing at the present time was to provide the artisan with an intellectual interest in his work, irrespective of its evident utility; and, if that were done, he had no doubt but that the operative would respond with far more energy than he would to that of his private advantage. Referring to the action of the late Minister of Health in placing a ban on all so-called luxury building in order to encourage the building of houses for the working classes, Mr. Simpson likened it to the procedure of a man who stopped the minute-hand of a watch with a view of accelerating the second hand. So far from encouraging all kinds of building operations the foolish restrictions and regulations of the Government had made them almost impossible, and the sooner State control was removed the better. In order to protect building owners against excessive cost he suggested the desirability of having public directors of building who would advise as to the fairness and sufficiency or otherwise of tenders, and as to the insurance of buildings in which possibly trade unions might find a profitable source of investment. The success of these building directors, who would be paid by results, would, to a great extent, depend on the accuracy of their calculations. Instead of paying men engaged in the building trades not for the work they did, but for the time they took to do it, they should be paid by piecework on a scale laid down by the Institutes of Architects and Surveyors and adopted by the Government.

Mr. A. J. Forsdike, speaking on the question of payment by results, said that some of them laid a scheme before the Cabinet only a few weeks ago, one part of which was the payment of a bonus on output. While that part of the scheme was not being supported by the Government at the present time, they believed, sooner or later, it would be to the best interests of the trade that something like it should be adopted. The Government department must know perfectly well that the shortage of houses was due to their mismanagement. That department was now doing the best they could to get over the housing difficulty.

Sir Charles T. Ruthen thought it would be wise if the various sections of the building trades met together and arranged for operatives to be paid a reasonable wage for a reasonable day's work.

THE MINISTRY OF LABOUR GALLERY-BAYS 7 AND 8.

This exhibit is one of the most interesting at the show. Its object is to attract more support from the employers of building trade labour by affording them an opportunity of studying the scheme of training as carried out in the Government instructional factories. The exhibits of carpentry, joinery, plumbing, plastering, painting and decorating, sign-writing, and architectural draughtsmanship, prove up to the hilt the capacity of the men who are being trained under the supervision of thoroughly competent craftsmen, and the readiness and speed with which they acquire ability far above the average of the ordinary worker. All instruction is in charge of each section, and visitors are invited to discuss matters and methods, and so convince themselves that the work is being well done. We hope none will fail to do so, and that every effort will be made to extend the scope of the Ministry of Labour's most useful work. On its extension and cordial encouragement depend in no small measure the restoration of ability and output which are so sadly lacking in these days of the ordinary work-

man, who, in many cases, has had no real training at all, and whose only object seems to be to do as little as possible, and that badly.

THE MEASURE OF OUTPUT IN BUILDING.*

By T. SUMNER SMITH, M.Q.S.A., F.I.A.R.

The acceleration of output is, if not the chief, one of the greatest concerns of the industrial world to-day. As the acceleration of output increases so respectively does cost decrease.

There are two kinds of payment for services rendered: appreciation and wages. No one, I feel sure, would question that appreciation—approbation by your fellow men—is the highest form of reward, but it is seldom sufficient for the needs of most human beings, as things are to-day, to accept payment in that form alone. In modern times the great inducement to work is wages—tokens of reward—in exchange for which the necessities of life and luxuries are sought, and, in varying degree, are obtainable.

In the building industry reward usually takes the form of payment at a fixed rate of pay per hour—the same minimum pay for the same kind of work for the good, bad, or indifferent workman. This tends to create a dead level of uniformity, with no special inducement for the skilful and industrious workman. Beyond the worker's interest and pride in his work, and the wages he receives, all the reward goes to the employer.

Expert skill, no matter in whatever sphere of work, should have its own sufficient reward as an inducement for the skilful man to remain at his own particular branch of work.

The present system of wages in the building industry, irrespective of the question of what is or is not an adequate wage, leads to two evils: (1) A dead level of uniformity of achievement, and (2) a desire on the part of the ambitious to change to a more lucrative and probably less suitable employment.

As an illustration, we will now examine the wages systems in vogue in the engineering trade. In this specific trade there are several systems of pay in operation, viz.: Flat-rate or day-wage system, piecework system, premium bonus system, collective bonus system.

The flat-rate or day-wage system is one which represents a return for time worked rather than performance. Its principal advantage to the employer is simplicity in estimating and recording, and to the employee an assured wage, freed to a limited extent of individual responsibility; whilst its defects to the worker are that it does not recompense increased exertion, or the use of higher intelligence.

The piecework system offers a direct inducement to the worker to increase production. The employer usually fixes the price for the work. The price allowed for the job is usually determined by comparison with the time previously taken for that or similar work, or sometimes by the more modern analytical method; the workman frequently has little say in the matter, since he is assured of payment for the time spent at his ordinary day-rate. Usually the time to do a job is fixed on the basis of the piecework rate of speed, and time and one-third is paid, that is to say, one-third more than the nominal time rate of pay is paid for the time worked.

The premium bonus system is a modification of the piecework plan, with a similar guarantee that the worker is

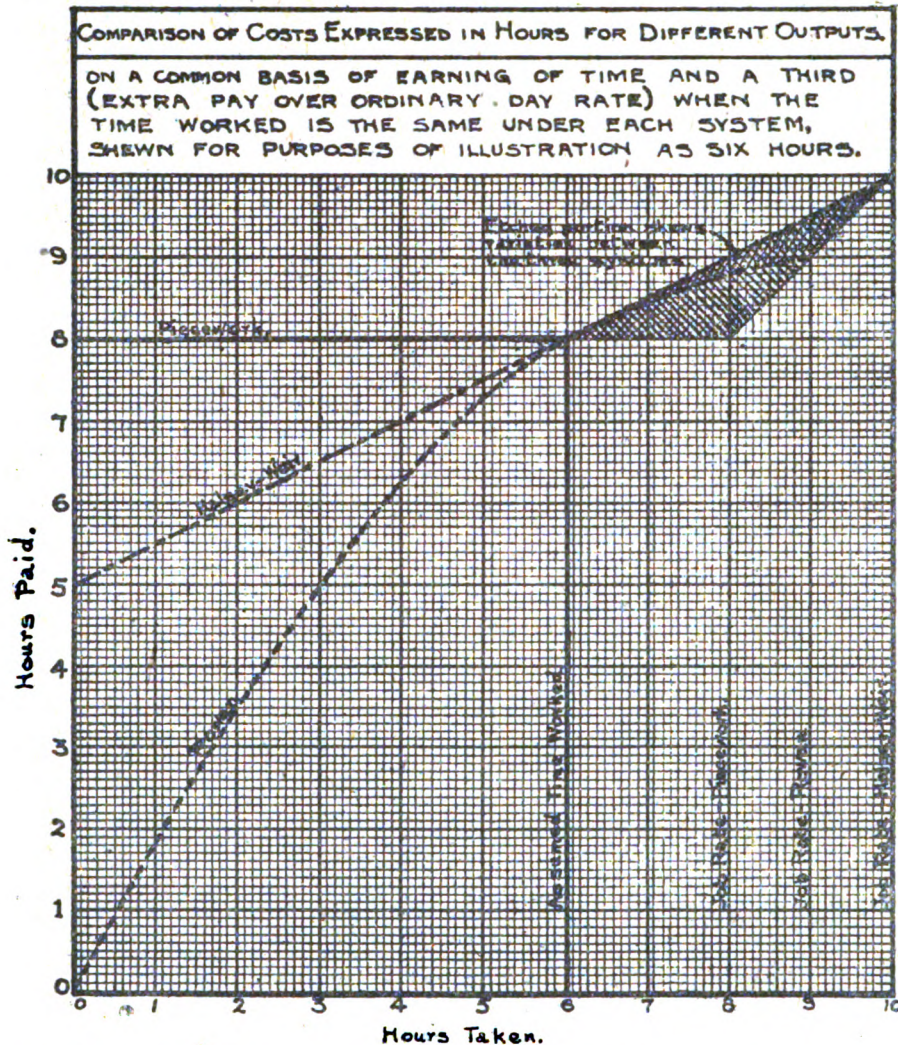
* From a Paper read March 15 before the Institute of Industrial Administration.

assured of his wages at his day-rate for time spent on the job should he exceed the time allowed. Under this system the job is given a price or time which is determined in the same way as for the piece-

to say, if the output for a particular week has been increased 25 per cent. above the normal figure, each worker in the establishment receives 25 per cent. increase in his week's wage.

DIAGRAM No 1.

PIECEWORK-HALSEY-WEIR-ROWAN SYSTEMS.



work plan, but the employer shares in the benefit from the time saved, and there is less temptation to restrict earnings, as commonly occurred under the piecework system by the cutting of piecework prices.

In comparison with the day-work system, the premium bonus system has the advantage of securing greater production by the exercise of the workman's skill stimulated by self-interest instead of by more exacting and, as sometimes happens, irritating supervision.

The two premium bonus systems mainly in use in this country are the "Halsey-Weir" and the "Rowan."

The "Halsey-Weir" system is a direct proportional method—50 per cent. of the time saved is paid as a premium to the workman; whilst the "Rowan" system is on differential method—a premium is paid to the workman for the time spent on the job in the proportion of the time saved to the time allowed; that is to say, were he to save 50 per cent. of the time allowed, his ordinary day-rate wages for the time spent on the job would be increased by that percentage.

As regards the collective bonus system, the Priestman system is the most advertised. This provides that each worker shall receive a percentage increase on his weekly wage, which is proportionate to the week's increase in production. That is

It is said that this automatically makes for combined effort to make production the maximum. It is claimed that there are no petty jealousies, that work is not regulated by the slowest worker, but every worker endeavours to help one another. It is further stated that the actual result of two years' work on this system has been an average increase in production of 40 per cent., which means the workers have been paid 40 per cent. more in wages than they would have received under the old system of day-rate.

The danger of this system lies in the possibility of the standard of output adopted for purposes of bonus representing a low standard of efficiency. This position is seriously aggravated by the Priestman method of giving a permanent bonus of 10 per cent. as an inducement to adopt the system, and irrespective of any increase in output.

I have given much thought and consideration to the question of wages in relation to output, and I am doubtful whether any one of these systems is applicable to the building trade, because I foresee many difficulties arising out of the nature of the work. However, some system of payment by result is certainly desirable and necessary as a special reward for skill in the acceleration of output. In my book on "Concise Costing for Housing," I sug-

gested a system which, in my opinion, would meet the case. It is as follows: "Groups of workmen, including the foreman, should receive by way of bonus 50 per cent. of the value of the increased output over and above agreed labour constants, the employer to take 15 per cent., the remaining 35 per cent. to be set aside and a fund created termed a 'bonus fund.' A proportion of this bonus fund, say, 75 per cent., might be distributed yearly, half-yearly or quarterly, and divided amongst all employees in proportion to their respective wages, and the remaining 25 per cent. distributed amongst those employees who had shown special aptitude and put in regular attendance at their work."

It will be noted that this method takes into consideration reward for a group of workmen engaged upon a special task, reward for individual merit, whilst in addition they would participate in the collective reward, and the employer would also benefit to a certain extent.

Before this scheme could be put into operation it would involve the setting up of constants of labour for rate-fixing purposes. These should be upon a broad and equitable basis. I shall deal with this later.

It has been proved beyond all doubt that it is highly dangerous to maintain a very high rate of speed for any considerable length of time, as it invariably leads to accidents.

Excessive hours of continuous labour also contribute to accidents. The accident records of many firms showed an increase during the war period and immediately afterwards in the number of severe and moderately severe accidents reported. One factory which had 27 such cases in 1917, had 67 in 1918, and 107 in 1919.

A reduction in working hours per day may lead to an increase in speed, such that the output per day will be greater. A splendid example is afforded by the steel plate industry. An investigation of the rolling of red-hot bars into plates of

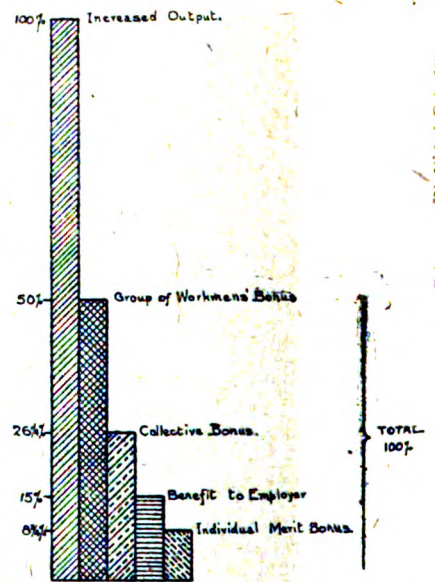
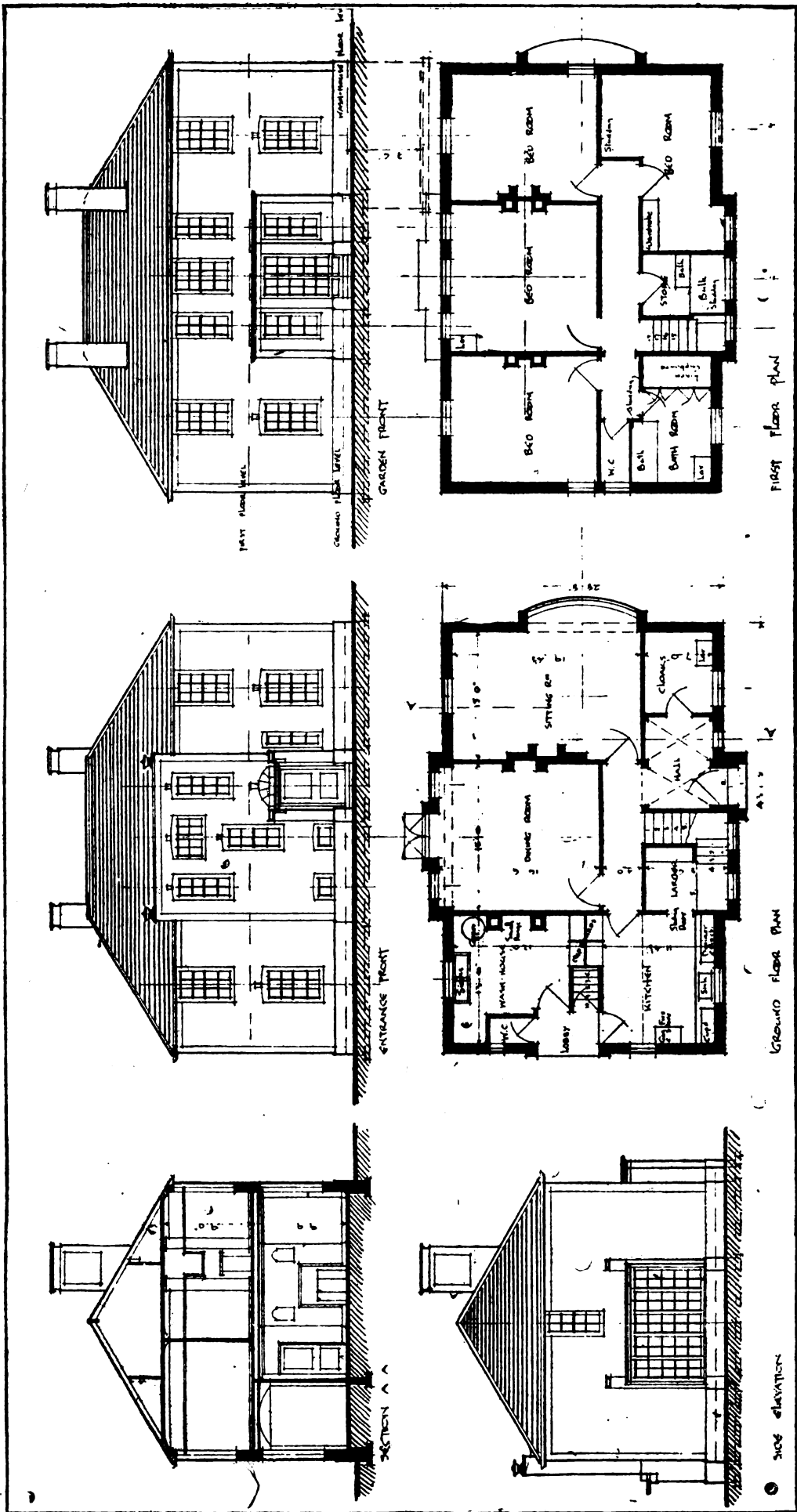


Chart No. 1, Author's Proportional System, showing bonus for groups of workmen, collective bonus, and individual merit bonus, divisible quarterly, half-yearly, or annually. Benefit to employed.

steel, and a comparison between the eight-hour and six-hour shifts gave the following results: Output average for fourteen weeks at eight-hour shift, 100.2, and output average for twelve weeks after six-hour shift had been going seven weeks.

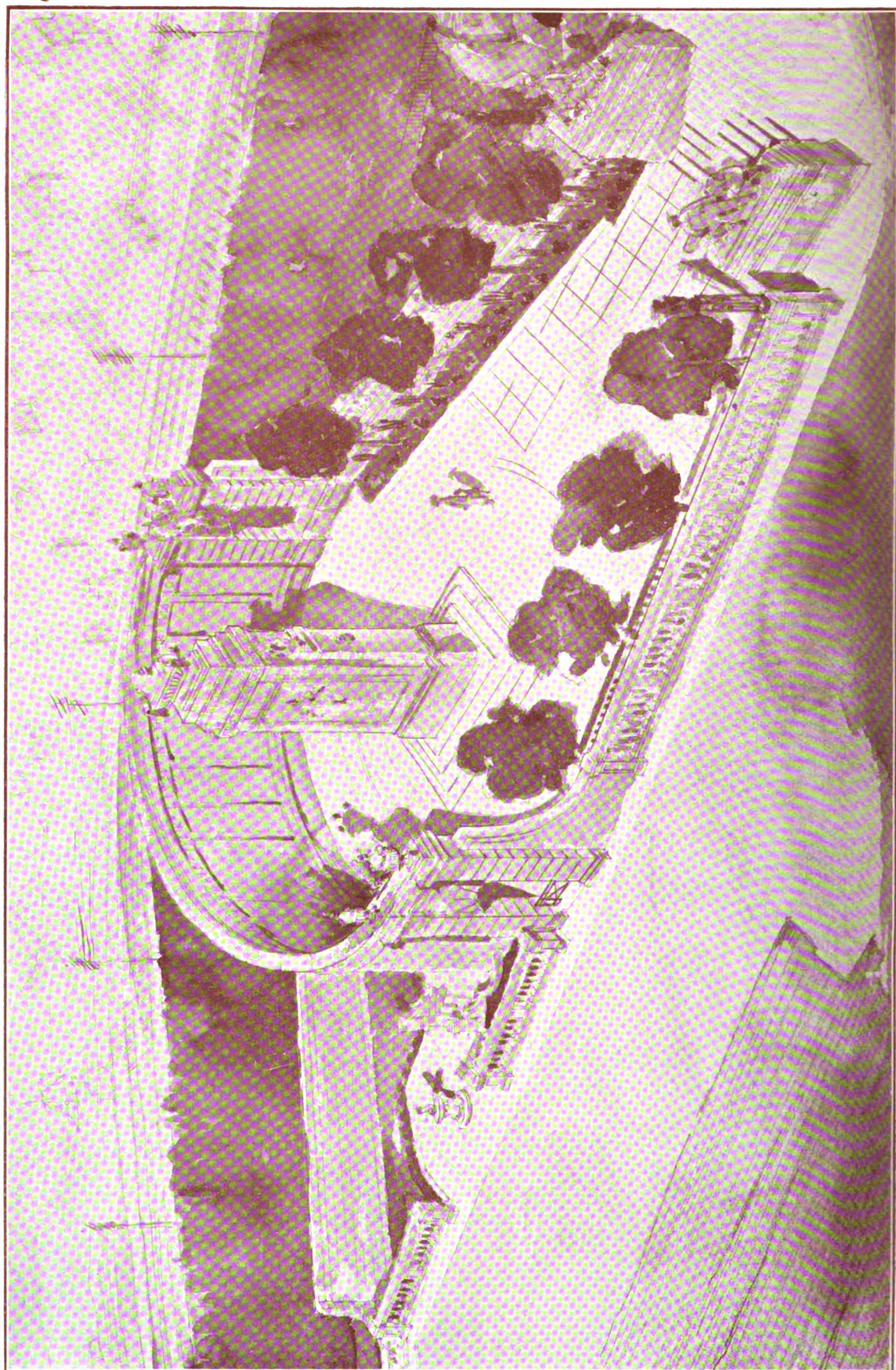
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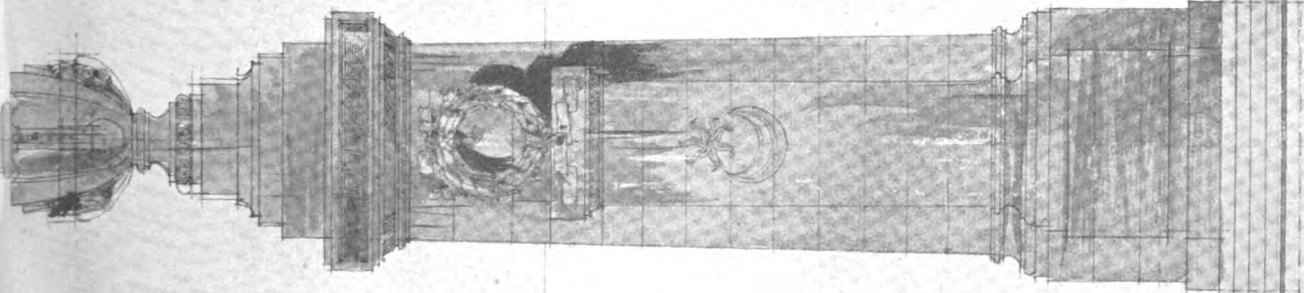
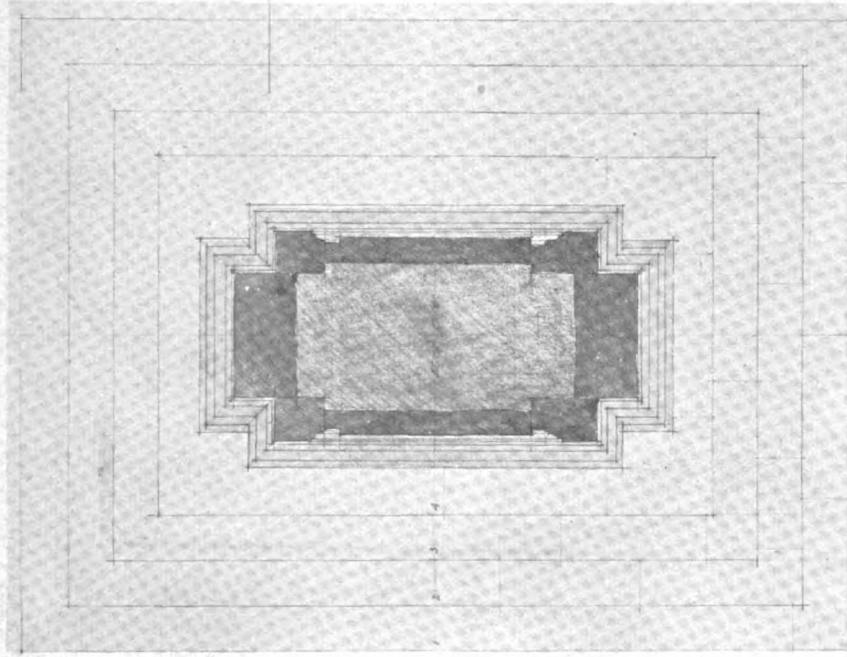
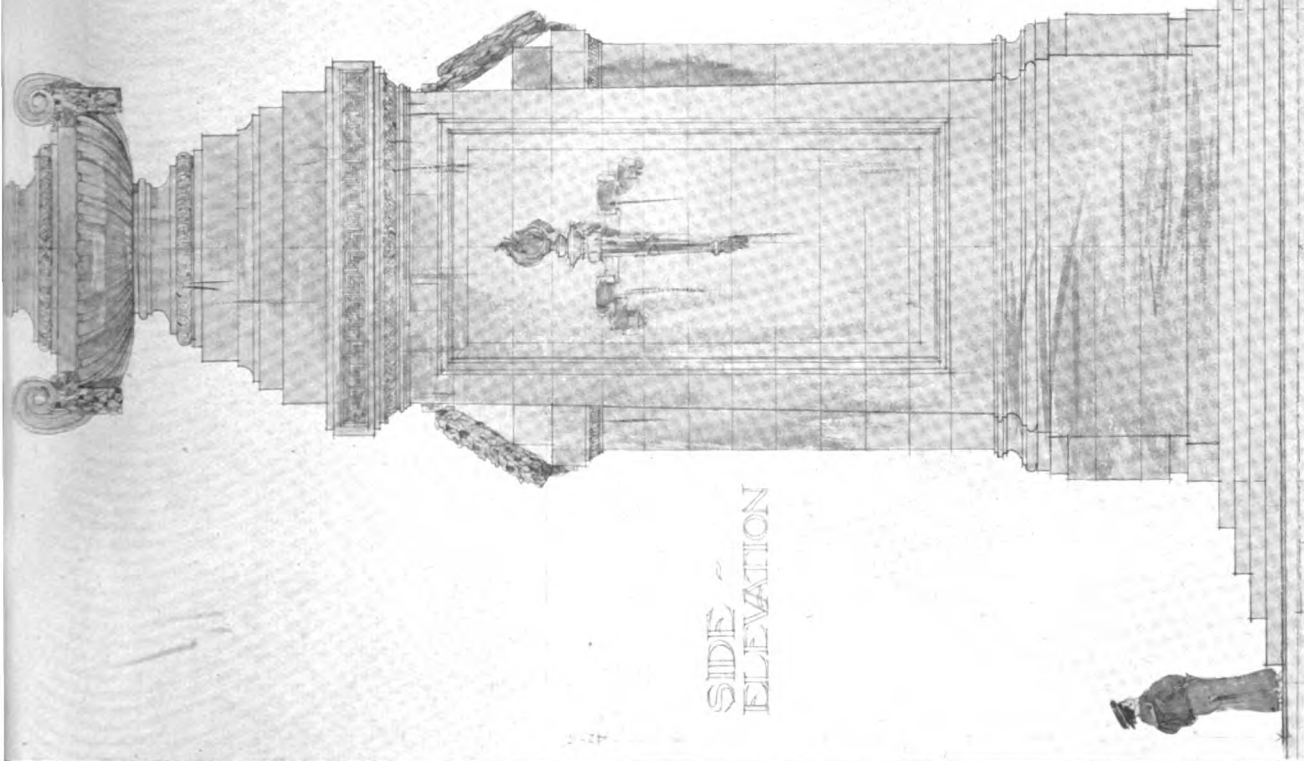
HOUSE AT KNUTSFORD, CHESHIRE.
Mr. J. HENRY SELLERS, Architect.

THE BUILDING NEWS, APRIL 15, 1921.



PORTSMOUTH
WAR-MEMORIAL.

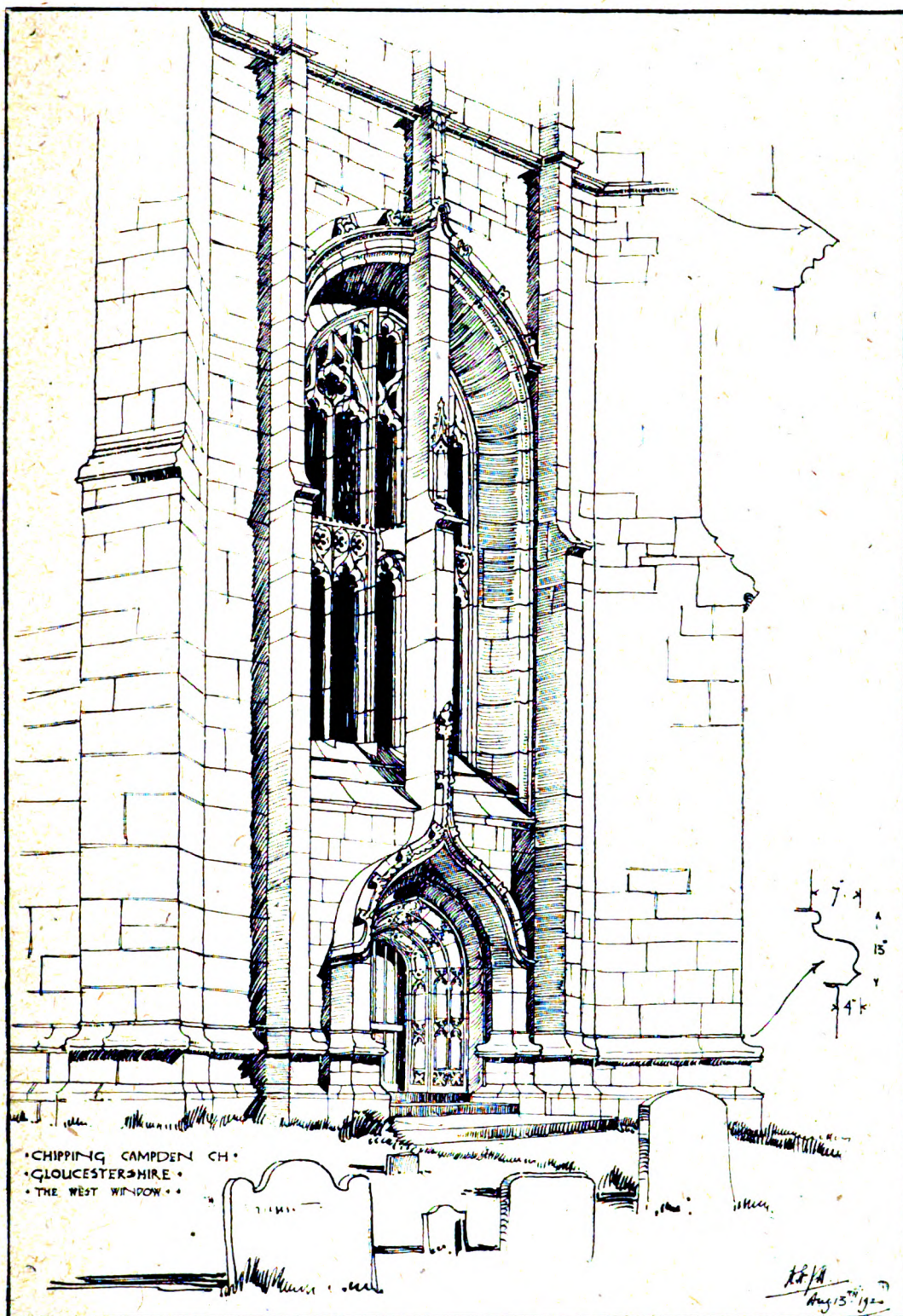
The High School City of Portland.



THE SELECTED DESIGN, PORTSMOUTH WAR MEMORIAL : DETAILS OF CENOTAPH.

Messrs. J. S. GIBSON and W. S. A. GORDON, F.F.R.I.B.A., Architects.

Mr. PAUL WATERHOUSE, M.A., F.S.A., Assessor.



WEST FRONT, CHIPPING CAMPDEN CHURCH, GLOUCESTER.
Sketched by Mr. H. ST. JOHN HARRISON, A.R.I.B.A.

(Continued from page 198.)

111.4. A gain of 11.2 with less working hours.

EDUCATION AND TRAINING.

We have only travelled a little way, but it will be apparent that the education and training of workers in the past have not been all that could be desired. Education and training are vital factors in production. By education and training I do not mean merely general education, ordinary technical training, and workshop practice; but special education and training, and practice in a special way for special purposes. It should be possible to train human beings to do each specified task and do it well in the least possible time without undue fatigue, and with profit and pleasure to the worker concerned.

Time and motion studies should be an aid in this direction. Data derived from this source, when applied intelligently and scientifically, should lead to an increase in the efficiency of human labour, with a corresponding increase in output and without undue fatigue.

You will all remember the allegations of 'canny' bricklayers in connection with housing schemes. The most remarkable thing about this discussion was the lack of intelligent understanding of the subject matter, and the most flagrant transgressors were builders themselves. Had builders in general, rightly understood the business of collecting data with some reasonable accuracy, they could have exposed the fallacies in the Press. Particulars have now been obtained, and you may no doubt all be familiar with the statement of Dr. Addison that bricklayers are laying from 250 to 600 bricks per day on housing schemes.

Again, one contractor has openly stated that on one of his jobs a bricklayer had laid 28,000 bricks in eighteen working days—an average of 1,555 bricks per day—and that the quality of the work was excellent.

Mr. Frank H. Gilbreth, in his book "Bricklaying System," shows that by the adoption of suitable scaffolding he has succeeded in reducing the number of movements necessary for laying a brick from eighteen to five, and increased the rate of bricks laid per day to three times the usual number—now between 3,000 to 4,000 per day.

In America the bricks are slightly less in size than ours. In England and Wales we have various sizes, all of which are less than those of Scotland. What is required is a standard size or sizes easy to handle and adaptable for quick-laying. Given these, with suitable scaffolding and good organisation, the average bricklayer, intelligently trained, should be able to lay an average of from 1,500 to 2,000 bricks per day on straight walling without undue fatigue.

Much of what I have said to ensure an increase in output would depend upon sound administration. Without sound administration you cannot hope to have a well-governed and a well-regulated industrial concern. We may safely leave out of consideration the one who succeeds by taking a "sporting chance," as well as his twin-brother who fails on account of his "bad luck."

There are too many crudities, rule-of-thumb methods, and obstacles in the building trade to give management a real chance of displaying its possibilities, and all tend to retard production. The three outstanding questions are:—Standardisation and mass production, design and control, and estimating and costing.

With regard to the first, there are a number of things that could be standard-

ised without in any sense offending æsthetic taste. A good and beautiful thing, no matter how often repeated, is not a loss but a gain. Skirting, picture moulds, architrave moulds from approved designs could be repeated and a selection made and used in almost every job, such that, during slack periods, could be made for stock. Doors, windows, cupboards, mantelpieces, and the like could be treated in a similar fashion. Many other things could be standardised—in a large measure, house building—and in this way mass production could be fostered with a corresponding increase in output and reduction in cost. Too many finicking nothingnesses are put into many buildings, such as a variation for every kind of moulding, whereas a selection from a few choice designs should satisfy the most fastidious and serve all practical purposes.

As regards design and control, and comparing the engineering trade with the building trade, we find that in the former the general practice is they make their own drawings, settle the details, and control the policy; whereas in the building trade, builders are hampered in a great number of cases by incomplete drawings and lack of details supplied by architects, preventing the planning of work

ahead. Sometimes the scheme is not thoroughly matured or fully developed until the work is well advanced, and this oftentimes seriously affects the general policy of directing and organising the work.

The fruits of this short-sighted policy are seen in the number of constructional firms and reinforced concrete specialists that have sprung up of late, doing the combined work of both architect and builder. However, should this method lead to efficiency and economical building, then it may be taken for granted that it will stay on and multiply, eventually becoming a serious competitor to the profession and trade.

The methods of estimating building works are entirely out-of-date, generally by rule-of-thumb, and, correctly speaking, should be designated "guesstimating." Up to quite recently proper costing was so little known in the building trade as to be almost negligible.

The ordinary system of quantity surveying is by far the greatest cause of any of the defects in estimating, and keeps back the installation of costing systems. Taking again the engineering trade for illustration and comparison. It will be found that the practice in the best engineering works is that they estimate the

TABLE No. 1.
Showing the conversion of materials from measurement terms to purchase terms.
Number of Countesses Slates—size 20" by 10"—required to cover one square (100 square feet) laid to a 3" lap, giving 8½" gauge.

Authority.	Lap.	Gauge.	Number.
Fowler	3	8½	169
J. T. Rea	3	8½	170
Sprague.....	3	8½	171
Molesworth.....	3	8½	171
Spon.....	3	8½	171
Hurst.....	3	8½	178
including waste.			

TABLE No. 2.
A few examples of items in practical bills of quantities.

Tons. cwt. qr.	Weight ...	Concrete.
27 12 0	.. 1½ in. to 2 in. aggregate as before specified, in foundations to walls and floors.	
9 15 3	.. " " ½ in. to 1 in. aggregate as before specified, in cills, lentils and brackets, etc.	
16 1 2	.. " " Clean sharp sand as before specified.	
16 3	.. " " Granite chippings as before specified.	
10 11 3	.. " " Portland cement as before specified, in concrete foundations, floors, etc.	
42 14 2	.. " " Labour only mixing concrete in the proportion of 5 parts broken bricks to pass a 2 in. ring and to be retained on a 1½ in. ring, one part sand, and one part cement.	
yds. 11¼	.. Cube. ... Labour only laying concrete in foundations to walls, 6 in. thick, including levelling and well ramming.	
122 No.	.. Sup. ... Labour only laying concrete to solid floors, 4 in. thick, true and level. Common Brickwork.	
43,020	.. No. ... Common bricks as before specified.	
740	.. No. ... Selected common facing bricks.	
41,225	.. No. ... Labour only setting common bricks in lime mortar.	

TABLE No. 3.
Showing the Relative Value in Cost of Materials and Labour for Cottages, and the Ratio in Percentage of Time Occupied in each Trade.

	LABOUR.			MATERIALS.		
	Ratio in percentage of time occupied.	Per-centage of costs.	Ratio in approxi-mate value per £.	Per-centage of costs.	Ratio in approxi-mate value per £.	
Excavator and Drainer.....	6.88	2.47	0 6	.53	0 0 1½	
Concretor	4.81	1.84	0 4½	2.00	0 0 4½	
Bricklayer	89.38	17.26	3 5½	13.16	0 2 7½	
Carpenter and Joiner.....	31.64	15.52	3 1	20.84	0 4 2	
Slater	1.12	.58	0 1½	2.31	0 0 5½	
Plumber and Glazier.....	3.89	1.74	0 4½	5.74	0 1 2	
Plasterer.....	10.51	4.95	1 0	2.10	0 0 5	
Painter	2.27	1.05	0 2½	.47	0 0 1	
	100.00	45.41	9 1	47.15	0 9 5	
				45.41	0 9 1	

The remaining costs being made up as follows:—

Insurance	1.92	0 0 4½
Plant.....	.87	0 0 2
Water .....	.15	0 0 ½
Temporary Lighting, etc.....	.15	0 0 ½
Sheds .....	.68	0 0 1½
Stationery, etc.....	.35	0 0 1
Rents, Rates, Taxes, etc.....	.41	0 0 1
Staff Salaries.....	2.96	0 0 7
	100.00	1 0 0

cost of materials from their own particulars of quantities of materials of each component part as distinct from an estimate of time it will take to do the job, and then the various on-costs are added to the whole. The ordinary system of quantity surveying in vogue in the building trade lumps all these together, which makes it practically impossible to formulate a correct estimate without a minute analysis of the component parts of each item—a colossal task. This will be quite clear when it is considered that almost every item contains two variable units—material and labour. Again, many items contain different kinds of materials, such as will be found in brickwork, slating and plastering, and these are expressed in terms different from those by which they are purchased. This involves the conversion from terms of purchase into terms of measurement when estimating, back again into terms of purchase when ordering.

Before anything can seriously be attempted in this direction, it would seem to necessitate the establishment of constants for materials, i.e., materials converted from measurement terms into purchase terms. In this respect the trade is badly served, as will be seen from Table No. 1.

Author's method of working out, giving the actual number of slates per square.

Sizes of slates — 20 ins. × 10 ins. laid to a 3-in. lap.

Gauge 20 - $3 \div 2 = 8\frac{1}{2}$ ins.

Area covered by each slate, $8\frac{1}{2}$ ins. × 10 ins. = 85 sq. ins.

One square contains 120 ins. × 120 ins. = 14,400 sq. ins.

Therefore, $14,400 \div 85 = 169,412$ slates.

This is a typical example of many, and is illustrative of the need of reliable and up-to-date tables.

With approved and standardised tables of constants for materials, bills of quantities could then be expressed in terms of purchase for materials, and in measurement for labour (see Table No. 2). The various on-costs, as shown by way of illustration in Table No. 3, could then be added.

From this table it will be noted that these bills of quantities, in addition to being both practical and universal in application, can serve four purposes: First, as a basis for an accurate estimate of the intended structure; secondly, for ordering materials and their assembly on the site at the proper time; thirdly, for analysing and recording costs; lastly, as a schedule of prices for the adjustment of variations on the contract in an expeditious and equitable manner.

A reference to the subject of costing will bring my paper to a close. By the adoption of practical bills of quantities costing could then be used to check estimating, and data obtained therefrom would be a valuable guide in future estimating. Table No. 2, which is an adaptation of Tables No. 7 and No. 9 from my book on "Concise Costing for Housing," may be taken as an illustration of its possibilities.

It is possible by costing to arrive at the time taken for each unit of labour for any specified task. Then, by means of costing with the resultant establishment of constants of labour, payment by results could be adopted, as they could form the basis of rate-fixing, which, if founded upon the principles of equity, should assure success.

In conclusion, it will be clear that there is much scope for improvement, and much lee-way to make up in the building trade before output can be adequately measured and maximum efficiency obtained.

The Earl of Crawford, First Commissioner of Works, has appointed Mr. F. E. Carter to be his private secretary.

Our Illustrations.

SELECTED DESIGN, PORTSMOUTH WAR MEMORIAL.

Mr. Paul Waterhouse, F.S.A., the assessor appointed by the President of the R.I.B.A., made matters clear by stipulating on behalf of the Portsmouth Corporation, in the official conditions for this open competition, that the promoters wanted the design for their war memorial to be made stately in character, "producing its effect by dignity of outline rather than by profusion of ornament"; also that its "general effect must be substantially architectural." It was clearly mentioned, too, that the prime consideration to be kept in mind regarded the visibility of the memorial from the main road of the city in front of the Town Hall. This is an exceptionally fine Classic building, erected on the lines of the Town Hall at Leeds, by the Leeds architect, the late William Hill, F.R.I.B.A., about forty years ago. We illustrated this work in our issue of September 24, 1886. Messrs. Gibson and Gordon, of Old Bond Street, the architects of the chosen design, which we now illustrate, grasped the situation by adopting a raised level platform reached by a flight of steps, thus lifting up their cenotaph or monument 42 ft. high, with an enclosed cortile well above the main street level, and so bringing their composition more in scale with the design of the big Town Hall. The quadrant mural screen of unpierced walling behind gave their scheme a setting, and also served to mask the encircling embankment made by the railway engineers, and may divert attention from the disconcerting steam traffic of the L. and S.W. trains. The bird's-eye perspective side-on view was desirable to explain the general layout of the adopted scheme; but, as a matter of fact, such an aspect of the entire arrangement can only be obtained from the side windows of the Town Hall, immediately to the left of the site. The scheme included a façade for the entrance archway to the Park, which feature is hidden in the picture by the quadrant wall. Though subordinated by the memorial, the approach to the Park is not made less convenient or more difficult of access, though less direct. The main essentials of the project have been kept in view, notwithstanding the peculiar drawbacks incidental to this particular site. The cost contemplated is £10,000. The contract has been placed with Mr. S. Salter, of Southsea, and the work is now being commenced, Portland stone being used.

HOUSE AT KNUTSFORD, CHESHIRE.

This compactly planned house is situated in Chelford Road, Knutsford; the walls are of 2½ in. bricks, and the stone dressing of Portland. The roof is to be of green Burlington slates. No range is provided in the kitchen; all the cooking is done by gas, with a combined gas-cooker and fire. The house will be heated by radiators and Messrs. Saunders and Taylor's low-pressure system, which will provide hot water for washing purposes. A range with a small oven is provided in the wash-house for drying clothes. The builders are Messrs. L. Brawn, of Wilmslow; the plumber Mr. E. J. Pamphilon, of Manchester. Mr. J. Henry Sellers, of King Street, Manchester, is the architect.

WEST FRONT, CHIPPING CAMPDEN CHURCH, GLOUCESTERSHIRE.

The Perpendicular church of this parish has a very spacious nave and two aisles, also a tower 110 ft. high, but the west front, with its uncommon window, bisected as it is by a detached buttress-like pier,

is one of the most interesting features of the building. The hoodmould of the west door projects in such a way as to necessitate boldly-handled responds, making a quasi-porch, with the crockets of the canopies running up into a finial on the face of this pier in front of the window. At Dorchester, in Oxfordshire, the east window has a somewhat similar structural division, though differing materially from the Gloucestershire example. The buttress in the centre of the latter west window is almost entirely detached, standing free of the tracery; but in the chancel end of Dorchester priory the buttress is solid, forming part of the central mullion. Among modern architects who have adopted the Chipping Campden treatment, it will be remembered that the late J. D. Sedding copied the idea in his church of St. Peter at Ealing. Mr. H. St. John Harrison, A.R.I.B.A., made this sketch last year, when on his Pugin Studentship tour in the West of England.

COMPETITIONS.

CAIRO.—The Egyptian Government has issued plans and particulars for the Qaer el Aini Hospital and School, to be built on the V-shaped Roda island site in the heart of Cairo, on the Nile, and bisected by the Avenue de Rodah, which is approached by the Mohamed Ali Bridge. The assessor is Mr. J. W. Simpson, P.R.I.B.A. The designs in the preliminary competition must be lodged not later than October 3 next. The intention is to appoint the competitor whose design is placed first by the assessor in the final competition as architect to carry out the work. Six of the designs will be chosen in the first stage of the double competition to take part in the second stage with six other architects specially invited by the assessor to submit designs in the final course, five hundred pounds (Egyptian money) being paid to each of the twelve final competitors. The remuneration of the chosen architect to be in accordance with the R.I.B.A. scale of charges. Questions must be sent to the assessor on or before June 6 next. A tower is suggested as a distinguishing feature at the northern apex of the site. The buildings, as a State institution, should be composed to form a dignified and fitting architectural monument. Economy plan, however, is reckoned of great importance. Both sexes are to be accommodated, the female side being described as the *Hareem*, entirely cut off from the men, no overlooking windows being permissible. Provision is to be made for 1,225 patients—surgical wards 550 and medical wards 250 for men, with operation theatres and isolation wards. Surgical wards, *Hareem* division, 325 beds; medical wards ditto, 100 beds. Students' hostel and directors' house, also a mosque and a sisters' home. Precise tabulations and notes are included as to requirements in detail, besides which local conditions, construction, and materials for the guidance of competitors furnish matter for a separate pamphlet.

Altar rails, the design of Sir Aston Webb, are about to be placed in the Chapel of Sacrifice at the Church of St. Bartholomew-the-Great, Smithfield. They are being made of old oak belonging to the church.

During the past three years (says Commander Hilton Young in a written reply to a Parliamentary question) estate duty has been paid on thirty-three estates of over £1,000,000; on sixty-eight estates of a value between £500,000 and £1,000,000; on 967 estates of between £100,000 and £500,000; and on 1,557 of a value of between £50,000 and £100,000.

At last week's meeting of the City Corporation Mr. Deputy Millar Wilkinson moved a resolution requesting the Special Committee to inquire and report as to the regulations for admitting persons as freemen of the City by redemption. At present, he said, anyone could become a freeman on payment of £2 6s. 6d. Most of the applicants had no connection with the City, and few even had City addresses. Mr. Richard Davies said in a good many cases the freedom was purchased for advertisement purposes.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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OUR ILLUSTRATIONS.

Uppingham School, Rutland, Memorial Shrine, proposed to be built on to the chapel. Elevation,

section, and plan. Messrs. Ernest Newton, R.A., and Sons, Architects.

Housing Scheme at Swansea. Various types of houses. Plans, sections, and elevations. Sir Frank Baines, Director of Works, H.M.O.W., Architect.

Currente Calamo.

An excellent start was made on Monday throughout the country with the Government scheme of employing the ex-Service men in the building trades, which, after two years of negotiations, has been brought into working with the co-operation of the National Federation of Building Trade Employers. At one Labour Exchange in London on Monday the applications were so numerous that the forms of application were exhausted. To complete the success of the scheme, it is imperative that all employers not yet members of the Federation should at once become such, and thus ensure themselves against any interference by the "passive resistance" some of the trade unionists, or rather their Press correspondents, are talking about. It will be noticed, moreover, that advertisements from H.M. Office of Works are this week, for the first time, headed "To Federated Builders Only." That is quite right and proper. All things being equal, it is in every way to be desired that employers who are helping the Government scheme along should get the work the Government can legitimately give it, with a saving to the taxpayer and to the benefit of the ex-Service man.

Sir Alfred Mond is certainly an improvement on Dr. Addison. His critics may not agree with all he says, but they must admit that his explanations are to the point and that he pretty plainly indicates where the punishment should visit the crime for which his late Department is not responsible. Yesterday week it fell to his lot to defend the Estimates for the Office of Works, of which he was for more than two years First Commissioner. This year's vote was for £370,500, a modest decrease of £30,000 upon last year's. But Sir Alfred had to face a deal of criticism, all the same. Sir Philip Pilditch was critical concerning the adventure of the Office of Works into house-building enterprises. He was sceptical as to the success of the Department in building houses, and hoped it would not extend its activities. We did not want a "bureaucratic architectural works department" set up. Let the Office of Works confine itself to the public buildings, he said. Colonel Ashley was assured by Sir A. Mond that the over-

head charges on building schemes were repaid by the local authorities. Mr. Lorden bluntly declared that was "all eye-wash," as all above a penny rate was paid by the Treasury. Sir Alfred cheerily pointed out that the Office of Works "was no longer a quiet family party to look after a few Royal Palaces and the birds in the parks," and that it was easier to storm the Hindenburg line than to shift a Government office from one place to another when it did not want to move. Too true; but as Minister of Health Sir Alfred will soon ginger up some of the delayers of Housing of various sorts who have gone to sleep in Dr. Addison's Circumlocution Office.

Sir Alfred Mond's statement with reference to the future housing policy of the Government is a pretty plain reversal of that of Dr. Addison. Under the present regulation the general housing subsidy only extends to July, 1922. "It is obvious," Sir Alfred Mond says, "that where local authorities have, with the consent of the Ministry, entered into commitments, and where the delay in completing their schemes is due to such difficulties as the procuring of adequate labour and material, arrangements will have to be made to extend the payment of the subsidy for a reasonable period." This, however, must not be taken as an encouragement to local authorities to be dilatory in carrying out the work they have in hand. It is not impossible, we are told, that, when we arrive at the end of this housing scheme, the Government may be ready to enter into another scheme should it be necessary. The time to consider how far the Act of 1919 will have to be modified will be when the operation of that Act is drawing to a close. All Sir Alfred Mond can say at present is that, as far as the Ministry of Health is concerned, default powers, which are inserted in the Act, are not going to be used to compel local authorities to carry out ruinous schemes. The Government do not intend to extend the present system indefinitely. A limitation of the number of houses to be built under the housing scheme will have to be arrived at and the number of rejected schemes will have to be reduced. Every effort, we are told, must be made to obtain modifications of the contracts already let, in view of the falling prices in material and labour, and in view of the fact that a great deal of

work is in hand, authorities ought to go slow in accepting future tenders. The last caution we confess we do not understand, but we are as certain as ever that cold shoulder to building guilds, Building Trade "Parliaments," *et hoc genus omne*, and a good deal more encouragement to legitimate private enterprise will render any further Government schemes unnecessary.

It is evident from Sir Alfred Mond's statement on the medical staff of the Ministry of Health that our worst opinion of that Department little realised its inflation and extravagance. The staff of the Local Government Board in 1914 was thirty-one, that of the National Health Insurance Commissions eight, a total of thirty-nine doctors. The Ministry of Health, which was formed by combining these two Department, has one hundred medical officers, including two part-time specialist officers. We were told when the Ministry was created that duplication of staffs would be avoided and economy secured. In 1914 the doctors' salaries ran to about £26,000. This rapidly rose to £130,000, at which figure it now stands. Surely Sir Alfred Mond will promptly apply the shears to this needless and wanton addition to the taxpayers' burden?

The Exhibition of Pictures of the Belvoir Hunt, and other Scenes of English Country Life, by Mr. A. J. Munnings, A.R.A., which opened on Tuesday at the Alpine Club Gallery, Mill Street, Conduit Street, will assuredly attract shoals of visitors. The pictures of the Belvoir Hunt were painted during the artist's stay at Woolsthorpe, with the Master, Major Bouch, and the facilities given in the kennels and stables have rendered possible a series of most admirable impressions, or pictures, which will charm every lover of horses and dogs, bearing as they do throughout the freshness and vigour of good work done on the spot, and untouched by the artist afterwards. There are also a lesser number of other works portraying some delightful rural scenes and episodes at Epsom. The catalogue is embellished by a photogravure portrait of the artist and a pleasant foreword by John Masefield, who reminds us, most refreshingly in these days of strife and selfish discord, that the English mind is happiest in its thoughts of country things,

and rightly, for man is based on country things which abide, while town things run their fever. No visitor will fail to preserve this catalogue or to obtain a copy of "The Tale of Anthony Bell," a hunting ballad by Mr. Munnings, a graphic story of the famous fox-hunting squire of the early days of the nineteenth century, which, we are glad to learn, is to be expanded into a book some day, with illustrations by its author. It will assuredly sell by thousands, for it has the ring of the true ballad in every verse.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE UTILITY OF RESEARCH ON BUILDING MATERIALS.

A meeting of the Royal Institute of British Architects was held at No. 9, Conduit Street, London, W., on Monday, at which the principal business was to listen to a paper by Mr. Alan E. Munby, M.A. (F.), on the utility of research on building materials. Mr. Jno. W. Simpson (President) was in the chair.

Mr. Munby said that undoubtedly the chief attribute of an architect was the power to create such buildings as should uplift the beholder and quicken the artistic sense. The leaders of the profession were rightly great artists. They had, however, a trust to discharge to the profession in all its aspects; and an architect was expected to be equally ready to test a drain as to design an altar cloth, to arrange for the installation of electrical plant as to create a monumental façade. Ability in all these spheres could not be equally developed in one individual. Nevertheless, the architect accepted responsibilities covering these wide fields. It might be said that technical matters should be left to pure technicians, the architect confining himself to questions of planning and design; but such a decision could not fairly be made for the whole profession by those whose work lay mainly in the artistic sphere, because by far the greater proportion of the livelihood of architects was derived from things in which artistic work had but a small part. Until about a century ago building was a comparatively simple matter requiring few materials. Brick, stone, timber, slates, and tiles considered, little was left, and even these often had a local origin, and their qualities were well known. Time again was less valuable, brick earths could be well seasoned; timber was cheap enough to admit of the removal of the inferior parts; the contractor was often an actual craftsman with sufficient time to enable him to do good work. In such circumstances there might seem little occasion for an architect to seek scientific knowledge, but Leonardo da Vinci and Sir Christopher Wren were remarkable examples of great Artists who were also men of science. If research was necessary in the days of Wren, it was much more so to-day, when the architect had to deal with subtle powders, such as cements, which might have any composition; clay products rapidly manufactured by machinery, aggregates of diverse family history, timber from unknown sources, metals varying enormously in properties with minute differences in composition, paints ready mixed and beyond hope of lay investigation, a host of patent materials, floorings, partitions, roof coverings, and builders' sundries, many of these before they came under the architect's eye, being woven into the engineering complications of a modern building in association with transportation, warming, lighting, power,

and other services. The architect could not be expected to be also a mathematician, physicist, chemist, and geologist, but he should have a sufficient general knowledge of science to enable him to appreciate its value and understand, direct, and control, in a broad sense, the work of scientific experts whose assistance he might require to insure the best use of materials in his buildings.

The lecturer followed with some statistics of the building industry. He said that some 750,000 operatives were employed in it, and, on the assumption that 80 per cent. were on full work at one time as an average, this represented a wage bill of about three millions a year, apart from the consideration of other contractors' costs. As regards materials, the annual production of building bricks was about three thousand millions, which, taken at the present price of London stocks, represented £15,000,000. One hundred million tiles were made annually, worth possibly £800,000. The production of cement was at present 2,250,000 tons, worth some £10,100,000. Some 200,000 to 240,000 tons of slates were mined annually, worth some £7,000,000. The value of imported timber, excluding pit props, sleepers, and staves, was £66,750,000. In 1907, the date of the last figures available, the home consumption of paint materials exceeded £10,250,000, equal probably to £30,000,000 to-day. He had been unable to dissect constructional steel, but last year nine million tons of steel ingots and unmanufactured castings were produced in this country. The aggregate value of other materials must be considerable, but omitting these and steel we had an annual value of some £130,000,000. These figures were for materials only; when we reflect that a labourer's wages were almost four times and a skilled worker's wages nearly three times pre-war cost, the value of any investigations likely to improve the durability of materials and add to our knowledge of their most appropriate employment became obvious.

A research problem generally had two ends, often belonging to different professional or commercial spheres. As an example, many defects in materials arose from atmospheric influences, and the attack should be made simultaneously on the improvement of the materials and the reduction of the deleterious impurities in the air. Obviously, co-operation between the two sets of workers would be valuable. The utility of research was exemplified by the improvement in certain materials, notably steel and cement. The high and certain qualities obtainable in these materials was the result of patient research stimulated by demand. If we could purchase on the basis of essential quality the stimulus to improvement would be greatly increased. Suppose we bought cement by strength and paint by durability, instead of by weight, much poor quality material would disappear from the market. Dry rot in timber was a constant source of trouble, and of those cases which had come under his notice, quite half were due to defective rain-water pipes. These were usually thinner at the back than in front, hence the vulnerable unpainted side perished, and the pipe leaked against the wall, the defect being often undiscovered until some dormant spores, wakened into life by moisture, began their ravages upon the internal timber. Were these pipes rigidly specified, the immediate result would no doubt be trouble, delay, and increased cost, but this might be got over by giving notice in advance of an R.I.B.A. standard to be required; and very soon

defective goods would be ruled out of reputable work, with great national saving as a consequence. Before the days of Portland cement all our buildings were erected in lime mortar; but the top of the eighteen-inch brick cone to the dome of St. Paul's carried more than four tons per square foot, a weight we should hesitate to place on many walls of modern brickwork. We manufactured cement scientifically to conform to definite and rigid specifications; but the lime industry was much as it was a hundred years ago. In America the burnt stone was hydrated, and marketed as a dry, screened powder. This kept fairly well, did not expand or fire, and carried as much sand in mortar as the unhydrated lump material. At the present time on actual material, about only one pound a rod could be saved by the use of lime in place of cement in brickwork; but the saving in wages was important, because when building in lime a man could work much more rapidly. Another matter was that the methods of improving our weaker limes was becoming forgotten. In 1856 a patent had been taken out for Scott's Cement, formed by the addition of gypsum to stone lime. Tests were available showing that the strength of mortar could be thereby more than doubled. Street had used such mortar in 1878 in building the Law Courts, but few, if any, were conversant with this material at the present day.

As to stone, the lecturer said that the Science Committee of the R.I.B.A. had the subject in hand, and the result of a ten years' exposure test on a number of common building stones was now under consideration. Most freestones took a skin hardness after quarrying, due possibly to the deposition of solid bodies near the surface on the evaporation of the "quarry sap." This skin once removed never seemed capable of replacement, and there was always a danger, in applying solutions or chemicals which resulted in precipitation, of obtaining a skin which, by further disintegration, would become detached from the stone, leaving it worse than before. Probably the physical characters of stone were more important than chemical differences in composition; and its durability often depended more on the character of a small percentage of cementing material than on that of its main ingredients.

Of bricks and tiles the lecturer said that architects were conversant with the disastrous effects which often occurred after only a few years with roofing tiles. This subject also was one which the Science Committee was endeavouring to tackle. A careful report was wanted on the conditions of manufacture, and an investigation into the subject of shelling, lamination, and the effect of slope angles and climatic conditions. The wonderful condition of certain old tiles was sometimes ascribed to the mellowing of the clay before use. This mellowing could only mean disintegration and chemical changes, and there seemed no reason why the chemist should not take up this subject seriously. As regards pressed tiles, almost any substance tended to laminate under pressure. Timber was a material upon which researches were urgently needed. It was an organic edible substance, open to the ravages of insects and fungoid growths. All were conversant with the effects produced by boring beetles or worm in many of our fine old roofs; much hidden structural timber fell a prey to these creatures. More urgent was the scourge of dry rot; it almost amounted to a national plague, and had been much accentuated since the war as

the result of the use of sappy and unseasoned timber and the neglect of property. It would be unwise to hazard an estimate of the annual cost of this pest, but, as one among other architects, he had seen in the last twelve months probably a dozen cases involving repairs amounting to many thousands of pounds. Yet there was not a single recent comprehensive volume on the subject in this country; the mycologist had little regard for the practical side of the problem, while the architect considered it too botanical for his sphere of action. Much might be done to check the evil at the docks and in timber yards, where infected wood was often treated with no more consideration than brick rubbish, and sometimes used as a convenient substratum on which to place sound timber. The Science Committee was making investigations into the storage conditions of timber, and if legislation was needed it was to be hoped that the R.I.B.A. would press for it. Meanwhile an organised body of whole-time workers prosecuting researches into the subject of diseases in converted timber was needed; probably few national investments would pay better. In dealing with a material of which the total annual value was over eighty millions, it did not seem unreasonable to ask for a quarter of a million to provide and endow a suitable Institute. What was wanted was first a ready means for detecting the spores of *Merulius* and *Polyporus*; and afterwards an investigation into the distribution of the disease, which was known to be specially prevalent in certain districts. Then regulations to bring the infection under control should be considered. There were, of course, a great many other aspects of timber which merited investigation.

Coming to metals, the lecturer said that sulphuric acid and other atmospheric impurities were largely responsible for their decay, though moisture and carbonic acid, which must be regarded as normal constituents of the air, played a part. Attention had recently been directed to the inhibiting action of certain substances, as, for example, lime protecting iron in concrete. Certain steels resisted corrosion owing to the presence of vanadium. Most commercial metals were really alloys, and the discovery of a strong, cheap metal which would resist atmospheric corrosion would be worth many years of well-paid research work. If an alloy research failed, some skin treatment at the time of manufacture might prove effective. He had an ingot of copper clothed permanently with the beautiful red oxide temporarily produced on clean copper by a London fog. This ingot had had a chequered career in his possession for thirty years, but its surface remained as clean as when it came from the mould. The decay of zinc was really a very serious matter for owners of small town property; probably it depended in a great measure on impurities in the metal. There was no special difficulty in preparing pure zinc, and the cost should not be prohibitive. Paints and varnishes were perhaps the most difficult of materials to assess. Experiments made some years ago in America showed that in two similar paints the size of the solid particles was respectively 125 and 2,500 to the linear inch, and that the latter had twice the durability of the former. Oxide of iron paint in oil varied in price more than 50 per cent., but the means of ensuring that the best was supplied when it was demanded were very slender. Among one hundred and fifty pigments in common use about 17 per cent. were liable to fade. This was a subject worthy of investigation. The nature of gums and resins was but imperfectly

understood, and varnishes made from these were open to much adulteration. Our organic chemists might help in finding substitutes for some of the very costly varnishes now used.

Of other matters the lecturer said it should be possible to produce a glass able to resist abrasion, and that this would result in a great improvement to much basement property. A proprietary plastic floor was another matter deserving attention, so also a wall covering which should at least be guaranteed not to contain certain injurious ingredients.

The lecture was illustrated by lantern slides showing among other things the effect of ten years' weathering on various stones. Other slides showed, much magnified, the surface of hand-made tiles dating from the eighteenth century and still in first-class condition, contrasted with the surface of machine-made tiles less than ten years old and already becoming un-serviceable. The most notable difference here was the presence of air bubbles in the hand-made tiles. Other slides showed specimens of timbers, metals, varnishes, etc.

Sir Richard Glazebrook, K.C.B., moved a vote of thanks to the lecturer. He said the fact that the modern builder used such different materials from those of his forefathers, and that modern buildings were so enormously larger than most of those of old days, raised questions involving very careful and delicate investigation. In the early stages of the laboratory one of the matters brought most prominently before the scientists there had been the necessity for being able to test building materials on quite a large scale—to test large ferro-concrete beams or pillars of the actual size used in engineering practice, although it had proved impracticable to do this at that time. There were other problems connected with ferro-concrete. He had recently received a paper from America dealing with the effect of stray current electrolysis on various building materials, especially concrete work. The danger to building materials from electricity was not, perhaps, a very great one, the voltages were not great; nevertheless, damage was done. A figure in the paper showed the effect of passing an electrical current through a block of concrete containing iron. A chemical action took place, the concrete swelled, and might swell sufficiently to split the block. This was one of several matters connected with ferro-concrete that had been enquired into in America, and that needed research here. A question they had investigated at some length at the National Physical Laboratory was that of the thermal qualities of various substances. Among other things they had tested certain roofing materials, made of cement or plaster with fibrous material embedded. It had been supposed that these would be particularly good for maintaining the temperature of a room, but when the experiment was made the surprising result was obtained that ordinary galvanised iron was found to be 20 per cent. better than these tiles. The actual passage through the iron was much more rapid than through the other material, but this was more than compensated for by the great difference in the rate at which the heat escaped from the surface. Testing materials used in cold-storage work they had found—measuring the rate per hour at which the heat passed through a square foot slab one inch thick—that cork, slag wool, and charcoal allowed the passage of about .3 B.Th.U.'s. Wood and cement each allowed the passage of about one such unit, bitumen six units, and concrete block eight units. Another

matter which they had been concerned with was the devising of such a roof for a picture gallery as would allow the north and south walls of that gallery to be equally illuminated; they had now a room 60 feet by 30 feet and 17 feet high, on which temporary roofs could be placed, and the effect investigated of allowing the light to enter in various manners.

Sir Ray Lankester, K.C.B., seconded the vote of thanks. He said that his earliest recollection of scientific research in connection with building materials was when the magnesium limestone of which the Houses of Parliament had been constructed had begun to decay, and his father together with other scientific men had been consulted. It had been proposed to apply silica to the surface, but he believed that eventually a resinous paint was used. The area of investigation that had been suggested by the lecturer was enormous; it was hardly possible that anybody representing a particular profession could undertake it. It seemed to him that the attitude of the practical man in any profession should be to propound the problems to be answered at leisure by the scientific workers. No serious knowledge of stone, for instance, could be gained by any rapid survey of its microscopical or chemical attrition. The question of dry rot also involved biological problems which could not be rapidly dealt with; he believed there was more than one fungus concerned in it. So, also, with regard to the boring larvae of beetles; how to check them was a matter of very careful experiment.

Mr. H. O. Weller gave some account of the work being done by the Building Research Board. Among other things being investigated, he said, were the colloidal properties of clay and a new base for paints to replace lead. The standardisation of materials, or the issue of standard specifications, was also a matter to which attention was being given. They thought there should be specifications of sand, lime, brick, and iron Portland cement. One branch of their work was the study of failures; we learned more from failures than from successes.

Mr. J. Allen Howe, of the Geological Survey, said that an enormous amount of investigation had been made into the qualities of stones, but architects and engineers did not avail themselves of the results of these labours. A directory of British stones was needed.

Mr. H. D. Searles-Wood also supported the vote of thanks.

The Chairman said that what architects needed were simple tests by which they could readily tell the quality of materials.

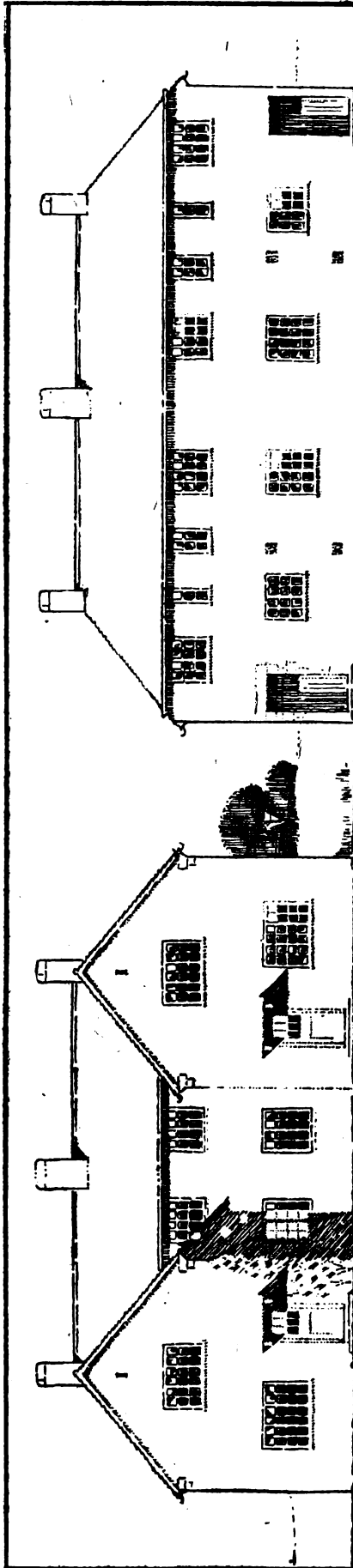
The vote of thanks was heartily accorded, and the lecturer having briefly replied to the discussion the proceedings terminated.

The memorial to Captain Leefe Robinson, V.C., the first man to bring down a German airship on British soil, is being erected on the field at Cuffley where the airship fell. The memorial is to be a granite obelisk placed on a granite plinth about six feet in height.

Labourers employed in widening the road at Ocklynge Hill, west of Pevensey Bay, near Eastbourne, have excavated several skeletons thought to be bones of soldiers killed in engagements between the Saxons and Normans. An iron dagger implement was also found.

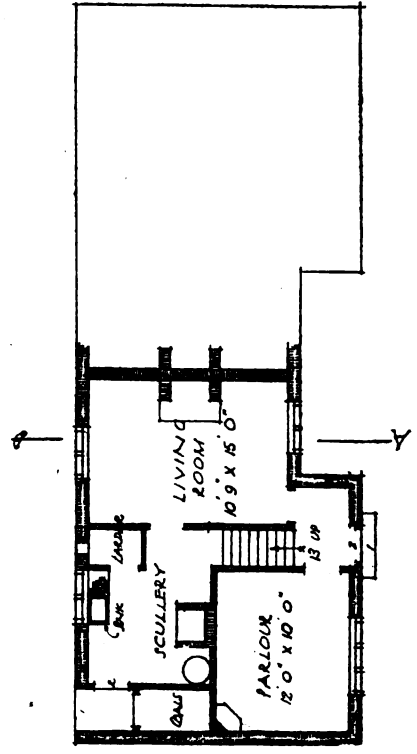
The Minister of Health has appointed Sir Charles T. Ruthen, F.R.I.B.A., to act in an honorary capacity as Director-General of Housing. Sir Charles Ruthen is Consulting Chief Inspector to his Majesty's Office of Works and President of the Society of Architects. He is the author of "The Timber-Frame House—its Possibilities" and many articles upon housing, town-planning, and kindred subjects.

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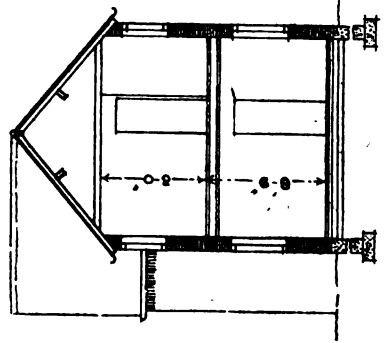


FRONT ELEVATION

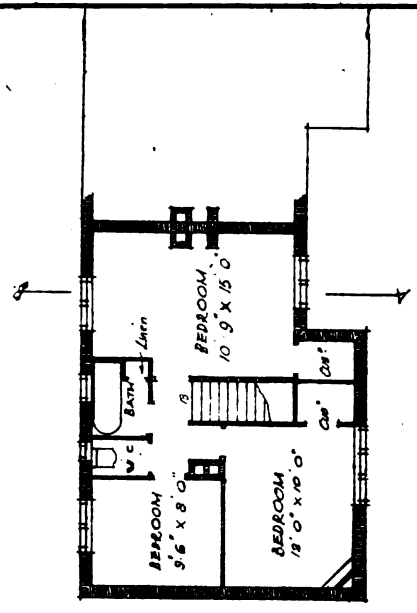
BACK ELEVATION



GROUND FLOOR



SECTION A-B

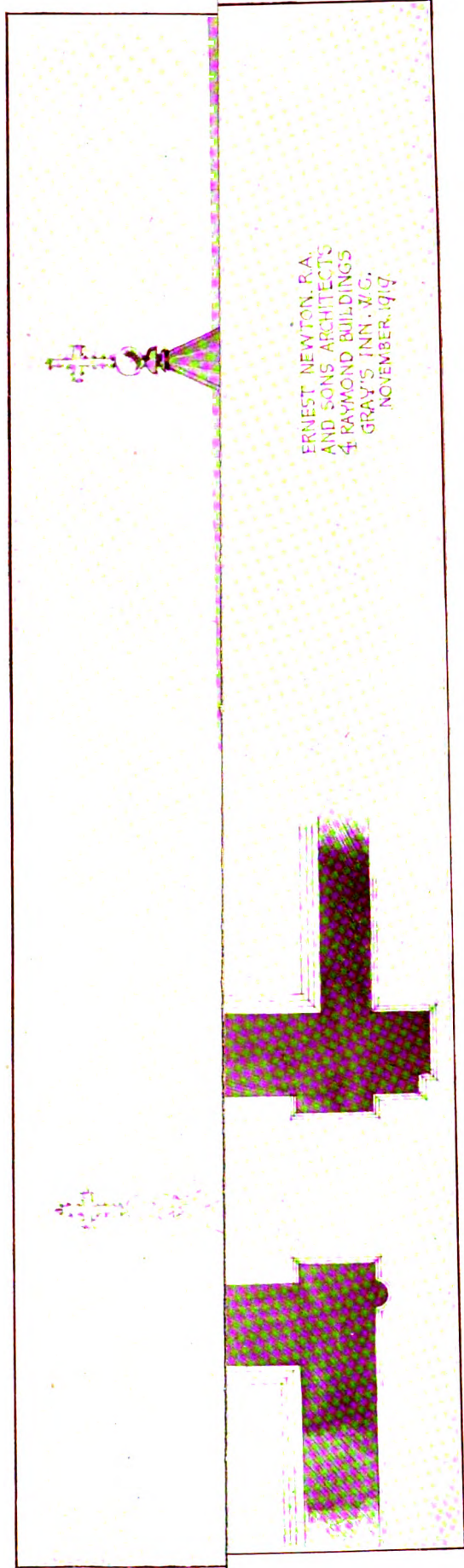


FIRST FLOOR

HOUSING SCHEME FOR SWANSEA : TYPE B₃ HOUSES IN PAIRS, EACH 942 sq. ft.

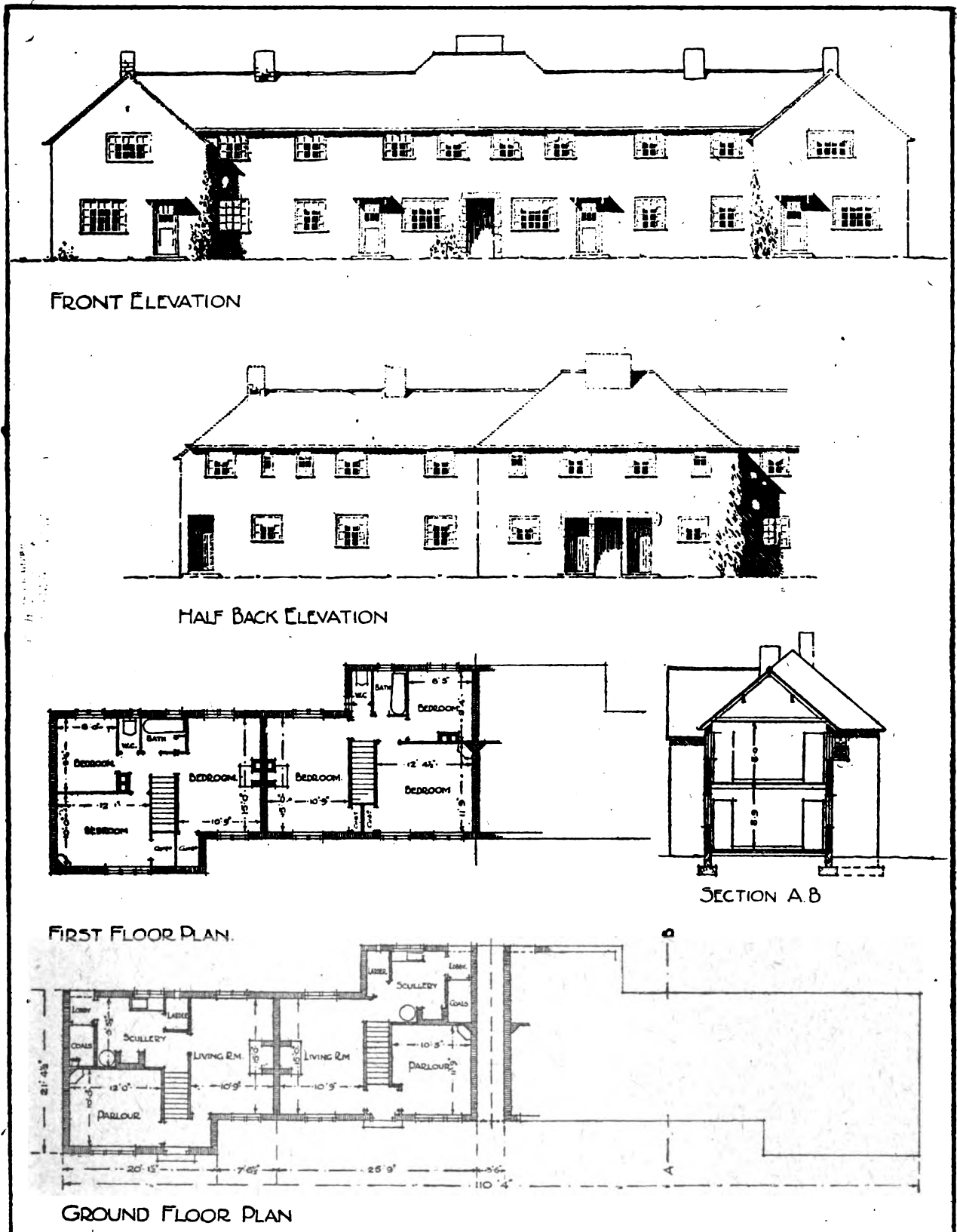
Sir FRANK BAINES, Director of Works, H.M.O.W., Architect.

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ERNEST NEWTON, R.A.
AND SONS ARCHITECTS
4 RAYMOND BUILDINGS
GRAY'S INN, W.C.
NOVEMBER, 1919.

UPPINGHAM SCHOOL, RUTLAND, MEMORIAL SHRINE, PROPOSED TO BE BUILT ON TO THE CHAPEL.
Messrs. ERNEST NEWTON, R.A., and SONS, Architects.



HOUSING SCHEME FOR SWANSEA : B₃ TYPE, ENDS 942, INTERMEDIATES 948 sq. ft.
Sir FRANK BAINES, Director of Works, H.M.O.W., Architect.

Our Illustrations.

UPPINGHAM SCHOOL MEMORIAL SHRINE ATTACHED TO CHAPEL.

This proposed war memorial in the form of an octagonal shrine intended to lead out of the south side of the chapel of Uppingham School has been designed by Messrs. Ernest Newton, R.A., and Sons, of Gray's Inn. Its proposed site is on the axial line of the main entrance to the chapel on the north side. The internal seven faces of the walling provides for three mural panels in each compartment to be carried out in bronze. Twenty-one spaces allow for a composite roll of honour finished in gilt and tinted giving the names of the "old boys" fallen in the war. The cornice and internal woodwork was intended to be in oak with a cove and ceiling in plaster decorated in oil colours. The accompanying drawing was made by Mr. W. G. Newton, M.A.

HOUSING SCHEME, SWANSEA.

Sir Frank Baines, the director of works, is supervising this work at Swansea, and we give two sheets of the working drawings of the types B3. The superficial feet areas in blocks of four dwellings at ends are 942, the intermediate ones giving 948 ft. The semi-detached houses are 942 sq. feet each. The portion of the Swansea housing scheme to be carried out by H.M. Office of Works for the Housing Committee of the borough council by direct labour consists of two sites—one at Morrision and the other at Birch Grove. It is proposed to proceed with the 310 houses on the Morrision site, and 170—the full number—on the Birch Grove site, where work has commenced. The complete scheme for Morrision comprises 720 houses, with a site in the centre for a church, hall, etc. Generally speaking, these schemes are to accommodate tenants engaged in industrial enterprises, such as tin, steel, spelter, and chemical works, and collieries. The Morrision scheme covers 86½ acres, of which reserved sites, open spaces, allotments, greens and roads absorb about 28 acres. The number of houses to the acre are 9.8 gross and 12.2 net; the average frontage is 39 ft. Birch Grove site is rather over 17 acres in extent, with 2½ acres devoted to allotments, roads, etc., the number of houses to the acre is 10.5 gross and 11.7 net, and the frontages average 35.6 ft. The B3 type of house shown in the illustrations have the baths upstairs, though the greater number have been designed with the bath on the ground floor, a type which is preferred by the majority of the workpeople. The Housing Committee being anxious that the scullery should not be used as a sitting-room, space has been restricted accordingly. The walls will be 11 in. hollow brick rough-cast, with stone dressings to front doorways and chimney caps; and the roofs will be covered with grey Welsh slates.

A course of five lectures on "Carpentry and Joinery" will be commenced at Carpenters' Hall, on Thursday, May 12. An examination will follow the course.

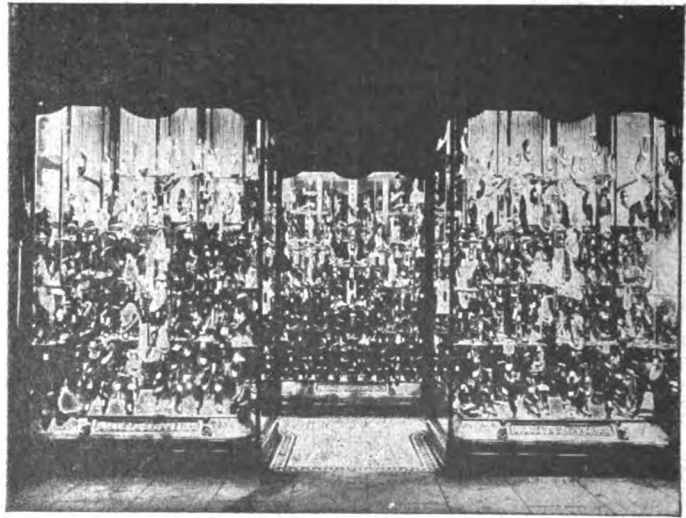
An oak tablet has been placed on the south wall of Christ Church, Trinity Road, Edinburgh, to commemorate the gallantry of twelve men connected with the congregation who fell during the Great War. The design of the tablet was made by Sir R. Lorimer, F.R.I.B.A., A.R.A.

A memorial has been erected to the late G. A. Storey, R.A., over his grave in Hampstead Cemetery. The memorial takes the form of a classical figure carved in marble from the bas-relief designed and executed by the late artist for his mother's grave, which, however, was never carried out for that purpose.

A BRILLIANT GROUP OF SHOPS. X-RAY LIGHTING AT PALMER'S GREEN.

To convert the wealthy corporation to a new principle or method of business, or, at any rate, to bring it to the stage of interest and experiment, is a relatively simple matter. In connection, for example, with the lighting of shop windows, little difficulty has been experienced in

practice is far more efficacious than precept. By equipping their own shop window with concealed X-Ray reflectors and Mazda gas-filled lamps, and thus distinguishing it from the windows on either side, Messrs. J. Prosper and Sons created a feeling of discontent amongst their neighbours, to such excellent effect that within a few weeks twelve shops in the same block had installed X-Ray equipment. These shops include the follow-



A BRILLIANT BOOT DISPLAY.

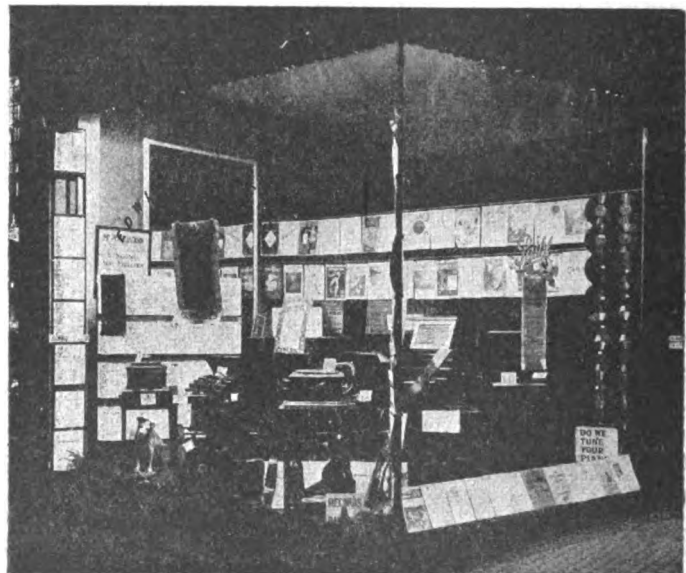
The illumination produced by the X-Ray units is evenly diffused throughout the window, although the lamps themselves are invisible from the pavement.

persuading the big department stores to instal up-to-date systems. Small traders, however, have not been so easily convinced of the advantages of scientific design, and the majority of suburban shops pathetically exemplify the futility of pouring the new wine of gas-filled lamps into old bottles of obsolete equipment.

Here and there one may see windows lighted adequately and artistically; and

ing:—Toy shop, boot shop, outfitter, baker, draper, music shop, some of the trades being duplicated. The shopkeepers followed one another's example. As each installation was completed its contrasting brilliance forced neighbouring shops to imitative action.

Two shops of this scintillating group have been photographed. In both X-Ray reflectors of the "Hood" type are used,



"LIGHT MUSIC."

This window is illuminated by means of X-Ray reflectors and Mazda gas-filled lamps concealed along the top front edge.

yet more rarely a small community of well-illuminated shops may be discovered. Such an aggregation is to be seen at Palmer's Green. Messrs. J. Prosper and Sons, the local electrical contractors, are lighting enthusiasts, itself a very useful basis for successful propaganda; and they have the further merit of

each reflector being fitted with a 100-watt Mazda gas-filled lamp. One of them, a music shop, affords an excellent example of the advantages of the X-Ray method of lighting in highly trimmed windows containing tickets and other printed matter. As will be seen from the illustration, the music titles are clearly visible. Had the

window been lighted in the ordinary way by means of lamps hanging in the line of sight, the reflected light from the white surfaces of the music would have produced halation on the photograph, and the printed matter would have been quite illegible, which phenomena are simply a photographic exaggeration of the actual effects on the human eye.

Four X-Ray "Hood" reflectors and 100-watt Mazda gas-filled lamps are used in this window—a by no means extravagant allowance in view of the results obtained. The lighting units are concealed by the narrow curtain at the top of the window.

In the other case, a boot shop, the window is similarly lighted, and here, too, the definition is quite good. It will be noted that in spite of the close dressing the illumination on the lower portion of the display is ample and well diffused.

Both photographs were taken at night, solely by the light of the X-Ray units, and have not been retouched in any way.

The materials for all twelve installations were supplied to the contractors by the British Thomson-Houston Company's Illuminating Engineering Department (77, Upper Thames Street, E.C.4), to which requests for further information should be addressed.

TANK CONSTRUCTION.

The many readers who have profited by Mr. Ernest G. Beck's book on "Structural Steelwork," published by Messrs. Longmans, Green and Co., and which we reviewed on p. 88 of our issue of February 6, 1920, will welcome his latest work on "Tank Construction," just issued by Messrs. Emmott and Co., Ltd., of 20, Bedford Street, W.C.2, and 65, King Street, Manchester, at 12s. 6d. net. To those who are under the delusion that our knowledge of the principles involved in the design and construction of tanks is more or less complete this will come as a revelation. The truth is that in most of the commonly employed methods of constructing tanks the makers evidently do not even know how the sheeting acts in resisting the pressures of the contained liquid. Moreover, the "design" is often based on assumptions which certainly and obviously cannot be realised in the finished structure. As a matter of fact, ignorance of principle has taken refuge in its determination to secure "economy," somehow by cutting down the thicknesses of the sheeting, or sacrificing essential parts of construction, with the result that the life of a tank has been a short one, and the lot of those constantly called on for repairs and renewals anything but a happy one.

It is in many ways regrettable that, as usual, empiricism has in this, as in so many other matters, ignored practical research, for the problems presented are fascinating to the practical engineer, while the commercial benefits assured to makers of the encouraging results obtained are of the most solid kind. The wonder is that the literature of structural design has been so barren as far as the tank is concerned. So far as we know, that, however, is the case, and the labour devoted by Mr. Beck to his subject has been for the most part akin to that of the explorer in a newly-discovered continent who returns laden with the fruit of discovery as novel as welcome. Take, for instance, the parts of the work which especially bear the stamp of originality, such as the discussion in Chapter II. especially with regard to the influence of floors and roofs, of costs differing materially from that of walls, on the economical proportions; and also with regard to the latitude

available for departure from the proportions giving maximum economy in the area of sheeting. Or the suggested method for staying the walls of rectangular tanks by means of horizontal rails in Chapter IV.; the investigation concerning the action and design of rails and curbs in Chapter V.; the treatment for trough-bottomed rectangular tanks in Chapter VI.; the suggested methods for simplifying the design, manufacture, and erection of the roofs, walls, and floors of cylindrical tanks in Chapter VII., and the treatment for dished bottoms of elevated cylindrical tanks in Chapter VIII. Throughout all the above, as elsewhere, Mr. Beck has a grip of his subject which will end the profitless existence of the makers who, with no reputation to preserve, foist their products on their customers built up of inferior metal which it is impossible to work up properly, and the defects in which have to be camouflaged by red lead and jointing devices, the result being a tank certain to give trouble sooner or later, and who, when asked for explanations, reply in vague terms, darkly hinting at the existence of some malignant power which all their "skill and care" has been unable to prevent, in spite of the fact that a leaky tank bears witness to bad material or faulty workmanship, and to nothing else.

The volume covers 265 pages and contains 178 illustrations, and will take its place at once as a standard work of the first rank, on a subject of the first importance; and we shall look forward expectantly to the issue of another book at an early date, which Mr. Beck promises, on bunkers, bins, and silos, on similar lines.

PROFESSIONAL AND TRADE SOCIETIES.

READING SOCIETY OF ARCHITECTS.—The quarterly meeting of the Reading Society of Architects was held last week at the Chamber of Commerce meeting room, when forty-six architects were present, including the President, Mr. C. Steward Smith, F.R.I.B.A., in the chair, and Messrs. A. Cooper, A.R.I.B.A. (Slough); A. S. Cox, M.S.A.; T. T. Cumming, A.R.I.B.A.; F. H. Floyd, F.R.I.B.A. (Newbury); W. J. Freeman, A.R.I.B.A.; G. T. Gardner (Oxford); J. H. Goodman; J. R. Greenaway, F.S.I.; N. W. Harrison, F.R.I.B.A. (Oxford); W. Roland Howell, F.R.I.B.A.; P. A. Hopkins, M.S.A. (Gerrard's Cross); Harry Hutt, A.R.I.B.A.; C. S. Kimpton, A.R.I.B.A. (Sunningdale); H. M. Lewis (Wokingham); E. P. Morgan; W. Galt Millar, F.S.I.; W. R. Morris; J. S. Paton, M.S.A.; H. Whiteman Rising, F.R.I.B.A.; Thos. Rayson, A.R.I.B.A. (Oxford); R. A. Rix (Burnham); Basil Sutton, A.R.I.B.A. (Lambourn); H. W. Smith, M.S.A. (Oxford); G. Berkeley Wills, A.R.I.B.A. (Marlow); F. G. Sainsbury, M.S.A.; G. H. Williams, A.R.I.B.A. (Windsor); F. Woods (Maidenhead); H. E. Watkinson, F.S.I.; and C. B. Willecocks, F.R.I.B.A. (hon. sec.) After several new members had been elected, Mr. Ian MacAlister, the secretary of the Royal Institute of British Architects, gave an address on the proposed Berks, Bucks, and Oxon Architectural Association, in which he pointed out the need for such an association, and the value it would be to the profession. After discussion it was unanimously resolved to form such an association, and a committee was appointed to arrange the necessary details, consisting of Messrs. C. Steward Smith, W. R. Howell, H. W. Rising, C. B. Willecocks, Thos. Rayson, G. T. Gardner, N. W. Harrison, H. W. Smith, Basil Sutton, P. A. Hopkins, G. H. Williams, F. H. Floyd, Berkeley Wills, A. Cooper, R. A. Rix, C. S. Kimpton, with Mr. H. Hutt as hon. sec. In conjunction with the three-counties association, it is proposed to form several affiliated local architectural societies similar to those already formed at Reading and Oxford, so that all architects in the three counties may be in close touch with the central body.

THE SURVEYORS' INSTITUTION.—The Council have drawn up a memorandum indicating the points upon which farm agreements may be affected by the Agriculture Act, 1920. This memorandum has been submitted to Mr. Aubrey Spencer, barrister-at-law, and when approved will be circulated to members. A special general meeting to consider the supplemental charter and amended by-laws will be held at the Institution on Tuesday, May 10, and a confirmatory meeting on Monday, May 23. In the event of the members then signifying their approval of the proposed alterations and additions to the existing charter and by-laws, the necessary steps will be taken to place a humble petition before His Majesty for their sanction. The date for the annual country meeting, to be held this year at Norwich, was fixed for Thursday and Friday, July 7 and 8. It is hoped that the arrangements will include, on the first day, a civic reception in the morning, with visits to the Cathedral and Messrs. Boulton and Paul's after luncheon, and an Institution dinner in the evening; and, on the second day, a motor-car visit to Sandringham. In view of the statements which have been made in Parliament and in the Press that legislation on valuation and rating is under consideration, the Council have asked the Parliamentary Bills Committee to draw up a memorandum dealing with the various questions involved for submission to the Government.

THE R.I.B.A. HOUSE LIST FOR OFFICERS NEXT SESSION.—Mr. Paul Waterhouse, M.A. (Oxon), F.S.A., has been nominated by the Council of the R.I.B.A. as President for 1921-22. The Vice-Presidents proposed are: Messrs. S. D. Adshead, M.A., Herbert Tudor Buckland, A. W. S. Cross, M.A. (Cantab.), and E. Guy Dawber. Mr. Arthur Keen, Hon. Secretary. The new names set down for the Council are the following Fellows: Messrs. H. V. Ashley, Walter Cave, A. J. Davis, G. Topham Forest, H. Austin Hall, C. Stanley Peach, G. Gilbert Scott, A.R.A., and William Woodward. Mr. Walter Cave retires from the Vice-Presidency in May, and Messrs. Robert Atkinson, H. P. Burke Downing, and George Hubbard, F.S.A., retire from the Council. Mr. G. G. Scott, A.R.A., as President of the A.A., retires with expiration of his official year. The retiring Associate members vacating their seats are Messrs. Patrick Abercrombie, M.A., Horace Cubitt, and W. G. Newton, M.A. The new candidates are Messrs. H. C. Bradshaw, J. Alan Slater, M.A., Michael T. Waterhouse, H. A. Welch, and J. Hubert Worthington, M.A. (Manchester), all Associates. Mr. W. G. Newton, the new President of the A.A., will sit as the representative of that body on the new Council. Sir Reginald Blomfield, R.A., and Mr. J. William Simpson will serve as the two Past-Presidents chosen by the Council.

"It will have to be realised," says Lord Inchcape, "that high wages and short working hours, and low output, and can't canny, which were possible when trade was booming, are impossible when trade is bad. It must also be realised that 20s. or 30s. or 40s. a week with work is better than an unemployment dole with no work, and that no country can go on indefinitely paying people for doing nothing."

Having been restored at a cost of over £2,000, the church of St. Mary Abchurch was reopened on Wednesday week. Sir James Thornhill's painting of the Holy Choir in the dome was then seen to advantage for the first time. By an arrangement of concealed electric lights the painting becomes clearly visible. In the bidding prayer the names of Wren, Grinling Gibbons, and Sir James Thornhill were specially mentioned. Dean Inge preached.

In the Mayor's and City of London Court on April 7 Messrs. Leopold Farmer and Sons claimed ten guineas against Mr. Alfred Gerhold, 95, Grove Road, Bow, fee as surveyors and valuers for preparation of his claim against the Government for land commandeered by them at St. Clare's Hall, St. Oyth, Colchester, in 1916. Defendant said he was still waiting for the Government to pay him. Judge Jackson said he was not surprised defendant was still waiting. The Crown were not very expeditious; but that was no reason why the plaintiffs should wait. Judgment for plaintiffs, with costs.

Our Office Table.

A series of six public lectures on Architecture will be given at the Galleries of the Royal Institute of British Architects, 9, Conduit Street, W.1, at 5 p.m., on the following days:—Thursday, April 28—Lecturer, Mr. A. Clutton Brock, "Architecture as Everyone's Concern"; Chairman, Mr. John W. Simpson, President of the R.I.B.A. Thursday, May 5—Lecturer, Mr. F. C. Eden, M.A., "Architecture and Travel"; Chairman, Sir Aston Webb, K.C.V.O., C.B., P.R.A. Thursday, May 19—Lecturer, Mr. Roger E. Fry, "Architectural Heresies of a Painter"; Chairman to be announced later. Thursday, May 26—Lecturer, Sir Charles Nicholson, Bart., M.A., "Post-War Churches"; Chairman to be announced later. Thursday, June 2—Lecturer, Mr. Henry M. Fletcher, M.A., "Building a House"; Chairman, Mr. Ernest Newton, R.A. Thursday June 9—Lecturer, Mr. H. S. Goodhart Rendel. "Some Fashions in Architecture". Chairman to be announced later. Admission free.

According to a British patent taken out by H. D. Baylor, 315, Guthrie Street, Louisville, Kentucky, U.S.A., November 8, 1919, No. 27,647, quick-setting cements are converted into slow-setting by the addition of 10-17 per cent. of quicklime and sufficient water to hydrate the lime produced by the decomposition of the aluminates, and also the added lime, the mass being agitated to prevent setting during the hydration, and finally re-ground. In an example, 1,650 lb. of hydraulic cement is ground with 200 lb. of lime, the mixture is agitated, and about 150 lb. of water is added. When the reaction is complete, the mass is re-ground.

"Jerry-builder" is a word which had its birth in Liverpool. Most of the lexicographers are agreed about that, but not as to its origin. There used to be a legend that it derived from a firm of builders named Messrs. Jerry, who flourished in the middle of the nineteenth century; but that story was solemnly "turned" down by the "New English Dictionary." In Professor Weekley's "Etymological Dictionary" of modern English, which has just been published, it is stated that "jerry-built" made its first appearance in print in a Liverpool newspaper of 1861; and as to its origin, the professor conjectures that as Liverpool hears and picks up a good deal of sailor talk, the prefix "jerry" may be a corruption of the nautical word "jury"—which, as in "jury-mast," is applied to all makeshifts and inferior objects. We incline to doubt it. At any rate, the word was in use considerably before 1861.

"Building Repairs," by Ernest G. Blake (London: B. T. Batsford, Ltd.), should interest many besides architects, builders, and others immediately concerned, for it is unfortunately the truth, as the author says, that the ordinary mechanic often sacrifices strength to appearance, and that in brickwork, joinery, and plumbing, especially, property-owners too often pay through the nose for "repairs" which are mere camouflage. The trades covered are bricklaying, tiling, slating, masonry, shoring, carpentry, plumbing, hot-water fitting, electrical work, plastering, and painting, paperhanging, and glazing. The information is practical, and the book would well repay study by all jobbing workmen.

So many of the State Legislatures of the United States have legalised State Registration for architects that it is somewhat surprising that, basing its action on a disinclination to create further State Boards, the Indiana State Legislature, on second reading, has defeated a Bill drawn to organise a State registration for architects. Inasmuch as registration has in a majority of States been recognised as essential to the correct practice of architecture, it would seem that the objection to an increase of Boards might have been overcome by the abolishment of some now useless bodies. The Indiana Society of Architects, nothing daunted by the present failure, has announced its determination to labour persistently to secure State registration, but as the Legislature

does not meet again until 1923, the much-needed reform is a long way off.

The Beaver Board Link for April is the best incentive to obey a timely reminder that it is easier to smile than to frown; to frown you use sixty-four muscles, but only thirteen to smile! And you will smile thirteen to the dozen as you turn page after page over, filled with fun and teeming with the best advice to all who want to do more business. The twenty-four illustrated instructions how to "Boom Your Business" are worth a king's ransom, and prompt application should be made for them at the headquarters of the Beaver Board Company, Ltd., 133-136, High Holborn, W.C.1. The concluding hint should be acted on by every local authority: "Boom your town! Be a joiner, not a slacker! Start a 'Build Now campaign or a Clean-up and Paint Now campaign.'"

At a meeting of the Eastern District Committee of Stirling County Council, held at Falkirk on the 14th inst., complaint was made of the quality of bricks supplied for the committee's housing schemes. It was stated that the architect had reported to the Housing Committee that the bricks which had been supplied through the Director of Building Material Supplies for the site at Avonbridge were of such inferior quality that they could not be used. The clerk was instructed to communicate with the Board of Trade, calling for an official survey and inquiry into the matter, and to state that two of the houses partially built of the bricks showed signs of rapid decay. Meantime, it was agreed not to proceed further in making use of the bricks, and that payment for them be refused. It was intimated that the Standing Joint Committee had approved of the scheme under which the Eastern District Committee of the Central District Committee proposed to enter upon the manufacture of bricks themselves.

The report of the Associated Portland Cement Manufacturers, Ltd., to be submitted to the twenty-second ordinary general meeting of the company, to be held at River Plate House, Finsbury Circus, London, E.C.2, on Tuesday, April 26, 1921, at 12 o'clock noon, states that the balance brought forward at January 1, 1920, was £143,511 3s. 3d. The revenue for the period, as shown by the accompanying profit and loss account, after providing for taxation, amounted to £952,531 3s. 9d., making £1,096,042 7s., from which have been deducted—directors' and trustees' fees, £5,225; debenture stock, mortgage, and other interest, £200,015 14s. 11d.; depreciation and sinking funds, £328,848 17s. 6d.—£534,089 12s. 5d., making £561,952 14s. 7d. An interim dividend on the preference shares to June 30, 1920, was paid on September 30, 1920, of £62,829 16s., and a final dividend on the preference shares to December 31, 1920, was paid on March 31, 1921, of £62,829 16s., making £125,659 12s., and leaving a balance of £436,293 2s. 7d., out of which it is proposed to pay a dividend on the ordinary shares of 10 per cent. for the year ended December 31, 1920, amounting to £213,732, leaving to be carried forward £222,561 2s. 7d.

At the fifty-first ordinary general meeting of the Val de Travers Asphalt Paving Company, Ltd., to be held at 18, Hamilton House, 155, Bishopsgate, London, E.C.2, on Wednesday next, the directors will present the balance-sheet and profit and loss account duly audited for the year ending December 31, 1920. After making the following appropriations: Depreciation and cost of maintaining plant and machinery, £6,281 7s. 4d.; written off cost of Neuchatel concession, £882 7s. 1d.; depreciation in value of horses and harness, £100 4s. 6d.; written off mining property, £2,000; and corporation profits tax (estimated), £1,500, the nett profits of the year are £29,960 8s. 2d., which, with the sum brought forward, £5,321 11s. 1d., amount to £35,281 19s. 3d. From this has to be deducted the interest on the debenture stock, amounting to £6,900. An interim dividend of 3d. per share was paid in October last. A further dividend of 1s. 9d. per share, less income-tax, was now recommended, making 10 per cent. for the year, and leaving a

balance to be carried forward of £28,781 19s. 3d. A controlling interest in the United Limmer and Vorwöhle Rock Asphalt Company, Ltd., has now been acquired.

"Reinforced Concrete Calculations in a Nutshell," with 1909 L.C.C. Regulations, edited by Joseph T. Piggott (E. and F. N. Spon, Ltd., 57, Haymarket, London, S.W.1, 3s. 6d.) is a series of simple practical rules for obtaining the dimensions and main reinforcement of beams and slabs for all classes of reinforced concrete structures, including a table of square columns with fixed ends; formula for depth of foundations; bending moment; shear and deflection diagrams and formulae, and data from which the material can be priced. The book is invaluable to architects, structural engineers, builders, and all designers and users of reinforced concrete structures. The rules are complete for each subject, no intricate diagrams being necessary for the use of the calculations. By employing the simple practical rules given, the chief dimensions and main reinforcements of beams, slabs, columns, and bases of columns for buildings constructed under L.C.C. Regulations may be rapidly and accurately determined.

The City Coroner, Dr. F. J. Waldo, and a jury last Monday concluded the inquest on the body of John Hockley, 46, and John Lawrence, 51, who were killed through the collapse of a floor during the reconstruction of Gresham House, Old Broad Street, E.C., on March 30. The jury returned a verdict of "Accidental death."

The chancel screen which Mr. E. O. Griffith has been erecting in St. Faith's Church, Great Crosby, from the design of Mr. Gilbert Scott, is now completed, and was dedicated at a special service last evening. It has been given by Mr. Douglas Horsfall in memory of his son, Captain Robert Eleum Horsfall, who was killed in the Cambrai push on November 20, 1917.

In the wage dispute now pending between the Mersey branch of the Building Trades Federation and the Master Builders' Association, about 20,000 Liverpool and district building trade operatives are involved. On behalf of the affiliated trades the federation demanded an advance of 8d. per hour, whilst the employers made a counter demand for a reduction of 4d. to make the hourly rate 2s.

The forty-first annual dinner of the Builders' Clerks' Benevolent Institution will be held on Tuesday, May 3, at 6 for 6.30 p.m. in the King's Hall, Holborn Restaurant, Mr. Edmund J. Hill, of Messrs. Higgs and Hill, Ltd., the President, in the chair. Seats can only be reserved for those who signify their desire to the Secretary, 4, Upper Street, N., to be present, quoting the number on their ticket.

Having defeated the Tramways Department in the previous round of the London County Council Inter-Departmental Football Competition, the Architects' Department, on Wednesday, April 6, met the Education Officers in the semi-final and won by 2 goals to nil. The first goal scored for the Architects was by Mr. W. H. Clothier, as the result of good wing work by Mr. G. F. Shipway, the latter also scoring the second goal.

The death occurred last Saturday, in his 70th year, of Mr. William Forrester-Addie, senior partner of Messrs. Forrester-Addie and Son, auctioneers and estate agents, of Shrewsbury and Chester. Until his resignation in 1916 he was for thirty years agent for the Earl of Powis's extensive Welsh estates, and with his son, Colonel J. H. Forrester-Addie, he was also agent for the estates of Lord Camden, Lady Joan Verney, and the Lake Vyrnwy estate of the Liverpool Corporation, and their technical adviser in their extensive forestry schemes.

The public examination in bankruptcy was conducted at Coventry Bankruptcy Court on Monday of Albert Walter Sheriff, Balsall Common, Berkswell, and Benjamin Harry Whitehouse, now living at Clent, formerly carrying on business in partnership, as builders, at Berkswell, under the name of Sheriff and Whitehouse. The statement of accounts showed a deficiency of £1,172 on liabilities amounting to £6,954. Whitehouse attributed the bankruptcy to lack of capital, cash not coming in quickly enough, and "Government subsidies holding things up." The matter was formally adjourned for one month.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

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OUR ILLUSTRATIONS.

"All India" War Memorial, Imperial Delhi: Archway at East End of the Main Processional Avenue. Foundation-stone laid by H.R.H. the

Strand, W.C.2.

Duke of Connaught, K.G. Sir Edwin L. Lutyens, R.A., architect.
 Lyssenthoek British Military Chapel and Cemetery, Poperinghe, Belgium. View and plan. Sir Reginald Blomfield, R.A., Litt.D., F.S.A., F.R.I.B.A., architect.
 A Bungalow at Spalding. The "Interloc" cellular block system. View, plan, and constructional details. Mr. W. E. Webster, architect.
 West End of Sudeley Church, Gloucestershire. Sketch by Mr. H. St. John Harrison, A.R.I.B.A.

Currente Calamo.

The position of ex-service men in the building industry, following the agreement arrived at between the Government and the National Federation of Building Trades Employers, is being well administered by the district committees throughout the country, appointed by Regional Federations. Applications for employment by ex-service men are made to the Labour Exchanges, and these are now being forwarded to the district committees. In the course of a week or two the scheme should be in operation throughout the whole country. During last week-end the National Council of Wages and Materials held several meetings, at which the representatives of the building trades employers and the unions were present. The conclusions arrived at are as yet uncompleted, but will probably be promulgated in the course of the next week or ten days.

Mr. J. W. Simpson, President of the Royal Institute of British Architects, has written to Major-General Thuillier, Commandant, the School of Military Engineering, stating that the desire that the military and civil branches of the architectural profession should be kept in touch with each other is very cordially reciprocated by the Royal Institute, and its great organisation throughout the British Empire is placed at his service for such a purpose. As Mr. Simpson points out, the fact that many hundreds of architects were engaged with the R.E. during the war in every kind of technical operation indicates the fertile recruiting ground available in case of need; and the normal education of architects would appear to be a sound basis of training for R.E. officers. With minds formed to plan schemes carefully in advance, and to pay meticulous attention to detail in their execution, their natural destination in warfare is the Corps of Royal Engineers—that essentially scientific and professional body of soldiers in which correct practice is inspired by genius and raised to the level of an art. It may surely be possible to assist in maintaining contact between the two bodies by an interchange of students in connection with the Reserve of Officers, and we are glad to know that General Thuillier will bring the matter before the War Office.

Messrs. Gillett and Johnson, the well-known bell founders, added another to the long list last Friday of brilliant successes during the firm's achievements as the leading practical exponent of campanology for more than a century. Princess Beatrice was present to see the ring of bells just cast for Carisbrooke Church, in the Isle of Wight, and to hear the set of ten new bells rung which have just been completed for Rochester Cathedral and tuned on the five-tone Simpson principle, the undoubted superiority of which we described in our issue of December 24 last year, when the new bells for the Royal Exchange were so satisfactorily tried. That visit was one of the most enjoyable we have ever paid, so interestingly were the principles of the art of bell-founding and tuning expounded, and so many were the triumphs, old and new, of the firm examined. Last Friday all agreed that another exceptional treat had been enjoyed, and that the public rejoicings outside and throughout the gaily decorated town and the shouts of welcome in the streets to Princess Beatrice had unmistakably endorsed the delight of everybody that the occasion had been so royally signalled by Her Royal Highness. Mr. Cyril F. Johnston, the head of the firm, said he knew of no previous occasion on which a member of the Royal Family had witnessed the casting of a portion of a peal of bells. It was good to know also that there has never been a strike or the slightest hitch in the relations between the workmen and the firm, which has always found a man able and willing to redress any real grievance, and equally to be told that England can now beat even the historic Belgian foundries at making bells in tune in themselves and with one another, as proved by the fact that English bell-foundries are providing bells for Rotterdam (in the historic bell-land of the Low Countries), and also for the great Peace Memorial at Washington, U.S.A.

The exhibition of the International Society of Sculptors, Painters, and Gravers at the Grafton Galleries is in many ways the best during many years. There are, it is true, no great pictures, and very little sculpture, but the general average of the 335 exhibits is high, there is a good deal more foreign work, and even the freaks are amusing, if still

rather artless than artistic. Sir William Orpen, R.A., K.B.E. (the President), is a prolific contributor of about a dozen works, the most able of which is the portrait of M. Clemenceau (4). Others which none will miss are "Amiens, August, 1918" (18), "General Jan Smuts" (62), and "President Wilson" (108). Mr. James Pryde (the Vice-President), shows "The Arch" (61), a fine composition, ably rendered. Mr. Glyn Philpot, A.R.A., is well represented by "Dawn" (8). Mr. Ambrose McEvoy is, perhaps, at his best with his portrait of "Captain Sir John Alcock, D.S.C., K.B.E." (45), but "Mrs. Rosen" (11) may be preferred by her admirers and his. There are two fair examples of his style by the late William Strang, R.A. (late Third President of the Society)—"Job and His Wife" (44) and "A Venetian" (81). Mr. Gerald F. Kelly scores high with two "Burmese Dancers" (58 and 64). Mr. W. G. De Glehn's portrait of "Miss Margaret Elwes" (39) is good, and so are his "Hydrangeas" (40). Sir John Lavery's only exhibit is "Cap d'Ail" (78). "Mrs. Murray," by Mr. Philip Connard, A.R.A. (105) is a success, and his "Farmyard" (106) pleasing. Mr. P. A. de Laslo sends an effective portrait of "A. H. Freeland Barlow, M.D., LL.D.," a late President of the Royal College of Surgeons, Edinburgh. Mr. Louis Sargent's "Spring Flowers" (69) are redolent of a better April than that we are enjoying, and his "Mischabel Group" (73) is well up to his usual high level. Most of the foreign work is French, among the best being more or less numerous examples of that by Degas, Besnard, Louis Legrand, and Manet. Lady Scott sends most of the sculpture, her bronzes of Colonel House (191), and "Carl Akeley" (65) about the best; and there is an effective bronze mask, "Margaret" (67), by Mr. W. Reid Dick, and another of "The Jolly Miller" (102), by Mr. E. Whitney-Smith.

There are about a hundred fewer exhibits at the Royal Scottish Academy this year, owing apparently to the reduction in the number of invited works. There is not much that is new except War Memorials and some of the sculpture. The President, Sir J. L. Wingate, has three small landscapes, but all good, two coming from a private collection in Edin-

burgh. Sir James Guthrie is well represented by a portrait of Mr. F. C. Gardiner, which is well hung. Some of the pastels are among the best things in the exhibition. There is a portrait study, "Miss Domette," by the late William Strang. Sir John Lavery's portrait study of the Viscountess Massereene and Farrard is shown, and his snowscape, "A Monk." A collection of the works of the late Charles Mackie is well worthy of his reputation. There are a good many portraits, one good group being that by Mr. Robert Hope, A.R.S.A., of Earl Haig addressing the Fathers and Brethren of the General Assembly of the Church of Scotland. Among other more or less prominent subjects are: "Mid-Lothian," by J. Campbell Mitchell; "On the Tyne, East Linton," by P. S. Nisbet; "Aberlady," by Jas. Paterson; and "Edinburgh from the South-West," by Mrs. M. V. Monro. The French and Belgian sculptors figure to best advantage in the Sculpture Hall, and the portrait bust of John Geddie, by H. S. Gamley, and a figure study of Robert Louis Stevenson, by T. J. Clapperton, are good. As a whole, the general atmosphere of the exhibition, while perhaps encouraging to hopes for the extension of opportunities for new work in most directions, is not distinguished by new ideas or a wider outlook.

The Government Training Grants scheme for ex-officers and men of similar educational qualifications has, we are glad to know, undoubtedly proved of great value. Statistical information, compiled by the Appointments Department of the Ministry of Labour, of recent successes of ex-Service candidates trained under the auspices of that Department, shows that the candidates form a very considerable proportion of the number who actually passed. In the last three final examinations of the Institute of Chartered Accountants (England and Wales), 298 ex-Service men in receipt of grants under the Appointments Department passed, and of these quite a number gained gold medals or certificates of merit, while in the last four final examinations of the Chartered Accountants (Scotland) 140 of those in receipt of grants were successful, 10 of these gaining distinctions. Thirty-three passed the final examination of the Society of Incorporated Accountants in November, 1920, two of the candidates gaining second and third place. Nine have passed examinations of the Royal Institute of British Architects, and 21 the Institution of the Civil Engineers (Associateship). Since 1919, 395 ex-Service candidates in receipt of grants have passed the Law Society's examination (England and Wales), and several of these have gained high places and distinctions, including 1st (three times), 3rd, 4th, 5th, 6th, 7th, and 8th places: 16 prizes, 10 first-class distinctions, 19 second-class distinctions.

Stone Mountain, a solid granite monolith rising sheer out of the landscape about twelve miles east of Atlanta, Georgia, will begin this spring to assume the aspect of a granite memorial to the

Civil War. "The Lost Cause," a gigantic sculptural representation of an army of one thousand Confederate leaders, is to be carved in the face of the mountain, which is fifteen hundred feet long and one thousand feet high. After eight years of planning, the engineering framework for this monument is being laid. Gutzon Borglum, the American sculptor who originated the idea, is to superintend its execution. Plans had been completed in 1917 for beginning the work when America entered the World War. The mountain had been surveyed, and a road cut to the top. Even hoist cables and some machinery had been installed. Nothing further was done, however, until January of this year, when complete support was pledged for the renewal and completion of the undertaking after the unavoidable interruption. The memorial is to be composed, as said, of one thousand complete figures. Each figure will represent some leader in the Army of the South, but more than that—each will be a portrait capable of recognition by anyone versed in the military history of the United States. Each soldier will be fifty feet in height, and will be distinct to the observer five miles away. The first seven figures of the army will represent cavalry led by the three men who were probably the most striking characters in the Confederacy: Robert E. Lee, "Stonewall" Jackson, and President Jefferson Davis. Next will come a troop of cavalry, the vanguard of the army, in close formation. Trudging masses of infantry will follow, and far over the shoulder of the mountain, seeming to stretch over miles of fields, will come rumbling batteries of artillery. At the base of the mountain a Memorial Hall will be carved out of solid rock. This hall will contain a chamber for each State of the old Confederacy for the preservation of records, a museum in which relics of the fast-fading reminders of the struggle may be exhibited, and for similar purposes.

Our little troubles in the Post Office will assuredly be multiplied ere long when the new charges now thrust on us hit us all. Overcharges will be frequent. All thanks therefore to Messrs. J. C. King, Ltd., the great wholesale and retail printers and stationers, of 42-60, Goswell Road, E.C., who are supplying a ready and real check on the Post Office with their "Phonechex" telephone call-book, which gives space for 5,000 calls, and is strongly bound, and only costs 4s. 9d. It furnishes the telephone user with an indisputable reference always at hand which even the Post Office cannot upset, and which will avoid the little misunderstandings with clients which often lead to loss of business and frequently to litigation, and will be found henceforth in every office and building where time is an object. If you doubt it drop a postcard to Messrs. J. C. King, Ltd., at once, and ask for a specimen leaf, which will be sent free. You will send on your 4s. 9d. as soon as you see what the "Phonechex" will save you, and bless its originators and us every time you phone instead of using more swear-words so often to the exchanges.

ARCHITECTURE AT THE ROYAL ACADEMY.

The general features of this year's display are excellent, each wall of the picture rooms being extremely well grouped, and the sculpture is distributed more generally, an additional room also being devoted to it. These improvements have, however, caused the exclusion of many exhibitors mostly hitherto placed on the line and often in central positions, and so much disappointment has been caused. There are 227 fewer exhibits than last season, notwithstanding the large proportion of comparatively small works.

The Architectural Gallery is good on the whole, but contains several inconsequential and scrappy drawings. Nothing is exceptionally remarkable, perhaps, excepting the central picture in the post of honour at the east end, showing Sir Edwin Lutyen's "All India" War Memorial, now being built by the Government at Imperial Delhi. It is majestic and massive, terminating the fine vista from the Government House and forming a worthy approach to the Great Processional Road. This archway neither emulates European precedents nor Hindoo models. The style is original and free from convention, its conception being marked by breadth and big proportions without stereotyped trimmings of applied enrichments. Its architect advisedly relied on a combination of vertical emphasis, strengthened by a judicious use of horizontal lines binding the whole together. Mr. W. Walcott's drawing well illustrates this undoubted success, and our reproduction of his picture is herewith published.

The President, Sir Aston Webb, in partnership with Mr. Maurice Webb, has four contributions. The proposed Bank of Chile, Santiago, is the outstanding subject of this series. The perspective, in colour, by Mr. H. C. Bradshaw, is accompanied by a big plan showing a symmetrical layout surrounding a spacious banking hall, and entered by a palatial *salle d'attente*. The façade is distinguished by a fully sculptured pediment over a Corinthian portico, the wings, intended for future extensions, having fluted pilasters to match, with plainer premises continuing along the street and setting off this handsome banking premises. The Textile Trades' War Memorial at Ballards, Addington, Surrey, by the same architect, comprises a school for 240 boys, housed in six blocks of dwellings planned in pairs to take 40 scholars each. The dining and school halls make the extensive centre-piece, with an open-air pavilion between them along the main side of the quad formed by classrooms right and left of it. The buildings are eminently picturesque, set on an upland site of 70 acres. Sir Aston's Royal Exchange War Memorial is appropriately shown, and his fourth work is Messrs. Crosse and Blackwell's Settlement of Cottages at Branston, in every way admirable.

Sir John Burnet, A.R.A., shows two larger undertakings, viz., the Ramsgate foreshore scheme, represented by long, panoramic pictures in colour hung too high up to be seen properly, and the Thames façade of Adelaide House, London Bridge. It is on the lines of a skyscraper when looked at from the river, and as a companion to the Fishmongers' Hall on the Bridge approach, this structure will surely seem overwhelming. It is crowned by a covered-in open attic or winter garden, in American fashion, and at the rear to the east is a big tower-like extension, possibly occupied by elevators, but no plan is shown. The landing quay at the water's edge quaintly sets the

elevation off with its Greek-like reserve and dignified reticence depending really on its mastering size. The orange-red flags seen in the picture flanking the basement do not look at home close to the wharfs and Billingsgate disorder.

Sir Reginald Blomfield's principal contribution this year is an autograph perspective of the Chapel and British Military Cemetery in Belgium at Lyssenthoek. A detail of this building was exhibited last season. It is flanked by quasi-transeptal features without structural projections, flush with the contour of the drum, which carries a flat saucer dome in concrete set on springer courses of ashlar and topped with a cross standing on a globe. The circular chapel arena is elongated on plan at the western side by a portico furnished with two Doric columns, and towards the east there is a small sanctuary. Its altar is placed in a segmental apse. Some distance away from the entrance a "great war stone" stands on the paved approach. The scheme, though small, is monumentally conceived. The second exhibit by the same architect is rightly of a more ambitious type, befitting a war memorial for a great city like Leeds. The proposal consists of a cenotaph serving as a centre-piece in a grande place, backed in the sketch by a long palatial public building provisionally included for future civic developments. The monument itself is marked about half-way up its height by a tall figure frieze, and immediately above this sculpture is an open-sided columniated cinerary shrine housing a florid sarcophagus. Over the ordinary-looking fascia and cornice to this ciborium enclosure the oblong shape of the masonry is gathered in by set-offs to obtain a square pedestal in the centre, on which to place a seated statue of heroic size crowning the cenotaph. Swags and garlands serve to foliate its base. The wider spacing of the end shafts to the baldachin differs from the inter-columniation on its sides. In sharp perspective this variation would obviously be intensified when seen end-on. The scheme, however, has been abandoned owing to lack of funds. The third drawing sent by Sir Reginald is a pencil sketch of Point Hill, Rye, in Sussex, and is shown in the black-and-white gallery.

Sir T. G. Jackson, R.A., is not so happy as usual with his Wimbledon War Memorial Obelisk, foliated as it is with fussy detail and standing on a curved-shaped pediment on top of the plinth. This veteran architect's new cloister for Bath Abbey is much more worthy of his name, and made florid enough to fit its position. The church overwhelms this addition, as shown by the view. We greatly prefer his third perspective, Radley College, Memorial Gateway. It consists of dual arches flanked by octagonal turrets and an oriel bay set over the central pier dividing the openings. The little building is very pleasingly and artistically designed, and the lodge adjoining is an advantage by giving breadth.

Uppingham School, Rutlandshire, has excellent modern buildings by George Edmund Street, who carried out the chapel to which Mr. Ernest Newton, R.A., has just added a war shrine.* The new memorial hall and adjoining classrooms about to be built by the same architect, though different in style, will not conflict with the 19th century premises. Messrs. Ernest Newton and Sons rely on large mullioned side windows, interspaced by handsome pilastered piers reminiscent of Kirby Hall, the famous mansion in this neighbourhood, by John Thorpe, architect to the Treshams. The entrance end of

the hall has flanking octagonal turrets to the gable, and big bays add to this early Renaissance treatment, and the roof is set off by a *fêche*. Two other water-colours by Mr. Cyril Farey show the interesting Monastère du Carmel, now nearing completion at Caen, in Normandy, designed by Messrs. Newton, who are joined in this work by Mr. W. Nicholls. The establishment will accommodate 28 nuns of the cloistered order. The smaller picture gives a view of the main quad of Italian-like severity, with its little arched cloister. The nunnery is simple and dignified, having corrugated tiled roof of flat pitch, grouped in an artistic way, surrounded by an open country, as seen in this bird's-eye sketch.

Another scholastic undertaking of an ecclesiastical kind also cleverly represented is the addition to Cuddleston College, Oxon, by Messrs. Hart and Waterhouse, who have improved upon the Gothic mode represented by the original Victorian buildings. One of the most convincing examples of direct draughtsmanship in the room is the exhibit of Mr. Arthur Blomfield, illustrating a detail of the revised entrance in the centre of the Pall Mall front of Messrs. Barclay's Bank, now erecting. It is a decided improvement upon the dual porches originally intended for this façade. From Piccadilly Mr. Curtis Green is happily represented by the Wolseley Showroom, and also by an excellent detail of its pretty entrance, with the well-designed hanging grille. There are few ecclesiastical exhibits, but Mr. W. D. Caröe shows St. Hilda's, Hartlepool, a rich example of his style. Mr. Ryan Tenison is to be congratulated on his new church at William, Herts, and Mr. A. G. K. Mackenzie sends a nice pencil detail of Reredos, All Saints, Hursley, Hants.

Sir Ernest Newton and Sons include the coloured view drawn by Mr. W. G. Newton, the architect of the Memorial Hall at Marlborough College. The picture subordinates rather this clever design, which will stand close to Bodley's beautiful chapel, at right angles with its west front. The semicircular auditorium for the speech room necessitated a classic treatment, so the two buildings rely on contrast for their relative values. The garden scheme makes a capital feature in this important undertaking, which was won in a recent competition restricted to Marlburians. Mr. Paul Waterhouse has happily realised the spirit of Scottish domestic work in the row of residential flats and Castle Wynd House, each from St. Andrews. Another clever water-colour of a typically Highland building illustrates Meggerine Castle, Perthshire, which Messrs. R. C. James and Vincent Steadman are altering and extending in an appropriate way, besides adding lodges and gates. The new lodges built at "The Chequers," Buckinghamshire, for Lord Lee are exceedingly refined, with uncommonly pretty wooden gateways, the tasteful work of Messrs. O. Milne and Phipps. This mansion is now the official residence of the British Prime Minister. Mr. Guy Dawber is represented by an interior of the fitting-up of the old Norman Chapel as a war memorial in Ely Cathedral. The architect has skilfully adopted East Anglian tradition in the working out of these oak furnishings. Cottages, Sunrising, Warwickshire, is his second study in this room, but in the south galleries Mr. Dawber gives a street view in Rodez, France, among the water-colours. Mr. G. G. Scott, A.R.A., does not exhibit on this occasion. Sir Ernest George, R.A., is represented in two clever water-colours of "Notting Hill Gate" and "The Elec-

tric Power Station, Chelsea,' in the South Galleries.

One of the most capable works of the year is the Memorial Hall to be built at Sheffield, by Mr. E. Vincent Harris, who has vastly improved upon his competition design by substituting an octostyle colonnade in place of the ten columns. This revision gives room for a pair of bold, massive mural piers, happily terminating the frontispiece and enclosing its masterly portico. The doorways to the crush hall and fenestration to the foyer above are now wisely recessed, leaving the columns disengaged. Greater breadth to the composition is obtained by the omission of the two Quadriga sculptures originally encroaching upon the steps in front of the colonnade. The recumbent lions now located at the angles of the dwarf walls round the terraced platform give a spacious appearance, and by this raised paved cortile arrangement steps to the side exit doorways are avoided. Mr. Harris's second exhibit is a delicate penoil perspective of Queen Mary's Maternity Home at Hampstead. The long unbroken ridge line and row of uniform dormers with hipped roofs impart simplicity to the institutional appearance of this building. The projecting pavilions help to give a homelike setting to the colonnaded verandah and balcony of nine bays. The pair of entrances at the ends are in keeping with the elevation, which is much enhanced by two tall chimney shafts serving as a contrast to the horizontal lines of the front. "Woolfly," a charming country house near Henfield, Sussex, by Messrs. Streatfeild and Atwell; Mr. Chadwick Windley's terraced Wiltshire House at Cricklade, and Lady Hulse's Village Hall at Breamore, Hants, of which Mr. Michael Waterhouse is architect, all merit their inclusion in this gallery. The same may be said of Mr. I. M. Cashmore's houses at Knutsford, Cheshire, and the Chalk House, Guildford, by Mr. B. A. Poulter.

Sir Robert Lorimer, A.R.A., has three works. The Memorial Organ, Merton College Chapel, Oxford, rests on a screen above the tribune for a choir, on the front of which are three singing angels grouped in a panel. The organ case is rather German in outline, and richly decorated, almost filling the arch with its pleasing outline. Sir Robert's memorial pylon or cenotaph for Queenstown, Cape Colony, has bronze soldiers on brackets on each front and St. George and the Dragon crowns the monument. His third exhibit is the Westminster School War Memorial, a very Late Renaissance screen at the end of the school, elaborated with carved spandrels of rifles, war helmets, spades, and impedimenta, the centre-piece being finished by St. George and the Dragon and relieved by Ionic columns and pilasters.

A model of the new bank in Lothbury chosen in competition stands in the middle of the room, the work of Messrs. Mewes and Davis; Mr. W. Henry White deserves mention for his nice interior of Reception Room, Bayswater Hill. Mr. Burke Downing is represented by a new church of St. John, Walthamstow, and new chapel, Brighton Training College, which is most suitable. The new library building for Selwyn College, Cambridge, by Mr. T. H. Lyon, Master of the University College of Architecture, is scholarly and free from meretricious trimmings, dignified and plain. The Housing Scheme at Hammersmith quad, the work of the late H. T. Hare and his partner, Mr. Bertram Lisle, will furnish a good architectural addition to the Borough, as well as a utilitarian convenience much needed.

*Illustrated in THE BUILDING NEWS on 22nd inst.

ARCHITECTS' WELCOME CLUB DINNER AT OLYMPIA.

Last Friday the Architects' Welcome Club entertained to dinner in the Pillar Hall, Olympia, over a hundred guests, Mr. John W. Simpson (President of the Royal Institute of British Architects) being in the chair. The banquet having been partaken of and the loyal toasts honoured, the Chairman said he had to propose a very popular toast. He had heard of unfortunate gentlemen who had to propose such toasts as that of the Government Departments, but the one he was responsible for showed clear signs of recovery. There was a better output by the operatives, and that better output had been at once reflected in lower prices. There was a story of a country parson, visited by a deputation of his parishioners, who represented to him that ruin was at hand on account of the prolonged drought; and begged him to put up prayers for rain. The old gentleman said, "Yes, certainly; but let me warn you it is not the slightest use as long as the wind keeps in the east." (Laughter.) In the same way all efforts to revive the building industry could be of but little use while the east wind of high costs shrivelled up and withered the good intentions of building owners. Such a gathering as theirs would hardly have been possible two years ago, and its taking place was an excellent augury for the future. He congratulated his fellow president, Sir Charles Ruthen, on his appointment as Director of Housing. He congratulated the country also; the appointment would be fruitful of most beneficial results, not only to architects but to taxpayers. (Applause.)

Sir Charles T. Ruthen (President of the Society of Architects) proposed "Our Guests." He thanked the Chairman for the reference that had been made to himself, and said he did not see why architects generally should not work harmoniously together. If they did not do so, it would not be the fault of either himself or Mr. Simpson. The building industry was one of the greatest in the country; if its importance had been recognised in the years before the war we should have been saved much industrial trouble to-day. If people had reasonable conditions under which to live when not at their work, you got better workmen and better work. It was exceedingly unfortunate but typically British that one of the greatest of social problems had been left to come immediately after one of the greatest upheavals the world had ever known. But the British people seemed to rise to any occasion, and he believed we should eventually see the country in a good and sound state, with the industrial classes happy and comfortable. He welcomed the guests—architects, builders, quantity surveyors, operatives, and all other sections of the trade—and hoped they would all work harmoniously together in order to get the industry into a thoroughly satisfactory condition.

Mr. A. P. Forsdike (President of the National Federation of Building Trades Employers) responded. He said those who had been in the trade for a long time would realise the great change that had come over the industry in the last few years, for builders had got into much closer relationship with architects and quantity surveyors than ever before. The industry could not be separated; all were bound up in one body, from the operative to the architect; and the best results could only be obtained by a real co-operation of all the parties.

Mr. J. W. Lorden, M.P., proposed the health of the chairman. This toast was

honoured with the customary rendering of "For He's a Jolly Good Fellow," and the chairman briefly replied.

Speech-making was not the only entertainment provided. There was besides a programme of music, etc., given by the band of the Royal Artillery, Mr. George Baker, Mr. Nelson Jackson, and the Westminster Singers all contributing to a most enjoyable evening.

NOTES FROM THE MINUTES OF THE R.I.B.A. COUNCIL MEETING, APRIL 18, 1921.

Annual Exhibition of Architecture.—A Joint Committee, representing the Council and the four Standing Committees, has been appointed to organise the first of the Annual Exhibitions of Architecture which will be held in the R.I.B.A. Galleries.

Garden Party.—A garden party has been arranged for June 28 in the gardens of the Zoological Society.

The Birmingham Housing Director's Report.—A letter will be sent to the public Press calling attention to statements in the report recently issued by the Birmingham Housing Director.

Proposed Charter for the Incorporation of Scottish Architects.—The Royal Institute Council have informed the Council of the Institute of Scottish Architects that they will not oppose the application for a Royal Charter for the new Incorporation of Scottish Architects.

Conditions of Contract.—The Surveyors' Institution, the National Federation of Building Trades Employers, and the Society of Architects will be invited to appoint representatives to attend a conference on the subject of conditions of contract.

The Ministry of Health's Contract No. 3.—A public statement on this form of contract is to be issued for the guidance of architects and public authorities.

The Renfrew War Memorial Competition.—This competition has been banned because the conditions are not in accordance with the published regulations of the Royal Institute for architectural competitions.

THE R.I.B.A. ANNUAL REPORT, 1920-1921.

The annual report for 1920-21 of the Royal Institute of British Architects, which will be presented at the annual general meeting on Monday next, is one on which all will congratulate those under whose management such steady progress has been made, and so many activities developed. The losses by deaths have been numerous, including many whose names will long be remembered by all of us. The membership shows a healthy increase on the total of Fellows and Associates, a slight falling off in the list of Honorary Associates, and a welcome decrease in that of the Licentiates. During the year 138 Fellows and 320 Associates have been elected, as against 56 Fellows and 168 Associates in the previous year, and 105 Licentiates have passed the examination for election to the Fellowship and have been duly elected as follows. The number of Licentiates is now 1,537 as compared with 1919 in 1916.

The following table shows the subscribing Membership and Licentiateship of the Royal Institute compared with the preceding five years:—

	Fellows.	Asso- ciates.	Hon. Asso- ciates.	Licen- tates.	Total.
1916	852	1,679	52	1,919	4,502
1917	842	1,656	48	1,890	4,436
1918	838	1,631	45	1,882	4,396
1919	834	1,720	46	1,836	4,436
1920	863	1,773	44	1,715	4,395
1921	969	2,032	45	1,537	4,583

Particulars of the various assessors, arbitrators, etc., and grants made during the year follow in the report, and the announcement that the portrait of the President is being painted by Sir Arthur S. Cope, R.A. It will always be one of the most interesting in the

list of Presidents, for Mr. J. W. Simpson has established a great record, and will go down to history as one of the greatest, and his successor, able and universally esteemed as he is, will have his work cut out to keep the course straight and constant which Mr. Simpson has so well adhered to, missing no opportunity, making no enemy, and mastering every difficulty.

The general proceedings of the past session are familiar to our readers. The steady development of organisation in the Provinces is rightly noted, and due tribute paid to the time given by Mr. Simpson and his visits paid to the allied societies, always so heartily welcomed, with that end in view. All will be glad to know that this wholesome policy is to be extended in the future. It has been settled that meetings of the Presidents of the Allied Societies shall be held three times a year at the Royal Institute; that annual R.I.B.A. conferences will be held in important provincial centres; and that, each year, one of the candidates nominated for the Vice-Presidency shall be a provincial member. The first of the provincial conferences will be held in Liverpool from Thursday to Saturday, June 23 to 25. A committee, consisting of the Presidents of the Allied Societies on the Council, is arranging the programme, and the Liverpool Society of Architects has offered the most generous hospitality and assistance to the conference.

In the current issue of the "Kalendar" the new Code of Professional Conduct and Practice has been published for the guidance of members and of the public generally. It has already proved its usefulness in several cases that have arisen.

During the past year the Competitions Committee has had an exceptionally heavy burden of work thrown upon it by the promotion of a large number of competitions, chiefly for the design of War Memorials, in which those responsible have often ignored the R.I.B.A. Regulations. The Council acknowledge their indebtedness to the members of the Committee, and in particular to its Hon. Secretary, Mr. Herbert A. Welch, for their arduous and successful efforts in dealing with these competitions.

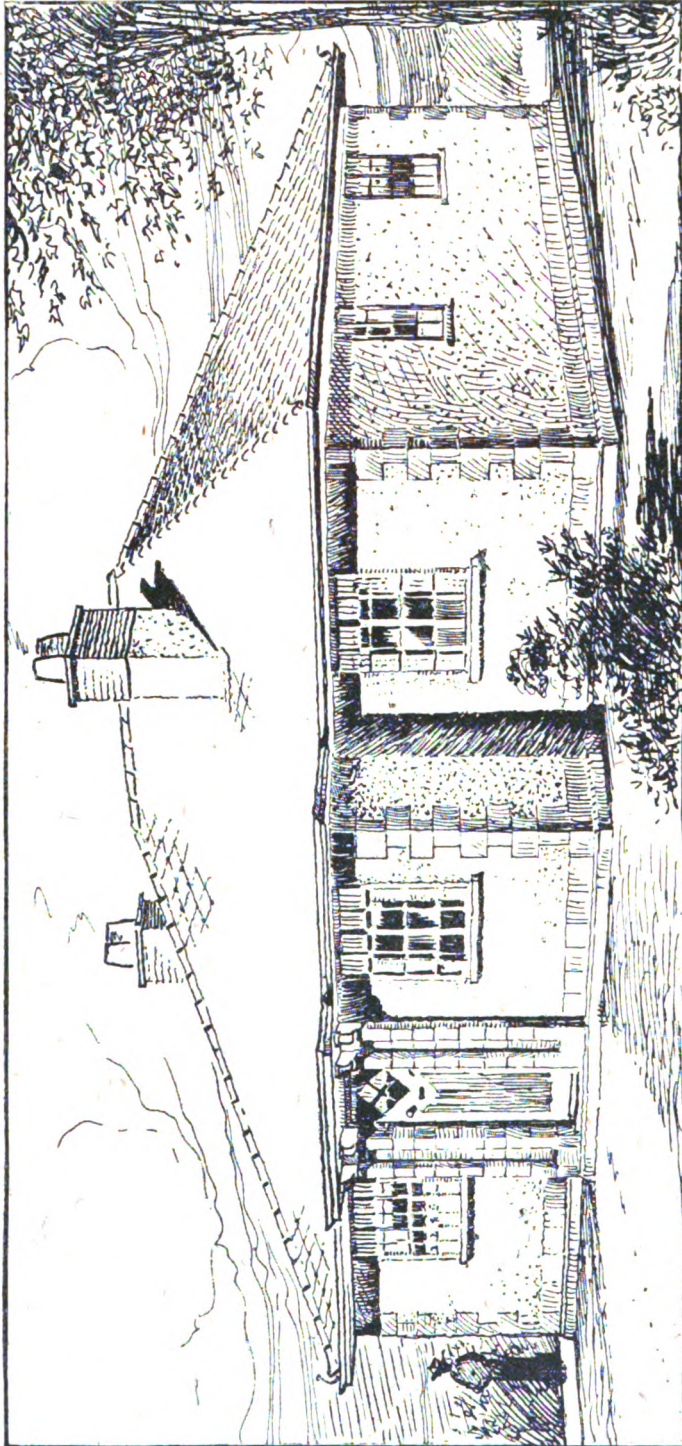
The action of the National Federation of Building Trades Employers in repudiating the "agreed Form of Contract," and issuing, without consultation with the Royal Institute, the so-called "National Building Code," has been the cause of certain difficulties during the course of the year. The Royal Institute has now invited the Surveyors' Institution, the National Federation of Building Trades Employers, and the Society of Architects to a conference on the general question of conditions of contract. It is hoped that a frank discussion of this difficult subject will result in an equitable solution being found.

The Council have watched with anxiety the slow and difficult progress of the National Housing Scheme. They felt from the outset, and they have more than once clearly stated their opinion, that unless the resources of professional knowledge and business ability were given the fullest scope in the planning and administration of the scheme it would fall far short of the success anticipated by the Minister of Health. The result of two years' experience has only confirmed them in their opinion. During the whole of the session negotiations have been carried on with the Ministry of Health in connection with the scale of fees for housing work. The Council regret that the Ministry have so far failed to realise the importance of settling this matter promptly on equitable terms.

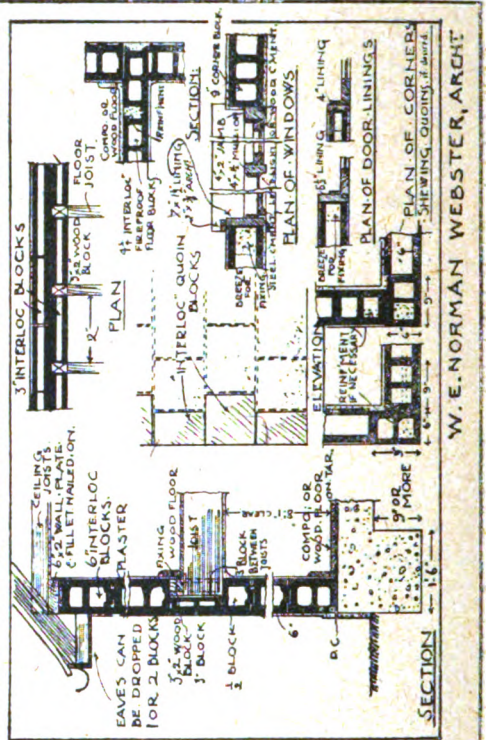
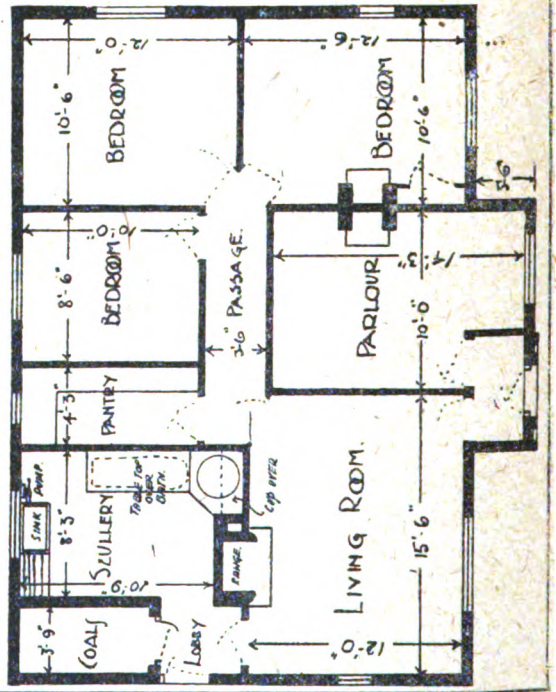
The Council again call the attention of members to the valuable services which have been rendered both to the Royal Institute and to the profession generally by their colleague, Major Harry Barnes, M.P. His Parliamentary duties have made it impossible for him to make frequent attendances at Council and committee meetings, but his presence in the House of Commons has been invaluable to the profession.

The Council have received from the Assistants' Welfare Committee a number of proposals which have been formulated in the interests of assistants. They have not up to the present seen their way to adopt the scale

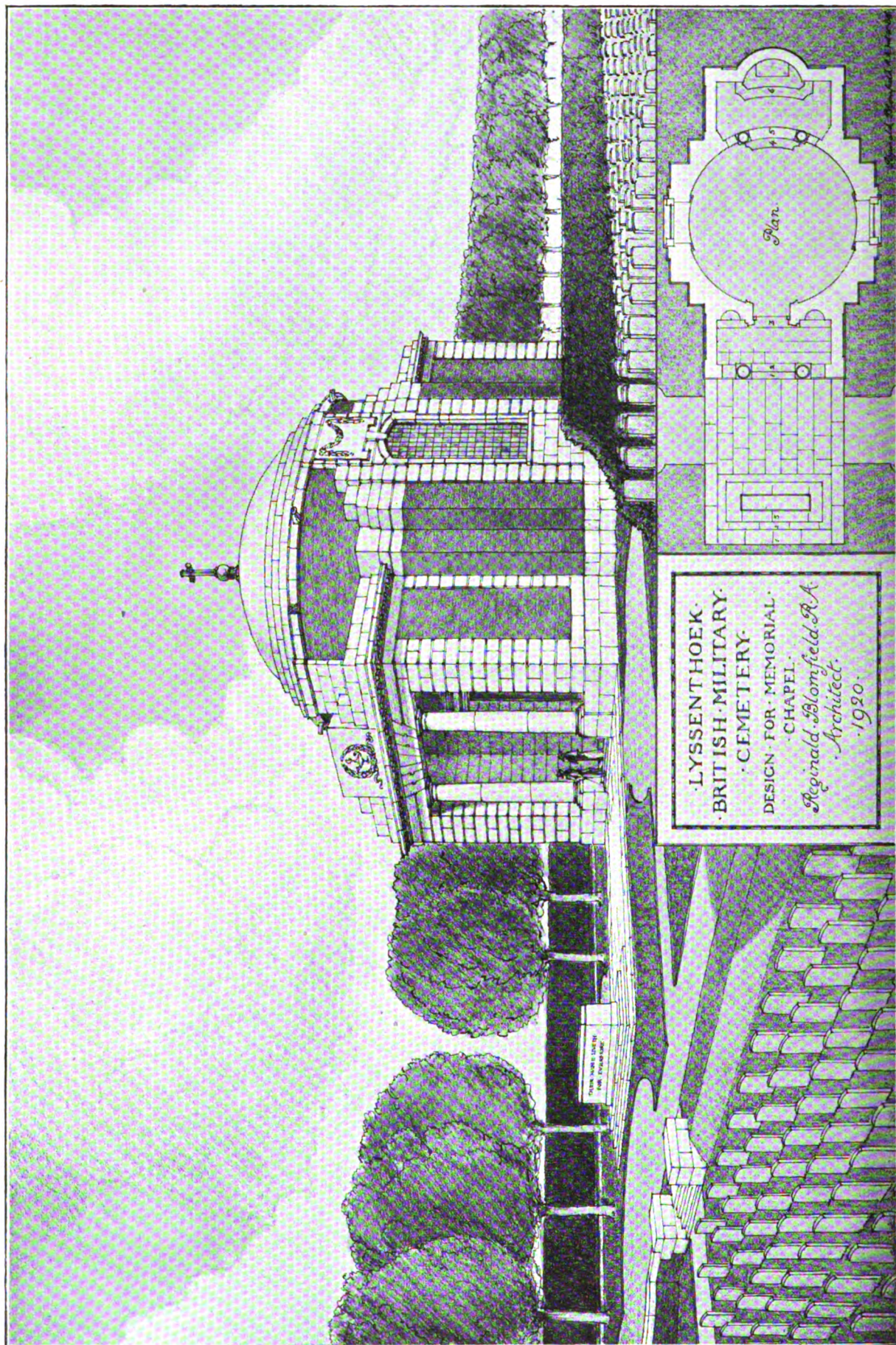
(Continued on page 233.)



A BUNGALOW AT SPALDING, LINCS.
BUILT WITH "INTERLOC" BRICKS OR BLOCKS.



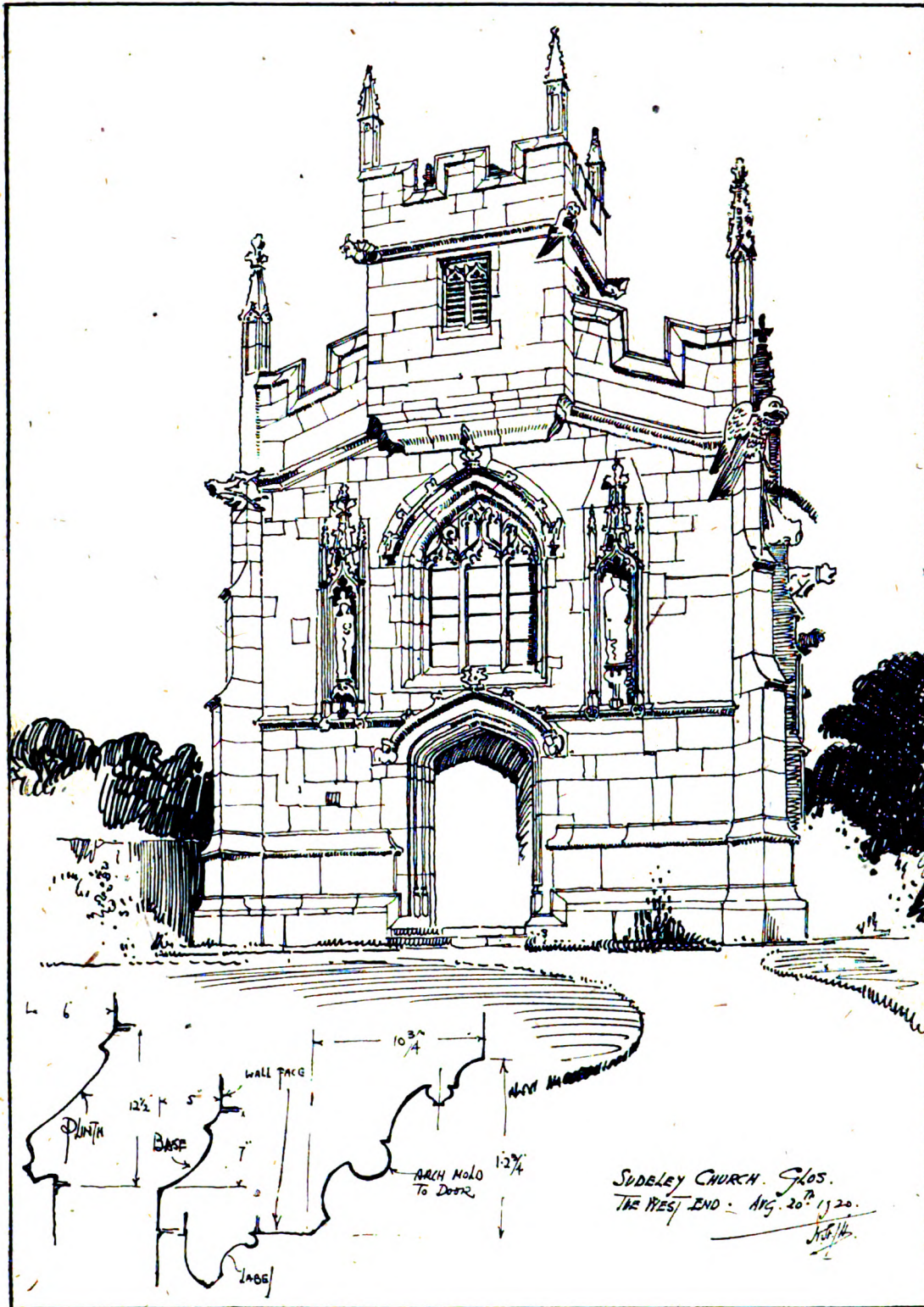
THE BUILDING NEWS, APRIL 29, 1921.



LYSSENTHOEKE BRITISH MILITARY CEMETERY AND CHAPEL, POPERINGHE, BELGIUM.
... Sir REGINALD BLOMFIELD, R.A., M.A.Oxon, Litt.D., F.S.A., Architect.



"ALL INDIA" WAR MEMORIAL : END OF PROCESSIONAL AVENUE, DELHI.
The Foundation Stone laid by Field Marshal H.R.H. DUKE OF CONNAUGHT, K.G., 1921.
Sir EDWIN LUTYENS, R.A., Architect.



SUDELEY CHURCH, GLOUCESTERSHIRE : WEST FRONT.
Sketched by Mr. H. ST. JOHN HARRISON, A.R.I.B.A.

(Continued from page 224.)

of minimum salaries suggested, but they are giving sympathetic attention to the other proposals submitted to them.

After an interval of seven years the series of annual dinners has been resumed, and the 1921 dinner will take place on Wednesday, May 11, at the Princes' Restaurant. It is hoped that there will be a large and representative gathering of members at the dinner to do honour to the guests.

The representative committee which has been considering the question of the unification and registration of the profession has been at work during the whole of the past session. A draft report has been unanimously adopted by the sub-committee, and, after consideration by the councils of the constituent bodies, it will be submitted to a meeting of the main committee on May 12.

It has been decided to organise an annual exhibition of contemporary architecture, which will be held in the Royal Institute Galleries. A joint committee, representing the Art, Literature, Practice, and Science Committees, and the Council, has been charged with the duty of making the necessary arrangements. The first of these exhibitions will be held in the coming winter, and detailed information will be published at an early date. That is a wise and welcome step. Some day we hope it will be followed by the establishment of a permanent Museum of Building Appliances, on the lines—much more extended—than those of that established by the late Mr. D. O. Boyd in the middle of the last century, with the co-operation of the R.I.B.A. in Maddox Street, and which in its day proved much more useful than short annual exhibitions.

The reports of the various Committees are set out fully, and embody a vast and increasing amount of useful work. Those of the Practice Standing Committee, the Competitions Committee, and the Building Industries Consultative Board are especially interesting, and will, we hope, be carefully considered.

All will be glad to learn from the financial statement, together with the report of the hon. auditors, that the measures taken last year to strengthen the financial position have been successful. By the exercise of rigid economy in every direction the Institute was able to pass through the difficulties of the war period without incurring debt. But the return of peace and the necessity of reviving all normal activities and embarking on new ones made an increase of revenue essential. The measures recommended by the Finance Committee and proposed by the Council to the general body were moderate, but they have proved to be adequate. The addition of one guinea to the pre-war rate of each subscription and fee, and a proportionate increase in the cost of publications, should increase revenue from £14,447 in 1920 to £19,425 in 1921. The expenditure of £15,455 in 1920 left a deficit on the year's working of £1,008. The expenditure in 1921 should leave a surplus of practically £1,000. A careful supervision of expenditure is still necessary, but the R.I.B.A. is now in a position to act with more freedom in undertaking new duties for the good of the profession, and we are sure will not hesitate to spend well where it can be done so wisely.

COMPETITIONS.

GLASGOW.—At a meeting of the Glasgow War Memorial Committee, held on Monday, it was decided to invite designs from the following architects for a cenotaph to be placed in George Square:—Sir George James Frampton, R.A., Sir Edwin Lutyens, R.A., Sir John James Burnet, A.R.A.; and Sir Robert Lorimer, A.R.A.

GLASGOW HIGH SCHOOL.—In the competition for a memorial to be erected within the High School of Glasgow to the former pupils of the school who fell in the war the following awards have been made:—(1) Mr. W. J. B. Wright, Lic.R.I.B.A., 170, Hope Street, Glasgow; (2) Mr. Donald M'Kay Stoddart, Lic.R.I.B.A., Messrs. A. N. Paterson and Stoddart, 266, St. Vincent Street, Glasgow; (3) Mr. Neil C. Duff, F.R.I.B.A., 187a, West George Street, Glasgow.

Our Illustrations.

"ALL INDIA" WAR MEMORIAL, IMPERIAL DELHI.*

This drawing is in the Royal Academy Exhibition. The foundation of the arch was laid on February 10, 1921, by Field-Marshal H.R.H. the Duke of Connaught, K.G. The inscription on the foundation-stone is in two languages, and the words "India," 1914-1919," are the only dedication. The archway is at the east end of the main processional avenue, which is flanked by canals of running water, fountains, and avenues of great trees, looking up to Government House, which terminates the great vista to the west. The main arch is 87 ft. 6 in. high, with a width of 35 ft. The lateral arches are 20 ft. wide and 40 ft. high. The archway is built of sandstone, surmounted by a tank to be filled with petroleum, so that on days of commemoration there will be a volume of smoke by day and of fire by night. In India there are creeds widely differing, and it is essential and right that the creed of no man who made sacrifice in the war should be offered offence. Sir Edwin L. Lutyens, R.A., is the architect.

LYSSENTHOEK BRITISH MILITARY CHAPEL AND CEMETERY, POPERINGHE, BELGIUM.

Sir Reginald Blomfield, R.A., is the architect of this Memorial Chapel at Lyssenthoeck, and the view reproduced herewith is his principal drawing at the Royal Academy this season. The British Military Cemetery, which includes over 11,000 graves, is about 1½ miles out of Poperinghe, and is the largest of all the British military cemeteries. Immediately next to it was a large military hospital, and the burials during the war had to be made as best they could, and the design of the lay-out had to follow on. In consequence, a narrow triangular strip was left, on which the Memorial Chapel and the Great Stone have to be placed. The chapel faces to Mount Kemmel. A half-inch detail of this building was exhibited in last year's Academy. The War Cross (28 ft. high) stands at the angle of the cemetery, next the road to Poperinghe. The plan in the corner of the plate shows the scheme internally.

A BUNGALOW AT SPALDING. THE "INTERLOC" CELLULAR BLOCK SYSTEM.

This method of construction, designed by Mr. W. E. Norman Webster, of Spalding, Lincolnshire, has been used in erecting this bungalow. On the same sheet sectional details show how the blocks are utilised at the quoins and reveals as well as in the general walling. It is claimed that this system has proved to be both economical and efficient, effecting a saving in the time of erection by at least one half, saving the need of skilled labour, and thus insuring a reduction in cost over ordinary brickwork. A fair average eight-hour day's labour is sufficient to lay 160 blocks, which amounts, it is said, to 1,280 bricks for the same time. Mr. Webster informs us that similar cottages can be secured for £750 each. The accommodation here shown provides a good living-room, parlour, pantry, scullery (with bath), coals, etc., and three bedrooms. The building qualifies for the full subsidy of £260, and has been approved by the

* Other illustrations of the various buildings and their details of Imperial Delhi will be found in our issues for May 7 and 21, June 4 and 25, July 16 and August 13, 1919, April 30 and November 5, 1920. Sir Edwin Lutyens, R.A., and Mr. Herbert Baker, F.R.I.B.A., are the joint Architects employed by the Government of India. The scheme will take years to complete.

Ministry of Health. Structures of more than one storey as well as detached dwellings can be built, also pairs or groups are applicable to this method of "Interloc" construction.

WEST END, SUDELEY CHURCH, GLOUCESTERSHIRE.

This church formed the private chapel belonging to Sudeley Castle, so prominently conspicuous in history. From Stuart days till the middle of the nineteenth century the chapel remained in a more or less ruined condition. Sir Gilbert Scott was then employed to superintend its restoration and refitted the interior. A white marble tomb with a recumbent statue of the Tudor Queen Katherine Parr was erected by the sculptor, J. Berne Phillip. This lady died in childhood at Sudeley Castle, and was buried in the precincts of this chapel. The chapel bell, dated 1660, bears the inscription: "Lady Dorotie Chandos, widdowe, made this." So far as we are aware the building has not been illustrated before, but in Rickman's "Attempt to Discriminate the Styles of Architecture," a special reference is made to the interesting character of this bell turret, corbelled out and over-sailing the façade. In some respects it is unique, having an embattled parapet and being treated after the manner of a little western tower with spire terminals, whereas gable bell turrets of this class usually are capped either with spirelets or gables. The accompanying sketch by Mr. H. St. John Harrison, A.R.I.B.A., is one of several made in the Cotswold district during his Pugin Tour last year.

PROFESSIONAL AND TRADE SOCIETIES.

R.I.B.A. VISIT TO NEW LONDON COUNTY HALL.—The second visit of the series now being organised by the Art Standing Committee will take place on Saturday, May 7, at 2.30 p.m., when Mr. Ralph Knott, the architect to the New London County Hall, has kindly arranged to conduct a party of members and licentiates over the buildings now in course of erection. Members and licentiates wishing to join the party should apply to the Secretary, R.I.B.A., for the necessary ticket of admission not later than Tuesday, May 3.

READING SOCIETY OF ARCHITECTS.—The following resolution was passed by the Council of the Reading Society of Architects on April 21, 1921:—"The Council of the Reading Society of Architects, having seen in the local Press a reproduction of a drawing showing the Friar Street front of the proposed head post-office for the County Borough of Reading, and assuming that the building actually proposed is fairly represented by that print (copy attached), whilst recognising the quiet restraint and many excellences of the design from an academical point of view, nevertheless, from a public point of view, feels compelled to voice the general feeling of disappointment felt with regard to the elevation of the building on the following grounds:—1. That the design lacks the character, dignity, and importance which the size of the town, the purpose of the building, and its position demand. This criticism is not intended to be against the adoption of the Georgian style, but only against its suggested application. 2. That the design does not indicate a building belonging to an important State Department and is void of the generally-recognised attributes of such a building. 3. That the entrance doors for the public and the central post box are inadequately emphasised. Moreover, apparently there is no provision for the proper display of the necessary public notices. 4. That the example set by a great State Department should give a lead for a higher standard of architectural beauty and fitness. 5. That the design has evidently been produced with laudable economic intentions, but it is felt that many advisable improvements may be made without unduly increasing the cost."

MEASURING THE LIGHT OF ROOMS.

A new instrument for measuring the light reflected by room walls has been designed by A. H. Taylor, until recently associate physicist of the American National Bureau of Standards. The reflectometer, simplicity being one of its virtues, was evolved on the theory that if a light is projected on to the inner wall of a small hollow sphere, painted with a diffusely reflecting white paint, it can be shown that the illumination of the surface by reflected light only will be equal in intensity at all points. A small portion of the surface is cut away, leaving a hole over which the surface to be tested is placed. At another point on the sphere, 90 degrees from this one, there is a small hole through which the opposite wall of the sphere is viewed by means of a portable photometer. The spot under observation is screened from the test surface by the use of a small opaque screen. Therefore, when the light is projected on to the test surface, it must be reflected from it and from the sphere walls once each before any of it can reach the observation point.

The instrument consists of a lighting tube, capable of being set at an angle to the sphere surface, rotating about an axis normal to the surface of the sphere. Such an arrangement permits the direct light to be thrown on the test surface or the sphere wall as may be desired. An efficient lens system affords a narrow beam of light without scattered rays. A uniform, sharply defined spot of light, 2.5 centimeters in diameter, is the result, thereby requiring only a small opening. A 2.8 volt opal-back flashlight lamp is used in the tube. Its low voltage makes the instrument of a portable nature, and possibly adaptable to any reliable type of portable photometer. The elimination of the battery-meter set and the substitution of a three-cell flashlight dry battery and miniature resistances would further contribute to the compactness of the reflectometer.

According to claim, the superiority of the absolute type of instrument over one giving relative values is in the non-requirement of a standard surface and the unnecessary qualification of lamps or sphere surface remaining constant from day to day. Experimental work with the new reflectometer involved the making of test objects, such as neutral grey specimens, by mixing black drawing ink and lamp black with a white cement. After being surfaced with coarse sandpaper, resulting in good diffusers, the surfaces were tested for light-reflecting factors by the observation of surface brightness at intervals of 10 degrees. A block of magnesium, a polished sheet of milk glass and white-painted cardboard were supplement to the test specimens above-mentioned. The high reflection factor obtained for magnesium carbonate was the outstanding result of the experiments.

As President of the British Society of Master Glass Painters, the Earl of Plymouth was presented by the Glaziers' Company with its Freedom at Painters' Hall on Thursday week. At the same time the Freedom was given to Mr. Henry Tanner, F.R.I.B.A., (Crown Surveyor), Mr. Joseph Wilkes Shearer, and Mr. Theodore Pennington.

The present temporary students' room of the Department of Engraving, Illustration, and Design (opening out of Room 132) was closed for removal on Monday, Tuesday, and Wednesday, April 25 to 27. On Thursday, April 28, the Students' Room was reopened in its original quarters, adjoining Room 71. The Book Production Gallery (Room 74) was reopened to the public on the same day, together with the west entrance to the library, in Room 74. The temporary entrance to the library is now closed.

ENGINEERING CONSTRUCTION.

Two massive volumes on "Engineering Construction," by W. H. Warren, LL.D., reach us from Messrs. Longmans, Green and Co., forming parts of their excellent "Civil Engineering Series," every instalment of which has achieved front rank. Vol. I., which is issued at 30s. net, is a revision with many additions of the work first published in 1894, and a second edition of which appeared in 1910 under the title of "Engineering Construction in Steel and Timber." Vol. II., now just published, is mainly devoted to the physical properties of materials such as cement, mortar, concrete, brickwork, and stone, and the design of the more usual structures erected therewith. The details of calculations necessary for the determination of earth pressure on retaining walls and timber trenching are fully given, together with the principles underlying all reinforced concrete construction, such as beams, columns, floor-slabs, retaining walls, grain silos, reservoir dams, and arches. Much space is devoted to Arch Analyses, and the comparison of the results obtained by various methods as applied to filled and open spandrel arch bridges, which will undoubtedly be helpful to those engaged in the design of such structures.

The labour spent on both volumes must have been considerable, and the mass of material gathered from the various technical journals and other sources enormous. The result is most creditably gratifying. It is not too much to say that the work must at once find its way on to the shelves of every technical library or educational institute, so completely is the subject covered in all its various ramifications, and so lucidly are the conclusions formulated and justified. Each volume includes about 500 pages, while there are six plates and 451 illustrations in Vol. I., and two plates and over 200 illustrations in Vol. II.

In consequence of the coal dispute and the distress caused thereby, it has been decided with great reluctance not to hold the Royal Academy annual dinner this year.

Mr. Charles Henry Turner, of Rochdale, of Messrs. Turner Brothers, Asbestos Co., Ltd., and the African Asbestos Co., Ltd., has left net personally £246,278, gross £269,662.

The "Wilson Premium" for the best paper read before the Crystal Palace Engineering Society during the past session has been awarded to C. W. Carter for his paper on "Reinforced Concrete."

A memorial tablet in brass, with oak frame, has been erected in the vestibule of the Parish Church, Alloa, in memory of the 110 men connected with the church who gave their lives in the war. The tablet was designed by Sir Robert Lorimer, Edinburgh.

The Marquis of Aberdeen and Temair unveiled a memorial in Gilcomston Parish Church, Aberdeen, which takes the form of a carved reading desk, inscribed with the 64 names of the fallen who belonged to the congregation. The desk was designed by Mr. George Bennett Mitchell, architect, 148, Union Street, Aberdeen.

Before the Institution of Sanitary Engineers, at Caxton Hall, Caxton Street, Westminster, S.W.1., on Wednesday, May 4, 1921, a sessional meeting will be held, and a paper read on "Water Meters and Water Waste Preventing Fittings; their construction, relative merits, and application," by Mr. S. A. Batley (Assoc. Member). Mr. Nandy Hoskins (President) will take the chair at 7.0 p.m. Discussion to follow.

An action (Woodward v. Lee) was tried by Mr. Justice Rowlatt on the 21st. inst., in which the plaintiff claimed against her landlord damages for personal injuries which she received through the breaking of a rail. She had a right to use a water-tap on the leads and roof of a wash-house which belonged to the defendant, and she said that he was bound to keep the rail in repair. His Lordship said that he must hold that the rail was a "trap," and gave judgment for the plaintiff with agreed damages of £350 and costs.

Correspondence.

TASTE IN ARCHITECTURE.

To the Editor of THE BUILDING NEWS.

Sir,—The writer of a recent article in the *Times* on rural beauty finds difficulty in seeing what steps might be taken to prevent the erection of tasteless villas, etc.; in view of the opinion that the architecture of villas and cottages is a matter of taste, and the fact that local authorities have no control over ugly designs, but only over other questions affecting building which can be dealt with through by-laws.

I suggest the remedy is for building by-laws to be amended and simplified to cover (a) sanitary and hygienic requirements, (b) the prevention of and escape from fire, (c) to ensure strength and stability, and (d) to limit the approval of building plans to those prepared by qualified architects.

The public are guarded to some extent from faulty construction and sanitation by the existing regulations, and they are entitled to be protected also from the equally evil effects of defective planning and design.

As usual we must look abroad for a precedent, and I draw attention to a by-law recently passed by the Johannesburg Town Council which provides that all plans approved for buildings exceeding two hundred pounds in cost must be signed by a qualified architect. I believe a similar by-law has been in force for some years in Pretoria with beneficial results, and here it may be noted that the statutory registration of architects is in force in the Transvaal, and therefore there is not the same difficulty there which exists here in regard to the legal definition of a qualified architect.

I understand that the Scapa Society is promoting a Bill to give local authorities powers to veto the display of advertisements calculated to disfigure the landscape, and I think architects will agree that these powers might be extended to buildings with equal propriety; and, if so, why not go a step further, and ensure that in the public interest buildings shall be erected from the plans and designs of qualified architects, who would, incidentally, have some personal interest in seeing that their creations were not subsequently defaced?—Yours faithfully,

C. McARTHUR BUTLER,
Secretary.

The Society of Architects,
28, Bedford Square, W.C.1.

BIRMINGHAM HOUSING DIRECTOR'S REPORT.

To the Editor of THE BUILDING NEWS.

Sir,—It has come to the notice of my council that a report on Birmingham housing schemes, issued by the Birmingham Housing Director, has obtained a wide circulation amongst local authorities and others interested in housing. Should a copy of this report come to your hands, I desire to draw your attention to the fact that certain of the statements contained in it are open to question, and have formed the subject of meetings between representatives of the Birmingham Architectural Association and members of the Birmingham Housing Committee's technical staff.

The following extracts from the newspaper reports of the Birmingham City Council meeting on April 5 last form an interesting commentary on the report referred to:—

"Mr. James, chairman of the Housing Committee, said he wanted to tell the council quite frankly that the figures of

cost per house shown in the committee's last monthly statement were quite alarming, and he desired to warn the council that they would become even more so."

The Housing Department was strongly criticised at this meeting, and a resolution was adopted that the operations of the Housing Committee be investigated by a special committee of inquiry, who shall report their findings to the City Council.

At the same meeting it was resolved that the development of three estates be placed in the hands of unofficial architects.

Yours faithfully,

IAN MACALISTER,

Secretary.

Royal Institute of British Architects,
9, Conduit St., Hanover Sq., London,
W.1, April 25, 1921.

BUILDING CONTRACTS.

To the Editor of THE BUILDING NEWS.

Sir,—The Council of the Royal Institute of British Architects have had under consideration the form of Contract No. 3, which is issued by the Ministry of Health.

My Council consider that this form leaves too much in the hands of the contractor, who is protected at every turn, and has little responsibility.

In my Council's opinion, the ordinary lump sum contract is greatly to be preferred, both from the employer's point of view and in the interests of the ratepayer.

—Faithfully yours,

IAN MACALISTER,

Secretary.

Royal Institute of British Architects,
9, Conduit Street, W.1,
April 22, 1921.

CHIPS.

A circle of forest trees is to be planted on Wimbledon Common as a war memorial.

A Paynter Stainers' Masonic Lodge is about to be consecrated in connection with the Painter-Stainers' Company.

Mr. George Hilderley (64), of The Croft, Mile End Lane, Stockport, and the Central Building, Chester, paper-hanging merchant, has left £35,358.

The mint which is to be erected at Shanghai by the Chinese Government will, it is said, be the largest in the world. Some of the plant is to be constructed in China and the remainder purchased abroad.

Dr. Dendy Watney, of the firm of Messrs. Daniel Watney and Sons, 4a, Frederick's Place, E.C., has been appointed Chairman of the Rents Tribunal under the Local Authorities (Assisted Housing Schemes) Regulations, 1919.

An expenditure of £213,275 will be needed to widen Threadneedle Street. In recommending the L.C.C. not to contribute towards the amount, the Improvements Committee say the improvement would not be commensurate with the cost.

Sir William Blake Richmond, R.A., of Beaver Lodge, Hammersmith, left property of the value of £9,838. He bequeathed a selection of his plaster casts to the British Museum; the portrait of his friend, William Holman Hunt, to the National Portrait Gallery; and the designs and drawings for the decoration of St. Paul's Cathedral to the Victoria and Albert Museum.

An arch of old London Bridge, which was demolished during the construction of the new one, has been discovered close to St. Magnus Church during some building operations now in progress. Some remains discovered at Miles Lane, City, not far from the Thames, consist of Roman timber work, which, however, is not yet sufficiently exposed to allow of a detailed examination.

On Thursday, April 21, the Architects' Department of the London County Council (the holders of the Cup) met the Comptrollers Department in the final round of the L.C.C. Interdepartmental Cup Competition. The Architects' Department won by five goals to two. The Council's architect, Mr. George Topham Forrest started the game by kicking off in most professional manner at 5.35 p.m. The Comptroller of the Council, who also attended the match, presented the cup to the captain of the winning team (Mr. G. F. Shipway).

Our Office Table.

Many of our readers, who will pleasantly call to mind their always satisfactory relations with Mr. F. J. Robertson during his long connection with Claridge's Asphalte Company, which terminated when he left to render good service during the war in the Naval Reserve, will be glad to note that he has commenced business on his own account at 22, Oakdale Road, Streatham, S.W.16 (Tel., Streatham 1044), and is now prepared to execute all asphalte work, Syssel or Limmer, in town and country at lowest rates. In bitumen dampcourses, roofing felts, etc., Mr. Robertson is equally an expert, and in all such architects and builders may depend on practical advice and prompt execution in connection with all work undertaken by him.

The directors of Bell's United Asbestos Co., Ltd., pioneers of the world's asbestos industry, have resolved, in view of the audited accounts to December 31, 1920, and after providing for Excess Profits Duty and Corporation Tax, to recommend to the shareholders at the general meeting, to be held on May 12, 1921, the payment of a balance dividend of 1s. 6d. per share on the ordinary shares of the company, which, with the interim dividend paid in October last, makes a total distribution of 12½ per cent. for the year. The amount to be placed to reserve is £20,000; the amount to be carried forward is £34,124 1s. 1d.

At a General Assembly of Academicians and Associates on the 21st inst. Sir John J. Burnet (architect), Mr. W. Reid Dick (sculptor), and Mr. F. Cayley Robinson (painter) were elected Associates of the Royal Academy. Sir John J. Burnet, born in Glasgow (1857), was trained at the Ecole des Beaux Arts, Paris, and has travelled in Italy and America. His best works include the British Museum extension and the Royal Institute of the Fine Arts. He is a F.R.I.B.A., a corresponding member of the Institute of France, and a member of the Royal Scottish Academy. Mr. William Reid Dick was born in Glasgow forty-two years ago, and studied first in the School of Art in his native city, afterwards in Paris. Since 1908 he has contributed sculpture to the Royal Academy, the Paris Salon, and the International Society. He was on active service in France and Palestine, 1915-19. Mr. Frederic Cayley Robinson, who is fifty-nine years of age, was born at Brentford-on-Thames, and studied at the Royal Academy Schools in 1884 and in Italy. Among his best achievements are the mural decorations painted for the Middlesex Hospital. He is a member of the Royal Society of Painters in Water Colours. On Friday, Mr. Augustus E. John, the painter, was also elected an Associate R.A. Now at last, and later doubtless as a full Royal Academician, Mr. John will have inside opportunities of expounding his views as one of the increasing number of artists elected because of the fame they have won outside and not in or with the help of the Royal Academy.

"The New Stone Age," by Harrison E. Howe (London: University of London Press, Ltd., 18, Warwick Square, E.C.4, 12s. 6d. net), is an interesting story, in some 300 pages, well illustrated by photographs and diagrams, of cement and concrete in the service of Man, presented from the scientific standpoint, but in non-technical language. The past history of cement and concrete is well summarised; the raw materials necessary for the different types are discussed and their preparation explained. The parts chemistry and the allied sciences play in cement and concrete preparation and construction are fully detailed, and the various uses of concrete set forth with some notable examples. Whether all our own readers will share the author's sanguine expectations of the benefits of the "New Stone Age" we are not sure; but he tells his story well, and the book should be read by all concerned.

The annual general meeting of the subscribers and donors of the Architects' Benevolent Society (founded 1850) will be held

in the rooms of the Royal Institute of British Architects, 9, Conduit Street, W.1, on Tuesday, May 3, when the report and balance-sheet will be submitted. Mr. John W. Simpson, the President, will take the chair at five o'clock. The attendance of subscribers and donors is particularly requested.

Viscount Burnham, in the House of Lords last Tuesday, asked the Government whether it was intended to continue in any form the power given to local authorities to prohibit building except under licence. He complained that a series of arbitrary regulations had been imposed which had completely disorganised the whole building trade. No further purpose could be served by continuing them. They had led to increased unemployment, and the whole building trade wanted them removed. The Earl of Onslow said the powers given to prohibit luxury building had been of service in conserving the supply of labour, and there was no evidence that local authorities had used their powers unreasonably. A Housing Bill was now before Parliament, and if any amendment to abrogate these restrictions were proposed it would receive most sympathetic consideration from the Minister of Health.

The presentation of the first award of the Kelvin Medal will be made by the Rt. Hon. A. J. Balfour, O.M., F.R.S., in the Hall of the Institution of Civil Engineers to Dr. William Cawthorne Unwin, F.R.S., on Wednesday, May 4, at four o'clock. The medal was founded in 1914, principally by British and American engineers, to commemorate the achievements of Lord Kelvin in those branches of science which are especially applicable to engineering. The award is dealt with by a committee of the presidents of the representative British engineering institutions, after their consideration of recommendations received from similar bodies in all parts of the world, and, in accordance with the terms of the Trust, it is made to the person whom the committee find to be most worthy to receive this recognition of pre-eminence in the branches of engineering with which Lord Kelvin's scientific work and researches were identified.

Mr. Herbert Thompson, of Dundalk Villa, Belfast, retired builder, has left £10,428.

The biennial International Exhibition of Modern Art was opened last Sunday in Venice in a large gallery built expressly to house it. British art has a hall entirely to itself.

Lord Leverhulme last Friday, in answer to a shareholder who advocated the drastic curtailment of the expenditure on advertising, replied by quoting the lines:—

"The man who whispers down a well
About the goods he has to sell
Will never make as many dollars
As he who climbs a tree and hollers!"

The Bishop of Stepney has dedicated a war memorial to the fallen members of the staff of the Atlas Assurance Company. The central feature is a St. George Triumphant, by Mr. W. Reynolds-Stephens, vice-president of the Royal Society of British Sculptors, and consists of a wall panel of bronze with various marbles. It is erected at the head office of the company in Cheapside.

The death is announced of Mr. Herbert Francis Golds, builder, surveyor and estate agent, on April 10, at his Clapham Common residence at the age of forty-four years. Mr. Golds had carried out the development of the Cavendish House Estate, Clapham Common, and of estates elsewhere. He was a member of the Wandsworth Borough Council and of the London County Council for Clapham South.

The Queen visited 29, Tothill Street, Westminster, last Saturday to view the model, just completed, of the Empire War Memorial Shrine, after twelve months' work, by Messrs. Daymond and Sons, sculptors and modellers, under the direction of Major Pawley. The completed building is estimated to cost two million pounds. The interior of the shrine, which is Gothic in design, will be surrounded by 78 recesses, each of which is planned to serve as a memorial chapel capable of dedication to those who have fallen in the war. The building will be in the form of a Greek cross, with a diameter of 300 ft. from end to end of the arms; it will tone with the Abbey. The model will be open for public inspection for a few weeks.

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*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.

AMBLE.—For fifty houses, Albert House estate, for the urban district council:—
Carse and Son, Amble .. £2,406 0 0
(Accepted.)

CHINGFORD.—For 64 cottages, for the urban district council:—
Rowley Bros., Wood Green .. £45,070 0 0
(Recommended for acceptance.)

CONGLETON.—For houses, for the rural district council. Accepted tenders:—
Twelve houses at Betchton:—
Jackson, S. .. £10,832 0 0
Eight houses at Haasall:—
Edwards, G., Alsager .. £6,762 0 0

LOUGHBOROUGH.—For erection of houses, for the town council:—
For 12 houses in Elms Grove:—
Moss, W. and Sons, Ltd. .. £10,572 0 0
Corah, W., and Son .. 11,087 0 0
Chown, A. and H., Northamp-
ton .. 11,600 0 0
Dare and Wareing, Birming-
ham .. 9,780 0 0
Barlow, T., and Co., Notting-
ham .. 11,520 0 0
Faulks, A. .. 11,610 0 0
Wileman, A. J. .. 11,899 0 0
Building Guild, Ltd., Man-
chester (net prime cost basic
price per house) .. 790 0 0

For seven houses in York Road:—
Marriott, J. F., and Sons .. £7,000 0 0
Moss, W., and Son .. 6,158 0 0
Corah, W., and Son .. 6,769 0 0
Chown, A. and H. .. 6,600 0 0
Dare and Wareing .. 5,685 0 0
Barlow, T., and Co. .. 6,650 0 0
Faulks, A. .. 6,660 0 0
Wileman, A. J. .. 7,090 0 0
Building Guild, Ltd. (net prime
cost basic price per house) .. 790 0 0

MIDDLETON, LANCs.—For twelve pairs of houses ("B3," "B7," and "B8"), South Side, for the town council. Messrs. T. A. Fitton and Son, 18a, Corporation Street, Manchester, architects. Accepted tender:—
Lambourne and Co., Ltd., Openshaw, Manchester: Type "B7," £830; type "B8," £940.

MIDDLETON, LANCs.—For 62 houses, North Side, for the town council:—
Wheeler, R., and Son, Brooks Bar, Manchester: "B1" and "B4," £847; "B2" and "B3," £773.

SWADLINCOTE.—For 86 houses, for the urban district council. Messrs. Baines, A.R.I.B.A., and Provis, M.S.A., 22, Friar Lane, Leicester, architects. Recommended for acceptance:—

Contract 1.—Hall Street, 56 houses:—
Dare and Wareing, Ward End,
Birmingham .. £42,534 0 0
Contract 2.—Oversetts Road, 20 houses:—
Dare and Wareing .. £15,358 0 0
Contract 3.—Highfield Road, 10 houses:—
Dare and Wareing .. £7,936 0 0

SYDNEY, N.S.W.—For supply of 200 k.v.a. power transformers, for the city council:—
English Electric Co. of Aus-
tralia .. £13,700 0 0
(Accepted.)

TILBURY.—For 250 houses, Winget system, for the urban district council:—
Patent Impervious Stone Co.,
Ltd. (accepted) .. £221,500 0 0

WAKEFIELD.—For fourteen "A" type houses, Sharlston, for the rural district council:—
Rhodes, P. .. each .. £768 0 0
(Accepted, subject to Housing Commissioner's approval.)

LIST OF TENDERS OPEN.**COMPETITIONS.**

July 15.—For Designs for the proposed Council Chamber in Calcutta, for the Legislative Council of Bengal. Three premiums of £500, £250, and £100 Assessor, Mr. Henry Crouch, F.R.I.B.A., Consulting Architect to the Government of Bengal. Architect placed first to be employed to carry out the work.

Oct. 3.—For designs for the new buildings of Qasr el 'Aini Hospital and School at Cairo, for the Egyptian Government. Two stages, the first preliminary, open to all architects; the second and final, restricted to twelve architects, six to be selected from the most meritorious in the preliminary competition and six others nominated by H.H. Government, with the advice of the Assessor, Mr. John W. Simpson, F.R.I.B.A., Memb. Corr. de l'Institut de France, whose judgment will be final and binding.

BUILDINGS.

May 3.—For erection of a new post-office at Hayes, Middlesex.—For the Commissioners of His Majesty's Works.—Drawings, specification, and a copy of the conditions and form of contract may be seen on application at H.M. Office of Works, London, S.W.1.

May 4.—For a further 100 Class A houses at Huntington, Staffordshire.—For the Cannock Rural District Council.—Plans and specification may be inspected at the office of Mr. H. M. Whitehead, director of housing, Penkridge, near Stafford.—Tenders to the Director of Housing.

May 4.—For 26 houses, Bideford.—For the corporation.—Mr. B. W. Oliver, A.R.I.B.A., Bridge Buildings, Bideford, architect.—Tenders to W. B. Seldon, town clerk, Bideford.

May 5.—For 26 houses on the Dumpton Road site.—For the Ramsgate Corporation.—Specifications may be seen at the office of the Borough Engineer, Albion House, Ramsgate, or the office of the Architect, Mr. W. Everard Healey, L.R.I.B.A., M.S.A., 2a, Turner Street, Ramsgate.—Tenders to the Town Clerk's Office.

May 6.—For three pairs of houses, to be built of clay lump, South Lopham.—For the Thetford Rural District Council.—Mr. J. G. Skipper, F.R.I.B.A., 7, London Street, Norwich, architect.—Tenders to W. J. Haywood, clerk, London Road, Thetford.

May 7.—For 92 houses of various approved types on the Wood Green Urban District Council's White Hart Lane estate.—For the urban district council.—C. E. Staddon, acting clerk, Town Hall, Wood Green.

May 10.—For the erection of a new post office at Reading.—For the Commissioners of His Majesty's Works, etc.—Drawings, specification, and a copy of the conditions and form of contract may be seen on application at Reading Post Office, or at H.M. Office of Works, London, S.W.1.

May 10.—Alterations to Ministry of Pensions premises, Lionel Street, Birmingham.—The District Surveyor, H.M. Office of Works, Birmingham, or H.M. Office of Works, London, S.W.1.

May 10.—For 71 houses, in groups, Watney, Southfield.—For the Wandsworth Borough Council.—Mr. G. L. Elkington, A.R.I.B.A., Norfolk House, 7, Laurence Pountney Hill, E.C.4, architect.—Tenders to the Clerk, Council House, East Hill, Wandsworth, S.W.18.

May 10.—For 38 houses, Furzedown, Tooting.—For the Wandsworth Borough Council.—Mr. H. B. Elkington, A.R.I.B.A., Norfolk House, 7, Laurence Pountney Hill, Cannon Street, E.C.4.—Tenders to the Clerk, Council House, East Hill, Wandsworth, S.W.18.

May 11.—For sorting office, Ipswich.—For H.M. Works Commissioners.—The Secretary, Contracts Branch, H.M. Office of Works, London, S.W.1.

May 11.—For 300 houses of various types at Mansfield.—For the Housing and Town Planning Committee.—Mr. W. Thompson, A.M.I.C.E., borough engineer and surveyor, Market Street, Mansfield.—Tenders to J. H. White, town clerk, Mansfield.

May 12.—For 100 houses, with roads and sewers, March, Cambs.—For H.M. Works Commissioners.—Drawings, form of contract, etc., may be seen on application to Town Clerk, March, or H.M. Office of Works (Contracts Branch), London, S.W.1.

May 19.—To Federated Builders only.—For a new post office at Whitley Bay, for H.M. Office of Works. Drawings, specifications, and a copy of the conditions and form of contract may be seen on application to the District Surveyor, H.M. Office of Works, 63, Westgate Street, Newcastle-on-Tyne.

May 20.—For 1,000 houses, Middleton, Leeds.—Plans, forms of tender, etc., from Mr. W. T. Lancashire, Municipal Buildings, Leeds, city engineer.—Tenders to the Town Clerk, Municipal Offices, Great George Street, Leeds.

May 24.—For six pairs of houses, Bramhall.—For the urban district council.—Messrs. Adshard and Topham, 23, King Street, Manchester, architects.—Tenders to Chairman of Housing Committee, Council Offices, (Hazel Grove, Stockport).

Professor William Alphonsus Scott, who occupied the Chair of Architecture at the National University of Ireland since its inception, has died at Kingstown.

Miss Eileen Soper, aged 15, who has had two etchings accepted for this year's Royal Academy Exhibition, is one of the youngest artists who have ever gained this honour.

A report of the Local Government Committee of the L.C.C. giving details of the quinquennial valuation shows the county totals and increases, compared with those in force in April, 1920, to be as follows:—Gross value, £60,381,421 (an increase of £4,830,177); rateable value, £48,706,751 (increase £3,070,050); assessable value, £48,702,440 (increase £3,070,193).

Mr. W. R. Davidge, hon. secretary of the R.I.B.A. Town Planning Committee, who has been on a mission to India to advise the Government on the town planning and development of Bombay, returned to England on the 11th inst., after an absence of four months. Mr. Davidge has resigned his official appointments in London, and has removed his offices to 27, Abingdon Street, Westminster, where he is taking up consulting work.

An official statement issued at Scarborough in connection with the estate of Cass Hopper Wrightson, a local auctioneer, who died on January 31, shows that a large number of people will suffer heavily as the result of his financial transactions. The Official Receiver says debtor was more or less insolvent for a number of years past, and irregularities dating back to 1907 have come to light. The unsecured liabilities, owing to 130 creditors, amount to £74,839, and even this large total may be exceeded. As against this the assets are estimated to produce about £3,500.

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THE BUILDING NEWS

AND ENGINEERING JOURNAL.

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OUR ILLUSTRATIONS.

Memorial Hall, Sheffield: Revised Design. Mr. E. Vincent Harris, F.R.I.B.A., architect.

The Central Entrance, Messrs. Barclays Bank, Pall Mall East, S.W. Mr. Arthur C. Blomfield, M.A. (Cantab), F.R.I.B.A., architect.
Houses in course of erection in Radnorshire at a cost of £800 each, Presteign Housing Scheme. Type B. Mr. John Parker, M.Inst.C.E., architect.
Pulpit, St. Eadburgha's Church, Broadway, Worcester-shire. Sketched by Mr. H. St. John Harrison, A.R.I.B.A.

Currente Calamo.

The National Wages and Conditions Council of the Building Trades met again last week, and adjourned till yesterday and to-day, when its decisions with regard to the application of the building trades employers for the alterations in hours and wages in London and the provinces will probably be given. We regret to see that trade union obstruction of the scheme for the absorption of the 50,000 ex-Service men is being organised. Building trades operatives in Bath have now received a circular from the National Federation of Building Trades Operatives, 20a, Cedars Road, Clapham, marked "private and confidential," and possibly is being sent throughout the country. The recipients' attention is called to the dilution scheme, and the circular proceeds:

(1) Your duty will be, if dilutees are introduced in your workshop or job, etc., not under any circumstances must you assist in training; (2) dilutees must not be allowed to enter instructional factories set up for training disabled ex-Service men; (3) if dilutees are started in your workshop or upon the job, etc., full facts must be tabulated at once, and reported to your Society and the National Federation of Building Trades Operatives.

In regard to No. 1, if you are victimised by employers for refusing to train, your Unions and the National Federation will support you. In regard to No. 2, if dilutees are introduced the teachers for training disabled ex-Service men will be at once withdrawn or expelled from their Union.

Any violation of these instructions by any member or members must be at once reported to their Unions, and members dealt with under their general rules.

The circular is signed by Mr. George Hicks (President) and Mr. R. Coppock (Secretary). The outcome of the recent strike at Bath will hardly encourage another, especially to the prejudice of the men to whom above all others the country owes so much, we imagine.

As reported in our "Parliamentary Notes" on another page, Sir Alfred Mond is bringing common sense to bear on the tangle Dr. Addison made of Housing and the "Luxury Control" of building generally. The Government intends at an early date to rescind the regulations with regard thereto. The Ministry of Health is of opinion that the necessity for the regulations no longer exists, and that there should not appear to be any restrictions which limit the amount of employment in the building industry. Other considera-

tions, notably the changed circumstances of manufacturing industry and commerce, are putting a check on building enterprises that can legitimately be considered luxurious. We congratulate Sir Alfred Mond on having obtained the second reading of the Bill, and are sure that the care and attention he promises to exercise during the Committee Stage will ensure the beneficial continuance of the subsidy to private builders, and will help to get the building industry back to its normal conditions, under which, as he reminded the House, 95 per cent. of the working-class dwellings were built at reasonable cost by private enterprise and only 5 per cent. by public authorities.

We trust the High Court will endorse the decision given on Tuesday at the North London Police Court by Mr. Forbes Lankester, K.C., in the case in which Arthur Charles Dore summoned the Hackney Borough Council for making default in supplying electric power to his private house. Mr. Dore had entered into a contract for the supply of electricity from the Council's generating station, and employed a Mr. Cant, a master man who employed no labour, to do the inside wiring. The Council's workmen, however, refused to make the connection, because the wiring was not done by trade union labour. The Council, in their defence, relied on a clause in the Hackney Electric Lighting Order, which stated that they were not liable to a penalty if the default was caused by "inevitable accident or force majeure." Mr. Forbes Lankester said the Council were faced with a dilemma, in that they had either to yield to the threat of the trade union or run the risk of dislocating the business of the borough depending on electric light and power. This threat, if acted on, would deprive all men in the position of Mr. Cant of a legitimate livelihood, while it avowedly amounted to a claim on the part of the union to dictate to all their fellow-subjects the class of persons they should employ to do private electrical work on private premises. Some might regard such a threat as high-handed and insufferable tyranny on the part of the union; it was not for him to say. He found that the Council's default was not either inevitable accident or force majeure, and fined them 5s. per day for nine days (£2 5s.), with

twenty guineas costs. He would assist any appeal to the High Court, as he thought that if the meaning of *force majeure* was to be extended it should be done by the High Court, and not a Court of summary jurisdiction.

The London County Council's General Powers Bill, now before Parliament, deals in Part VI. with District Surveyors, who, it is proposed, after October 1 next, shall have their fees increased by 25 per cent., and to an extent not exceeding a further 25 per cent., varied from time to time, subject to the aforesaid maximum at the pleasure of the Council. In cases which, during the period commencing on October 1 next and terminating on December 31, 1926, a building notice has been served, and evidence is given of cost of additions, alterations, or other work within fourteen days of completion, no fee, however, shall be payable to the District Surveyor exceeding the fees prescribed in Sub-section 3a of £1 1s. on cost of work not exceeding £25, £2 2s. on £50, £3 3s. on £75, £4 4s. on £100, £5 5s. on £200, £6 6s. on £300, £7 7s. on £400, and £8 8s. on £500 worth of work. District Surveyors are not to be entitled to claim for compensation under Section 154 of the London Building Act of 1894 in respect of any alteration of fees now proposed. The provisions of Part VI. shall cease to operate on December 31, 1926, and before that date the Council undertakes to use its best efforts to secure the passing of a Bill to make the provision as to fees payable to District Surveyors after that date. Notices of alterations of fees under Sub-section 2 must be given by the Council by advertisement in the "London Gazette" and otherwise before such alterations become operative.

An interesting Masonic ceremony took place at Inverary last Friday, when Mr. F. W. Fell Clark, chairman of the well-known firm of Robert Ingham Clark and Co., Ltd., of West Ham Abbey, London, E., was installed for the second time as Provincial Grand Master of Argyll and the Isles. The ceremony was performed by the Grand Master of Scottish Freemasonry, the Earl of Eglinton and Winton, in the presence of a large company, numbering nearly 250, from every part of the Province. Many officers of the Grand

Lodge of Scotland were present, among whom were the Substitute Grand Master, the Earl of Stair, and Mr. David Reid, the Grand Secretary. Several English brethren also attended, including some Past Grand Officers. The brethren afterwards dined in a spacious hall in the grounds of Inverary Castle, which had been placed at their disposal by the courtesy of the Duke of Argyll. The whole of the proceedings were full of interest, and will be long remembered by those who were privileged to attend.

We think Mr. Jacob Epstein's protest in the *Times* of Monday last will be echoed by all who care for antique sculpture, who will view with astonishment and dismay the present policy followed by the British Museum authorities in restoring the marbles—that is, working them up with new plaster noses, etc., the latest instance of which is the "restoring" the head of the Demeter of Cnidus. The Demeter is not only "improved" with a new plaster nose, but to bring the rest of the head into consistency with this nose the whole face has been scraped and cleaned, thus destroying the mellow golden patine of centuries. Other important pieces "improved" are the marble boy extracting a thorn from his foot, and the very fine priestess from Cnidus, so altered as to give an entirely different effect from that it originally had. Surely the transformation of the Museum into a Beauty Shop is a descent from the sublime to the ridiculous?

A practical test to determine the relative strength of sheathing and Bishopric Board as applied to construction was recently made by the department of building inspection at Hartford, Conn. A load of 300 pounds was used, deformation being measured at each loading. The result of the test on $\frac{3}{8}$ -in. M and B sheathing, one side, with wood lath on opposite side, was as follows:—

300 deformation	$\frac{3}{8}$ "	1200 deformation	$2\frac{3}{8}$ "
600 "	$\frac{1}{2}$ "	1800 "	$6\frac{7}{8}$ "
900 "	$1\frac{1}{2}$ "	2100 "	$8\frac{5}{8}$ "

When load was released, deformation showed 5 3-16 in. Result of test on Bishopric Board on one side, with wood lath on opposite side, using same loading as on sheathing, showed the following deformation:—

300 deformation	$\frac{1}{8}$ "	1500 deformation	$1\frac{3}{8}$ "
600 "	$\frac{1}{4}$ "	1800 "	$1\frac{9}{16}$ "
900 "	$\frac{5}{16}$ "	2100 "	$2\frac{1}{16}$ "
1200 "	$\frac{1}{8}$ "	2400 "	$2\frac{7}{16}$ "
		2700 "	$3\frac{1}{16}$ "

When the load was released, deformation showed $1\frac{1}{8}$ in. In his report to the Bishopric Manufacturing Company, Frederick W. Barrett, supervisor of buildings, stated that the test showed very clearly that Bishopric Board, properly put on, was much stronger than sheathing, and that there was no reason why same should not be allowed to be used where $\frac{3}{8}$ sheathing can be used.

Messrs. Hukins and Mayell, architects and surveyors, have removed from 124, Westbourne Grove to St. James House, 73, Holland Park Avenue, W.11. Telephone number and Exchange unaltered.

THE ROYAL ACADEMY.

Whatever motives inspired the drastic reduction this year in the number of exhibits, there is no doubt that the general hanging of the pictures under the direction of Mr. D. Y. Cameron, Mr. Arnesby Brown, Mr. Charles Sims, and Mr. Adrian Stokes is well done, and that the public like it. It is equally certain that the best pictures at Burlington House are by members of the Academy, that those sent by the "new blood," about which so much nonsense is talked, are not among them, and that no sign is evident of the advent of the genius who is to ride the whirlwind and direct the storm of fashion in favour of "Futurism," or whatever the next name may be for the shibboleth of the aspirants who commence as splotchers and blotchers, but gradually filter down to mediocrity and mannerisms of a type perhaps distinguishable from, but not preferable to, the mild conventionalism of the older type. Some of those who have found places are, perhaps, of as little interest as the feeble productions of the struggling orthodox in past years, but some of the rejected this year have included good work by good men, which, at any rate, might have more interestingly occupied the wall space in Gallery VI. now wasted on Thornhill's copies of Raphael's cartoons, the originals of which can be seen any time at South Kensington.

There are no "great" pictures this year. The places of honour are rightly filled by Mr. Frank O. Salisbury's "And They Buried Him Among the Kings" (73) and Sir Arthur S. Cope's "Some Sea Officers of the War" (97), both in Gallery III. In the first-mentioned Mr. Salisbury has repeated his success last year with his "National Thanksgiving at St. Paul's," which we illustrated in our issue of May 14, 1920, and certainly with more difficulties to overcome. Pictorially, Sir Arthur Cope's task must have been as difficult, for the accessories were less favourable, but the work as a whole is a victory of harmonious tone and colour over stringent conditions common to all historical subjects. Mr. Salisbury has another kindred work, "The Passing of the Unknown Warrior, H.M. the King Chief Mourner" (315), equally creditable to his capacity for achieving accuracy and investing it with qualities appealing to genuine emotion. Sir Arthur Cope shows a good portrait of the Earl of Duncannon (94) and two nice landscapes, "In Trebartha Woods" (298) and "Under Hawks Tor" (528).

Sir William Orpen signalises his election as R.A. by sending six works, of which the one that will be most talked about is "Le Chef de L'Hotel Chatham" (115), a somewhat highly-coloured portrait of a doubtless jovial functionary, whose good cheer will attract many appreciative admirers. It has been purchased under the Chantry Bequest by the Council. Sir William's other portraits are: "Earl Haig" (3), "Sir William MacCormack" (14), "Sidney Boulton, Esq.," Chairman of Lloyd's (118), "Mrs. Melvill" (152), and "Jenny Simson" (543).

In strong, and, to our thinking, preferential contrast are Sir John Lavery's four portraits, two of them especially—"The Lady Katharine Somerset" (54), and "Lady Lavery" (109), his diploma work on his election as R.A.—among the best things he has done. Sir John also shows a delightfully-rendered interior of "The Vandyck Room, Wilton" (27).

Mr. George Clausen is as beneficently busy as ever with an "Interior of a Barn"

(2), a very beautiful "Midsummer Dawn" (153), and "Haymaking" (451). Mr. Charles Sims is manifestly on the modernist track, but discreetly. His "Wedgwood" (26), with the two girls and the child in the sea, is very pleasant to behold, and may be commended to the study of any student likely to mistake formless "Bolshevism" for artistic "direct action." Next best we like "The Pond, Hemsted" (416), tree-fringed, and with the reflections in the water and the surface ripples so well managed. The three others are: "On the Road to Gorbio, Mentone" (385), "The Lake, Hemsted" (398), and "Sunset, Romney Marsh" (531).

Sir William Llewellyn, R.A., sends a portrait of "Sir Aston Webb, P.R.A." (30), as his diploma work. It is a good likeness, and all will hope Sir Aston looks as well again after his late illness. Mr. J. J. Shannon, R.A., has four good portraits, the best, perhaps, "The Hon. Mrs. Piercy" (139). Mr. Charles Shannon's diploma picture, "Vanity and Sanctity" (65), is dignified and well conceived. Mr. J. L. Sargent has only one portrait, "Lieut.-General Sir George H. Fowke, K.C.B." (155). Other portraits that will find favour are: "The Rev. S. Baring Gould" (81), by Mr. S. Melton Fisher; "R. B. Cunninghame-Graham, Esq." (34), by Mr. John Da Costa; and "Sir Rider Haggard, K.B.E." (111), by Maurice Greiffenhagen.

The landscapes include many good ones, Mr. Arnesby Brown's, as usual, among the very best. "A Mill on the Yare" (38), "The Waveney Marshes" (44), and "The Coast Road" (78) are, alike, the most vivid reflections of nature, missing no charm of atmospheric effect or charm of light and shade. Sir David Murray sends six, of which "Crofts in the Lews" (96) is one of the finest of its kind in this year's exhibition. Of Mr. Oliver Hall's four, "Stoborough Heath" (249) is his chief success, but all will sustain his well-earned reputation. Sir D. Y. Cameron sends only two this year, "Autumn in Argyll" (112), and the other, "Durham" (31). Mr. Adrian Stokes has three, "In the Dunes" (12), "Looking Towards Skye" (116), and "On the West Highland Coast" (319).

Among others of more than average merit and of various types we may mention Mr. Richard Jack's diploma work, "On the Moors" (23); Mr. Philip Connard's "End of a Perfect Day" (66); Mr. A. J. Munning's contributions, including portraits of "Robins Bolitho, Esq.," senior master of foxhounds to-day (82), and of his wife (547); Mr. J. C. Dollman's "Up a Tree" (265), his only work this year, unless more, always welcomed, are among the mistakenly rejected; Mr. Gerald Kelly's "Siesta" (517); Mr. G. W. Philpot's "The Journey of the Spirit" (177), a powerful manifestation of vigorous imagination; Miss Elmslie's "She Walks in Beauty" (135); Mrs. Walton's "The Back of Beyond" (253); Miss Forbes-Robertson's "Shrimpers" (384); Mr. John Mace's "Waterloo Bridge" (430); Mr. Allinson's "Swiss Peat Country" (9) and "Snow in the Jura" (192); Mr. Fiddes Watt's portrait of "His Grace the Duke of Athol" (100); and Mr. R. Anning Bell's "Ecce Ancilla Domini" (162). The four selections from the works of the late Mr. W. Strang, whose death so soon followed his election as Royal Academician, are "Irene" (62), "Venus and Adonis" (131), a chalk drawing of "Dr. Ritchie Scott" (599), and "Thomas Hardy, O.M.," a line engraving.

The watercolours and etchings in the South Rooms are well above the average. Sir Ernest George has two, "Notting Hill Gate" (594) and the "Electric Power Station, Chelsea" (604). Miss E. A. Soper, the clever authoress of fifteen, has four etchings attributed to her in the alphabetical list of exhibitors, but two only rightly, (847) "La Barriere Cassée" and (855) "The Swing." The other two are by her father, Mr. George Soper, a dry-point, "Summer: The Last Load" (846) and another dry-point, "Autumn: Ploughing" (859). All four are distinctly able works, and the similarity of the style and merit of those of both father and daughter is marked.

THE SCULPTURE.

The sculpture is as bad as usual as a whole, and perhaps looks worse because it is so well displayed. Five of the best things are by Mr. F. Derwent Wood, who, year by year, is establishing his claim to be *primus inter pares*, and something more. All are comparatively small things, but all good. "Frank Moran, Pugilist" (1,126), a bust, is a characteristically resolute face, yet quite devoid of the vulgar pugnacity that marks some of the champions of the ring. The two bronze niche figures (1,172 and 1,174) are delightfully delicate and attractive. The others are the marble bust of Miss Anne Dinnage (1,175) and his diploma work, "The Dancer" (1,179), in bronze, a fine embodiment of real poetry of motion. Mr. Alan G. Wyon sends "Lux mea Christus" (1,087), a suitable figure for a tomb at Sanderstead. Sir W. Goscombe John, R.A., has three subjects, a "Portrait Study of Mr. Lloyd George" (1,124), for a statue to be erected at Carnarvon; "Mors Janua Vitæ" (1,097), a marble memorial to a lady, and "The Victor" (1,086), a model of a bronze statue for the Lampeter War Memorial. Mr. Paul R. Montford sends "Wounded" (1,096), a statue, part of the Croydon War Memorial, and a portrait bust of "Jaques Vigas, Esq." (1,196). Sir Hamo Thornycroft's sole contribution is a bronze bust of "Viscount Cowdray" (1,162), and that of Sir George Frampton a marble relief of "Sir Walter Roper Lawrence" (1,171). Mr. Gilbert Bayes has a bronze and enamel statuette, "The Guardian" (1,177), the enamel being in somewhat incongruous colour; "Comrades" (1,220), not a bad bronze group; and the "Lamp of Memory" (1,242), a stone figure, part of a memorial for Todmorden. Sir Thomas Brock is only singly represented by an effigy of "The late Capt. Charles Grant Seely," who fell at Gaza, well done in marble. Mr. Adrian Jones's "Action Front" (1,248) is one of the best things of its kind we have seen. The grouping of the men, the horses, and the guns is excellent. Another of kindred character and merit is Mr. Bertram Mackennal's "Sketch Model for Bronze Group for Australia House" (1,125). Of the many war memorials it is best to say nothing. Of the works by new aspirants—new to us, at any rate—"Blind Humanity" (1,085), by Rebecca Mate, and "Rest" (1,247), by Hibbert Binney, show promise that may bear better fruit than nine-tenths of the rest.

There are not many designs for stained glass on view in the Architectural Room. That for a south transept window in Selby Abbey (1052), by Messrs. Ward and Hughes, of 67, Frith Street, Soho, is the best.

The Prince of Wales has become honorary President of the Royal British Colonial Society of Artists.

A HISTORY OF FRENCH ARCHITECTURE FROM 1661 TO 1774.

The two volumes by Sir Reginald Blomfield, R.A., under the above title, by Messrs. George Bell and Sons, Ltd., at four guineas, are a continuation of the two volumes on the same subject covering the years 1494-1661, and published in 1911, a review of which was given in our issue of October 13, 1911. They are marked throughout by the same intimate knowledge of the subject and accuracy of judgment, imparted with the attractive literary skill which so eminently seconds all Sir Reginald Blomfield's writings and speeches and will most acceptably complete a work which will always take a foremost place in the architectural literature of our time, never growing out of date, and always including in its readers the professional architect and student, and helping, we trust, to restrain the evil influence of the revivalists here and elsewhere, who, as Sir Reginald says truly enough, "plunge recklessly into design without serious study of its technique and blunder about into solecism after solecism," with the result that "the greater number of modern buildings are merely commercial undertakings, in which architecture is the last consideration."

Volume I. starts a summary of the development of French architecture continuously from the time of Francois I. to the death of Louis XV. Mazarin died on March 8, 1661. His influence on the arts was not an encouraging one. A virtuoso, and loving to surround himself with the choicest in art, he was parsimonious, and grudged any public expenditure that could be put off or avoided altogether. Still, he amassed a fine collection of books and works of art, and the huge sums he accumulated and left to Louis XIV. enabled that monarch to embark on his, or rather Colbert's, systematic re-organisation of the arts of France. Change of direction of educational institutions charged with the training of the students and artists soon followed Mazarin's death. The rise and fall of the Academy of Painting and Sculpture is noted, and its quarrels with the Corps de la Maîtrise, a union of master-painters and sculptors, are described. The last-mentioned body set itself to compulsorily enrol and register all artists, and outside its membership no artists were allowed to practise. In 1654 Mazarin had had to interfere on behalf of the Academy, and again in 1658. But the Academy, apparently distracted by the quarrels of its members, had failed in its trust, and its students set to work to establish a school of their own—probably the earliest example of the famous French system of Ateliers. Still later on the Academy grew more careless, selfish, and intolerant, and the party of reform led by David brought about its extinction in 1793 by the Convention. All through the time above indicated there had been no Academy of Architecture, but in 1662 Charles Perrault persuaded Colbert to form a "Conseil des Batiments," the whole time of which seems to have been wasted in disputes in which Perrault demonstrated to Le Vau and Le Brun their ignorance of architecture, and their error in not recognising the merits of his design for the new buildings of the Louvre. Colbert evidently sickened of this "Conseil des Batiments," for in 1671 an Academy of Architecture was founded, all the members of which were practising architects. This body in many respects worked well. It was part of the State hierarchy, financed by the King, and a formidable barrier of official routine was

established which prevented any serious innovation in architecture. It is true, says Sir Reginald Blomfield, the happy freedom and the days of adventure of Henri II. and Louis XIII. were gone for ever. Yet for one hundred years the French Academy maintained the great tradition of French classical design, and the value of its work is shown by what happened after its temporary suppression during the French Revolution. Had France adhered to the principles of 1687, Sir Reginald thinks "we should have been spared the insipidities of the Empire" and the sentimentalities of Viollet-le-Duc. Most of the rest of Volume I. is devoted to the buildings of the reign of Louis XIV., and their architects, Bernini, Perrault, Blondel, Errard, Mignard, La Valenière, Le Pautre, Cottart, Recher, Robelin, De Lisle, Levé, Girard, Gobert, Le Duc, Gittard, Bruant, Bullet, Mansart, and others, admirably illustrated by ninety plates by the author and others.

Vol. II., illustrated by 110 more plates, deals in further detail with the architecture of the reign of Louis XIV. and its overlapping periods. The typical plans of the town house and the country house are described and illustrated, and the failure of the period as regards public architecture is commented on. That the art fell away in the eighteenth century was due to the fact that the King had built himself and his courtiers to the verge of bankruptcy. Reaction against all authority, active at first only in the world of ideas, was gradually rising to the surface with the men of action, and the menace of the imminent catastrophe became ever more sinister and insistent.

The remaining chapters continue the story of the doings of some of the other architects of the period, including Daviler, Desgodetz, L'Assurance, Le Roux, Audry, de Cotte, J. J. Gabriel, Ange Jacques Gabriel, the greatest architect of the eighteenth century, Mansart, Soufflot, and others; and deal less fully, but interestingly, with the work of the reign of Louis XV. During that reign not very much building was carried on, but architects were held in high esteem, and the tradition of the pre-eminence of architecture in the arts was carried on by De Cotte, and lasted, though with ever diminishing range, almost down to the Revolution. Mansart's abuse of his position seems, indeed, to have convinced the King that it was dangerous to concentrate despotic control of the arts in the hands of one man, and after Mansart's death the post of Surintendant was broken up into departments, with a sort of Minister of Fine Arts with a salary of 35,200 francs per annum, and an executive department dealing with the design and execution of the Royal buildings, and directed by the "Premier architecte du Roi," with a salary of 12,000 francs per annum. Few important private houses were built, and not many churches, during the reign, except in the provinces.

The "end of a great tradition" was, says Sir Reginald, not the work of the architects, but of amateurs and literary men. Of these Caylus was the first and in some ways the most disastrous member. The revivalists finished the evil work, Quatremère de Quincy experiencing the full measure of Sir Reginald Blomfield's denunciation. "If," he concludes, "de Quincy could return to-day, he might believe that he had succeeded after all, for the latest revival has been that of the ponderous classic he loved, and the latest official theory of the control and administration of the arts is on no account to be entrusted to creative artists, and that the proper persons to direct

the arts are persons "who have no first-hand acquaintance with them. . . . In France, as in England, a great national tradition was killed by the doctrinaires. It will only be built up again by the devoted labours of artists themselves."

ARCHITECTURE AS EVERYONE'S CONCERN.

LECTURE AT R.I.B.A.

Architecture as everyone's concern was the subject of a discourse delivered by Mr. A. Clutton Brock before the Royal Institute of British Architects at No. 9, Conduit Street, on the 28th ult. He said that everyone had a firm conviction that, whereas taste was exceedingly rare among other people, yet he was himself born with a mysterious faculty that enabled him to discriminate in artistic matters. We constantly met people who said, "Of course, I know nothing about it, but I know what I like." But really to know what one liked was one of the most difficult things in the world, for we were constantly being hypnotised by people who imposed on us by persuading us that something or other was what we liked. Thus, in shops we got not what we liked, but what the commercial traveller persuaded the shopkeeper we would like. (Laughter.) He (the speaker) had only begun to learn anything, however rudimentary, about the arts when he rid himself of the notion that he had any taste, when he said to himself, "I have to get rid of the idea that I know good from bad; I have to study principles; I have to seriously ask myself, Is this good or bad, and if so, why?" Where people had real knowledge they did not talk about taste. For instance, those who were interested in motor-cars took them seriously. They did not say, "Of course we know nothing about it, but we know what we like"; but they learned something about machinery and something about the way in which function ought to be expressed in design. They knew what they wanted, and if there was anything in a design silly or inexpressive they recognised the fact; and, because of this, the design of motor-cars steadily improved.

Developing this point, the lecturer continued that there must be a real public interest in the art of building if it was to prosper in a country. If we took the case of the French cathedrals, these were in the first place great works of engineering, in which people from all over France were enormously interested. If, for example, we studied contemporary accounts of the building of Chartres Cathedral, we read that people went in crowds to see it and slept inside the unfinished building; and this was the case with cathedral after cathedral. Each one sought to be an improvement on the last. The builders did not talk about art; they were trying to make a better cathedral, just as to-day each man tries to make a better motor-car than his rival. Consequently there was steady progress, steady development in design; for anyone could see when a problem was better solved than in a previous case. A thoroughly good building was wanted for a definite purpose, and, as everybody was interested, there was an extraordinarily rapid development.

The lecturer said his second point was that as we had only a limited amount of energy to spare from the hand-to-mouth task of earning our living, it was very important we should put that energy to the very best possible use. If we elected to spend it on building, we wanted an edifice well designed, well built, and constructed

of good materials; and whenever, as was usual, a lot of utterly useless ornament was designed and executed, there was proportionately less energy to be fruitfully applied. Look at the Carlton Hotel! and tell yourself that all that ornament had been first designed by one or more human beings in an office, and afterwards carved by other human beings! Every bit of such waste was a taking away from the real excellence that we might have had. But to design a perfectly simple building really well was a very difficult thing, and architects were tempted by the public to conceal their inability to do it by using pilasters and things of that kind. Bentley, who built the Roman Catholic Cathedral, was a man who knew how to design and how to use material; and though most of his life had been wasted in producing imitation Gothic buildings, when he got his opportunity he produced a great work. It was great because he had achieved a very difficult problem of design; its grandeur and beauty came from that. The ornament which was being added now tended to spoil it. Architecture was the most social of all the arts; more than any other it depended on a public interest, understanding, and conscience. You might have a painter like Rembrandt going on in a lonely way, working in the kitchen and painting his cook, and yet producing masterpieces. But the architect could only produce masterpieces if he had a public who wanted them. Genius in architecture was not made by the accident that a certain number of people were born with a great talent for designing buildings; it was made by the atmosphere of the society in which the architect lived; and if now we had a public as much interested in architecture as it was in motor-cars or aeroplanes, architectural genius would be as common as blackberries. For the present condition of architecture we were all responsible—all of us. Each should say when he saw a bad building, "That is the result of my ignorance and vulgarity." But we had such a totally false idea of what architecture was that if there was real functional beauty in a building we did not notice it. Waterloo Station had very considerable functional beauty about it, but we did not think of Waterloo Station as architecture at all. When the Tower Bridge was first built, without any architecture, there was an extraordinary beauty in the magnificent steel structure expressing its function so perfectly. Unfortunately, the City Corporation, having money to spend, and not noticing there was any functional beauty at all, thought the thing to do was to cover the naked engineering with sham mediævalism. So they put up two towers with places at the top whence you could pour boiling oil on the people below if you wanted to. (Laughter.) This sort of thing was the result of people conceiving of architecture as something that concealed function. When we realised that there was a beauty in works of engineering, and that added beauty could not come in concealment of that functional beauty, but must come in emphasis of it, we should have great architecture.

Of the effect of bad architecture upon the mind, the lecturer said it used to be thought that ugliness did not matter to anyone who was indifferent to it. But we knew now that a large part of the mind was not conscious; and the fact that you had not enough sensibility to notice your surroundings did not mean that they had no effect upon you; your case was similar to that of a man whose nose did not tell him that the drains were bad. He (the speaker) had got the habit some time ago of noticing how particular surroundings

heightened or lowered his vitality. He remembered that there were certain places where in his walks as a small child he used to get more tired than elsewhere; these were invariably places where there were hideous cheap cottages. But in the Piazza of Saint Peter's one felt as if he could knock twenty men down, or jump over the moon, one's vitality was so heightened! There were many hopeful signs, though mostly very humble ones. A better state of things could not be brought about by the expert alone; the help of the whole public was needed. (Applause.)

A vote of thanks was moved by Major H. C. Corlette, seconded by Mr. Theodore Fyfe, and supported by the Chairman.

This was heartily accorded, and the thanks of the meeting having been also tendered to the Chairman, the proceedings terminated.

THE BUILDERS' CLERKS' BENEVOLENT INSTITUTION.

The forty-first annual dinner of the Builders' Clerks' Benevolent Institution was held on Tuesday evening in the King's Hall of the Holborn Restaurant, when some 400 guests assembled with the President, Mr. Edmond J. Hill, of Messrs. Higgs and Hill, Ltd., in the chair, supported by Mr. H. T. Holloway, V.P., Mr. C. J. Trollope, Mr. F. Higgs, and others.

The President proposed the toast of the evening, "The Builders' Clerks' Benevolent Institution," founded in 1866. At present each male recipient receives £40 per annum, and each woman £30, with special help as required. More should be done to make it generally known, and it was incumbent on the trade to help. There was at the present time in the gift of the Institution a presentation to entitle the receiver to free maintenance and education, for which the committee would be glad to receive the claims of applicants. He trusted that the contributions of the evening would mark a record in the history of the Institution.

The next toast, "The Architects and Surveyors," was proposed by Mr. F. Higgs and responded to by Mr. G. H. Hadland, Q.S.A. That of "The Builders and Builders' Merchants" was proposed by Mr. E. J. Brown, Mr. F. Shingleton replying for the builders and Mr. C. A. Harman for the builders' merchants.

The final toast of the evening, "The President," was proposed by Mr. H. T. Holloway, and the President replied.

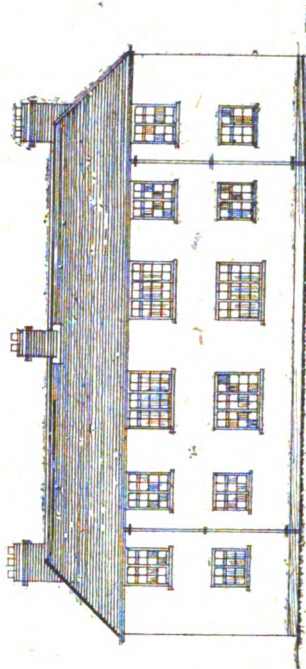
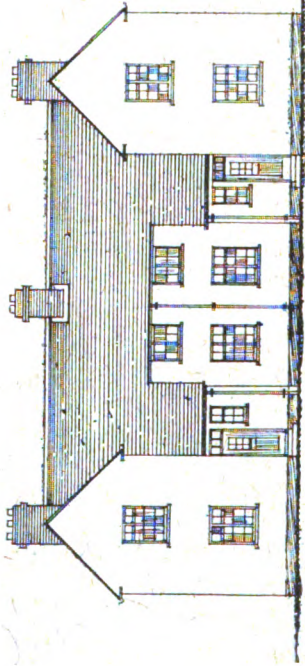
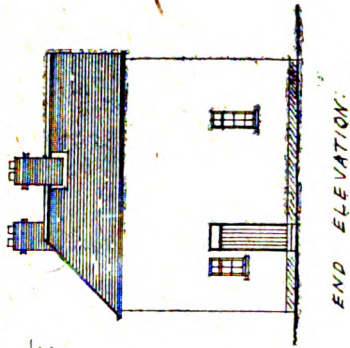
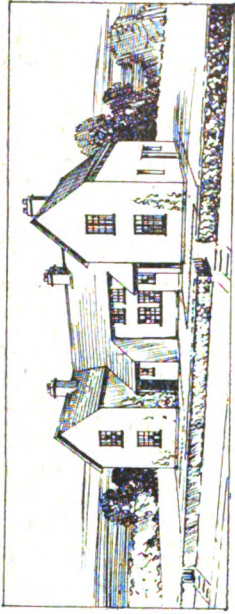
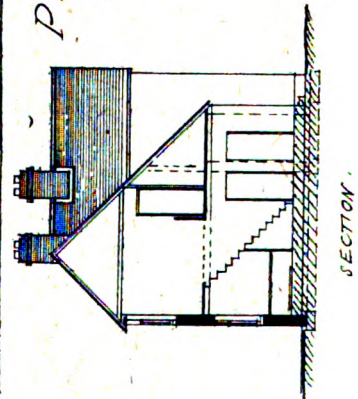
The total contributions, as tallied by the Secretary, Mr. John Austin, A.C.I.S., and announced by the President, amounted to upwards of £750, including £50 from the President and his firm.

COMPETITIONS.

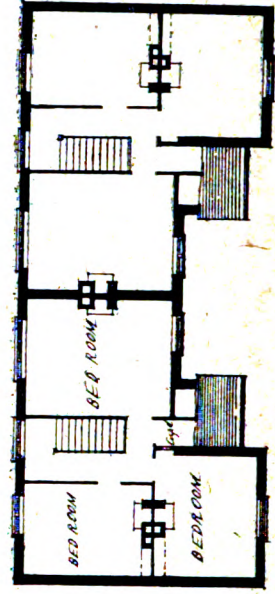
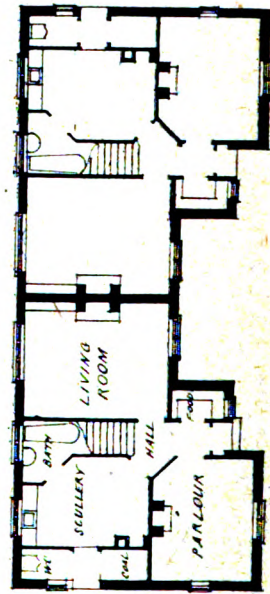
ROYAL ENGINEERS WAR MEMORIAL.—In the open competition for the Royal Engineers War Memorial, the assessor, Sir Reginald Blomfield, R.A., Litt.D., has awarded the first premium of £200 to Messrs. Hutton and Taylor, F.F.R.I.B.A., of 212, Bath Street, Glasgow; the second premium of £125 to Major E. Vincent Harris, O.B.E., late R.E., of 29, St. James's Square, London, S.W.1; and the third premium of £75 to Messrs. W. Harvey, J. F. Wilson, A.R.I.B.A., and F. V. Blundstone, of 119, North Hill, Highgate, N.6. The Committee has accepted the award of the assessor, subject to certain modifications in detail, and the work will be put in the hands of the competitors placed first by the assessor. One hundred and one designs were submitted for the competition.

THE BUILDING NEWS, MAY 6, 1921.

PRESTEIGN HOUSING SCHEME
PROPOSED HOUSES TYPE B.



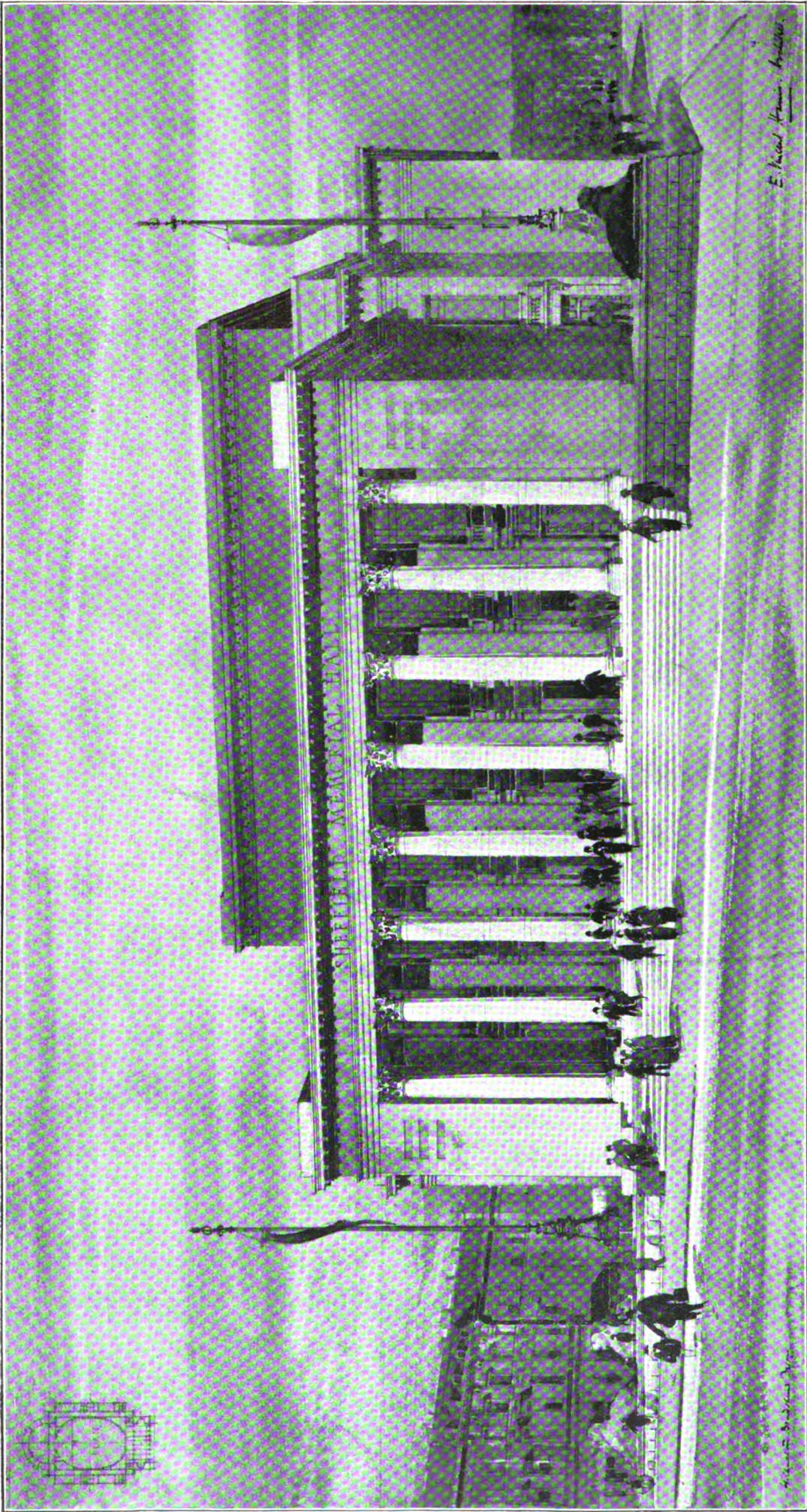
SCALE. 1" = 2' 0"



JOHN PARKER ROY ARCHITECT.

HOUSES IN COURSE OF ERECTION IN RADNORSHIRE AT A COST OF £800 EACH,
Mr. JOHN PARKER, M.Inst.C.E., F.S.I., Architect.

THE BUILDING NEWS, MAY 6, 1921.



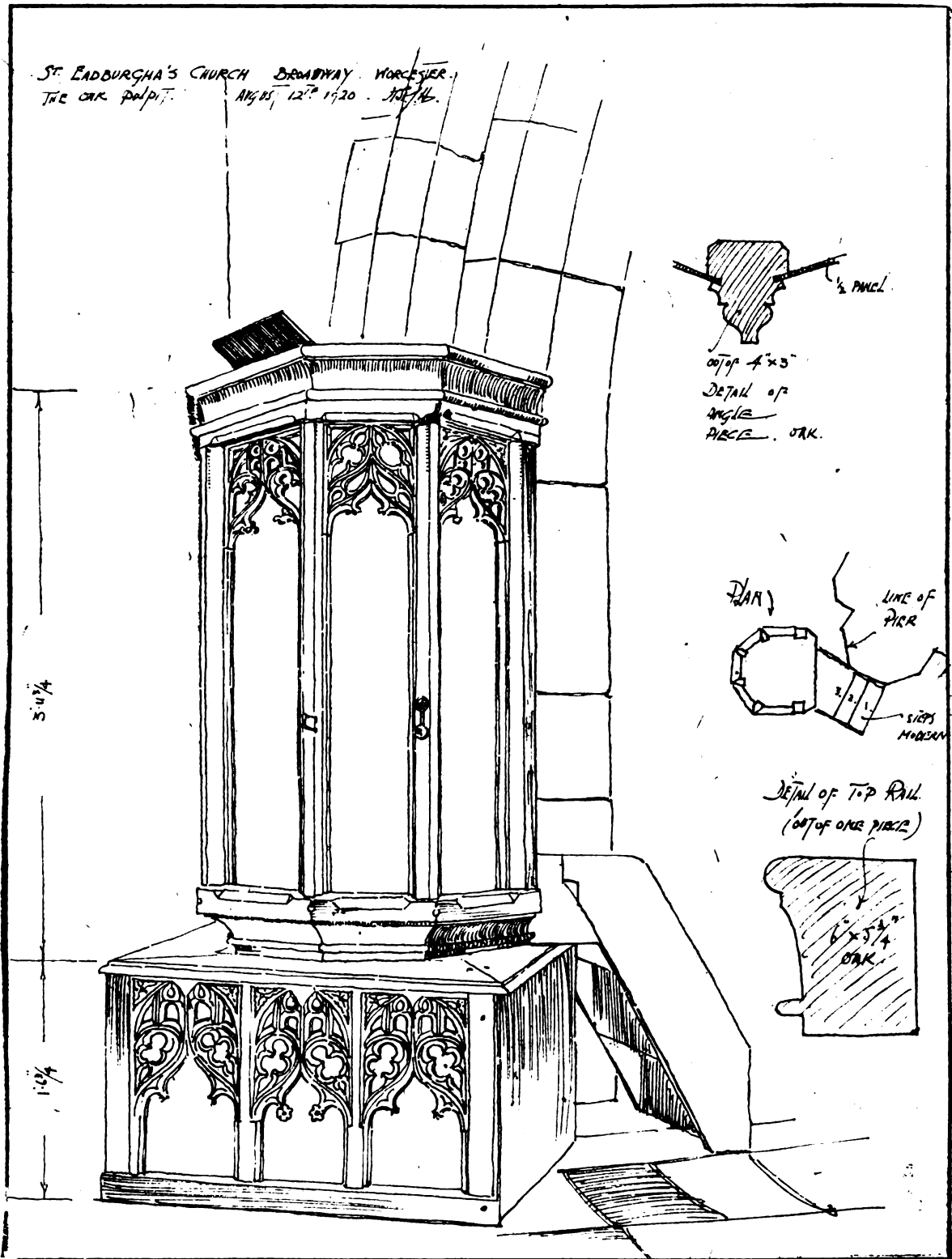
MEMORIAL HALL, SHEFFIELD : REVISED DESIGN.

Mr. E. VINCENT HARRIS, F.R.I.B.A., Architect.

THE BUILDING NEWS, MAY 6, 1921.



THE CENTRAL ENTRANCE, MESSRS. BARCLAYS BANK, PALL MALL EAST, S.W.
Mr. ARTHUR C. BLOMFIELD, M.A.Cantab, F.R.I.B.A., Architect.



PULPIT, ST. EADBURGA'S CHURCH, BROADWAY, WORCESTER.
Sketched by Mr. H. ST. JOHN HARRISON, A.R.I.B.A.

Our Illustrations.

WAR MEMORIAL HALL, SHEFFIELD: REVISED DESIGN.

In our review of the architectural drawings at the Royal Academy last week we particularly mentioned Mr. E. Vincent Harris's revised design for this fine building, to be erected on the spacious open site known as Barker's Pool, Sheffield. In *THE BUILDING NEWS* for August 27 last we reproduced his competition perspective immediately after the competition was decided on the award of Sir Aston Webb, P.R.A., the assessor. To-day we publish Mr. H. C. Bradshaw's water-colour drawing now on view at Burlington House. By comparing these two views, it will at once be seen the great improvement which the architect has made in the elevation. A total of 4,000 people had to be provided for in two halls—3,000 persons and 500 chorus in the larger one, and 500 seats in the smaller hall. Mr. E. Vincent Harris, F.R.I.B.A., of St. James's Square, S.W., is the architect.

MESSRS. BARCLAYS BANK, PALL MALL: CENTRAL ENTRANCE.

We gave a double-page view of this important bank, now in course of erection, in our issue for January 5, 1916, and also a plan showing the island site, with frontages facing Pall Mall East, the Haymarket, Suffolk Street, and Suffolk Place. It was originally intended that the south-eastern corner of the premises on the ground floor should be occupied by an insurance company. Since then the latter company has renounced the option of retaining this corner; consequently Messrs. Barclays Bank will occupy the entire ground floor, the eastern portion being devoted to their foreign department. The opportunity has been taken to substitute a central entrance for the pair of distinct portals shown by the original design. This alteration is illustrated by Mr. Arthur C. Blomfield's Royal Academy drawing, of which we give a reproduction to-day. An internal lobby is provided, having an entrance to each portion of the bank east and west of the portico, while a central door leads to a staircase behind, giving access to the upper floors of the building, which will be available for chambers and offices, furnished with two passenger lifts. The site is Crown property, facing Cockspur Street. The façades are in Portland stone. Messrs. George Trollope and Sons, and Colls and Sons, Ltd., are the contractors, the architect being Mr. Arthur C. Blomfield, M.A., F.R.I.B.A., of Princes Street, E.C.

PRESTEIGN HOUSING SCHEME: TYPE "B" HOUSES.

The contract for the scheme has been conditionally secured by Mr. J. J. Griffiths, of Presteign, the "A," or non-parlour, type for £740 each, and the "B," or parlour, type (the subject of our illustration) at £800 each. Roads, sewers, water mains, fencing, and usual tenants' fixtures are included in the contract, being £240 less per house than that of similar houses now being erected in the neighbourhood. A new departure has been adopted in the construction of the walls, which consist of the outside 4½-in. brickwork, a 2-in. cavity, and the inside of 3-in. clinker concrete, bonded together with ties in the usual way. The site necessitates a northerly aspect, but sunlight is secured to both living rooms and principal bedrooms, and is excluded from the food pantries. Bathrooms with lavatory basins and scullery sinks are all supplied with hot and cold water.

Dressers, linen closets, cupboards, shelves, and wardrobes are provided throughout. Mr. John Parker, M.Inst.C.E., F.S.I., of St. Owen Street, Hereford, consulting engineer to Hereford Corporation, is the architect.

PULPIT, SAINT EADBURGH'S CHURCH, BROADWAY, WORCESTER.

Mr. H. St. John Harrison's sketch, reproduced to-day, includes a key plan showing the position of this pulpit in relation to the adjacent pier, which is most unusual. The steps, of course, are modern, and with such high-pitch risers, without any handrail, must be very awkward. The ancient pulpit itself is in more than one respect unique, owing mainly to the boxlike base on which it stands or out of which it rises. As an example of Mediæval furniture, the structure is uncommonly interesting. The panels are only half an inch thick, and are grooved into the solid oak moulded angle uprights, measuring 4 ins. by 3 ins. The top rail is about 6 ins. by 6 ins., out of one piece of stuff. The height of the top of the pulpit is about 5 ft. 6 ins. from the pavement, as the figured dimensions show. We cannot recall anything quite like this pulpit, either in the Cotswold district or elsewhere. It is at present in the old disused church of St. Eadburgha.

ARCHITECTS' BENEVOLENT SOCIETY.

The annual general meeting of the Architects' Benevolent Society was held on Tuesday at No. 9, Conduit Street, W., Mr. John W. Simpson (President) being in the chair.

The minutes of the last annual meeting were read, confirmed, and signed.

This was followed by the reading of the seventy-first annual report of the Council. From this it appeared that during the year a sum of £1,474 12s. 6d. had been distributed in relief—£1,135 12s. 6d. in grants and £339 in pensions. As it had been realised that at the present cost of living the amounts granted in pensions were very inadequate, the Council had decided to make a supplementary addition of 50 per cent. The increased cost of living had also influenced the Council in the distribution of grants, as the pre-war scale no longer afforded the same degree of assistance. In view of this additional demand on the Society's funds, and also of the fact that towards the end of the year the accounts had shown a serious falling off in subscriptions, while the claims on the society were increasing, it had been decided to issue an appeal for additional subscriptions. On December 18, therefore, a letter signed by Mr. John W. Simpson (President of the Royal Institute of British Architects and also of the Architects' Benevolent Society), Sir Charles T. Ruthen (President of the Society of Architects), and Mr. G. Gilbert Scott (President of the Architectural Association) had been sent out to the members of the three societies. This appeal had resulted immediately in the payment of many arrears in current subscriptions, as well as the accession of a large number of new subscribers.

The amount received in answer to this special appeal was not stated, as the report dealt only with the affairs of the society to the end of 1920; but particulars were given of a number of other donations and subscriptions.

The President, in moving the adoption of the report, said the smallness of the meeting was satisfactory as showing that the persons interested in the society were content to leave the conduct of its affairs

to those who had hitherto conducted them so efficiently. He had to congratulate the meeting on the satisfactory ending of a year which had not promised very well at the beginning. During the trying years of the war the Council, largely due to the loyalty of old subscribers, had been able to keep subscriptions at pre-war level, but last year there had been a great falling off. It was felt also that a society with a purpose such as theirs, and with a history of seventy years' good work behind it, should not be held dependent on a comparative few—not more than five per cent. of practising architects.

The President then repeated the information contained in the report with regard to the sending out of a special appeal. The object, he said, had been to get a thousand new subscribers of a guinea each. This hope had not been realised, but subscriptions had been received from all parts of the world, among other places from Canada, Australia, India, South Africa, and New Zealand. The President of the Royal Academy had sent a cheque for 25 guineas, and the other subscribers included Mr. Thomas Hardy and Lord Plymouth. The actual result of the appeal so far had been 501 new subscriptions and twenty-four increased subscriptions; the total addition to the amount received in subscriptions being £618. In addition to this there had been 121 donations, amounting to £437. This result could not be called unsatisfactory, and he hoped that the full number of 1,000 new subscribers might be reached before the end of the present year. This was the last occasion on which he would fill the chair, but it would always be a pleasure to remember that during his term of office the number of subscribers had been substantially increased. It was still, however, far from adequate.

Mr. G. Hubbard seconded the resolution, adopting the report, and it was carried.

The following elections then took place:

It was agreed that the President of the R.I.B.A. for the time being should be President of this Society also, while Mr. Reginald St. A. Roumieu was re-elected Vice-President. The gentlemen elected to be Ordinary Members of Council were Messrs. W. Campbell Jones, E. C. P. Monson, Herbert Shepherd, Stanley Hamp, Saxon Snell, William Woodward, E. J. Sadgrove, Maurice E. Webb, H. M. Fletcher, Dendy Watney, H. D. Searles-Wood, W. Henry White, and Henry Lovegrove; with Mr. W. G. Newton and Sir Charles Ruthen representing the Architectural Association and the Society of Architects respectively.

Mr. G. F. Bowman, of Roundhay, Leeds, architect, has left £21,762.

Middlesex County Council last week had two tenders for reconstruction work on the Edgware Road, Hendon, one of £111,320 and the other £84,646. The lower was accepted.

The Earl of Cavan has completed the preservation of the ruins of the old parish church of Ayot St Lawrence, Herts. Sir Lionel Lyde intended to level this building to the ground in 1779, but was prevented by the Bishop of Lincoln.

The "smile muscle" in the cheek of James Godfrey, 13 years old, having been bound by the scarred tissue above when he came in contact with an electric wire, the boy became incapable of smiling, and he has now secured a verdict of 20,000 dollars in the Kansas City Circuit Court against the Power and Light Company.

At Tuesday's meeting of the London County Council Labour amendments were moved to the report of the Housing Committee submitting the proposed scale of rents for houses on the Bellingham and Becontree estates—ranging from 13s. 6d. to 30s. 9d. per week—with the object of securing a reduction of 25 per cent. The amendments were defeated by large majorities.

PROFESSIONAL AND TRADE SOCIETIES.

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE OF THE UNITED KINGDOM.—The report of the Council and statement of accounts for 1920, to be submitted to the members at the annual general meeting, to be held at the Institute, 34, Russell Square, London, W.C.1, on Thursday, May 12, 1921, at 3 p.m., states that 553 new members have been elected during the twelve months, as compared with 193 during the preceding year; 122 members were transferred to Fellowship, as against 65 in 1919, and 21 were transferred to Associateship. The Council regrets to report the loss of 32 members by death during the year, together with the loss of 89 members by resignation. The loss of 22 other members is to be recorded by reason of lapsed membership. On December 31, 1920, the membership roll was as follows:—Honorary members, 18; honorary Fellows, 6; Fellows, 2,691; Associates, 837; students, 170; total, 3,722. The income for the year was £10,113 17s. 9d., and the expenditure £11,664 17s. 5d., leaving a debit balance of £1,550 19s. 8d. This has been deducted from the balance brought forward on January 1, 1920, showing a balance to the credit of income and expenditure account of £14,234 11s. 10d. The amount standing to the credit of the Benevolent Fund Account on December 31, 1920, was £4,875 4s. 8d., after writing off £1,971 5s. 5d. as accumulated depreciation of investments in order to include them in the accounts at market value in conformity with the policy adopted for the Institute general account.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.—The annual meeting of the Royal Institute of British Architects was held at 9, Conduit Street last Monday evening, the President (Mr. J. W. Simpson) in the chair. Referring to the medal offered for the best street frontage, Mr. Walter Tapper said he did not think the advancement of architecture would be served in that way. Art was governed by the character of the nation, and unless the nation was sound at heart they would not get sound architecture.

PARLIAMENTARY NOTES.

THE HOUSING BILL.—Sir A. Mond (Minister of Health) obtained on Tuesday the second reading of the Housing Bill. Its main purpose, he explained, was to deal with the continuance of a subsidy to private builders which fell out when the Bill of last year was thrown out by the House of Lords. A considerable number of houses were begun on which a subsidy would automatically have become due if the Bill had passed last year. It was agreed at that time that the subsidy should be restored at the earliest opportunity and the pledges honoured. Before the war no less than 95 per cent. of working-class dwellings were built by private enterprise and only 5 per cent. by public authorities. That proportion was now entirely reversed. The subsidy was instituted to get the industry back to its normal condition. The amount of the subsidy (£260 for a five-roomed cottage) was fixed by the Ministry of Health. If it became possible, owing to a fall in cost of construction, to reduce the subsidy and still maintain the stimulus to private building, that course would be adopted. The amount of £15,000,000 fixed by the Act of 1919 as the total to be spent would not be exceeded by the extension. He would himself move the deletion of clauses one and three. It was not desirable to continue the prohibition of luxury building. There was so much unemployment, and as the building labour was going to be diluted considerably, the time had come when they could safely withdraw the restrictions on luxury building. He would be very glad to listen very carefully to all the arguments regarding the Bill when it was in Committee.

The Executive Committee of the Welsh National Memorial to Thomas Charles Edwards, the first Principal of the University of Wales, has engaged Sir Goscombe John, R.A., to design and erect a bronze statue of the Principal outside the Aberystwyth College. It is hoped to unveil this at the end of June.

Our Office Table.

Having realised the necessity of repairing the statue of King Charles II, in Parliament Square, Edinburgh, the Lord Provost's Committee of Edinburgh Town Council decided recently to consult the President of the Royal Scottish Academy, Sir J. Lawton Wingate, before proceeding with the work of repair. The matter was delegated by Sir Lawton Wingate to a Committee of Sculptors, comprising Mr. Pittendrigh MacGillivray, R.S.A.; Mr. H. S. Gamley, R.S.A.; Mr. Percy Portsmouth, A.R.S.A.; and Mr. Alex. Carrick, A.R.S.A. The report of this committee was considered by the Lord Provost's Committee last week. The report stated that the Committee of Sculptors were disappointed in finding that the figure and horse were much more unsatisfactory than their remembrance of the work had led them to anticipate. They were of opinion that the pedestal was much the best and most important part of the monument. It was in architectural harmony with the south side of the square, and fine in design and execution. It was of Craigleith stone, and technically a most excellent piece of workmanship. Although the statue was not a fine example of its style and period, they recommended that it be properly repaired, made suitable, and preserved as a historic monument. The Lord Provost's Committee instructed that the report should be circulated, and meanwhile delayed consideration of the proposals.

Lady Poynter, wife of Sir Ambrose Poynter, the architect, after having trained for two years at a well-known West-End firm, is starting in business as a house decorator. She is going to work under the name of "Toucan," not because she wishes to conceal her identity, but because she wishes to trade under a proper business title. Later, perhaps, she hopes to have the assistance of her husband, hence the business title "Toucan," for what one cannot do two can. Though this is a little joke, doubtless the Toucan is a bird which will provide a good trade design.

The Office of the Commercial Secretary to His Majesty's Legation at Christiania has forwarded particulars of an inquiry for materials wanted in connection with building enterprise and repair of municipal property in Norway. The following list of materials has been furnished by the inquirers as an indication of the class of goods which will be required in large quantities, but it is not intended that it should be considered in any way exhaustive:—Rolled steel girders, armouring iron, plumbers' requisites of all kinds, sanitary ware, cement, paint oils, linoleum, etc. Further particulars relating to this inquiry may be obtained by United Kingdom firms interested on application to the Department of Overseas Trade, 35, Old Queen Street, S.W.1.

The members of the London and Middlesex Archaeological Society last Saturday visited the north end of London Bridge to view the arch of old London Bridge discovered during the excavation work now being carried out by Messrs. McAlpine for a large commercial building. The old arch is part of the bridge constructed many centuries ago by Peter of Colechurch, and in 1703 the arch was strengthened by three broad flat stone ribs, one of which has since fallen, and on one of the others may be seen the date, thus—17w03. It is not known to whom the initial "w" belongs. A portion of the nearest arch on the shore side, closer to St. Magnus Church, has also been disclosed. It is hoped that the old relics may be preserved, and a careful survey is being made to ascertain if it will be possible to drive the necessary piles and erect the steel columns without interfering with the arch in any way.

C. Baker's new list of secondhand scientific instruments includes a varied and useful selection of drawing appliances and surveyors' apparatus at tempting prices and with a guarantee of personal examination and treatment in the firm's own workshops, ensuring efficiency far exceeding the value of

most things of the sort sold in many of the shops and made by the bushel to sell. Send for "List 72" to 244, High Holborn, W.C.1. It covers 78 pages, and includes many particulars of accessories indispensable in every drawing office.

Messrs. Millars' Timber and Trading Co., Ltd., of Pinners' Hall, Great Winchester Street, E.C.2, have recently issued a nicely produced folder describing and illustrating their stone and ore crushers. These machines embody the most modern constructional features:—The strongest and lightest form of frame, which is a great advantage where portability is desirable, as in roadwork; simple mechanism; long bearings; dust-tight oil boxes; reversible jaws; and every facility for adjustment. The machines are supplied with steel-plate screens or elevators, and are mounted on travelling wheels if required. They are used for crushing quartz, ores, road metal, railway ballast, limestone, clinker, etc. A table giving sizes, weights, power required, and output is included.

STATUES, MEMORIALS, ETC.

GRESFORD.—The Archbishop of Wales last Sunday dedicated a porch, which has been erected in the north entrance at Gresford Church in memory of the fifty men of the parish who fell in the war. The memorial, which was designed by Sir Thomas Jackson, cost £1,400, of which £1,300 has already been subscribed by the people of Gresford. The porch is of Cefn stone, with a niche in York stone representing St. George and the dragon.

MONTROSE.—The War Memorial Committee last Friday viewed a model of the proposed Montrose War Memorial, designed by Mr. H. S. Gumley (sculptor), R.S.A., Edinburgh, and Mr. Washington Browne (architect), R.S.A., Edinburgh. The design and plans, which provide for a massive pedestal of Duddingston stone with panels of bronze for the names of the fallen, surmounted by a lightly-poised figure symbolical of Peace, with uplifted arm bearing the laurel wreath of Remembrance, was unanimously approved. The inclusive cost is estimated at £2,300.

ST. MARY'S R.C. CATHEDRAL, EDINBURGH.—The dedication of the memorial to the members of St. Mary's R.C. Cathedral, Edinburgh, who lost their lives in the Great War took place last Sunday night. The memorial takes the form of "Stations of the Cross" or "Via Dolorosa." The cost (about £1,000) has been subscribed by the congregation. The wall of the south or "Lady" aisle is panelled in Scotch oak, divided into six bays by oak piers. The first bay is in the form of a triptych, with carved oak crucifix in the centre panel, flanked by oak doors with wrought iron hinges; these enclose the roll of the fallen (150 names) inscribed on vellum. The second bay incorporates the soldiers' memorial. The remaining four bays contain the fourteen Stations of the Cross framed in oak panelling; over each station are carved spandrels of symbolical and decorative foliage and birds. The whole is surmounted by a cornice with pierced carved cresting containing the thistle, the rose, and the shamrock. Below are kneelers and shelf to act as elbow rest. The stations have been specially designed and modelled for the memorial, and are cast in plaster and coloured and gilt. The work has been designed and carried out in Edinburgh—Designer, Mr. Reginald Fairlie; stations and woodcarving, Mr. Thomas Good; panelling, Mr. Nathaniel Grieve; roll of honour, Miss Crockart.

The Mayor of Keighley, accompanied by Mr. Sugden, the architect, went to Poix-du-Nord on Sunday to lay the cornerstone of the hall which Keighley will build for its "godchild." This hall, erected at a cost of £4,000, will be used in the first instance as a Mairie and afterwards as recreation and reading rooms.

A country clergyman, says the *Morning Post*, anxious to raise money for restoring an arch in his church, commissioned the local sign-writer to paint an appropriate notice. The next day he was horrified to observe in the porch, emblazoned in brightest red, the following: "Contributions for the Arch Fiend earnestly solicited."

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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OUR ILLUSTRATIONS.
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 Gatehouse to a South Coast Villa on an historic site in Kent. Mr. Philip Tilden, Architect.

Currente Calamo.

The National Wages and Conditions Council has considered the reference to it of the notices pending for alterations of wages and conditions, and although owing to the complexity of the matters submitted the Council has not yet completed its labours upon them, it has come to the following decisions thereon and has adjourned until May 31, when it expects to be in a position to complete the business. The Council had before it the fact that upon the present-day cost of living there is warrant for a reduction under the sliding scale of 3d. per hour, but as an interim award the reduction indicated in the first resolution has been given: "That the wages of craftsmen and labourers be reduced 2d. per hour as and from May 16. That the wages of labourers be reduced a further 1d. per hour as and from July 1. That this meeting stand adjourned until May 31, when the difference between the rates of craftsmen and labourers' wages be further considered and decided. In the interim a joint committee of employers and labourers, together with a representative of the National Federation of Building Trade Operatives, meet to enquire into the operation of any reduction of the labourers' wages and the effect such reduction would have on the lower-paid districts in order that the minimum shall not fall below an agreed amount. That both parties meantime endeavour to arrive at a recommendation as regards hours to be considered at the July meeting of this Council." So far so good, but the delay as regards the question of hours is to be regretted.

The agreement applies to the whole of England, Scotland, and Wales, and it is the first which has been come to in the industry on a national basis, the previous method of negotiation being on the basis of areas. When the Council was formed a few months ago every area had notices pending for increases or decreases, and one of the provisions of the national agreement entered into was that all such cases as were outstanding should be referred to the new body. The present result is another testimony to the possibilities of conciliation in relation to wage reductions which are rapidly accumulating. Under the agreement the rates for London will be re-

duced on May 16 as follows, the rates in the various grades of provincial areas being lower:—

	Present rate per hour.		New rate.	
	s.	d.	s.	d.
Mechanics (except plumbers)	2	4	2	2
Plumbers	2	4½	2	2½
Painters	2	3	2	1
Labourers	2	1	1	11

What is the difference in law between a "letting" and a "license" to occupy premises? This pretty point is just now making some stir in the Courts. At the West End flats are in great demand; there are no small houses, and there are no servants. With a flat, even if not fully furnished, one can pull through somehow! But where there is a lease the law may have to be reckoned with. The recent amusing case about two ladies and one flat of "Longman v. Marcosa" is of much interest. The plaintiff had let the defendant his flat at Lancaster Gate on a seven years' lease at a yearly rent of £185, with the usual covenant that she should not assign or underlet without his consent. In August, 1920, plaintiff, with surprise, discovered that his tenant had underlet for a month. He now brought this action for possession on the ground of her breach of covenant. It appeared that the flat's rental value was now much higher. The case came before Mr. Justice Shearman, and the ladies concerned made the proceedings lively. Defendant's case was that she had never sublet the flat. She had only given a lady friend leave or "license" to live there while she was away. Certainly that friend had paid her well for that convenience, but there had been no legal arrangement! Counsel quoted many cases, and used many words about "letting" and "license," making a pretty tangle of terms. The Judge at last cut the knot by ruling that, as only part of the premises had been sublet, there had been no breach of the covenant, and so the action failed, and judgment was for defendant, with costs. Thus the women won all round: the tenant keeps her flat, and can go on arranging for a friend's beneficial occupation while she is away by a license to use it which will not amount to a subletting in defiance of the lease.

The paper read at the Surveyors' Institution on Monday last by Mr. T. A. O'Donoghue, F.G.S., F.S.I., on the valua-

tion of mineral properties, with special reference to post-war conditions, if not of special interest to the majority of our own readers, should certainly be studied by those whose practice is carried on in mining regions, especially just now, for reasons that will be obvious after fuller perusal than we can spare to facilitate, and will be of the greatest service to mining surveyors and engineers, who know better than we do that there is greater necessity for the application of correct principles to the valuation of mineral properties than to most other properties because the market in mineral properties is restricted and because purchasers are, as a rule, "special" buyers. A free market contributing an unlimited number of transactions affords a measure of value which tends to counteract erroneous principles. Experience teaches one that a certain class of property fetches about so much in the market, and principles matter little. Such is not the case, however, in the valuation of mineral properties. Generally the market values are determined by specialists from deductions as to the "worth" of the property, and it is, therefore, more essential that sound principles should apply. Those principles Mr. O'Donoghue most carefully and judiciously defines, giving some valuable examples of valuations which will be found most instructive, and those who profit by them will find, as he assured his hearers, that the essentials for making a reliable valuation of a mineral property in the present complicated conditions are: (1) A thorough practical knowledge of mining which will enable the valuer correctly to assign the proper values to the revenue, the term, and the risk; and (2) a discriminating knowledge of the principles of the various interest tables, and how to use them. Four of these tables will be found appended to the paper.

Col. Hurst, in the House of Commons on Monday, asked whether the Minister of Labour was aware of the issue of a circular by the National Federation of Building Trade Operatives, forbidding its branches to help in the training of ex-Service men, and directing them to prevent ex-Service men from enjoying the instructional facilities promised to them by the Government, and what action he had taken in the matter. Sir Montague Barlow said he had seen references in the Press to the circu-

lar in question. They were going on all the same. Employers were carrying out their patriotic undertaking to help these men, and the Government had already announced their intention of doing all they could to make the scheme a success. We are all glad to hear it, and hope that the employers will be supported to the utmost extent against the efforts of the authors of the circular to upset the excellent arrangements organised by the National Federation of Building Trades Employers in conjunction with Dr. Macnamara.

Important results are expected from the work of excavation now being directed by Professor Garstang at the site of the ancient city of Askelon, often mentioned in the Bible. Askelon has a history extending from 1377 B.C. to 1270 A.D. Its ruins are a mystery. Akhanaton, one of the Pharaohs, reigned there about 1375 B.C., and Samson is said to have once slain thirty men of Askelon. Among discoveries already made are two architectural statues, some pottery specimens, the remains of a gigantic statue, the foot of which measured a little over a yard, and the debris of a marble shrine. There are also traces of the Canaanites. One of the examinations now taking place is of a site called "Peace Pool," and a search is being made for the Necropolis of the Philistines. It is possible that light may be thrown upon the hieroglyphic secret of the Phaestos Disk, an undeciphered document in stone about which controversy has raged in antiquarian circles since Dr. Pernier discovered it on the South Coast of Crete in 1908. It is believed to have been of Philistine origin, and the latest theory is that it is the oldest-known script of music in the world.

MODERN PRACTICAL JOINERY.

We are very glad to welcome a fourth edition of George Ellis's well-known and thoroughly practical book on modern practical joinery, first published in 1902, and of which all subsequent editions have been for some time out of print. Since the days of Newland and Tredgold nothing like it has appeared, and it goes without saying that since their time much has happened in regard to the practice of the craft, which helped to render Mr. Ellis's book at once as indispensable as his grasp of the subject has ensured for it the position it at once attained as a classic, and has since maintained. In many respects, indeed, it is the only work of the kind that covers every need of the craftsman, and offers to architects, designers, builders, machinists, and all interested in structural or decorative woodwork a mass of well-digested information, seconded by real practical experience, and brought thoroughly up to date. The labour spent upon it must have been as unremitting as the production of the book by Messrs. B. T. Batsford, Ltd., of 94, High Holborn, is excellent, and their arrangements to suit different classes of readers are liberally advantageous. As published complete in the three volumes, which contain 600 pages of text and 1,400 illustrations, the price of the whole being £2 5s. net, the work will speedily find its place in every library and resort of reference by those who will have failed to find its equal elsewhere. For

those whose immediate needs may be satisfied by the sections into which the work is divided, each of the three sections may be purchased separately; Vol. I., dealing with drawing tools, workshop practice and processes, and machines and machining, containing 220 pages and 500 illustrations, for 15s. net; Vol. II., with full descriptions of all kinds of house joinery; bank, office, church, museum, domestic and shop fittings, shop fronts, showcases, and splayed and carved work, in 276 pages, with 650 illustrations, for 18s. net; and Vol. III., devoted to new materials, methods and inventions, stairbuilding, foremen's work, fixing, and a new method of constructing joiners' work, with a descriptive treatise on nearly 150 woods suitable for joinery, with 180 pages and 250 illustrations, for 12s. 6d. net.

The author's experience as a teacher has led him rightly not to omit or slur over the more elementary parts of the subject, but to deal comprehensively and progressively as a whole. Commencing, then, with a description of the tools in common use, he has followed this by a chapter dealing fully with their application to the general purposes of the craft, and has then advanced step by step to the most difficult and elaborate examples, making each chapter, however, complete in itself. A glossary of terms bearing on the subject, the result of considerable research, and including many items not before given in print, is introduced, and will prove of much service to all interested in building. This glossary and the index have been considerably enlarged since the first edition, the latter especially, so as to afford increased facilities for reference.

Volume I. sets out with a brief but good definition of the art of joinery, as distinguished from carpentry, and proceeds to describe the necessity of accurate drawing and the uses of drawing instruments required, following on, in Chapter II., with the theory and practice of the various wood-cutting tools for use, every one of which is illustrated and its right use explained with good reasons for careful adherence thereto. Chapter III. similarly enumerates the nature and use of the necessary workshop appliances, the merits of which are impartially compared. From the illustrations of the simpler forms—the joiner's bench, for instance—any amateur should be able to make his own, and further on he will learn all about shooting boards, mitre blocks and boxes, cramps, and the proper preparation of glue. So in the following chapter on Workshop Practice he will find fullest information on the method of sharpening and setting saws, on dowelling, mortising, dovetailing, and the many other secrets of the art, which will be secrets no longer to the aspirant if he will master the practical solutions offered, and not accept the rule-of-thumb methods he will find many men in many shops contented to offer. Chapter V. describes the American Square and the British Square, with the improvements in it made by the author. Chapter VI. is an exhaustive review of the best types of joinery machines, the increasing use of which since the appearance of the first edition has necessarily rendered full treatment inevitable. Employers about to instal machines or to renew old plant will find the hints in this chapter worth their weight in gold, and the same in Chapter VII., which emphasises the right care and use of the machines. Chapter VIII. is a summary of the proper preparation of work for machining; Chapter IX. is a classification of joints, with full details of their uses and varieties. A well-compiled glossary completes the volume.

Volume II. is a perfect epitome of the various products of proper constructive

joinery, including all fittings for houses and special buildings. Chapter X. embraces the essentials of design and construction, with many illustrated examples of the various kinds of doors, and the proper methods of hanging them. All the usual types are given, and not a few which the ordinary workman or amateur will seldom come across, but which he will be glad to know more about. In Chapter XI. the linings and finishings of doors follow, with some valuable information on the treatment and fixing of architraves. Windows naturally follow, together with their shutters, blinds, and finishings in Chapters XII. and XIII. Chapter XIV., on shop fronts, opens with natural regrets that in these days, to the supposed requirements of the shopworker and his demands for nothing but plain glass stretching from the boundary to the doorway, is to be ascribed the paucity of woodwork that renders it impossible to design fronts of any individuality, the result being that our streets are lined with monstrous repetitions of skeleton sash-frames mounted upon narrow bases surmounted by heavy fascias, broken here and there by the flare and glare of the public-house with all its meretricious detail. An example of something better at 5, Queen Victoria Street is given, and we hope it may induce more building owners and lessees to adopt it. Of every needful shop fitting and fitment numerous designs are copiously illustrated, supplemented in Chapter XV. by the fullest particulars of air-tight case work. Chapter XVI., which deals with the fittings of banks, museums, libraries, and churches, will be specially useful to architects, especially to those called on for the first time to erect such buildings. In Chapter XVII. various methods of compound-curved and shaped work are given, and the last two chapters are devoted to miscellanea fitting and fitments, such as mantels, dressers, etc.

In Volume III. we reach the more advanced stages of the craft, such as stair-building, new materials, methods, and inventions, foremen's work and fixing. Seven chapters elucidate most completely the multitudinous details of each section, and in some cases original and ingenious methods of construction are given. Quite apart from the general subject, moreover, Chapter XXVI., which is the last, is a descriptive treatise on the woods used in joinery, which will interest and enlighten many besides joiners, who are but too well aware that the multiplicity of names given in different places and by various writers to the same woods has been responsible for much confusion in the minds of all who have sought to identify the woods they wanted. Mr. Ellis certainly removes many of these complexities, and we wish him further similar success with the exhaustive treatise on timber which he is preparing and which he hopes may some day see the light. In this volume he has had, naturally, to confine his attention to the chief woods suitable for joinery of the British Empire, the United States of America, and Japan. Identification of these will, in the meantime, be facilitated not only for joiners, but for all other users of wood, who are probably in far greater numbers often puzzled by the present confusion.

It is well worth noting that in his Glossary of technical terms and phrases are many which will not be found in any similar list with which we are acquainted, including many peculiar to Scotland and the United States of America; and that he has brought it conveniently up to date by inserting the names of the more appreciated modern specialities, the well recognised usefulness of which certainly fully entitles them to Dictionary rank.

ARCHITECTURE AND TRAVEL.

On Thursday week Mr. F. C. Eden delivered the second of the series of popular lectures now being given at No. 9, Conduit Street, his subject being "Architecture and Travel." Sir Aston Webb presided.

Mr. Eden said that architecture was a fascinating subject in itself, and a knowledge of it enormously enhanced the pleasures of travel. He did not know whether doctors spent their holidays studying the working of foreign hospitals, or whether barristers spent theirs studying the practice of foreign courts; but he knew that many people who earned their bread by architecture made that subject their hobby also. The study of architecture usually began in books, but if it was to be rationally enjoyed, the student must be on his guard against certain of the teachings of Pugin, Ruskin, and Morris. As architectural critics these brilliant writers had been discredited, but there were dogmas of theirs which still darkened counsel. "Architecture is sound construction truthfully expressed" was one of these. The fallacy was Pecksniffian, and lay in the use of the word "truthfully." We might or might not be aware that seven iron chains were embedded in the dome of St. Peter's; but did truthfulness require them to rust away their usefulness in the open, so that all the world might know they were there? At St. Paul's, again, the dome seen inside was not the same dome as the one seen outside, and neither of them carried the heavy stone lantern on the top. This was supported by an ingenious cone of brickwork concealed between the two shells. The objection to shams had led to countless churches at home and abroad being stripped of their mediæval plaster, so as to expose the "honest" masonry of the walls—thus giving the aspect of rude grottoes, fitter to be decorated with clinkers and oyster shells than with rich stuffs and delicate carvings—and it caused many people to lose a deal of pleasure they might otherwise obtain from fine architecture, as for instance when they discovered that the apparent tracery on the vault of Milan Cathedral was painted, not carved; or in the common case of some other material being painted to give it the appearance of marble. Tracery in colour alone had been characteristic of Gothic architecture from the beginning, and "marbling" was as old as the Minoan age; often, too, the artist had no intention to deceive. For example, a dado was wanted, and the painter, taking a hint from nature, gave a suggestion, say, of *verdo antico*. The result was an agreeably broken green with an amusing reminiscence of marble; but no one familiar with the material could possibly mistake it for the real thing. The effect which the designer produced should be judged on its merits, and not on the irrelevant ground of abstract morality applied to inanimate objects.

Another dogma to which the lecturer objected was the one that any building which fulfilled its proper function was by reason of that fact beautiful. The London pillar-boxes, he said, had been called beautiful on this ground. If fitness for function was the test of beauty, nature furnished us with the best examples; but you did not find people at Kew Gardens lost in admiration of that strange African Arum which exhibited the tints and exhaled the odours of putrefaction. The plant fulfilled its aim of attracting carrion flies, but it did not attract us. Fitness for function was compatible with downright ugliness. In the case of buildings, fitness for function appealed to the faculty by which we appreciated ingenious adaptation of means to ends, but beauty appealed

to the imagination and emotions, and to apply the term "beauty" to what merely satisfied the reason led to confusion of thought.

As to what distinguished between architecture and building, the lecturer said it was a fallacy to suppose, with Ruskin, that it was the addition of ornament. The only principles that he knew of to which architecture must conform were those laid down by the seventeenth-century scholar, Sir Henry Wootton: "Well building hath three conditions—commodity, firmness, and delight." Otherwise expressed, this meant that the building must satisfy a need, must be built in accordance with mechanical laws, and must satisfy man's love of beauty. It was the quality of giving delight that we sought in architecture, when on our travels and free to treat it as a pastime. Then we could leave the useful to take care of itself. One characteristic of architecture which gave universal pleasure was the picturesque. But this word did not mean the same thing to everybody; architectural picturesqueness did not arise from a jumble of incompatible elements; still less did it arise from ruin and decay. Looking down on an old Italian town the picturesqueness was felt, but the most striking element of this was the unity in the roofs—unity of pitch, material, and colour. A slate or galvanized iron roof did not make a pleasing break amongst the tiles, but struck a jarring note. Descending into the piazza the charm was obvious; the old streets entered quietly and unobtrusively, and did not draw away the eye. But you might notice in any town with a broad Corso Garibaldi driven through it how the proportion, emphasis, and cosiness of the old marketplace was impaired, so that the piazza degenerated into a mere excrescence of the new street. The placing of churches, statues, fountains in or around the piazza was not casual or unstudied; the former were never in the middle, but at the side or end, and more often than not "engaged" in other buildings. Even when these buildings were mere parasitic accretions, such as small shops and dwelling-houses, they gave scale and interest.

From this point on the lecturer gave a detailed account of some of the villages and small towns of Northern Italy, illustrating his remarks by the magic-lantern. Of one of these towns, Biella, he said it was a bustling little place, the centre of an important weaving industry. At the end of the main street of the upper town was a Renaissance gateway, from which might be descried, perched on a mountain shelf 4,000 feet above sea-level, the white buildings of Oropa—a famous sanctuary dating from about the middle of the fourth century, though the buildings were mainly of the seventeenth or eighteenth. At Oropa there was a fine hospice, which gave free lodging to all comers, and of these there were sometimes more than 100,000 in a single year. Just before the hospice was reached the road passed a grassy slope dotted with chapel-like buildings, built of granite, with plastered walls and roofs of dark stone slabs. These buildings were erected to shelter realistic groups of painted imagery which formed, in conjunction with their frescoed backgrounds, tableaux of the Redemption story—a perpetual miracle-play without words or action. From Biella to Varallo was a lovely drive of about four hours, passing the pretty little town of Mosso Santa Maria. As a turn of the road brought Varallo into view, a wooded hill was seen in the background capped with buildings of uncertain use. This was the famous Sacro Monte. Its highest point was a rounded knoll occupied by a circular chapel. Italy deserved to be studied village by village.

The Chairman said that he supposed everyone who travelled abroad should go with a certain amount of architectural knowledge. But the difficulty was to acquire that before the trip was taken, for it could not be picked up in one or two lectures. Most people, if they waited for thorough knowledge of architecture before they travelled, would never go at all. One of the questions as to how you were to enjoy architecture when travelling was as to your method of educating yourself with it. Sketching in architecture was extraordinarily difficult; keeping a diary was not so much trouble. If in your diary you endeavoured to describe a beautiful building somewhat in detail, you would soon come to a stop and have to go to the building again. He supported what Mr. Eden said about smaller buildings around churches; he did not think that St. Paul's, if it had a huge piazza around it, would look finer than now. He was a pupil of Ruskin's in a small way, but he thought Ruskin had misled people by placing so much importance on ornamentation and enrichment instead of on the whole scheme of a building. He (the Chairman) had seen the places described by Mr. Eden. The trip to that part of Italy was easily undertaken, and it was an extraordinarily good place to go to. The architecture there was not too large; it was very varied, and also very beautiful.

Mr. H. M. Fletcher, speaking of his own travels, said the exterior of Albi cathedral was one of the most terrifying, and almost uncouth, instances of simplicity in Europe; but the interior was by far the richest example of the combination of colour decoration, fresco painting, incredibly rich elegant light carving, and realistic sculpture on this side of the Alps. The walls, where not decorated with figure frescoes, were covered with a very rich form of pattern decoration. Marbling played a large part in this, but treated, as Mr. Eden had said, not realistically. Mr. Eden had been scornful on the subject of morality applied to inanimate objects, but against that we had to set the fact that these inanimate objects were the product of animate beings concerned with morality.

Major Corlette also spoke of Albi cathedral, mentioning, among other things, the painted sculpture there. All round the extraordinary choir screen, he said, there were delightful figures in the Gothic manner of the early sixteenth century—all most beautifully coloured.

Votes of thanks were passed to the lecturer and chairman.

COMPETITIONS.

GLASGOW. — The Alexander Thomson Travelling Studentship has been awarded to Mr. Alan Crombie (£75) by the Council of the Glasgow Institute of Architects for a design submitted in competition for a "Temple of Memory," and a second prize of £25 has been accorded to Mr. A. G. Paton for the same subject.

No interim dividend is to be paid on the ordinary shares of the Wall Paper Manufacturers, Ltd., on account of the current financial year, which ends on August 31 next.

Princess Christian opened the annual exhibition of the Royal Amateur Art Society, which is being held at 27, Grosvenor Square, on Monday. The King has lent three Downman portraits from Windsor for the loan section of the exhibition, which consists of eighteenth-century portraits in pastel, china baskets of British manufacture, and Chinese jade.

Mr. P. C. Woodhall, surveyor and architect to the Uttoxeter Urban District Council, has been appointed to a similar office at Bentley, Doncaster, in succession to Mr. J. G. Whitley, Assoc. M. Inst. C. E., the newly-appointed county surveyor of Flintshire. There were 130 applicants for the post. The salary is £600 per annum.

ARCHITECTURAL EDUCATION.*

By L. SYLVESTER SULLIVAN, F.S.Arc.,
A.R.I.B.A., Vice-President of the
Society of Architects.

Not long ago, and not for the first time, a father came to me for advice concerning his son still at school, who had declared a vocation and wished to enter his novitiate of the Mystery of Architecture. Before undertaking the responsibility, I found it necessary to turn over in my own mind this mystery on which my advice was sought, and to clear away any undergrowth which might be obscuring the vision of my own vocation; and I will try to put to you, before setting out the advice I gave and as I put it briefly to him, what my own idea of the architect is, and the education necessary to lead up to the profession of faith required of us—the faith which is demanded of us lest joy depart.

I cast my mind back some twenty-eight years, and realise the shortcoming of the education then available for the student getting his A.B.C.'s of architecture, and renew my vows of gratitude to that father of my own who denied me articles and gave me instead a three years' run of an art school, where he grounded me first in modelling from the round—in those days an enlightened beginning—and sent me to play around the carpenter's and blacksmith's shops—here to make something, there to see something. To the brickfields to see the bricks made, and to the job to watch them laid, to hold the lines, to mix the mortar, and to be thoroughly happy. Later, on coming to London, education was scrappy and haphazard, for the first need was bread and butter, which I had to make for myself, and class fees become matter of perspective when beginner's wages are seven half-crowns a week. When I could begin to afford classes I found them full of "les nouveaux Arts," very soon abandoned for the harder school of public competition, with published plates as my class master; but I got a few good lessons from Roscoe Mullins in clay modelling, and I remember another in the free use of india-rubber, a little mortifying to pride at the time, but gratefully remembered since. There was no question of minimum wage in those days—one worked and kept play almost within one's means.

I bring my mind to the present and compare the class of education now obtainable, and cast it forward, and think of what it may be twenty-eight years hence. I compare these periods of past, present, and to come, and find my heart leaping with hope for those young men and women not yet born who will have the privilege of learning them.

Ruminating in my mind on this and that, I turn to the dictionary and find "Education" is defined as "the training that goes to cultivate the powers and form the character," whilst the word "Architectural" is interpreted as "pertaining to or according to the rules of architecture." Seek to define these rules and at once the prospect of a life's study is before us, and we may realise the greatness of the matter lying within the scope of architectural education, with the fringe of which, for the father's benefit, and, I trust, yours and mine, I am about to allow my imagination to play.

Let me assume the necessity for architecture, for even in warfare, the principle of which is destruction, the basic idea in us was merely protection from death, so the architecture of one's dug-out, elementary, primitive, and hastily contrived as it might be, was matter of some moment; while even in company with our grim comrade, Death, the manner of its subsequent

internal adornment formed part of that mental refreshment which gave us the will and tenacity to live.

Concede me my assumption: from it follows the necessity for the architect and all that is implied in that necessity—the fostering, weeding, training, pruning, and foliation of him. Then, "What is an architect?"—for we must know something about him, his needs and mentality, his fibre and sap. The dictionary, sought once again, lays it down that he is "a master-builder; one who designs buildings and superintends their erection; a maker; any contriver, as the Creator." From the very commencement, then, we find the architect comparable only with the Highest, and one sees the pinnacle to which we are to open our avenues of education. But, with all reverence, the Creator is a Person impossible of emulation by ordinary earthbound mortals. Admitted, in all humility, and so well nigh is an architect, for consider the God-like qualities that must be his. Passion for art and achievement; patience, enduring capacity for study, voracious greed for work, undeterred by failure and disappointment; genius that takes pleasure as well as pain, for his pain and his pleasure will often be his only emolument; through, under, and above all, this love unfathomable for his exacting mistress.

Nor is this all, for he must be a man of other qualities—financial genius, commercial expert, chemist, metallurgist, accountant, lawyer, and judge. He must plan like a chess player, grovel in drains and control lightnings, detect abstraction from concrete—or any other deficiency of material. He must know the significance of inertia and gyration; by use of abstruse formulæ, such as πr , he must square the circle; while being a bit of an antiquary he should be able to project himself into the future and visualise his work in length, breadth, and depth of proportion and mass, nor, in so doing, must he overlook such small matters as the width over a man's elbows or the height of him when he sits down; he must be a constructionist, know the strength and capacities of the materials he proposes to stress in his operations, and must judge the strength of his buildings to a nicety, or, at least, know the exact moment desirable to stand from under. He has been likened to "colour that has run, indefinable in his limits." At any rate, he is a man of such overlapping responsibilities that it is to be hoped he says his prayers of nights!

As of the architect, so of the student who aspires to become this almost God-like paragon. What are we to do to help him attain his ideals, or to discourage him from them? An architect's deeds and misdeeds live after him and endure, perhaps more than those of any other. Then let us deter him, unless he be of the gifted undeterable, while he be yet young. It is not merely a kindness, but a duty from the first to encourage the elimination of the square peg. But for those others, the round pegs fitting trim and taut in their round holes, let us create everything in the way of inducement—facilities, libraries, schools, masters, travel, scholarships, prizes, and that crown of all work the opportunity and fact of achievement.

What facilities and opportunities for education have we to offer? In the old days there were not much; later something more, nowadays something more still, but yet not enough. In the mediæval ages of the nineteenth century there were articles and the grand tour for the monied; later there were articles, schools, and the grand tour still for the monied. Nowadays articles have all but dropped out—Education and Charles Dickens be praised!—and there are more and better

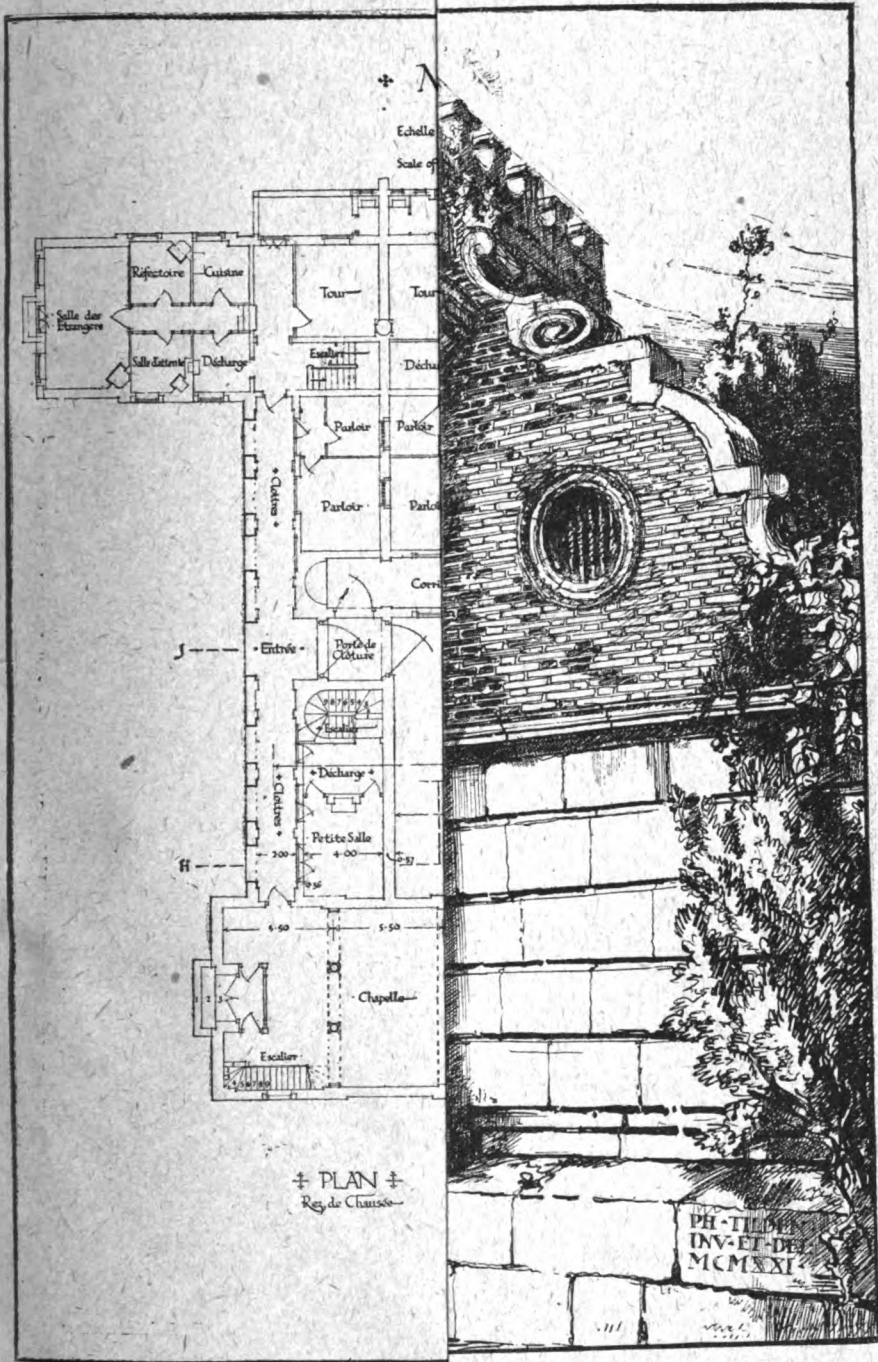
schools, with extension of scholarships and prizes, which in their train bring extended facilities of study and travel for the successful student. Before the war, the scamper on the Continent was becoming available for anyone with the luck of tuppence in his pocket. That scamper is becoming possible again, so that even without success in the prize list the student need not have to wait long for that enlargement of architectural vision travel brings.

It may be said of the schools that there is room for every one of them, provided each is kept at the boiling point of progress. Stagnation we are better without as damping to effort. The more virile the house-mistress, the cleaner, sweeter, and brighter will be her pans, and the sooner will they come to the boil. So, too, the more virile the faculties of our schools the more virile and imaginative the incentive of the housemaster with the consequent inspiration of the student. We need not regard with any dismay the idea which the University man is apt to have of himself and his value; that perhaps only betrays educational indigestion and unassimilated manner—only a stage, in fact, of the process of development. Education at present is in a state of flux—yet nevertheless education is the heritage of the future. There are those who would have us believe it beneath their dignity to scrape a dish, or lick a spoon—yet an elementary knowledge of philosophy and logic will show us that almost certainly they may have done both ere they reach the larder with the delectable remains. So philosophy and logic will teach us, in course of time, to pass on the educational dish and share the spoon of architectural mystery rather than to keep the excellence greedily to ourselves.

The schools, as distinct from the academical bodies, at any rate, are recovering, or have recovered, from the stagnation induced by the latter years of the nineteenth century, which must surely have been the outcome of loose thinking and interference on the part of the dilettante and critic of the day. In the result, these critics, combined perhaps with the half-comprehending worship of steam and machinery, have sloughed off from us the protective hide of craftsmanship and tradition, and only now are we beginning to value the comfort of things lost and to reclothe ourselves as best we may. We are still chilly from the flaying processes of the 'sixties, and we may still suffer so long as any coming under the agony of that period's implements remain. Even then we shall have the legacy of their monuments of ineptitude scattered up and down the land. It was, perhaps, because it was forgotten what a person of impossible attainments the architect is that pedagogy was allowed to have its way. However, we know better now, and must not be mistaken again. Let "Architect for the Architects" be our motto. Architects and practice in our schools. Architects and practice in our presses. Architects and practice in our institutes and academies. Let there be no room for the pedagogue, the dilettante or the mere uninformed critic. Practitioner in place of Panjandrum wherever architectural education is sold, given, or assumed; and by practitioner is meant the master practitioner of our ideal. "Contriver; as the Creator," someone anyway less effete than he who has mistaken the centre of his being as the hub of the universe, or the "little round button atop," as the climax of creation. Teaching implies giving, and who has more to give than the architect in the creation and the passing on of his tradition and craft. Not that we have not already got

(Continued on page 263.)

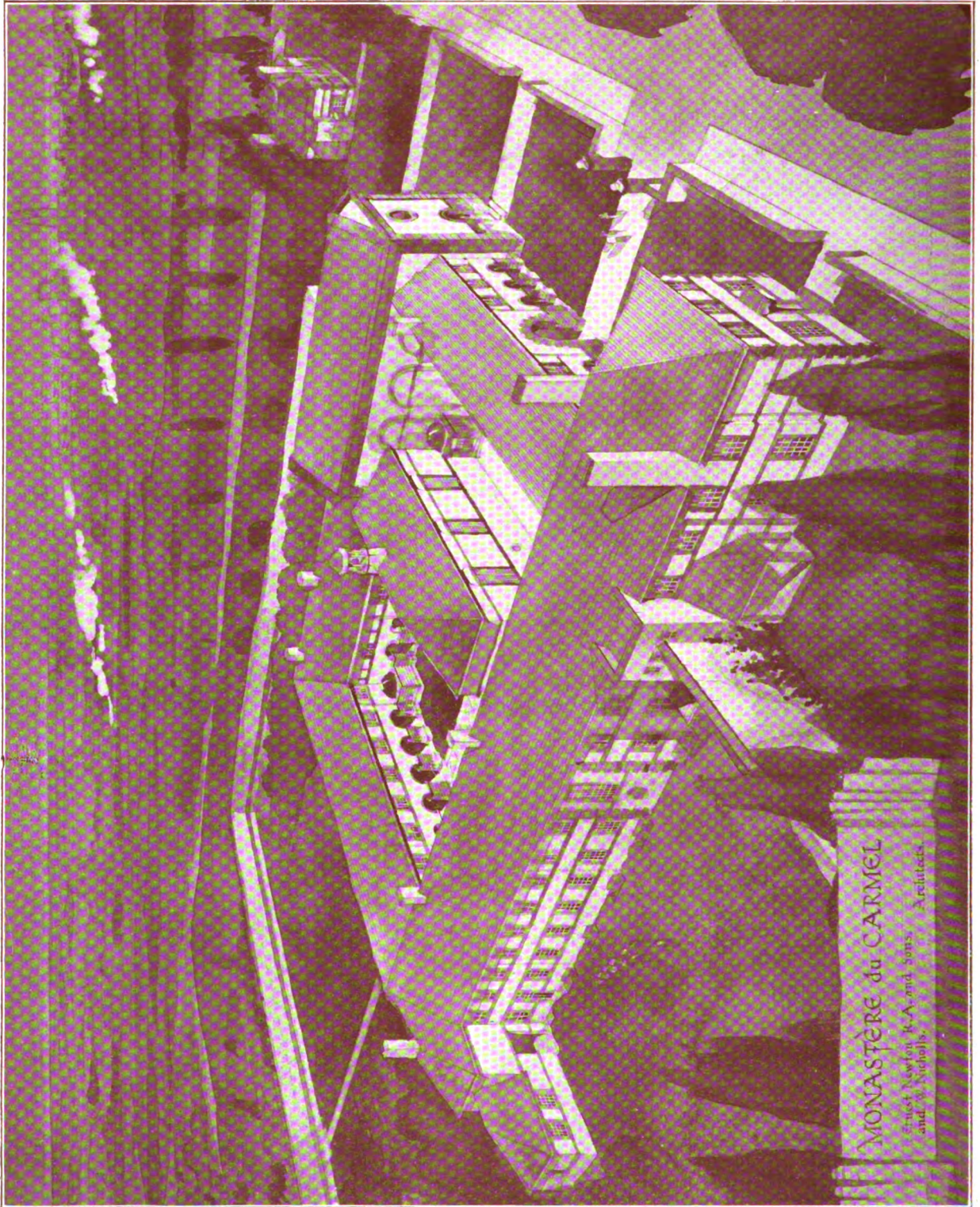
* Read before the Society of Architects, May 12, 1921.



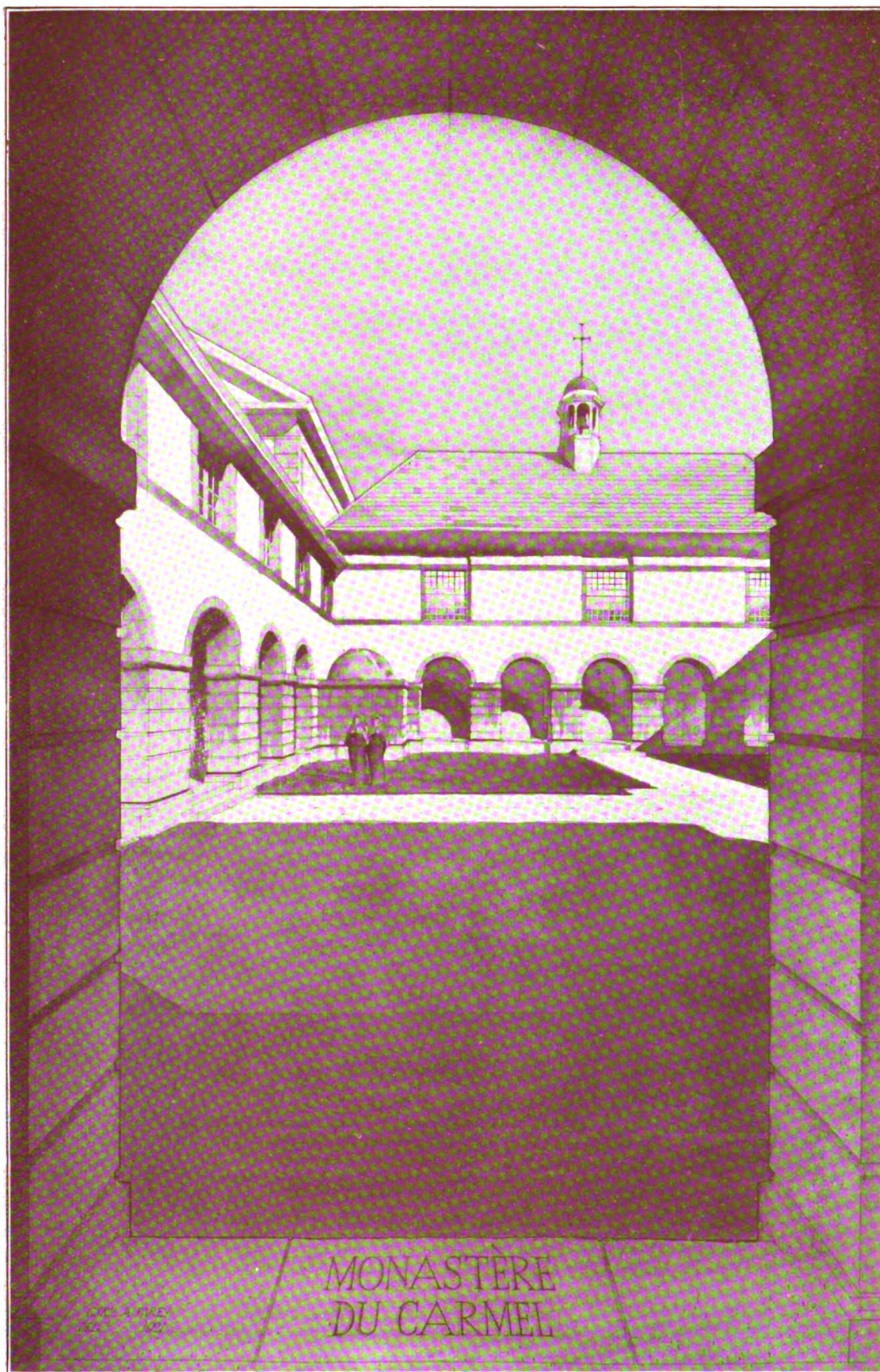
MONASTERE DU CASTORIC SITE IN KENT.

Messrs. ERNEST N

THE BUILDING NEWS, MAY 13, 1921.



MONASTÈRE DU CARMEL T CAEN, NORMANDY.
Messrs. ERNEST NEWTON, R.A., & SONS, with W. NICHOLLS, Joint Architects.



MONASTÈRE DU CARMEL AT CAEN, NORMANDY.
Messrs. ERNEST NEWTON, R.A., & SONS, with W. NICHOLLS, Joint Architects.

(Continued from page 254).

him to some extent both in our schools and our Press, but his value in both is not sufficiently recognised, and more especially so in our daily Press.

The days are past when Ruskin's "Seven Lamps," Leeds' "Handbook of the Orders," and Parker's "Glossary" were deemed sufficient equipment and library both for the architect and critic. There was also an authoress named Sophia Beale, I remember, and a delightful book on construction by a titled personage named, I think, Beckett. Then a walk to Rye and the measurement of the church doorway, together with a smattering of Leeds and Parker, were sufficient to answer a paper and obtain a "first" in "Architecture" from South Kensington, which, somehow, brought in its train "Frondes Agrestes" as a prize—a book I have failed to get through, and probably am none the worse for the failure. Examination as then understood was the means to the end not so much of education as the earning of a "grant" for the slim coffers of the Art School and its justification for existence in the eyes of authority. All this is not so very long ago, but it is by such as this that we may measure progress.

Examination now is recognised more as the test of training rather than cramming, and is even being done away with on production of proof of that training. An enlightened Board of Admiralty led in that matter some years ago, while the R.I.B.A. has gone a long way in this respect. Examination, in enlightened forms of it, we may suppose, must remain permanently for certain purposes, as in the competitions for our big scholarships and prizes; and there must be recognised the educational value of public competition, which many of us, unable to afford other schools, have attended with amazing regularity in face of repeated rebuff, disappointment, and bad assessment. Rebuff and disappointment will remain, but bad assessment must, assuredly, disappear as the training of the master-architect becomes traditional, pushing out the mere lobbying person who too frequently gets appointed in these affairs.

It is not every one who can come to our great centres for the refreshing fruits of knowledge, and so it becomes necessary to work outwards from the centre, but little has yet been done in this way, because perhaps its value has yet to be fully realised. A great extension of our circulating and lending libraries, or the institution of new ones for the purpose, to which would be added travelling exhibitions of useful drawings, fine drawings, and scholarship designs, perambulating the country at regular intervals. Access to and the use of these libraries and exhibitions should be open to the public, and made known to and drawn on by local educational and other bodies, and used as propaganda not only to educate the architect, but foster the taste, delight, knowledge, and civic pride of the public. The public does not know much about us or our ideals, but that is greatly our own fault.

Here, again, examinations should spread outward from the centre, and be so arranged that they could be taken in distant places, or at home even, with the creation of travelling Boards of interviewing examiners to go to those who cannot come to us, and with a rising standard for achievement. Progress along these lines may be slow, for the way must be felt, but so long as there is a student or an architect already in practice with architectural aspirations, no matter where or how otherwise inaccessible they may be, it should

be made easy for them to improve their knowledge, widen their outlook, and realise their legitimate hopes. The facilities offered should be widened. I would like our books and our knowledge to be available to the elementary and technical schoolmaster, the trades unions, the carpenter, mason, ironworker, and apprentice—indeed, anyone with a connection or interest in our art. So, perhaps, can tradition be fostered again. I would like to see set up and made known a small advisory committee, sitting frequently, by whom any one applying could be advised as to avenues of education, schools, courses of reading, and all matters pertaining to the furthering of the cause of architecture. This committee, in conjunction with the loan libraries and exhibitions, would find a field of work lying ready to its hand. Nothing it did would be lost, for even those coming into contact with it, and ultimately falling out by the way, would be the better for the contact, and have an enlarged understanding that would inevitably react to the benefit of common appreciation. The revolution in higher training brought about through the ægis of the Beaux Arts Committee is at least progressive and constructive. The First Atelier of Architecture founded by this Committee, made possible by the backing of the Society of Architects and its friends, spread the inspiration of its method by capturing the students, some of whom are now professors in other schools, and have carried its lights into the more distant parts of the Empire, into Canada, Australia, New Zealand, India, and South Africa. A group of Ateliers still growing in number has now been taken under the wing and patronage of the Royal Academy, but it remains for the group to see that it has not been adopted with a view to overlying and suffocation by its somewhat somnolent adoptive-mother. There need be not much fear of it, perhaps, because what youth wants, youth, generally speaking, will have, and I am not alone in thinking the chicks adopted are particularly lusty, vigorous, and know what they want. If they cannot get it the mother-hen may find, like the old bird in the fable, that her chicks have developed surprising attributes, and have gone sailing off on their own, leaving her high, dry, and clucking on the edge of undared adventures. After all, adventures are to the strong, and act as spurs to youthful mentality.

The Soane, Rome, Jarvis, Victory, and other scholarships are worth going for because they are the means to further education, though sometimes one doubts, in some respects, if some of the avenues they open are worth pursuing. For instance, the contemplation of ruins, I must confess, has always left me cold, and wondering if there is need of that contemplation being subsidised, and if it is not a fetish handed down by the noble ancients of the nineteenth century. I would like to see a prize given carrying with it a scholarship at a "British School in America," for the study and contemplation of a new world where work and traditions are being formed beneath our eyes on a scale incomparably greater than any of old. At least we need not decry the new merely because it is new, but rather let us get from it every ounce of educational value. It would be worth the experiment, and I am convinced the students would scramble for the opportunity in a way that would open the eyes of some of us who may be somewhat too gynecological in our desires to get beneath the skirts of a dead and decent past.

There is another aspect of education which may be lightly touched upon in passing. The wider the folds of our socie-

ties and of education can be built the better, for it must be to the general good to have the black sheep (if there be such) within than scampering free outside, so the more easily can the education of a little ethical discipline be applied. The better, too, for solidarity. A man is responsible to his fellows for the decency of his conduct quite as much in the crusading army of architects as in any other. The dignity of an army is that of its soldiers, especially in one such as ours, voluntary and submitting to discipline for the credit of the whole. If that is realised little education in the matter is necessary, and so the ethical code is made known to all that none need be ignorant. Neither the ethics nor the discipline are arduous beyond mere decency and duty to one's clients and one's fellows.

Enlargement of membership of the professional bodies and the question of registration need not be considered here, except to note the extension of education which membership and registration imply.

All this has been by way of discursive preliminary leading up to the advice I am to give to the by-no-means hypothetical father. Having turned over these ideas in a somewhat untidy mind, and having realised what my responsibilities are, I make up my mind to accept them, and to proceed with a few opening questions of my own.

Is the father certain that his son has any greater wish beyond a boy's fancy to become an architect, and has he tested it by means of a little sensible cold water?

Has he realised that the profession of architecture is not one for fools? That it is not necessarily a refuge for those shirking their work for, or failing for the Navy, Army, or Civil Service? That it is arduous, poorly paid, and full of disappointment? Does he think, and does his son think, that knowing these things it can be "stuck out" to the end of training even?

All this we may suppose having been affirmatively answered; what of the question of preliminary education? That should be of the best obtainable within means of pocket, but need not necessarily be of the more expensive public school and university type. Indeed, we may be inclined to advise against the courses leading to certain university degrees in architecture as unpractical and more for the dilettante than the diligent. I would prefer success to come to the lad through capacity rather than through the making of friends, though, of course, these may be useful. The sooner the boy realises it is work he has to face all through his life the better, so let him stay at his school a year or so longer than he might have done, getting a severe grounding in mathematics, mechanics, and modern languages; at the same time taking drawing from the round, geometry, elementary perspective and modelling, all of which he can get well taught in the local art school. Not much in the way of "Orders" and "Styles" at this stage, which he may have to unlearn, and will certainly get with less tedium under direction later. Let him do such work as this off his own bat if he likes, but he will best wait for teaching when he gets into the hands of the architect masters. Give him "Martin Chuzzlewit" to read, that he may learn something about Pecksniff, his mind and manner, and urge him to read French, Italian, and (shall we say it?) American, in the vernacular, for his own amusement and subsequent use, for these tongues will be valuable to him later on in opening the ways into these countries and the reading of their fine and logical books on his art. And see, finally, that he gets one or two, at least, of his

holidays abroad, rubbing off as early as possible his insularity, and any idea that England and its arts are the only good things in the world. If he can have a carpenter's bench of his own and occasionally hit his thumb so much the better.

We may now assume the boy to have reached the age of nineteen or thereabouts—and we come to the delicate question of Articles. Delicate because we know, maybe, that he and his premium are ours for the asking. What a chance for Pecksniff! I can picture him, in a dignified way, of course, turning in his grave—his monumental grave, for surely it must be monumental—at the bare idea of such a chance as this being let slip, and I can almost feel my own hair stand up on end in front like his, at this opportunity for shaping a boy's ends! But I say "No! to Articles"—and in my mind's eye I can see an incensed Pecksniff wrapping his winding sheet about him: to-gawise and stalking off "to see somebody about it."

And why not Articles? Is not Pecksniff reason enough? If not, I will say that no architect has time to devote to any pupil the attention and training the pupil ought to have in return for his Articles and his fees, even if he knows the lines that training and attention ought to take; and I will say further that so far as my experience goes I have met few of outstanding merit among all the article pupils I have rubbed shoulders with in the course of twenty-six years, though no doubt there are such. I will advise the father, if he can afford it, to spend the three or four hundred pounds the articles would have cost in the architectural schools; if he cannot afford it, let the boy relieve him if he can by winning entrance scholarships into these schools, for there the training is systematic, upward, and progressive from year to year, so that at the end of the fourth or fifth year the boy will have left his article contemporary far behind in knowledge of architecture, bar perhaps in office usages, which can be very quickly picked up afterwards. He will have taken such qualifications and diplomas as the profession bestows on its votaries in his stride, and, I venture to think, have a happier temperament ingrained in him than the disgruntled outlook on life the disappointed article-pupil seems to acquire as the chief attribute of his partially wasted years. In passing, too, he will probably have had a shot for the big scholarships and prizes, and, maybe, has pulled off one or more of them to his further advancement in learning.

On the other hand, if he has found his vocation to be a mistaken one, he will be advised so, and will easily change it without the disadvantage of breaking articles.

Another course may be taken, where means are very limited, for the boy may be got into an office as an "improver" as it used to be called, for little or no pay at commencement, but without articles. This has a good deal to commend it if it can be done in conjunction with periods in the schools or ateliers and with fairly frequent changes of office, for the boy will pick up experiences of varying kinds as he goes, and I would particularly advise him not to stop too long in offices of a specialising kind. Incidentally he will probably improve his pay at each change and avoid risk of becoming ruttish or rusty on his hinges. But in any case pay is not brilliant. This brings me to the end of my advice (except that I will refer my interlocutor to the compendium of schools which I attach to the end of my educational diatribe) and to another point. I said earlier that we should give our round peg the crown of all, the opportunity and fact of achievement. We have as a profession no such opportunity to give, but I can see

no reason why the Government should not do so. I suggest that some item of the work done by the Office of Works, and other public bodies such as the London County Council, should be set aside every year, or every year or so, as commissions to be given to the successful winners of the big scholarships at the completion of the studies these scholarships have brought. I do not advocate for a moment that these young architects should be taken on to the staffs of these bodies—that is generally a soul destroying business, and there is too much reason to suppose that these young men would become mere docketing and minuting machines. The work should be given them as commissions, under the direction of the First Commissioner of Works and the chairman of the L.C.C., in conjunction with and encouraged by the President of the Board of Education. If preferred, these promising young men might work under the advice and safeguard of some responsible official, so long as the functions of that official were limited. I cannot see that such a scheme would cost the Government much, if any more than it does now. The encouragement and value to the cause of the art of architecture would be incalculable, and I am convinced that it would be to the benefit of Government and the country as a whole.

You may accuse me of idealism and optimism—I think I am merely practical, but every architect, if he is to aspire "as the Creator," must be stuffed full of ideals and optimism. No pessimist I ever met was endowed with anything that seemed to encourage him to look upwards and enjoy the heights. A pessimist is one whose regard is ever on the ground in the optimistic hope that he may find a sixpence, when he might be watching a sunset or regarding the stars above him. Both the uplooker and the downlooker may be apt to bump into the lampposts of reality, but I know that the stargazer will have a more enjoyable memory than the searcher of the ways underfoot, and no one is the worse for looking heavenward.

Correspondence.

CROWN SURVEYOR: A CORRECTION.

To the Editor of THE BUILDING NEWS.

Sir,—I notice a reference made to me in your last but one number as "Crown Surveyor." The Crown Surveyor is Mr. John Murray, of 11, Suffolk Street, S.W.1. Kindly have a correction made in your next issue.—Yours faithfully,

HENRY TANNER.

Carlton Chambers,
12, Regent Street, S.W.1.

Mr. Bertram Blount, F.I.C., F.C.S., of Bedford Gardens, Camden Hill, W., joint author of "Chemistry for Engineers and Manufacturers," has left £4,817.

Mr. C. P. Courtenay, who has been appointed borough engineer and surveyor of Greenwich, has carried out the duties since the resignation of Mr. E. J. Heward in 1920. The salary is £600, with the Civil Service bonus.

A meeting of the Scientific and Technical Group of the R.P.S. has been fixed for May 24, at 35, Russell Square, W.C., at 7 p.m. The subject is "Studio Lighting," with special reference to the distribution and efficiency of light and to the colour composition of different lights.

A communication was read at the meeting of the Mold Urban Council last week from the Housing Commissioner for North Wales, authorising the authority, with the approval of the Ministry of Health, to accept the tender of Messrs. Thomas Roberts and Co., contractors, Mold, for the erection of forty-five houses on a site in Wrexham Road for the sum of £40,410.

Our Illustrations.

THE MONASTERE DU CARMEL, CAEN, NORMANDY.

The "Monastère du Carmel" is being built at Caen to accommodate twenty-eight nuns. Carmelites being a cloistered order, the whole of the conventual buildings are entirely isolated, the only ordinary communication being by grilles in the parlours and choir and by "tours"—revolving hatches—for the passage of goods of any kind, the main entrance under the archway only being opened on special occasions. The building is designed in the simplest manner and local materials have been used throughout. The walls are built of rough rubble and plastered with a coarse finish the natural cream colour of the plaster. The floors throughout are of fireproof construction. The general contractors are Messrs. Lemarinier Frères, and the carpentry is being carried out by M. Richard; both of Caen. It may be of interest to know that the men, at their own request, are working eleven hours a day, without any extra for overtime. There are no "luxury building" or other restrictions, and everyone appears to realise the importance of doing everything possible to stimulate and re-establish the building trade. The foundation stone was laid by the Bishop of Lisieux, in July last, and already two-thirds of the building are approaching completion. The architects are Messrs. Ernest Newton, R.A., and Sons, and Mr. W. Nicholls. These drawings are now on view at the Royal Academy Exhibition.

GATEHOUSE TO A SOUTH-COAST VILLA ON AN HISTORIC SITE IN KENT.

This gatehouse has been designed to enter a flat domain by the sea, and to separate a somewhat suburban type of landscape from what will be a magnificent garden. The massive top encloses a tank of water, which the needs of the garden render necessary, and it is thus possible to combine the artistic with the useful to a great degree. The building is not yet erected, and is, to a certain extent, conjectural, but its style of architecture is in accord with what is to be built within. The architect is Mr. Philip Tilden, of 3, Pelham Crescent, S.W.7.

A recommendation of the Liverpool Housing Committee to accept the tender of Messrs. R. Costain and Sons, Liverpool, to erect 184 houses on the Hoylake Road and Sumner Street estates for the sum of £183,447 was accepted last week by the Council.

The Speaker's Chair for Canada, which we illustrated in our issue of April 8 last, reached Ottawa on Wednesday week. The ex-Speaker, Mr. J. W. Lowther, proceeded to Canada on the 11th instant, and the ceremony of presentation will take place at Ottawa in the latter part of this month.

Mr. Marcus Bourne Huish, LL.B., who died on Wednesday week at his home in Essex Villas, Kensington, was for twelve years, from 1881 to 1893, the editor of the *Art Journal*, and was a critic of art, and also a frequent exhibitor of watercolours at the Royal Academy. He formerly practised at the Bar. The funeral took place last Saturday at Golders Green.

Instances of lower tenders for houses included in local authority schemes continue to be received by the Ministry of Health. Non-parlour houses at Blackwell (Derbyshire) are to be built for £667. Parlour houses of the B1 and B2 types are tendered for at £778 and £785 respectively. These prices include footpaths, fences, and drains. Grade A wages are to be paid. The Shardlow Rural District Council has accepted tenders at £624 to £679 for non-parlour houses and parlour houses at £768. At Loughborough parlour-type houses are being built for £795.

NOTES FROM THE MINUTES OF
THE R.I.B.A. COUNCIL MEETING.

MAY 2, 1921.

Unification and Registration.—At a special meeting the Council considered the report of the Unification Sub-Committee and advised the representatives of the Royal Institute in view of the meeting of the Unification Committee on May 12.

The Office of Works.—The Council approved a recommendation from the R.I.B.A. Office of Works Committee that a deputation should be sent to the First Commissioner of Works.

The Scale of Fees for Housing Schemes.—It was reported that the Director of Housing, Sir Charles Ruthen, had consented to receive a deputation to discuss all outstanding questions connected with the scale of fees for housing schemes.

The Ken Wood Preservation Council.—The President was appointed to represent the Royal Institute on the Ken Wood Preservation Council.

The Honorary Associateship.—The Council directed the Secretary to summon a special general meeting to consider the proposed alterations in the by-laws affecting Honorary Associates.

Rapid Testing of Steel and Other Metals.—The Council approved a recommendation of the Science Standing Committee that a demonstration should be made at a general meeting of the Royal Institute of a new machine for rapidly testing steel and other metals.

Appointment of Examiners.—On the recommendation of the Board of Architectural Education the Council appointed the examiners for the June examinations.

STATUES, MEMORIALS, ETC.

GODMANCHESTER.—The Archdeacon of Muntingdon dedicated the War memorial in the parish church on Ascension Day. It consists of a tripartite panel of black slate, in a massive frame of Weldon stone, adorned with the borough arms and Tudor roses, while beneath the sill there is elaborate ornamentation of pomegranates and foliage. It is placed in the eastern wall of the north aisle, beneath the window of the organ chamber. The seventy-seven names commemorated are engraved in gilt letters. The memorial was designed by Mr. Inskipp Woods, A.R.I.B.A., of Huntingdon, and executed by Mr. Ashley, of Godmanchester.

WOLVERHAMPTON.—At Monday's meeting of the Town Council the Mayor proposed the adoption of the recommendations of the War Memorial Committee to erect a monument at the south-west angle of St. Peter's Church, the site selected by Mr. J. W. Simpson, president of the Royal Institute of British Architects. He explained that it was proposed to spend £5,000 on the memorial, but it was hoped to raise £20,000, and perhaps more. Of the total amount subscribed 10 per cent. was proposed to be utilised in the creation of a fund for the assistance of necessitous widows and orphans or other dependants of Wolverhampton men who fell in the war, or the dependants of men who suffered total disablement. Of any balance which remained—and he hoped it would be a large one—it was suggested half should be applied to the provision of playing grounds for children in Wolverhampton, the other half to form a fund to be at the disposal of the Mayor for the time being. The motion was carried.

Expert examination at the Victoria and Albert Museum has established as a French work of the second quarter of the sixteenth century a stained glass window which for years was packed away in a case in the Parish Church of Rickmansworth, Hertfordshire. The glass originally formed part of the centre compartment of a window at the end of the choir of the Church of St. John at Rouen, and it is suggested that the window should be re-inserted in the fabric of the Rickmansworth Parish Church as a war memorial.

Building Intelligence.

LIVERPOOL.—The Health Committee and the city surveyor having approved the plans for the new premises of the National Bank, Ltd., at the corner of James Street and Fenwick Street, Liverpool, permission is being sought from the Prohibition Committee to proceed with the erection of the building. The new bank will be one of the loftiest piles in the city, its height being approximately 110 ft. Its site covers an area 80 ft. long by 50 ft. wide, with the main frontage in James Street. There will be nine floors above street level, and the bank premises are to be confined to the ground floor and basement, the other eight floors being for offices. Messrs. T. Arnold Ashworth and Son, architects, of 14, Castle Street, Liverpool, have designed the building in the Greek style, introducing the most modern features.

PROFESSIONAL AND TRADE SOCIETIES.

ARCHITECTURAL ASSOCIATION OF IRELAND.—At the annual general meeting of the Architectural Association, held on the 26th ult., the following prizes were presented by the President, Mr. J. C. Dewhurst:—The Downes bronze medal and two guineas to Mr. A. F. Hendy; the President's prize to Mr. R. B. Barrett. In connection with the Design and Architectural History Class, the following awards were made:—First prize awarded to Mr. C. P. McNamara; second prize awarded to Mr. T. F. Williamson; third prize awarded to Mr. H. Kilmartin. The following officers have been elected for 1921-22:—President, J. J. Robinson; Vice-President, C. A. Harrington; Committee—T. J. Byrne, F. B. Craig, T. L. Cullimore, W. A. Dixon, L. F. Giron, F. Hayes, W. S. Keating, T. F. Strahan, J. H. Webb; Hon. Treasurer, W. H. O'Donnell; Hon. Librarian, J. W. O'Sullivan; Hon. Secretaries, P. J. Munden and B. G. Joyce; Hon. Auditors, G. F. Beckett and H. G. Leask.

THE R.I.B.A. COUNCIL ELECTIONS.—In our issue of April 22 we gave the house list issued by the Council of Candidates for the forthcoming election. The voting list now issued shows the following extra nominations of "outside" candidates:—As Vice-Presidents—Messrs. H. P. Burke Downing, George Hubbard, and H. D. Searles-Wood, making seven for four places; members of Council—Messrs. Theodore Fyfe, Ch. L. Gill, Deliasa Joseph, Alan E. Munby, W. Gilbee Scott, and Herbert W. Wills, making twenty-seven for eighteen seats; associate-members—Messrs. L. H. Bucknell, Lionel B. Budden, G. D. G. Hake, and A. W. Sheppard. Mr. Paul Waterhouse, M.A., F.S.A., as President, Mr. Arthur Keen as Hon. Secretary, and Mr. Wm. Godfrey Newton, as representative of the Architectural Association, remain without competitors. The representatives of the allied societies (nine) are nominated in the following order:—Messrs. H. T. Buckland, Birmingham; Charles B. Floekton, Sheffield; G. W. Fraser, Liverpool; J. A. Gotch, Kettering; A. W. Hennings, Manchester; Llewellyn Kitchen, York; Thomas R. Milburn, Northern Architectural Association; W. T. Oldrieve, Edinburgh; and William B. White, Glasgow. The past-Presidents are Sir Reginald Blomfield and Mr. J. W. Simpson.

THE SURVEYORS' INSTITUTION.—At the special general meeting held at the Institution on Tuesday, 10th instant, a resolution approving the Supplemental Charter was unanimously passed. The meeting called for the afternoon of Monday, May 23, will be deferred until the result of the petition for the Supplemental Charter is known, when further general meetings for the approval of the amended by-laws will be held.

Among the objects purchased at the last meeting of the Trustees of the British Museum is a very fine limestone statue of a high Egyptian official who flourished under one of the Peammetichus Kings of the 26th dynasty, say, about, B.C. 600.

Our Office Table.

On Wednesday last, at the New County Hall, Westminster, Mr. George Topham Forrest, Architect to the London County Council, presented to Mr. Frank Sizer Capon, late head of the Statutory Division of the Architects' Department, a gold watch as a token of esteem from his colleagues on the occasion of Mr. Capon's retirement from the Council's service. In making the presentation Mr. Forrest commented on Mr. Capon's long service with the Metropolitan Board of Works and the County Council, and his extreme carefulness and attention to detail, which he suggested might be owing to Mr. Capon's earlier experience in connection with quantity surveying. Mr. W. E. Riley, late Superintending Architect, and now the Council's Official Architect for the New County Hall, in supporting Mr. Forrest's remarks, also bore witness to the valuable services rendered to the Council and his colleagues by Mr. Capon during the period he had known him.

"What You Want to Know in Building," by A. S. Bedingfield (London: J. M. Ouseley and Son, Ltd., 9, John Street, Adelphi, W.C.2, 3s.), is a very useful little book, and will prove especially so to lads and their friends who are contemplating a career for their sons as clerks of works, foremen, and all other aspiring building trades artisans. First, they will find a brief, but pithy, sketch of the career of the author, a lad, like many others, with parents puzzled what to do with their boys, and the satisfactory outcome of his seven years' apprenticeship; and, next, some excellent practical hints as to his duties and difficulties as a clerk of works, the "Warrant Officer of the highest rank of non-commissioned officers of the trade under the commissioned officers, the architects." There some very necessary information as to recent changes and improvements in modern building construction, followed by some special advice to intending Government employees, with helpful hints in regard to their examinations. Chapters on the best books, the clerk of work's future, possible partnership, and suggestions about partnership follow, and some illustrations of plans for submission to local authorities. Several pages of memoranda, weights and measures, and practical recipes finish the volume, which is pocket-size handy, and will prove an always reliable companion.

At last week's meeting of the Liverpool City Council, in regard to a motion against the further prohibition of building, except of cinemas and places of entertainment, Mr. Rankin (chairman of the Housing Committee) said, in view of what Sir Alfred Mond had said in the House of Commons the night before, he was prepared to have the question reconsidered by his committee. This course was agreed to. We think all local bodies might at once do the same, including the London County Council. All doubtless have felt bound to submit to the restrictions which have practically paralysed building without in the last advancing housing, but Sir Alfred Mond may, we think, be trusted to end this most stupid of all the stupid blunders of his predecessor.

An old Lincoln landmark, St. Martin's Church tower, is to be demolished, owing to its dilapidated and unsafe condition. The original church was the first Christian church to be built in the lower part of the city. It suffered grievously from the cannon of the Parliamentary forces planted on Canwick Hill in 1644, and lay unroofed and in ruins until the early part of the eighteenth century, when it was renovated. The tower now to be removed was rebuilt by public subscription in 1740, and was preserved on the demolition of the nave and chancel in 1877. It is said that the original church of St. Martin's was used by Remegius, first Bishop of Lincoln, as his cathedral, during the erection of the magnificent Minster on the hill.

We are glad to welcome a second edition of "Heating Systems and the Design of Hot Water and Steam Heating Apparatus," by

F. W. Raynes, head of the Department of Heating and Ventilating at the Royal Technical College, Glasgow (London: Longmans, Green, and Co., 21s.). Its value, of which we expressed a high opinion when the first edition appeared, is increased by a timely extension of the first chapter, so as to treat more fully on the various methods of heating, especially central or district heating plants. We commend the book especially to all engaged in the development of housing schemes, in which, particularly just now when the coal strike is, perhaps, teaching us the defects and extravagance of single-stove heating, it is to be hoped the opportunities afforded for the introduction of better and more economical means will not be allowed to slip away. In the Appendix a number of useful tables have been added which are in daily demand.

At the House of Commons last Friday the Minister of Health, Sir Alfred Mond, received a deputation from the National Federation of Building Trades Employers, who are actively engaged in carrying out the scheme for the training and employment of ex-Service men in the building industry. The deputation expressed some concern at the action of a number of local authorities in cancelling or reducing the number of houses to be built on their existing housing contracts. They were anxious to be assured that the Government did not propose to reduce the total number of houses to be built under the housing scheme below the number of 176,000 houses for which tenders have been approved. Sir Alfred Mond stated definitely that there was no such intention, and it was certainly not proposed that the number of houses to be built under the housing scheme would even be limited to 176,000, and this number would undoubtedly be exceeded.

"Practical Geometry for Builders and Architects," by J. E. Paynter (London, Chapman and Hall, Ltd., 11, Henrietta Street, W.C.2, 15s. net), is just the book that is needed by students who, having mastered the usual elementary primers, want more to help them in connection with advanced building construction, carpentry and joinery, and similar subjects, especially those who are without the direction of a competent teacher and have to rely on private study. They will find the problems sufficiently self-explanatory to enable them to master them, and the exercises at the end of the volume useful for testing their knowledge. It is doubtless true, as the author points out, that the art of any craft can only be learnt by handling the tools, and that no amount of study will ever help a man to make a mortise and tenon joint; but it is equally true that the man who has mastered the geometrical principles applied to roof construction, "circle circle" work, staircase work, and the like will start far better equipped than the "rule of thumb" man, and appreciate the assistance this book will give him.

The increased use in Canada of Bath and Portland stone has recently exercised the minds of local architects, according to a report from His Majesty's Trade Commissioner in Toronto. Hitherto the stone most used has been Bedford and Indiana limestone imported from the United States, and, while this stone is satisfactory, it is of a hard nature and costly to work. Instances of the use of Bath or Portland are not common in Toronto, but where it has been used it would appear to be satisfactory. The Canadian architect would be pleased to see a strong attempt made by United Kingdom quarries to supply the extensive Canadian demand for building stone. To create a demand, however, Bath and Portland stone should be well and properly advertised. The names and addresses of architects in Canada likely to be interested in hearing from quarry owners in the United Kingdom may be obtained on application to the Department of Overseas Trade, quoting Ref. No. 4373/ED/PN.

With its non-conducting air cells, its density and low absorption value, hollow tile is said to provide an effective insulating blanket for basement floors of factories. Hollow tile gives a warm, dry floor, which in turn results in a sanitary basement for the factory or home. Moreover, it is economical.

The large, light units are easily handled and quickly laid. First, the ground is levelled so that all ridges, lumps or depressions are eliminated. Then a layer of cinders or broken stone is put down and covered with a thin layer of sand. This is all pitched to the floor drains. The tile is then placed on the sand cushion so that it is as firm as when embedded in the mortar joint in wall construction. These tiles should not rock when walked upon. The surface of the hollow tile floor is thoroughly wetted before laying the cement top coat, which should be composed of one part cement to not over two and a half parts of clean, coarse sand, applied one inch to two inches thick, depending on conditions.

For determining the flowability of concrete or mortar mixtures the U.S. Bureau of Standards has devised a metal-covered table top which can be raised vertically by a cam working at the end of a vertical post. The table top is attached to the top of this vertical post. A bolt at the lower end of the shop regulates the height of the drop. In measuring flowability of a given mixture of concrete a mass is moulded at the centre of the table in a sheet-metal mould. The mould has the shape of a hollow frustrum of a cone. By slight tamping the mass completely fills the form, and the form is withdrawn. By dropping the table fifteen times through a distance of $\frac{1}{2}$ inch the mass is flattened, and it is usually found that it spreads concentrically. In making the measurement to compute the flowability two diameters at right angles to each other are measured. If the difference is apparent the long and short distances are measured. A self-reading caliper is used, and it is graduated so that the sum of the two readings is the value for flowability. The value may also be calculated by dividing the diameter of the new mass by the diameter of the original mass before agitation and multiplying by 100. This device will accurately measure consistency of a concrete, mortar, cement, or lime paste for all consistencies varying from dry masses having a slight tendency to flow or change shape when acted upon by external forces to those which are so fluid that water will flow away from the coarse aggregate.

Builders and the makers of building materials seem to be doing well in Germany. Mr. George Renwick, the special correspondent of the *Daily Chronicle*, writing from Frankfort-on-Main, says:—"I have been struck during my tour by the amount of building that is going on, and, indeed, the reports of the cement and building companies show that a very determined effort is being made to fill up the gap left by the stoppage of work during the years of the war. Take the results, just announced, of the following companies:—

	Dividends.	
	1919.	1920.
Diedesheim-Neckarelz Portland Cement Works	6 ..	15
North German Portland Cement Co.	10 ..	24
Finkenbergs Portland Cement Co.	6 ..	25
Vorwöhrer Portland Cement Factory	10 ..	25
Upper Silesian Cement and Chalk Works	10 ..	30
Silesian Cement Manufacturing Co.	10 ..	30

All these and other similar companies state that the increased building activity is responsible for their prosperity. Building concerns tell the same story. Messrs. Philipp Holzmann, a big building firm of Frankfort, made a net profit during 1920 of M.4,846,470, as against M.2,784,888 in 1919. The firm's work, says the annual report, included the building of many factories, factory extensions, and workmen's dwellings."

Sir Banister Fletcher, F.R.I.B.A., F.S.I., has removed from 29, New Bridge Street, E.C.4, to 1, King's Bench Walk, E.C.4.

The metalwork department of the Victoria and Albert Museum has received a gift from the Ven. D. Tait, Archdeacon of Rochester, in the form of a steeple cup and cover of the period of Charles I. This is the first example to come into the possession of the Museum of a steeple cup, so called because of the tall, spire-like finial of the cover. The cup, which is nearly 2 ft. high, is English silver work of the ordinary type, but not, which is unusual, silvergilt. It bears the hallmark of the year 1627.

LIST OF TENDERS OPEN.

COMPETITIONS.

July 15.—For Designs for the proposed Council Chamber in Calcutta, for the Legislative Council of Bengal. Three premiums of £500, £250, and £100 Assessor, Mr. Henry Crouch, F.R.I.B.A., Consulting Architect to the Government of Bengal. Architect placed first to be employed to carry out the work.

Aug. 13.—For Designs for a War Memorial at Wolverhampton. Premiums of 150 guineas, 100 guineas, and 50 guineas to authors of Designs placed first, second, and third by Mr. John W. Simpson, F.R.I.B.A., the Assessor. (See Advt.)

Oct. 3.—For Designs for the new buildings of Qasr el 'Aini Hospital and School at Cairo, for the Egyptian Government. Two stages, the first preliminary, open to all architects; the second and final, restricted to twelve architects, six to be selected from the most meritorious in the preliminary competition and six others nominated by H.H. Government, with the advice of the Assessor, Mr. John W. Simpson, F.R.I.B.A., Memb. Corr. de l'Institut de France, whose judgment will be final and binding.

BUILDINGS.

May 16.—For 40 houses, Guildford Park Estate.—For the corporation.—Messrs. Clemence and Co., architects and surveyors.—Tenders to Mr. E. L. Lund, supervising architect to the housing scheme, 36, High Street, Guildford.

May 22.—For 154 houses at Crayford.—For the urban district council.—Mr. W. F. Bickford, engineer and surveyor, Public Offices, Crayford, architect.—Tenders to the architect.

May 23.—For 50 houses at Abingdon, Berks.—Messrs. J. G. T. West and Son, M.M.S.A., The Knowl, Abingdon, architects.—Tenders to the architects.

May 23.—For 31 houses, St. Augustine's Road, No. 2 site, Chesterfield.—For the corporation.—Mr. B. Deeping, Gluman Gate, Chesterfield, architect.—Tenders to J. H. Rothwell, town clerk, Chesterfield.

May 24.—For six pairs of houses, Lumb Lane, Bramhall.—For the Hazel Grove and Bramhall Urban District Council.—Messrs. Adhead and Topham, 23, King Street, Manchester, architects.—Tenders to Chairman of Housing Committee, Council Offices, Hazel Grove, Stockport.

May 24.—For alterations to Winchester Post Office.—For H.M. Works Commissioners.—Drawings, specification, etc., may be seen on application to Head Post Office, Winchester.—Tenders to the Secretary, H.M. Office of Works, King Charles Street, S.W.1.

May 25.—For extensions to Post Office Savings Bank, West Kensington.—For H.M. Works Commissioners.—Tenders to the Secretary, H.M. Office of Works, London, S.W.1.

May 26.—For 210 houses at Southampton.—For H.M. Works Commissioners.—Drawings, specification, etc., may be seen on application to Borough Surveyor, Southampton.—Tenders to Secretary, H.M. Office of Works, London, S.W.1.

May 26.—For alterations and additions to assistant superintendent's quarters at West London District School, Ashford.—H. Dighton Pearson, F.R.I.B.A., 59, Berners Street, W.1.

May 26.—For 48 non-parlour type houses.—For the Bodmin Rural District Council.—Mr. W. J. P. Jenkins, Castle Hill, Bodmin, architect.—Tenders to J. Pethybridge, clerk, Bodmin.

May 28.—For 18 houses on the Elms Street extension site, Whitefield, Lancs.—For the Whitefield Urban District Council.—Mr. G. M. Denton, Council Offices, Whitefield, Lancs, architect.—Tenders to C. F. Porter, clerk, Council Offices, Whitefield.

The hearing of charges of fraud in connection with the purchase of houses, brought against the manager and the managing director of the Estates and General House Investments Company, Limited, at the Manchester Assizes, concluded last Saturday. The accused were found guilty and sentenced, the prisoner Summers to three years imprisonment, and Singleton to nine months.

Oswestry Town Council, on Monday, passed a resolution delaying the housing scheme for consultation with the Minister of Health as to the altered situation arising out of the proposed absorption of the Cambrian Railways by the Great Western Railway. The Cambrian Railways headquarters and wagon works at Oswestry employ 500 or 600 people, and there is anxiety as to Oswestry's future.

No evident desire to raise statues to Mr. Willett, the "Daylight saver," being manifested, the hon. secretary of the Willett Memorial Committee asks for £400 to carry out the design of a standard clock to be placed in Sloane Square, otherwise the scheme must take on a less important form, and be confined to the placing of a three-faced bracket clock, a pendant from the front of the Willett House, also in Sloane Square.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Birmingham House.

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Chequers Court, Bucks. The official residence of the British Prime Minister. New Entrance Lodges	

and Gates, executed for Lord Lee of Farnham, the donor. View and plan. Messrs. Oswald P. Milne and Paul Phipps, F.F.R.I.B.A., Architects.	
Samaritan Hospital for Women, to be erected at Liverpool. Messrs. Edward Kirby and Sons, Architects.	
City of Leicester: Coleman Road Housing Scheme Estate. Plans, Elevations, and Sections. Mr. Arthur J. Wood, A.R.I.B.A., Architect.	

Currente Calamo.

As will be seen by our report on another page, the meeting of the R.I.B.A. yesterday week, which assembled to discuss the two alternative proposals of the Sub-committee on Unification and Registration, one recommending absorption by the R.I.B.A. as the basis of unification, and the other the federation of all the existing societies, decided to adopt the former by 28 votes to 4, the resolution passed being: "That this Committee recommends the Council of the Royal Institute of British Architects to make such alterations in its charter and by-laws as will enable it to admit to membership all architects, and confer with the Society of Architects as to conditions of membership." It goes without saying that the success achieved ultimately by the course favoured will depend on the nature of the proposals made by the Council of the R.I.B.A.; and that, at any rate, if they prove inadequate or objectionable, as Sir Charles Ruthen said: "The Society of Architects could not be gobbled up without its own permission." It is the present duty of all concerned to wait till the details of the scheme are formulated, and of those whose function it may be presently to criticise or suggest, to reciprocate the graceful acknowledgment by the President of their abstinence, so far, from hampering the work of the Committee by premature comment. All, therefore, that with propriety can be said to-day is, first, that we are glad the scope and number of the Sub-committee was widened by the acceptance of Mr. Ivor P. Jones's motion to add six representatives of the allied societies thereto, increasing the membership from 19 to 25. This was manifestly right and expedient. But what we urge on every one of our readers now is to renew and manifest their interest in the arduous but most necessary task entrusted to the Council of the R.I.B.A.; and, presently, to discuss its accomplishment with the full conviction that if the recommendations offered are reasonable and practical, then, indeed, as Mr. Simpson said, the memories of last week's meeting would be for ever associated with the conviction that it was the most important ever held in the history of British architecture, not merely as regards the status and prospects of the individual architect, but in connection with the Mistress Art itself, and the

beneficial enlightenment of the public, taught at last to recognise in its votaries the true guides to health and beauty, and left no longer to the clutches of the charlatan and the profiteer.

Sir Alfred Mond made a good speech last week in the discussion of the estimates for £15,250,000 for the Ministry of Health. He compared himself to "my ancestor" on the banks of the Nile, who had been commanded to make bricks without straw, and did his best to make a good show as regards housing. There had been progress in building—176,000 houses with approved tenders on May 1; and thousands more houses in the hands of contractors or "begun." True, the loss to the State in respect of each house built by local authorities was £60 a year, and with 200,000 or 300,000 houses erected the annual loss to the taxpayer would be £12,000,000 or £18,000,000. The money gone in subsidies to private builders already amounted to £15,000,000. Housing, he cynically declared, was a cuckoo's egg put into the nest of the Ministry of Health, and the legitimate little chicks had been pushed on to the street. Not the "little chicks" Dr. Addison fell foul about with *The Times* last Friday, we suppose, getting rather more than he bargained for from our contemporary on which he sought to fasten a charge of "gross falsehood."

The work of the School of Archæology in Egypt has been carried on actively by a party of nine workers during the past winter. The main site, says Prof. W. M. Flinders Petrie in *The Times*, has been the Cemetery of Herakleopolis, the capital of the ninth and tenth dynasties, of which age very little was yet known. Though the ground had been searched by several explorers before, yet the systematic working has given much larger and more valuable results. Of the second and sixth dynasties many fine objects were found in unopened tombs. The ninth dynasty has provided a great amount of material, of domestic figures, and a series of hundreds of forms of pottery. Some fine work of the eighteenth dynasty was found, and remains of a tomb of the powerful viziers of the nineteenth. The robbery of boxes on the Egyptian railway last year—for which any compensation is refused—makes it undesirable to publish details until the

exhibition is ready, during July, at University College, Gower Street. Meanwhile an illustrated lecture on the discoveries was given (free, without ticket) at the College yesterday, and will be repeated on May 21, at 3, and May 25, at 2.30.

The City Corporation has decided to invite a number of well-known artists whose work is not represented in the Royal Academy exhibition this year to send pictures to an exhibition at the Guildhall Art Gallery. About 300 pictures will be hung, and the exhibition will open on June 8. In reply to a letter from the Director of the Corporation Art Gallery, asking for the views of the Royal Academy, Sir Aston Webb, P.R.A., replied:—"I am obliged for your courteous letter of the 9th inst, which I had the opportunity of laying before my Council last night. I am to assure the Corporation of London, in preference to the proposed exhibition at the Guildhall Art Gallery, that the Royal Academy would in no way regard it in the nature of criticism of any section of the Academic body, but rather welcome it as an excellent opportunity for the public display of the works of those painters of established reputation who are not this year represented in the exhibition of the Royal Academy."

A judgment affecting local authorities and owners of land adjacent to tar-sprayed roads was given in the High Court last Friday by Mr. Justice Salter in an action brought by Mrs. Dell, the owner of water-cress beds at Chesham, Bucks, against the Chesham Urban District Council. Mrs. Dell claimed damages and an injunction to restrain the Council from allowing road surface water impregnated with tar acid to run into her water-cress beds and destroy her cress. His Lordship said the defendants alleged that it was not the tar from the roads, but very cold icy water following heavy frost and snow that had done the damage. He thought the damage was caused in this way. The tar in the surface of the road that normally would remain hard was, under the action of the frost, broken up and churned into black mud. That mud, containing noxious tar acid, was washed into the cress-beds and killed the cress. Although the defendants were, under their statutory declarations, empowered to tar-spray

roads to prevent dust nuisances, they could not be protected if noxious matter from the roads got into private streams and did damage to fish or cress. Consequently, in this case, damage had accrued to the plaintiff, and should be borne by the defendant council when ascertained by a referee. The plaintiff would also have a declaration to the effect that the defendants were not entitled to continue the nuisance, with costs. The judgment is a very timely one. Some of the tarring, especially in one Metropolitan Borough, is done in the most slovenly fashion, and the covering of such bad material and so thinly applied that most of the tar is carried off by the tyres of vehicles and the boots of pedestrians before it has time to harden.

A good deal is said and written concerning clubs formed to promote the social welfare of the employees of various manufacturing concerns, but it is seldom that anything is heard of any effort being made to bring together the executive heads of large business undertakings. We believe that the golf match which was played at St. George's Hill Golf Club, Weybridge, on May 12, between the directors of Messrs. Burt, Boulton and Haywood, Ltd., the well-known timber merchants and tar distillers, and the directors of Messrs. Robt. Ingham Clark and Co., Ltd., "the world's largest varnish industry," was the first of its kind to be played in this country. The results of the morning round were as follows:—

B. B. & H.		R. I. C.	
Capt. Stobart	1	Mr. F. W. F. Clark	0
Lord Dunmore	1	Mr. R. F. Clark ..	0
Mr. D. H. Boulton	0	Mr. R. H. I. Clark	1
Capt. Yonge	1	Mr. S. Hornsby ..	0
	3		1

The afternoon play left the directors of Messrs. Burt, Boulton and Haywood, Ltd., with three points to their opponents' one, the position remaining as in the morning. Now that the first step has been taken, we should not be surprised to hear that similar friendly contests have been arranged between the directors of other houses.

UNITY OF THE PROFESSION.

THE COMMITTEE ON UNIFICATION DECIDES IN FAVOUR OF ABSORPTION.

A meeting of the Committee on Unification and Registration took place on Thursday, May 12, at No. 9, Conduit Street, London, W., Mr. Jno. W. Simpson, P.R.I.B.A. (Chairman of the Committee), presiding. The business was to consider the report of the Sub-Committee appointed in July, 1920, "to draft and submit to the Committee alternative proposals for unification based respectively on absorption and federation." The Sub-Committee had reported on April 6, 1921, its report taking the form of alternative schemes "A" and "B," to be adopted according as the Committee on Unification and Registration decided that the basis for unification should be absorption or federation.

The Chairman opened the proceedings, explaining that, in spite of the difficulties created by the industrial crisis, he had thought it better the Committee should meet that day. The profession had waited with admirable patience for the report, and a word of thanks was due to

the editors of the professional Press for the way in which they had abstained from publishing anything which would in any way hamper the proceedings of the Sub-Committee. (Hear, hear.) This was a most important meeting; he should think he might safely say the most important meeting that had ever been held in the history of the profession in England. There were present representatives of the Royal Institute of British Architects, of Licentiates of the Institute, of official architects, of the Society of Architects, of the Architectural Association, of the Assistants' Association—in fact, every professional association and society in Great Britain and the Colonies was represented at the meeting, and also architects who did not belong to any society. There had never been so representative a gathering. In determining how unification should be crystallised and consolidated as a definite proposition, each and every one must be prepared for a certain amount of sacrifice. The Sub-Committee had carried out its instructions, and the present meeting was to take the great decision. There would be disappointment throughout the whole profession if the meeting did not succeed in coming to some definite and satisfactory conclusion; but if it succeeded there would be established such a professional organisation as did not exist with regard to any other profession in this or any other country. The report of the Sub-Committee was in effect two supplementary reports, and it would be in order for any member to move the adoption of one or other section, but obviously not of both. It was extremely unlikely that anyone was prepared to subject himself to every item of either proposal. (Hear, hear.) There must certainly be points of detail on which members would desire to make suggestions and amendments. Still, he would ask the meeting to decide in the first place on the principle of the two schemes—as to which of the two schemes it would adopt, not in detail as a cut-and-dried proposition, but as regards the great general principle contained in it. Scheme A was called absorption, Scheme B federation; and it was for the meeting to decide which of these two bases should be adopted for the unification of the profession—no other basis had been suggested. When the principle was settled, the machinery for applying that principle could be discussed. The report of the Sub-Committee had been circulated some little time, and amendments asked for; and the fact that only three or four had been sent in was the greatest compliment which could be paid to the Sub-Committee for the way in which it had done its work. The amendments practically all referred to the details of one scheme or the other; so it would be quite in order to take the vote first of all as to which of the two schemes the meeting would have. He thought it well to clear the ground by explaining exactly what the two schemes meant; otherwise this meeting might be landed in a discussion on that most difficult of all subjects, the exact definition of words. Some would say "absorption" meant the power to suck up like a sponge; what did that mean to the profession? But "absorption" was the word of the present Committee, not of the Sub-Committee. The Sub-Committee had thought it better to talk of the schemes as "A" and "B." The principle of Scheme A—absorption—was the bringing of all the architects of the United Kingdom into membership of the Royal Institute. The principle of Scheme B was federation, the bringing of all the architects of the United Kingdom into one of the existing societies, and the

control of those societies by a federated council.

The Chairman concluded by suggesting that somebody should move that either Scheme A or Scheme B should be adopted.

In reply to Mr. Davidge, he stated that, whichever scheme was adopted in principle, the Committee could then proceed to discuss it in detail.

Mr. E. J. Sadgrove raised a point as to whether it was the intention under Scheme A to throw open all classes of the Institute for the absorption of members of the other bodies.

The Chairman replied that this was a detail; on Mr. Sadgrove pressing the point, he added that it was impossible to answer until the meeting had decided.

Sir Banister Fletcher urged the Chairman to give an answer to Mr. Sadgrove's question, and Mr. Sadgrove stated that he feared the classes would not all be thrown open.

Sir Charles Ruthen (Vice-Chairman) said that if the procedure suggested by the Chairman was adopted, no harm could come. The Society of Architects could not be gobbled up without its own permission.

Mr. Corlette moved that Scheme A be adopted, subject to such amendment in detail as might be necessary.

The Chairman asked Mr. Corlette to amend his resolution so as to move that the principle embodied in Scheme A be adopted—the bringing of all architects of the United Kingdom into membership of the Institute.

Mr. Corlette said he would move that the principle embodied in Scheme A be adopted. But as regards the bringing in of all the architects of the United Kingdom, speaking as the representative of the architects of the Commonwealth of Australia, he would like to see the scope of the resolution enlarged in that particular.

The Chairman replied to this that the meeting could not legislate for architects in the Colonies.

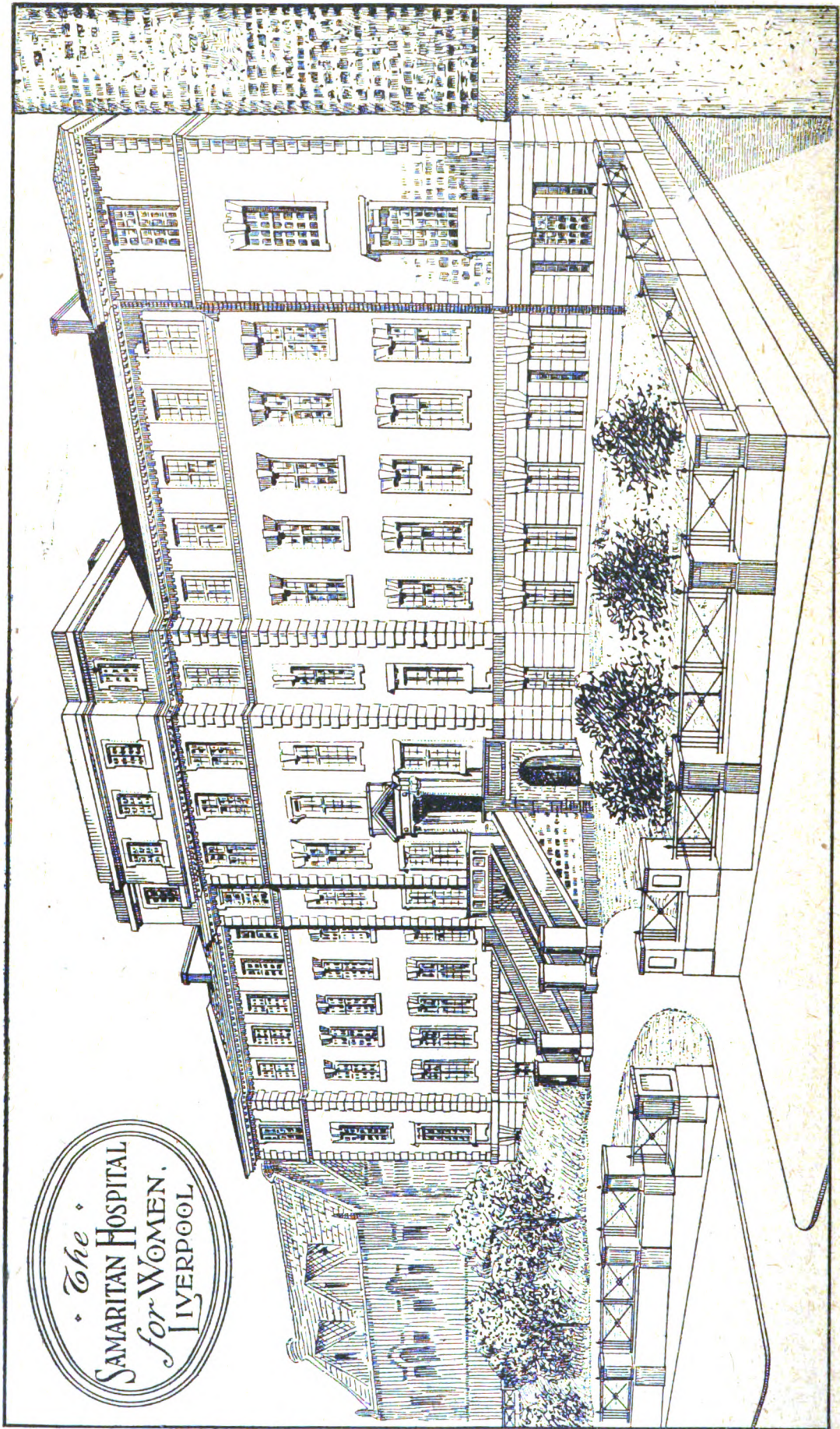
Mr. J. S. Gibson seconded the resolution that the principle of Scheme A be adopted—the bringing of all architects in the United Kingdom into membership of the Institute. He said the Sub-Committee had prepared the two schemes on broad lines, and the very fact that it had prepared them answered the question of Mr. Sadgrove. It was perfectly obvious that if Scheme A was adopted, and the Institute then said that under no conditions would it open its classes to the Society of Architects, the whole thing would go by the board. Having one body and one control was much better than federation, which would mean that they would preserve in existence bodies with a different class of membership, different methods of electing members, different qualifications, different subscriptions and different conditions. If they endeavoured to make a federation out of all these constituent bodies, and get them together in London, Liverpool, Manchester, and elsewhere to control the whole of the profession, they would be setting up an unwieldy organisation, one that would not work. He was convinced that the only way in which any good could be done nationally was by getting the whole of the architects under one control.

Mr. Sydney Perks said he was not prepared to vote either for or against the resolution without going into details. He was prepared to vote for "A" in preference to "B," or vice versa, according to details. Other schemes had been proposed which the Sub-Committee had not brought up at all.

Mr. Maurice Webb said that, representing the Architectural Association, he supported Mr. Corlette's motion.

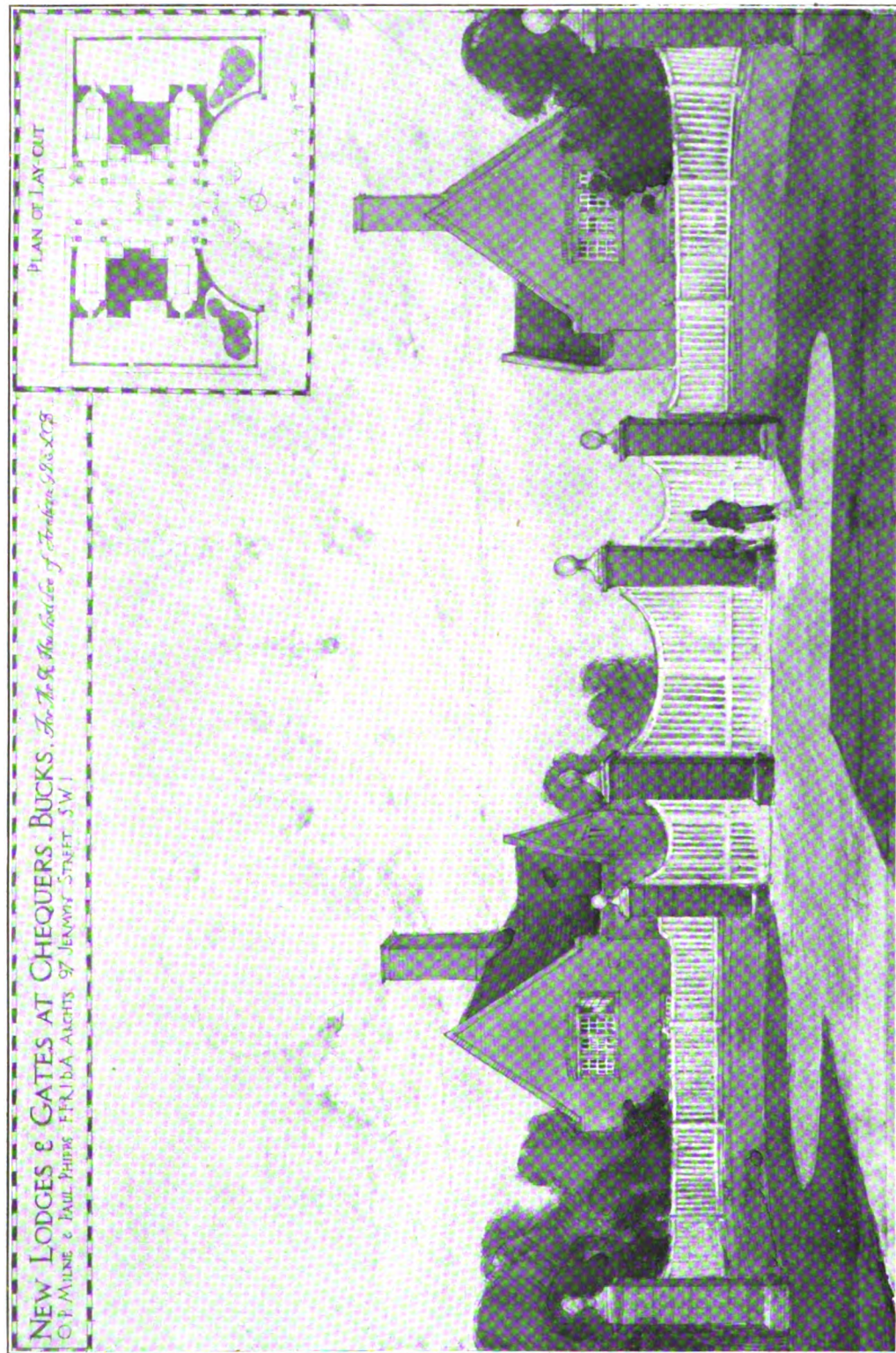
(Continued on page 277.)

THE BUILDING NEWS, MAY 20, 1921.



The
SAMARITAN HOSPITAL
for WOMEN,
LIVERPOOL.

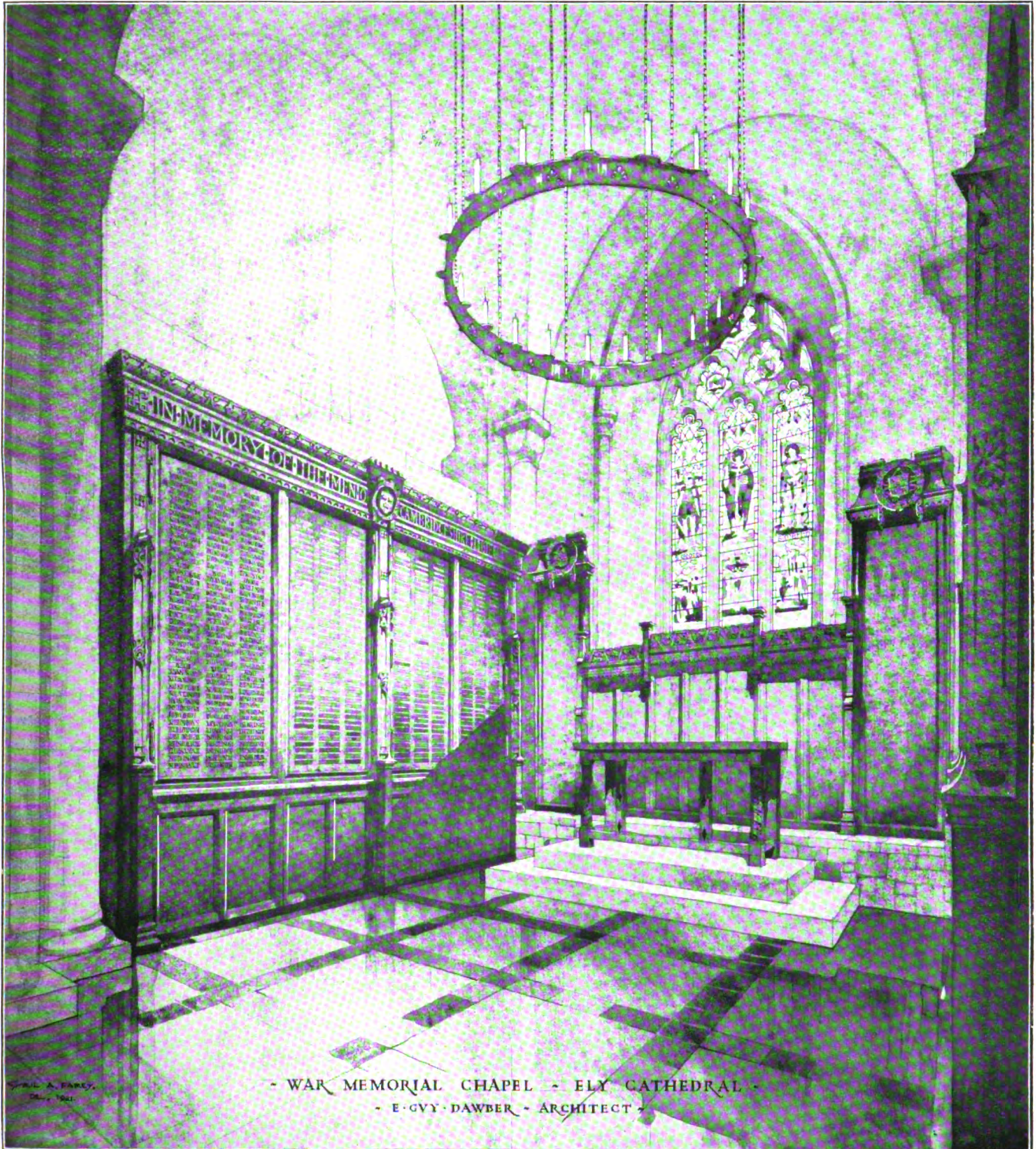
SAMARITAN HOSPITAL FOR WOMEN, UPPER PARLIAMENT STREET, LIVERPOOL.
Messrs. EDMUND KIRBY and SONS, Architects.



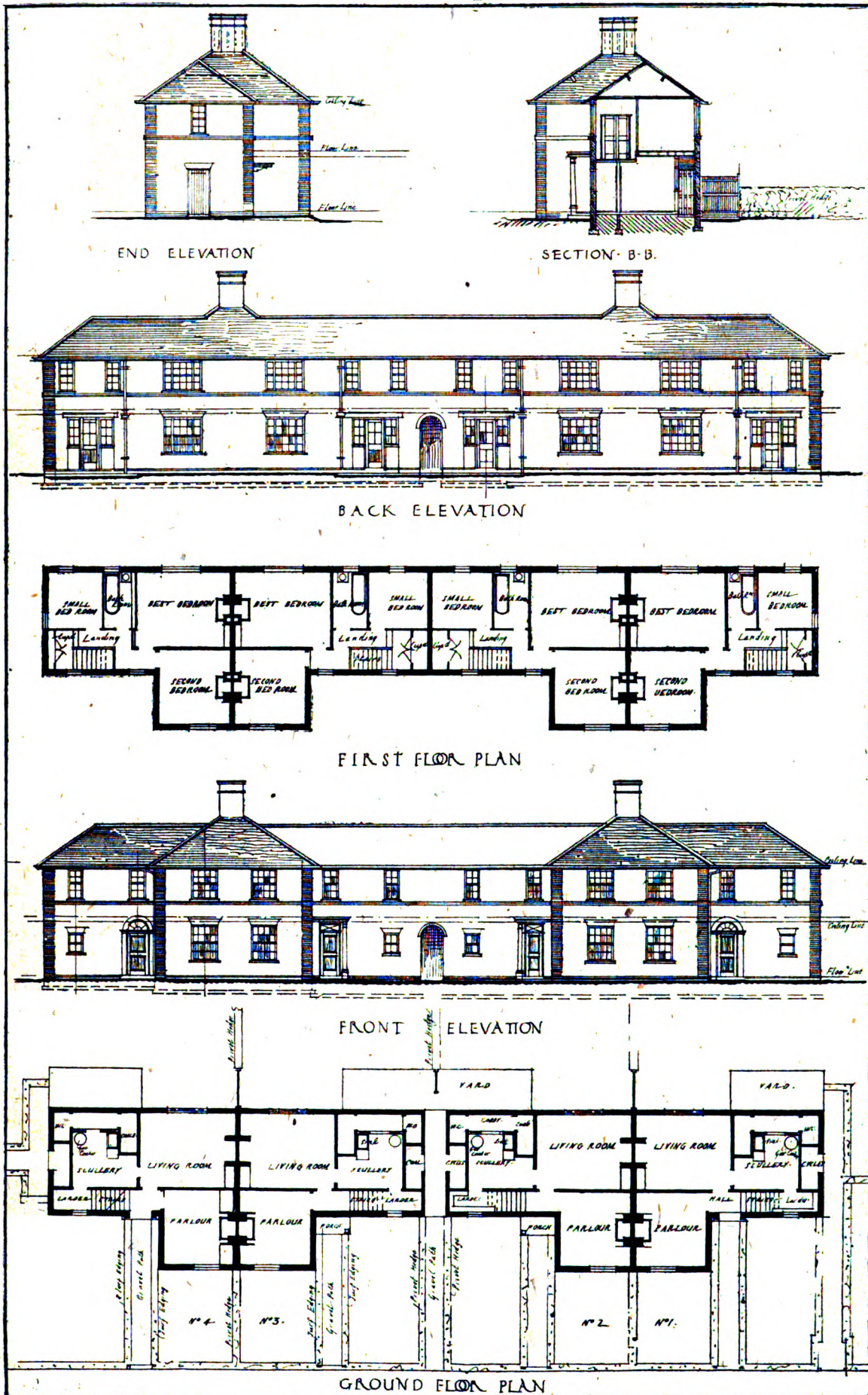
CHEQUERS COURT, BUCKS: NEW LODGES AND GATES, FOR LORD LEE OF FAREHAM.

The Official Residence of the Prime Minister.

Messrs. O. P. MILNE and PAUL PHIPPS, F.F.R.I.B.A., Architects.



ELY CATHEDRAL : WAR MEMORIAL CHAPEL.
Mr. E. GUY DAWBER, F.S.A., V.P.R.I.B.A., Architect.



CITY OF LEICESTER, COLEMAN ROAD HOUSING ESTATE.
Mr. ARTHUR J. WOOD, A.R.I.B.A., Architect.

(Continued from page 268).

Mr. J. E. Yerbury, as representing the Licentiates, said he had attended every meeting of the Sub-Committee. At first he had done so in fear and trembling, but the spirit shown on the Sub-Committee had been such that he had been able to call his committee of the Licentiates' Association together, and assure them that they were perfectly safe in expressing their views in favour of either "A" or "B." His committee had decided that Scheme A contained the ideal that the Licentiates' Association was looking for—unification. They thought the differences between the two schemes were differences of detail, not of principle, and they would support Scheme B rather than not have a unanimous committee; but they unanimously preferred Scheme A, and hoped it would be adopted.

Mr. H. T. Buckland said the Birmingham Architectural Association were unanimously in favour of Scheme A.

The discussion was continued some time longer. Among other points raised was that of Registration. Mr. MacArthur Butler said it had been suggested to him that even if all architects were got into the R.I.B.A. they would not get Registration; but he held that, supposing they did not succeed in getting Registration, they would have such a strong body of the whole profession that they would have another form of Registration, which would in practice serve them equally well.

Mr. Overbury, representing the Institute of Scottish Architects and the Edinburgh Architectural Association, said that neither Scheme A nor Scheme B would be acceptable to the Scottish architects without considerable modification.

Eventually the resolution, "That the principle of Scheme A be adopted as the basis of unification, the principle being the bringing of all architects of the United Kingdom into membership of the Royal Institute of British Architects," was carried unanimously.

The Chairman said the meeting had done a great deal for the profession. (Hear, hear.) The resolution they had carried of course eliminated Scheme B. Now came the question of machinery.

Mr. H. T. Buckland (Birmingham Association) said that when the two schemes were submitted to the Council of his Association, although they had passed a resolution in favour of "A" in preference to "B," they had suggested that the machinery might be simplified if the Institute took charge at once. He moved that the Institute should get to work forthwith to make such alterations to its present charter and by-laws as would enable it to admit to membership all practising architects, and should confer with the Society of Architects as to conditions of membership. The Society of Architects was, he said, the one Society not allied to the Institute. There was also the Architectural Association, but this had always been so closely identified with the Institute that it was regarded as being part of it.

Sir Charles Ruthen seconded the resolution, and a long discussion followed. It was at first suggested by Mr. Perks that the whole matter should be referred to the Sub-Committee, for them to draw up a scheme. The Chairman said that in his view the two propositions were not antagonistic. Until the Council of the Royal Institute and the Council of the Society had agreed on such lines as Mr. Buckland had indicated, the Sub-Committee could not get very far.

On the suggestion of Mr. Charles MacLaughland, the word "practising" was struck out of the resolution as unnecessary.

Various other verbal alterations were proposed, and Mr. Sydney Perks moved

as an amendment: "That this scheme approved to-day be referred to the Sub-Committee to bring up suggestions and details, they having power to consult any council or body or individuals they think fit."

The Chairman declined to accept this as an amendment, saying it was an entirely different proposition; thereupon Mr. Perks said he would ask the meeting to vote against Mr. Buckland's resolution with a view to afterwards supporting his own.

The resolution moved by Mr. H. T. Buckland, and seconded by Sir Charles Ruthen, was then carried by twenty-eight votes to four in the following form: "This Committee recommends the Council of the Royal Institute of British Architects to make such alterations of its charter and by-laws as will enable it to admit to membership all architects and confer with the Society of Architects as to conditions of membership."

On the motion of Sir Banister Fletcher, seconded by Mr. Davidge, a resolution was unanimously passed: "That the Sub-Committee be instructed to submit as soon as possible details of Scheme A."

A question as to the adequate representation of provincial architects was then raised by Mr. Ivor P. Jones (South Wales), and it was agreed, after some discussion, that the membership of the Sub-Committee should be increased from 19 to 25; the six additional members to be representative of allied societies.

It was also agreed, on the motion of Sir Banister Fletcher, seconded by Mr. Ivor P. Jones, that the selection of these six new members should be left to the Chairman and Vice-Chairman of the Committee on Unification and Registration.

Mr. J. E. Yerbury said it would be wise if more unattached men could be induced to serve on the main Committee; there must be a large number who would be willing to attend if invited.

No action was taken on this matter; and a vote of thanks to the Chairman and Vice-Chairman terminated the proceedings.

Building Intelligence.

BOURNE.—On Wednesday week the formal opening took place of the new wing of the Butterfield Hospital, Bourne, which also stands as the town's memorial to those who made the great sacrifice during the war. The new wing extends eastwards of the main building, and over the main entrance is a stone into which is cut in gilt letters the inscription:—"Erected 1920 in grateful remembrance of those who made the great sacrifice 1914-1918." From the entrance-hall and waiting-room a passage leads to the ward on the ground floor, which has been made adequate to accommodate four beds, and this is proposed to be used for women and to be named the Ingle Ward, in recognition of a legacy of £1,000 handed over to the hospital by the trustees of the late Mr. Frederick Ingle, of Colsterworth. A similar room upstairs is to be used as a men's ward and to have associated with it the name of Peace Memorial Ward. Adjoining each ward is a small room for the nurses in attendance, and leading out of each is complete lavatory and bath accommodation. The building contractor was Mr. J. H. Roberts, of Bourne, the plans and specifications being prepared by Messrs. Trayler and Lenton, of Stamford, who have also supervised the work.

Mr. G. C. Inskip, F.R.I.B.A., has resigned the Honorary Secretaryship of the R.I.B.A. in Australia after a period of twenty years' service, and Professor Leslie Wilkinson, F.R.I.B.A., of the School of Architecture, University of Sydney, has been appointed as Hon. Secretary of the R.I.B.A. in Australia in his place.

Our Illustrations.

WAR MEMORIAL CHAPEL, ELY CATHEDRAL.

This chapel, on the eastern side of the north transept, is being fitted up as a memorial to the men of Cambridgeshire and the Isle of Ely who fell in the war. It will be divided from the transept by a screen—which does not show in the perspective drawing—and will have a framing of oak panelling on each side and across the eastern end. The frieze and cornice will contain the inscription, and the arms of the Isle of Ely, the University of Cambridge, the Borough of Cambridge, and the County. As close upon 6,000 names have to be recorded, the panels on either side of the chapel are in four leaves, which will be hinged to swing open, and upon the front and backs of these and the face of the inner panels against the wall the names will be painted in white, on the oak work, divided into parishes. The floor of the chapel will be in Portland stone and Purbeck marble, and the eastern window will be in coloured glass, by Messrs. Powell, of Whitefriars. The whole of the woodwork will be picked out in colour, somewhat after the traditional manner of East Anglia. The work is being carried out by Messrs. Rattee and Kett, of Cambridge, from the designs of Mr. Guy Dawber, F.S.A., architect, who is represented by this drawing at the Royal Academy.

NEW LODGES AND ENTRANCE-GATES, CHEQUERS, BUCKS, THE OFFICIAL RESIDENCE OF THE PRIME MINISTER.

The ancient approach to Chequers from London was from the Missenden Road, but for some centuries this way has fallen into disuse. Lord Lee, whilst in occupation of the house, determined to again restore this entrance, and the work of making the drive down the old avenue was begun by German prisoners during the war. The whole is now being completed by the addition of two lodges and entrance-gates, so that the park, as well as the house itself, might be handed over complete to the Prime Minister. The lodges have been designed to harmonise with the quiet character of the house. They are, however, in no sense an exact copy of its ancient architecture, and will tell their own story and history. The gates, too, with their solid brick piers, have been kept very simple in design. Wood rather than iron has been adopted as being more in harmony with the quiet simplicity of the place. The lodges and gate piers are being built with Dutch brick, the roofs are covered with tiles from old buildings on the estate. The windows have brick mullions and leaded casements. The gates are of oak, painted white. The lodges will be surrounded by neatly laid-out gardens, and enclosed from the park by clipped box hedges (this shrub being indigenous on the Chequers estate). By this addition Lord Lee has added another page to the history of this beautiful English home, his munificent gift to the nation. The work has been designed by Messrs. Oswald P. Milne and Paul Phipps, F.F.R.I.B.A., and has been carried out by the workmen on the estate under their direction. The drawing reproduced is now at the Royal Academy.

SAMARITAN HOSPITAL FOR WOMEN, LIVERPOOL.

The proposed Samaritan Hospital for Women is intended to occupy a site bounded on the north by Upper Parliament Street, on the west and south by Lestock Street, and on the east by the

Windsor Street Municipal Free Library. The front will face the end of the Cathedral. Owing to the rapid fall of Upper Parliament Street, a lower ground floor is provided with a side entrance in Lestock Street for out-patients, adjoining which is a dispensary. There is also an entrance in the centre of the Parliament Street front for stretcher cases. With the exception of one ward, the remainder of this floor is mainly devoted to storage, cooking, heating, and laundry purposes. The main entrance to the upper ground floor is approached by a double flight of steps. On this floor are two general and three private wards, also dining and recreation rooms for the nursing staff. The remainder of the floor will be used for administrative purposes. The first floor has two more general wards, five private wards, operating theatre, etc., and matron's flat. On the second floor is a subsidiary operating theatre. The remainder of the space is occupied by staff and servants' bedrooms. The night staff are isolated on the third floor. The total accommodation provided is as follows:—General wards, minimum accommodation sixty-two beds; eight private wards; day staff—matron, four sisters, twelve nurses; night staff—one sister and three nurses; ten maids. The building is to be constructed of rustic brick and Portland stone, designed in a style to accord with the dignified restraint of the Eighteenth Century houses in Rodney Street and the neighbourhood. Messrs. Edmund Kirby and Sons, of Cook Street, Liverpool, are the architects.

CITY OF LEICESTER HOUSING SCHEME, COLEMAN ROAD ESTATE.

In our issue for April 1 we gave a sheet of drawings of some of the houses in course of erection by the Corporation from the plans of Mr. Arthur J. Wood, A.R.I.B.A., and we then printed particulars about them, also concerning this architect's share in the Borough of Leicester's housing enterprises. To-day we illustrate Mr. Wood's dwellings called Type B. These face north and east, and form part of Contract 1 for Block 1. The accommodation in these houses allows 160 ft. super area for the living-rooms; parlours, 119 ft. super; sculleries, about 72 ft. super; larders, say 19 ft. super; best bedrooms, 160 ft. super; second bedrooms, about 120 ft. super; and small bedroom, 70 ft. super. The lay-out for each tenement provides, without passage space, but including all walls, 551½ square ft. We previously specified the materials employed, and published a sheet of drawings of "Agreed price houses" on February 18 last from the designs of Messrs. Pick, Everard and Keay, built on part of the same comprehensive scheme on the site situate eastward of the town. Messrs. Harrison and Sons, another firm of local architects, are engaged upon some other houses on this property in Coleman Road, which will comprise ultimately 350 cottages. At the present time 250 are in hand, at the rate of twelve to the acre.

Mr. Samuel Blower, of Esme Road, Sparkhill, Birmingham, builder, a prominent member of the Master Builders' Association, who died on March 25, left £14,671 gross and £12,532 net.

Winget, Limited, have issued new lists describing the latest additions to their concrete block and other machinery, embracing illustrations of their "Winget" wagon loader and their Westminster block slab and brick-making machine, both indispensable as regards labour saving and saving of cost in production. Both lists may be had on application to Winget, Limited, at 24, Grosvenor Gardens, S.W.1.

Our Office Table.

Mr. Paul Kingsley Graves, P.A.S.I., A.A.I., of the firm of auctioneers, Messrs. Graves and Son, North Street, Brighton, has been placed first in all England in order of merit in the recent final examination of the Auctioneers' and Estate Agents' Institute. He won the Institute gold medal, the prize of £7 7s., the first prize of £5 5s. for "Practical Work Preliminary to Sale by Auction," and the Kent, Surrey, and Sussex Branch prize. Last year Mr. Graves won the Institution prize of the Surveyors' Institution for the highest marks in the intermediate examination. Before returning to business with his father, with whom he will shortly be entering into partnership, he was with the City auctioneers, Messrs. Debenham, Tewson, and Chinnocks.

The fund for the preservation of St. Paul's Cathedral now stands at a total of £62,569 8s. 7d., including an anonymous contribution of £9,305 (per Canon Alexander) and a further donation of £2,000 by Mr. Harry Lloyd. Recent donors include: Goldsmiths' Company (further donation), £500; Drapers' Company (further donation), £400; Skinners' Company, £300; Merchant Taylors' Company (further donation), 100 guineas; Tylers and Bricklayers' Company, 50 guineas; and Saddlers' Company (further donation), £50. The restoration work is proceeding. The task of making the second pier solid is almost complete, and the Cathedral authorities point out that it is important that the work should not be suspended. There is a great deal yet to be done before safety will be secured. At least another £75,000 is needed to complete the scheme prepared by the experts.

"The Structural Engineers' Pocket Book," compiled by Ewart S. Andrews, B.Sc. Eng. (Lond.) (London, B. T. Batsford, Limited, 18s. net), is a marvel of compilation and judicious selection, which, extending to 350 pages, with 270 illustrations, may be carried in the pocket, and will be found indispensable by all concerned with structural practice. The author has not attempted to repeat the tables given in the section books by the structural steel firms, but rather to give a digest of the various theories and methods of calculation, together with the various essential tables and data, together with references to other literature which those requiring more detailed information may consult. By architects, builders, engineers, draughtsmen, and manufacturers who wish to have available for ready reference tables and data required in their everyday general practice, together with an explanation of the leading methods of calculation, Mr. Andrews' book will be found a most helpful *vade mecum*.

Mr. Ivan A. Bayley, of North Sydney, Nova Scotia, states that he has been successful in making what he terms "fossil lumber," after a long series of experiments, utilising as raw material the substance variously known as infusorial earth, tripolite, fossil meal, etc., together with a small proportion of sawdust to lend it fibre. This infusorial earth is very abundant in Nova Scotia, New Brunswick, and Newfoundland, while it occurs in layers several feet in thickness in the beds of shallow lakes and in marshes which were once old lake beds; this material, which is practically silica, consists of the microscopic skeletons of a species of fresh water sponge which accumulate, in time forming these extensive deposits. The infusorial earth has very remarkable insulating properties and is quite infusible, and the "fossil lumber" which Mr. Bayley has produced is, therefore, fireproof and a great insulator, and it is likewise waterproof. This lumber has as yet only been made in an experimental way, and none of it has been put on the market, but a fossil lumber company is now being formed to begin manufacturing this product on an extensive scale.

The annual meeting of the Sun Insurance Office will be held at 63, Threadneedle Street, on Tuesday, May 31, at noon. The profit and loss account shows a credit of £610,937 6s. 5d., out of which an interim dividend of 9s. per

share was paid last January, absorbing £75,600, and another of the same amount will be paid on July 1 next, leaving unappropriated £469,737 6s. 5d. The total funds in hand will then stand at £4,238,551 9s. 1d. The business returns under each head show solid progress, and the position of this old-established company remains as solidly satisfactory as ever.

The Ecclesiastical Commissioners have decided to dispose of a City freehold in Aldermanbury, one door from the west side of London Wall, a site of 2,520 square feet, covered by the eastern part of the fabric of the church of St. Alphage, London Wall. The porch and tower and adjacent portions are to be preserved, but the rest of the site and materials will be sold. A somewhat similar treatment, under a special Act of Parliament, of St. Olave's Church, London Bridge, whereby half the site is to be an open space, and the tower retained, now enables the sale of the remaining 7,220 square feet. The site is in the heart of the provision market, between two well-known wharves, and it has frontages of over 50 ft. to the Thames and Tooley Street, within 100 yards of London Bridge. The two disused church sites are to come under the hammer on June 30.

A conference was held in the Council Room of the Royal Institute on May 9 between representatives of the R.I.B.A., the Society of Architects, the Institute of Builders, the National Federation of Building Trades' Employers, the Surveyors' Institution, and the Quantity Surveyors' Association. At the request of the meeting, the chair was taken by the President, Mr. John W. Simpson. A friendly discussion followed upon some introductory remarks by the chairman, and it was unanimously agreed that a new form of conditions for contracts between employers and builders should be drawn up for general use in the building industry of England and Wales. A sub-committee of four builders and six professional men was then appointed to consider the matter and report to the parent conference at an early date.

As there seems to be a doubt as to whether the sale of Gwydyr Castle will take place, we give prominence to the fact that Messrs. Ward, Price, and Co., of Scarborough, are holding the sale of the property on the 23rd inst., at the Grosvenor Hotel, Chester, and of the antique collection at the Castle on the Tuesday, Wednesday, and Thursday, 24th, 25th, and 26th, as originally arranged. From the prospective purchasers of the Castle and the collectors' point of view, we think they will appreciate that they will be amply compensated for any little inconvenience in travelling by being able to obtain the property, or the goods, at more advantageous figures than if the sale were being held in more normal times. There are few people in the district, so therefore there will be ample accommodation for those who wish to stay in the neighbourhood over the sales.

Professor S. D. Adshead, Vice-President R.I.B.A., has been appointed by the President to give evidence on behalf of the Royal Institute before the Government Committee on the high cost of building working-class dwellings.

The first peal of bells ever rung by Freemasons was in celebration of peace after the Great War, and took place at St. Clement Danes Church, Strand, where last Tuesday evening a marble tablet to commemorate the event was unveiled.

A workshop where disabled men are turned into "handymen" has been opened at Hailsham, Sussex, by the Ministry of Pensions. Each man is taught brazing, glazing, soldering, plumbing, glass-mending, carpentry, and the care of country-house lighting plants.

In the Auctioneers' and Estate Agents' Institute examination, to which women were for the first time admitted last March, two out of the only three women who sat for the intermediate examination have been successful. Both of them—namely, Miss N. E. Dean and Miss I. H. Graham—belong to Portsmouth, and have for several years been with the firm of Messrs. J. S. Howell and Co., 7, Clarendon Road, Southsea.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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OUR ILLUSTRATIONS.

Leeds War Memorial. Perspective sketch view design. Sir Reginald Blomfield, M.A., R.A., Litt.D., Architect.	
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Strand, W.C.2.

Selected Design, Marlborough College Memorial Hall and Gardens. New view, with plans of main floors. Messrs. Ernest Newton, R.A., and Sons, Architects.	
Historic Furniture, Gwydyr Castle, Carnarvonshire. A Jacobean intaid oak cradle, 1634, and centre table, 1644. Sold by auction this week by Messrs. Ward, Price, and Co., of Scarborough.	

Currente Calamo.

The new wages scale proposed by the National Wages Council for the Building Industry, of which we gave particulars on this page in our issue of May 13, has been accepted by the members on a ballot. The voting was:

For acceptance	26,299
Against acceptance	16,122

Majority for

The result of the ballot on using the funds for political objects was:

In favour	28,535
Against	17,863

Majority for

That means, we suppose, that direct action is meant to keep out the ex-Service men. Mr. Macnamara, on Wednesday, in reply to Viscount Curzon, said that more than 15,000 applications had been received from ex-Service men to join the Government scheme of employment in the building trades, but at the present moment only fifteen cases had been reported as having signed on. Viscount Curzon asked: "Is the right hon. gentleman quite satisfied with the progress that has been made?" Mr. Macnamara said: "No, certainly not, but the reason is beyond my control. Everything is at a standstill. All I can hope is that there will be better times soon, and then we can go ahead." It is now up to the master builders everywhere to follow the excellent course taken by the Birmingham master builders, resolved on at their meeting on Tuesday, as reported in "Our Office Table" on another page, and checkmate this low-down action of the unions.

The "serious deficiency of designers possessing the necessary qualifications," which is the latest mare's nest discovered by that rather fussily fertile body the Federation of British Industries, is a myth, the only "serious deficiency" being the desire on the part of manufacturers and others to pay designers adequately. To be fair, it should be added that manufacturers have long lost all faith in our art schools, which have ignored the workshop and done little but turn out copyists of examples in our museums, which have for the most part failed to fulfil their purpose.

and have become mere sight-shows. The "elevation of the art education of the people" by the cheaper production of objects by the gross by the art student who grinds out designs to order, much as the cemetery-mason has flooded the country with cheap war memorials, of a sort, to meet the limitations of local committees, is not likely to be furthered by "refresher courses" at the Royal College of Art and the Victoria and Albert Museum. There was a good deal to be said for Professor Rothstein's suggestion that students of the Royal College of Art should enter industrial works to study technical courses; but that, after all, would only be another makeshift, and would, probably, do little more than make a few better art masters and mistresses than those who have formed the principal product of the Royal College hitherto. Our system of State Art education, as it is worked by the Board of Education, has become more and more of a failure every year since 1851, mainly because here the State had no great State factories, superintended by real artists, such as Colbert, who so autocratically, but so successfully, reorganised the arts of France in the seventeenth century, attached his ateliers to. We have given up any hope of improving South Kensington, or of any likely reform of our art schools, with their easy but profitless regulation of entrance for people who have no aptitude for art as a career, and who, for the most part, drift into the ranks of amateurs whose work when accepted lowers the quality of current art and helps the manufacturer to pander to mere fashion. The manufacturer, we hope, will turn a deaf ear to the blandishments of the Federation of British Industries, and the taxpayer had better set his face like a flint against another addition of a million or two to his already heavy burden, and wait a little for "the elevation of his art education" till his back and belly are more reasonably covered and filled!

The arrangements for the exhibition at the Guildhall of a selection from the pictures that were not accepted for this year's Academy have now been completed. The selection committee is composed of Sir Luke Fildes, Mr. Henry Woods, Mr. H. Hughes-Stanton, Mr. Herbert A. Olivier, Mr. Julius Olsson, and Mr. Frank Salisbury. It will not be possible to hang more than 300 pictures of moder-

rate size in the Guildhall Art Gallery, and already applications have been received from more than 1,000 artists. Evidently the task of the committee is rather an invidious one, but we understand that they are not going to select pictures, but artists. The applications will be gone through and considered, and about 250 names will be selected from the 1,000 that have been received. These artists will each be asked to send a picture of moderate size to the exhibition. It must be of moderate size, in order to give as many artists as possible a chance of exhibiting, and it is not likely that any artist will be asked to send more than one picture, though the last point, however, has not yet been finally settled. The artist will send the picture he thinks fittest, and it will be hung, whatever the Selection Committee may think of its particular merits. If it is found that there is still room left after the first 250 artists have sent in their works, invitations will be issued to a limited number more. The private view of the exhibition will take place on Friday, June 10, and it will be opened to the public on the following day. It will remain open until Wednesday, July 13. There will be no charge for admission, and the exhibition will be open from 10 to 6 on week-days, and from 3 to 6 on Sundays.

The Rent Act, 1920, is still being laboriously construed by the Courts. No sooner is one problem solved than another crops up, full of vague possibilities. Not only do these things happen, but fresh general points may arise suddenly out of what seemed simple words in this hastily drawn Act. Thus Section 5, after setting out the conditions on which a landlord can get an order for possession, provides finally: "And the Court considers it reasonable to make such an Order." Now, "reasonable" is a very wide word of many meanings, though it looks harmless enough. In the recent curious case of "Flint v. Ead" the facts were that the plaintiff had bought a house at Shenford for his own occupation, and he wanted possession. The defendant tenant was a lady manager of a public-house in London, where she lived, but at holiday times and on other occasions she used this house in the country. It was argued for the landlord that he could not be bound to find her a third house under the clause as to "alternative accommoda-

tion" while she had her residence in London. The County Court judge at Brentford had refused plaintiff an order on the ground that no such accommodation was offered to the tenant. The plaintiff appealed to the High Court, and the two judges sitting took up the point of reasonableness above noted. They held that, even if all the conditions set out in Section 5 had been fulfilled by a landlord, he could not claim an order unless the Court thought it "reasonable" to make one. Keeping clear of the thorny question as to alternative accommodation, they held that, as the County Court judge had exercised his discretion upon all the facts, they could not interfere with his view of what was reasonable, and so they dismissed the plaintiff's appeal.

Mr. Kellaway has quickly caught the sleeping sickness that seems endemic in the Post Office, and is presumably seeking the same quack remedies in favour with his predecessor. His new regulations will fail, as all such have failed, to bring additional revenue, and will, as usual, hit traders of all descriptions hard. Until of late years newspapers were the favourite victims of oppression; and we have had many times, mostly with success, to fight hard for freedom from the freaks of Postmasters-General and other new brooms. The exception was when we were convicted and fined half-a-crown at Bow Street for resisting a silly refusal to extend to newspapers failing to reach their destination the same right of return to the sender that a letter has. As the magistrate told us then, by the Act of Parliament which covers his activities, or his somnolencies, the Postmaster-General can do anything he likes. That autocracy was the first of the many that have followed the initial departure of the House of Commons from its old traditions of maintenance of its authority over all Government departments. The rest have followed with impunity, till officialism has everywhere defied all protests and strangles the whole nation in its octopus-like tentacles.

Mr. William Lockwood, of Eden House, Townend, Colcar, Yorks, a Liberal leader in the Colne Valley for over fifty years, and in business as a joiner and builder, has left £11,569.

The "last bit" of Byron's Elm on the top of the hill in Harrow Churchyard is for sale by the vicar and churchwardens to the highest bidder to renew the seats on the spot; any surplus to go to the church spire contingencies fund.

An appeal is being made for £10,000 for the repair and renovation of Wesley's Chapel, City Road. In making the appeal the minister of the chapel, the Rev. Walter B. Armstrong, states that Wesley's tomb, statue, and graveyard are a reproach to Methodism.

Lady Askwith, speaking last Saturday at the annual conference of the Association of Teachers of Domestic Subjects, said: In the Ministry of Transport there were thirty men doing the work which her husband used to do alone, and each was getting a much higher salary than he had.

The examination for Assistant Examiner in the Patent Office will begin on Tuesday, July 26, 1921, instead of on Tuesday, July 12, 1921 (as stated in the printed regulations), and will last until Saturday, July 30, 1921. Any candidate who has attained the age of twenty on July 26, 1921, and has not attained the age of twenty-five on July 12, 1921, will be regarded as eligible in respect of age to compete on this occasion.

PROFESSORSHIP AND PUBLIC RECOGNITION.

We architects often complain of public indifference. The remedy, however, lies in our own education. Civic pride exists, but architects do not effectively solicit the co-operation of administrative bodies. In France the profession has more public recognition because of its more logically conceived organisation for the training of architects.

In education, as in commerce, "Centralisation" is irresistible. It has many drawbacks, yet remains the best of all imperfect systems. Regional architecture, with all its petty charms, was merely the happy result of costly transport. It is now doomed to uniformity and improvement. It is playing second fiddle because the local masters are unfortunately at present not up to the required standard. When a sufficient number of professors are sufficiently well equipped with educational rather than practising qualifications, then the localities will again be in the position to develop something worthy of the locality.

French architectural education is more a matter of encouraging personal effort rather than the imposing of individual opinion: The Ecole des Beaux Arts is not a teaching institution in the English sense. It is a centralisation of the schools, its characteristics being co-operation among students, representation for judging, and solicitation of the public. For this the results, whether good or bad, are necessarily more national than in any other country. Advocates of British nationalism in architecture could not do better than study the organisation of the Ecole des Beaux Arts. If a similar thoroughness is impossible without a Ministry of Fine Arts, we can at least inspire from its methods of education. A progressive series of "Programmes" (subjects) are proposed by a man who has made a special study, not so much of the subject in question as of the *object* and *method* of setting the subject.

The different "Ateliers" (schools) all send in "Projets" (designs) for the same programme, whether elementary or advanced. The projets are publicly exhibited in order of merit after being judged by a large representative jury, and awards made accordingly. The student's place in the "Concours" (competition) is a great lesson! This method has its shortcomings, and outshines all others. The guilds are gone, and the pupilage system, the best so long as there was nothing better, bids fair to be discredited as a premium stunt. Parents and the public have reason to support the colleges and culture.

At the Ecole des Beaux Arts the Professor entrusted with the setting of programmes is called the Professor of the "Theory" of Architecture. This responsible position is now held by M. Victor A. Blavette, Grand Prix de Rome (1879), Architect to the Louvre. He succeeded Julien Ouadet, a practising architect of equal reputation, and the much-esteemed author of the most excellent "Eléments et Théorie de l'Architecture (Cours professé à l'Ecole Nationale et Spéciales des Beaux Arts)," an invaluable work of the greatest value to all modern architectural students of no matter what nationality, and undoubtedly the best educational treatise on our subject in any language.

The French have the advantage of a tradition that architectural education is a science in itself not picked up in offices nor necessarily understood by brilliant students. A well-known practising architect may not by temperament be suitable to organise educational courses. It is a branch apart. However, the theory of the

"Ecole" is to turn out practical men; consequently, Universities would benefit by nominating a Professor capable of realising the principles he is called upon to inculcate, and Senates should therefore demand something more than mere teachers liable to lapse into proxy pedagogues.

From serious technical conversations with Monsieur Blavette and Monsieur Jules Godefroy (member of the Council at the Ecole des Beaux Arts), who are in no way responsible for this message, I gathered the following helpful conclusions with reference to the drawing up of programmes:—1. In principle they should be mainly theoretical. 2. They should aim at developing artistic imagination. 3. Their object is to train architects rather than contractors. However, architectural education has to be adapted to at least three categories of students: Elementary, Intermediate, Advanced. All must pass through the elementary stage, a few become advanced, the majority remain intermediate. Programmes for elementary students should tend to educate them, irrespective of practice, in the first principles of composition, the use of the orders, in the appreciation of proportion and the rendering of effect. Scientific construction can scarcely yet be expected. Students' imagination should not be hampered by petty considerations of a commonplace nature. The aim in this category is essentially artistic and theoretical.

Advanced students are supposed to have some practical experience, to have worked in offices, to have studied stereotomy, and other building sciences, besides having submitted solutions of some of the special programmes dealing exclusively with construction. They are then in a position to tackle in a practical way programmes of a nature calculated to stimulate the higher faculties for big decorative schemes. This class of programme is again more particularly of a theoretical nature, and the student should be left the greatest freedom in the choice of style. Special programmes are set with a direct archaeological aim, preparing the student for restoration work. Here let it be remarked that the "Ecole" stands for scholarly modern interpretation of traditional principles; that it encourages style or character, but not the imitation of style. In this way a national modern style is in process of development.

Students in the intermediate class now form the greatest number. The majority, especially since the war, cannot afford the time and money necessary for a complete education leading up to the Grand Prix de Rome, and most prefer practice to perfection, consequently the programmes for this class must be more practical, more scientific, and more adapted to the commonplace requirements of everyday life. The mass of the students have to leave when in the second class (or after having done one or two first class projets), in order to make a position in life. The catering for this class is a necessity, but somewhat upsets the principle of the progressive theory of the Ecole training leading up to the "Diploma," yet it is every day gaining more and more ground. However, the important point still remains that the professor responsible for setting the programmes should know how to word them so as to bring out artistic interpretations of practical problems.

The whole question of architectural education lies in the drawing up of programmes. The professor is himself expected to have a clear idea of the solution of the subject proposed; he should be sure of the possibility of the imagined scheme. While leaving great liberty to

the student, he should suggest the artistic character of the construction and hint at the required accommodation of the problem, avoiding ridiculous dimensions.

In judging the results submitted care is taken to award according to the aim of the programme. If the projet is a "Rendu" (careful drawing), it must be effectively rendered. If a "Projet de Construction," it must be scientifically worked out; but if the problem is one of setting down rapidly-executed imaginative ideas for a large composition, the projets submitted will not be judged from a prosy practical point of view.

We English pride ourselves on being practical, but that rather smacks of laziness or the love of 5 per cent. before fine architecture. The practical fellow has been termed "A man with one eye and a bag of tools." Napoleon said, "It is imagination which rules the human race." In architecture as in military tactics we can profitably inspire from our friends across the Channel. In this connection it is instructive to read Monsieur Godefroy's article in the "Bulletin de la Société des Architectes Diplômés par le Gouvernement" for May 1, 1921, a translation of the main part of which runs as follows:—

"A HAPPY INITIATIVE.

"On visiting the Ecole des Beaux Arts on April 6 one might have thought it had changed into an Ecole Militaire. The officers there, who for the most part ranked as colonels, came to visit the exhibition of the 'projets' of the 1st class (advanced) students, and more particularly that of the 'esquisses-esquisses' (rough draft schemes), the subject of which was, indeed, well set to attract them, seeing that it was a question of 'esquisses' (sketches) for a projet for an Ecole Normale d'Education Physique.

"Monsieur Blavette, the Professor of Theory, had hit upon a happy idea when proposing to the students in the first class a subject which attracted to our 'Ecole' the attention of the military authorities. It is to be remarked that the Minister for War hastened, as soon as cognisant of the subject set, to ask the director of the Ecole to inform him of the projets placed first. Our congenial sub-director (M. Bomier) then took the initiative to answer direct to the point that it would be still better if the Directeur de l'Instruction Physique du Ministère and the officers who might be interested in the matter would kindly visit the exhibition of the 'projets,' at which a delegation of the members of the jury would be present. The delegation would acquaint them with the conditions in which the competition had taken place, and would explain to them the ideas which the students aimed at interpreting in their compositions. In this way they would be better able to understand the reasons which brought about the placing in the order of merit.

"Certain members of the jury were hot without some feeling of anxiety. They somewhat feared lest the 'esquisses' should not appear with all the rendering and all the elegance which one would be right in expecting from Ecole projets; the more so as it was a question of showing studies rapidly executed in twelve hours, and which had no other merit than that of expressing ideas in an harmonious composition. They, therefore, wondered if the technicians who were going to see them and who could not be expected to have our eye would be able to appreciate all the interest.

"Well, it happened, on the contrary, that the military delegation which we

thought would only count three or four members, and which gathered together twenty-five, interested itself in each of these compositions, for the most part first-rate and all generally well expressed, clearly conveyed, so far as to reveal not only that the students were in no way novices—but that their comprehension of the subject was perfect.

"Louvet, our president, who very fortunately joined us, expounded the question, and, after having read the programme, commenced the analysis of each of the studies submitted. He was supported by Umbdenstock, Héraud, and Leprince-Ringuet, who all gave their personal ideas on the interpretation of such a subject, and were the expounders of the criticisms and observations which were made during the judgment as well as the reasons which had actuated the placing in the order of merit.

"What literally astounded all the specialist-officers was to learn that, without preliminary lectures, without having known in advance the subject, our young comrades were able to realise such a vast composition in a single day of twelve hours. This is a valuable point for putting into evidence the character of our beloved 'Ecole,' where our students are trained to develop that intuition of the thing such as it ought to be, so to speak, or if you prefer, that imagination which precedes the real, which every real artist should possess, and which forever incites him to perfect his work. No other centre of art could develop to the same point this particular accomplishment.

"The three 'esquisses' placed first were clearly superior. Their authors, Féchin, Marleix and Bergougoux, emphasised in their composition a decision of choice, a clearness of mind which did not escape the military delegation, so much so that their judgment as technicians happened to be identical with ours. Lieutenant-Colonel Bonvalot, directeur de l'Ecole de Joinville, and Major Oger, from the Military Staff Office, showed their satisfaction by suggesting that a reproduction of each of the esquisses should be sent to the Minister. The next day General Pénelon, Inspector of the Engineers, in his turn, paid a visit to the Ecole des Beaux Arts. He did not hide the fact that this exhibition was for him a veritable revelation. He even added, which is of great importance and really marks the beginning of a new spirit well calculated to gladden us, and of which it only depends upon us to get the advantage, that, each time in the future when it is a question of a building of a military nature an appeal should be made for the ideas of our comrades.

"Thus we have already obtained the result that our school will no longer be unknown in the future by the military authorities; a veritable close connection might even thus, in time, be established between the War Office and the Ecole. And as the civil authorities would not care to appear behind the times, perhaps we shall see the other Ministries undertake similar relations with us. Indeed, it would not be too much to invite them to do so, as M. Bomier has just done in connection with the War Office.

"It would suffice to inform the competent Ministry which might be interested in the subject of one of our competitions, whether the Ministry of Agriculture, Trade or Public Works.

"This collaboration might prove very fruitful to our teaching of architecture so complex that one can say, without exaggeration, that it touches all the domains of national activity.

"... We can never be sufficiently thankful to M. Bomier for his very happy initiative.

"J. GODEFREY."

From the above we gather several points of technical importance and a very practical suggestion for the increasing of our prestige in the public eye. Technically, it is an eye-opener for the uninitiated to see what well-trained students can do (overnight, so to speak) in the matter of composing a vast scheme, providing the programme is previously well drawn up. In actual practice the drafting of the programme is done by the architect himself after much collaboration with the client. When conditions for a public competition are properly drawn the competitors need not ask many "Questions," this meaning much work for the assessor. It is more than ridiculous to suppose that students are familiar with the exact accommodation desirable for every kind of building, hence the immense responsibility of the Professor of Theory.

What better method could be devised for the training of rapidity in composition?—not enough in itself, but a preliminary acquirement of necessity to the purist and a very practical accomplishment for the business-like artist; the most useful asset for impressing clients.

The "Esquisse-Esquisse" is particularly French in method, and generally perplexes foreigners. It is decidedly practical, yet essentially theoretical, and in itself must be regarded only as a form of study. If some brilliant but lazy students tend to rest on their oars, content with dazzling the eyes of the layman, that is no excuse for not developing this faculty, so much esteemed by all serious students as a necessity.

Is this skilful brilliancy widespread among our British students? If not, suggestions for the developing of this particular facility of expression should not be taken amiss. It would certainly do much to dissipate the superstition of public indifference.

The great principle of the Ecole training is the "Setting and Reading" of programmes—the most logically organised method in the world. The student learns not to make a station look like an hotel, and the professor learns not to ask for an hotel if he wants a station. Our learned president of the Royal Institute of British Architects, Mr. John W. Simpson, Membre Corr. de l'Institut de France, very clearly pointed this out to students last January when considering the question of public competitions. It is of all considerations the most important both for assessors and competitors. A "School" frankly academic provides theoretical grounding for the practitioner.

The mere reading of a series of programmes proposed for students at the Ecole des Beaux Arts is an education in itself. As an instance, a monument might in appearance be either funeral or triumphal or both, but merely to ask for a monument to the dead is to leave the student in the dark as to how it will be judged; besides, the reading of the programme is of no artistic educational value. The question of drawing up instructive programmes is an artistic science in itself worthy of our deepest consideration, and for this I would suggest for the benefit of British architectural education: "A greater 'Centralisation' of our teaching bodies; the nomination of a 'Professor of Theory' for the setting of programmes. That the jury for judging projets be representative of all the leading professors concerned." This extension of our efforts, I believe, would lead to more vigorous and more national results.

The professor, a practising architect who has made a special study of this particular form of instruction, should know in detail the requirements, both artistic and scientific, of all the subjects proposed, such as the usual stock-in-trade of commemorative monuments, town halls, theatres, museums, etc., and the general principles of town planning; but for modern purposes, as even he cannot be expected to be familiar with every kind of building from slaughter-houses to colleges and synagogues to lunatic asylums, it is his concern (more than the students') to find them out before setting the subject. For this he has a civic right to request information from administrative bodies, private companies, corporations, associations, etc. The British authorities, if courteously approached, are no less obliging than the French. Thus drawn up, the "Programmes" would be valuable documents to architects, and the students' "Projets" valuable suggestions to the public. The authorities, not being slow to recognise their own interests, encouragement would follow, and our efforts, less isolated, would become better known and more effectively patronised, public indifference would vanish, and the status of the profession would thereby be enhanced.

Effective professorship is the only road to public recognition.

H. BARTLE COX, A.R.I.B.A.

(Ancien élève atelier Laloux, Paris).

ARCHITECTURAL HERESIES OF A PAINTER.

Under the title of "Architectural Heresies of a Painter," on Thursday, May 19, at the Royal Institute of British Architects, Mr. Roger C. Fry delivered an amusing address which was at the same time an indictment of modern architecture, especially in this country. Beginning with the statement that he probably started on common grounds with his audience when he said that all was not well, he proceeded to set out the objections he found in the form of a series of "heresies":—

(1) We have substituted for the art of architecture the art of dressing buildings according to the fashion.

(2) This phenomenon is more or less world-wide. In the false architecture of modern Europe which results the English is distinguished by its lack of the sense of scale.

(3) It is sometimes distinguished also by its good taste. (Good taste in this sense is a social rather than an aesthetic virtue.)

(4) There are two possible kinds of beauty in a building: (a) What may be called natural beauty, which is also the beauty of a locomotive or a panther—this results from the clear expression of a function; and (b) æsthetic beauty, which results from the clear expression of an idea. We have so arranged that neither of these beauties occur in our buildings.

(5) Æsthetic beauty in a building is essentially the same as that of sculpture. It results from the expression of a plastic idea. There has hardly ever been an æsthetic architecture in England, and there has been even less sculpture.

(6) Our architecture does not express plastic ideas, but historic-social ideas.

(7) It is founded upon social snobbery.

(8) The vices of modern architecture have always been inherent in the architecture of England. Modern conditions have brought out the rash.

(9) Modern conditions and modern science have put into the hands of architects the greatest opportunity in the history of the world; but they have missed it completely.

(10) To a great extent it is not the architect's fault.

Developing the above theses, Mr. Fry said we were almost always pleased with fashionable dress; but it must be the last word of fashion. Worn just as well and by just as beautiful a lady, but two years later, the same forms would be definitely unpleasing, because the forms of fashion were never regarded intrinsically, but always according to their social implications. In architecture, buildings which, when just erected, attracted by a certain air of piquant novelty became *démodé* in a few years, and, like clothes, being dowdy, were done for.

As examples of these passing fashions, the lecturer quoted St. John's Wood Avenue, where baronial splendour seemed at last to have been compressed into the limits of suburban convenience, the Wagner-operatic effects of Hans Place, the Law Courts, and the so-called Queen Anne style that had succeeded to all these. But where, he asked, were the fashions of yester-year? All this expensive stone costumery had become tarnished and outmoded. At first some novelty of so-called style—really a reference to any past epoch which had not been recently exploited—had an air of *chic*, arousing a faint curiosity and suggesting social alertness. But exactly as fashions in clothes begap to be copied by each successively lower social level, so the new architectural style, whatever it was, having started its career in the smart world, gradually descended to lower and lower social depths. Some years ago a South African millionaire had given himself away by building a perpendicular Gothic palace at a time when no one in the know would have tolerated anything but some form of Renaissance—preferably French. Sham and very ornate perpendicular had once been modish, but the last he (the lecturer) had seen of it was in some shops in Bloomsbury which were socially negligible. (Laughter.)

Real style was the perfect adaptation of the means of expression to the idea—it resulted from ease of expression; but as understood now, style was essentially social symbolism. This copying of the past according to a prevailing fashion was fatal to creative effort. It implied an idea that æsthetic beauty was something material, absolute, fixed and determined like a chemical element; whereas, in fact, it was a relative quality inhering in the forms of the object of art only in so far as it was an evident sign of an inward spiritual state on the part of the artist. This was why nothing was so unlike an original work as its copy, because the copy was inevitably the expression of a totally different spiritual state. The copy itself could only be a work of art if the artist remained an artist, and did not become merely a copyist; he must get at underlying principles, not merely learn by heart the external evidence of those principles. He must think in the language, not merely translate into it. Of such successful and creative imitation the Renaissance architecture of Italy furnished the most obvious example; for in that, from the first, the underlying principles had been so firmly grasped that the adopted style grew continually into new coherent forms like the unfolding of an organism. Among modern architects Bentley showed, in the general planning of the interior of Westminster Cathedral, a free creative movement along the lines of a past style; but London generally was an incredible museum of pastiche, from

which one protected himself by not looking at the buildings. This was more or less true of all modern cities, and although the French had not played such wild chromatic scales up and down the archaeological keyboard as we, the adaptations of their styles were often grotesque.

Dealing with the absence of a sense of scale from British architecture, the lecturer said that Ruskin had remarked that we built rather for rats and mice than for men. We were meek, timid, and meticulous; we finished our tiny details with short-sighted antlike industry. We had invented the cosy corner, and in one form or another the cosy corner marked most of our buildings. This was not a merely modern characteristic of our civilisation. One had only to compare our snug little Gothic cathedrals, built piecemeal and without any generous comprehensive plan, with the vast pretensions of French cathedrals—mostly built straight off under the impulse of a single all-compelling *élan*—or with the great bare emptiness of Italian churches of the same period, to see that it was true at that time; and if we compared modern French and Italian architecture with our own we should see that it was the case still. In London Portland Place was the only street that gave room to spread the wings of one's civic consciousness. Saint Paul's was a case to the contrary; Wren was one of the greatest masters both of scale and of plastic expression. He was the one miraculous exception.

Speaking of the two kinds of beauty a building might possess, natural and æsthetic, the lecturer said the curves of a shell, recording the continuous life and adaptation of the creature inhabiting it, had the kind of harmony and essential logic that he meant by natural beauty. He found it also in many machines. An engineer who had completed the curve of a bridge by a purely mathematical calculation of its functional needs might have an æsthetic recognition of its logical precision, and might so arrange that nothing should interfere with the evidence of this. He might go further and make out for the spectator his recognition of its character. At no time in the world's history had there been a greater opportunity than now for displaying this kind of beauty; because our strict scientific methods had led to a vast amount of exact calculation of natural forces and exact adaptation to meet them. But the engineer was intimidated by the pressure of social prestige. Society demanded art, and so he had to allow an architect to put on the art. Or he might even have sufficient general knowledge of styles to put it on himself!

Of æsthetic beauty, the lecturer said this in a building was essentially the same as in sculpture, and resulted from the expression of a plastic idea. By this he meant such a construction of three-dimensional shapes as satisfied the contemplation of their relation one to another and to the whole combination. A mathematician and an artist might happen to like the same combination of cubes and hemispheres; but their satisfaction would be different in kind. The mathematician's interest would be due to the particular combination giving rise to certain mathematical formulæ; the artist's to an effect upon the imagination. It was to be doubted whether the minds of our architects moved freely in three dimensions—whether they did not rather understand and feel in the flat. If they felt plastically they would discover all sorts of untried possibilities.

That the vices of English architecture had always been more or less inherent, and had only been brought into promin-

ence by modern conditions was shown, the lecturer thought, by the work of our early builders. The essence of Gothic architecture was the purely engineering discovery of how to build a stone greenhouse; all its forms were dictated by the structural necessities that this involved. But our early architects used these forms as fashionable ornaments; a great deal of their Gothic was precisely costume. They continued to pierce wall surfaces instead of building with glass walls. It was hardly till the Perpendicular that they began to use Gothic structure with logical certainty and freedom; and the same thing happened with the Renaissance.

Dealing with the opportunity put into the hands of the architect by modern conditions, the lecturer said one could not help wondering why so violent a stimulus as that given by the new constructional possibilities had led to so disappointing a result. Think how great an impetus to æsthetic invention had been given in Romanesque and Early Gothic times by the working out of the problems of stone vault construction! Then every new invention had been accepted eagerly, and new forms been invented to express and embody each structural advance; but in modern architecture new constructional possibilities were accepted with a grudging reluctance. Instead of inspiring the invention of new and appropriate plastic forms, the new methods were slurred over by old stylish conventionalities.

Mr. C. J. Holmes, who presided, said that nearly everybody present would have a great deal more sympathy with Mr. Fry than he himself apparently expected. Mr. Fry demanded from architects an experimental courage; but this, in the case of an architect, was a rather larger quality than in the case of a man of letters or a painter. These wasted little more than their own time if an experiment failed; but the architect wasted a great deal of money besides committing himself to an immortality of abuse.

Mr. Austen Hall said that, if only the public would take an interest in architecture, their improvement in critical taste and appreciation would be followed by an enormous improvement in the work carried out.

Votes of thanks to the lecturer and chairman ended the meeting.

THE DESIGN OF THE PICTURE THEATRE.

"The Design of the Picture Theatre" was the subject of the paper read by Mr. Robert Atkinson (F.) at a meeting of the Royal Institute of British Architects held at No. 9, Conduit Street, London, W., on Monday. Mr. George Hubbard presided. The preliminary business included the announcement of the deaths of Mr. Herbert William Walker, Associate, 1897, Colombo, Ceylon; of Captain Morley Pope, Licentiate, Montreal; of Mr. William Hampden Sugden, Licentiate, Keighley; and of Professor Martin Nyrop, of Copenhagen, honorary corresponding member, elected in 1906.

Mr. Atkinson began with a complaint that architects were a poor lot artistically, as witness the trade Press, which, he took it, reflected the taste of the trade itself. Of this Press the medium of appeal was purely the "punch," and he had searched a year's numbers without finding a single block sufficiently clear to make a slide from. Among picture theatres, these had been all in bad taste in the past; but he could say confidently that the better theatres now were in thoroughly good taste. In America things were better than here, and he had recently visited that country with a view to in-

specting some of its best picture theatres. He was somewhat economical in mind, and when on this visit had decided that the cheapest way to see a picture theatre would be to send in his card to the manager and ask facilities for inspection. These had invariably been granted, and every manager proved to be enthusiastic about his building, even knowing the name of its architect. But the volubility of the manager generally occupied the best part of a day. He found it was cheaper to pay for admission, especially when by tipping an attendant a better position in the house could be obtained than the ticket he had taken entitled him to. (Laughter.) Was the cinema theatre a passing fashion? Like railways, motor-cars and flying machines, it had made enormous strides in its early days, and then improvement had come more slowly and been chiefly in detail. In the modern picture action was reduced to the minimum which would give the desired impression; it was becoming an old master in its studied elimination. As to the theatre in which the picture was shown, beginning as a penny gaff and progressing through the various stages of the vacant shop, the abandoned skating-rink, the temporary booth, the imitation Earl's Court, and the building of the wilfully ignorant and rapacious speculator, it had attained the level of being specially erected by a good architect and was reaching already the point where even the opera houses of yesterday would be puny compared with the magnificent erections of the picture world. The normal picture theatre of to-day seated about 2,500 people and had colossal brothers with a capacity of 5,000 and over. In design and construction it had overtaken the ordinary theatre, passed it, and incidentally applied an impetus which conservatism and lethargy had almost stifled, at any rate in England, so far as theatre design was concerned. Its planning revolved about the projection of the picture on the screen, combining with this good vision for the body of the auditorium and good exit. Where the site was cheap a one-storey theatre was most economical up to a seating capacity of 1,500; but for expensive sites and large capacities a double-storied theatre became essential. Three-tier theatres, the usual type for the normal theatre, were very difficult to work as picture theatres, and actually given the same area the two-tier theatre could be planned to accommodate an equal number of spectators. The greatest possible number of seats should be at some little distance—say, 50 or 60 ft.—from the screen; but not too far removed—not more than 120 ft. The fan-shaped theatre was the most suitable, for not only did this provide the maximum number of good seats, but it eliminated the bad near-side seats. In section, also, the converging sight lines suggested the conical outline, a return to the Roman vallerum in principle. Again the acoustical properties of the cone were as nearly perfect as possible, giving a confinement of volume in a given direction and an elimination of reverberation. If the sound volume exhausted itself at about the extent of the depth of the auditorium an echo was practically impossible. The sound volume would exhaust itself at about 100 to 120 ft. from its source; where halls were shorter than this the rear walls could be padded as sound chambers, and if the hall was larger the side walls and ceiling should be hollow, so as to increase the consonance. A dome, however flat, reflected sound-waves towards a focus and so caused an anti-climax. Apart from capacity and shape, the questions of seating and sighting lines

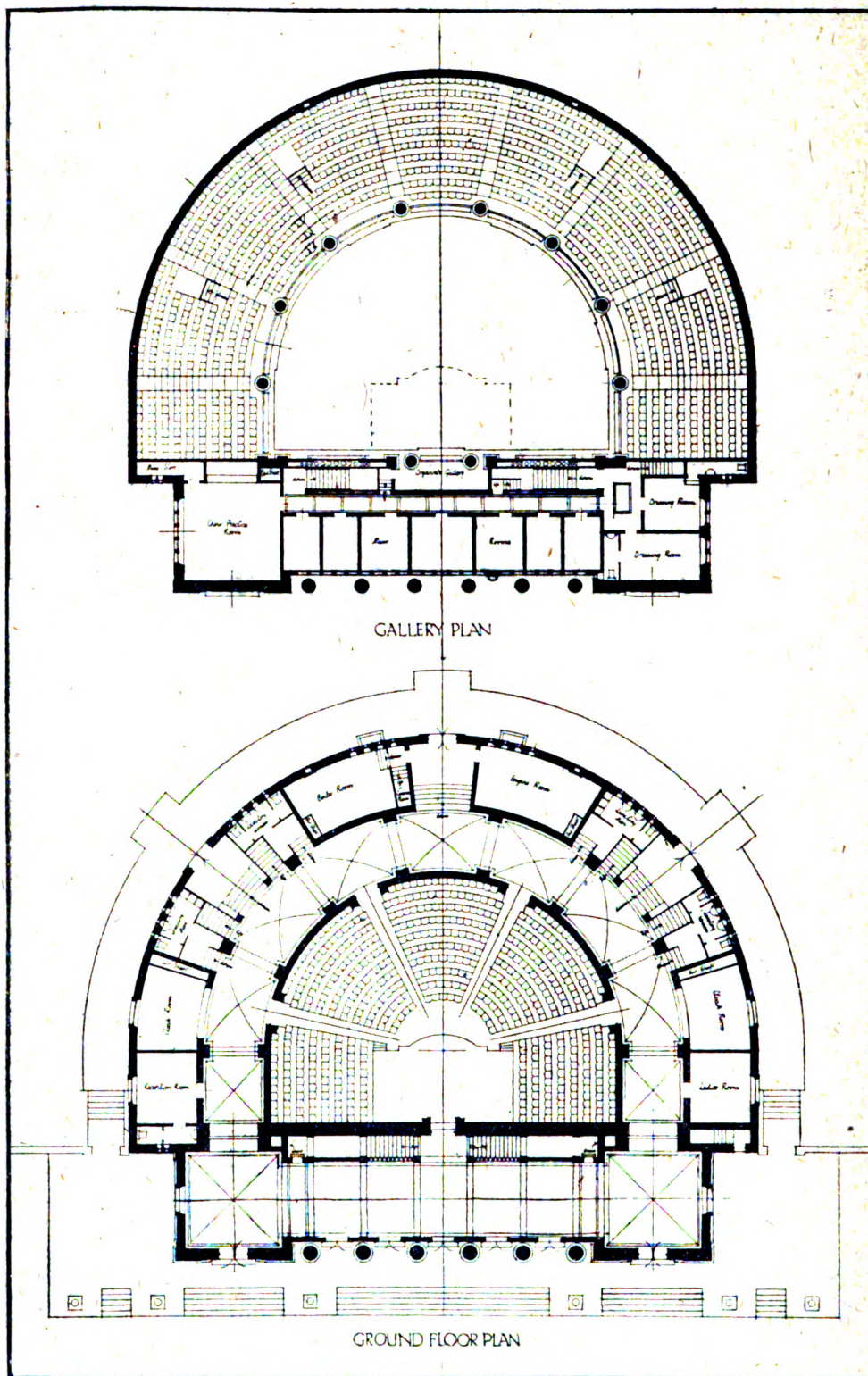
were of paramount importance. Sighting lines were usually so arranged that each person had a clear view of the bottom of the picture, obtained by sloping the floor or stepping the balcony so that the vision line of each seat was three inches above the vision line of the seat in front. This, with the possibility of staging the seats, gives a clearance of 6 inches between alternate rows of seats. Where there was a balcony the top of the picture should be visible from the rear seats under that balcony. The seating was usually spaced 2 ft. 6 in. by 1 ft. 6 in. in the cheaper seats, with a gradual increase up to 3 ft. by 2 ft. in the best seats. No seats should be nearer the picture than the length of the screen. Gangways should be not more than fourteen seats apart, not less than 3 ft. 6 in. wide, and should gradually widen towards exits or entrances. Projection was really the crux of cinema theatre planning; the ideal was the perfectly level throw; it was best to lay down the projection and build the theatre round it. The projection might be very easily worked from the back of the theatre in a building without a balcony, but such working became increasingly difficult as one or more balconies were introduced. The length of the projection should not exceed 100 ft., but up to 150 ft. had been done. The screen was best of solid plaster, distempered white and not of too smooth a surface. Rear projection had been tried, the screen in this case being of ground glass; it was not so good as front projection. The auditorium of a theatre to seat a thousand on one floor would need to be approximately 80 ft. by 120 ft., and for 1,500 people 120 ft. by 150 ft. With balconies these figures could be doubled. Outside this, a space in proportion for entrances, lobby, resting room, etc., were required. Sites should, of course, have at least two outside walls to streets, and where the capacity was 2,000 or over isolated sites should be selected, or allowance made for lateral open spaces on the ground itself. Exits should be exceedingly generous. It was by the familiar way in that people would naturally endeavour to escape in case of panic, and for this reason entrances should be very ample and extra exits provided visible from the usual way out. Stairs should lead from each floor entirely uninterrupted by cross passage or by secondary converging streams of people from another level.

In American theatres the escape stairs were generally of iron, suspended outside the main walls of the building, and fed at several different levels without increasing perceptibly in width, a method which enabled valuable sites to be fully utilised, but which was ugly and otherwise very unsatisfactory.

Speaking of decorative effects, Mr. Atkinson said that in spite of the progress in planning already made on that of the ordinary theatre, the internal decorative design of the cinema theatre was generally based on the out-of-date work of the last century. Colossal ceilings, with heavy ornament, domes, and candelabra, with a proscenium opening also colossal in character, seemed to be the sum total of effects. Many of the smaller theatres were extremely bad in taste and restless in ornament. But the very finest theatres in America had harked back to a kind of Pompeian Adams motive for their internal details, very tasteful, well modelled and well designed.

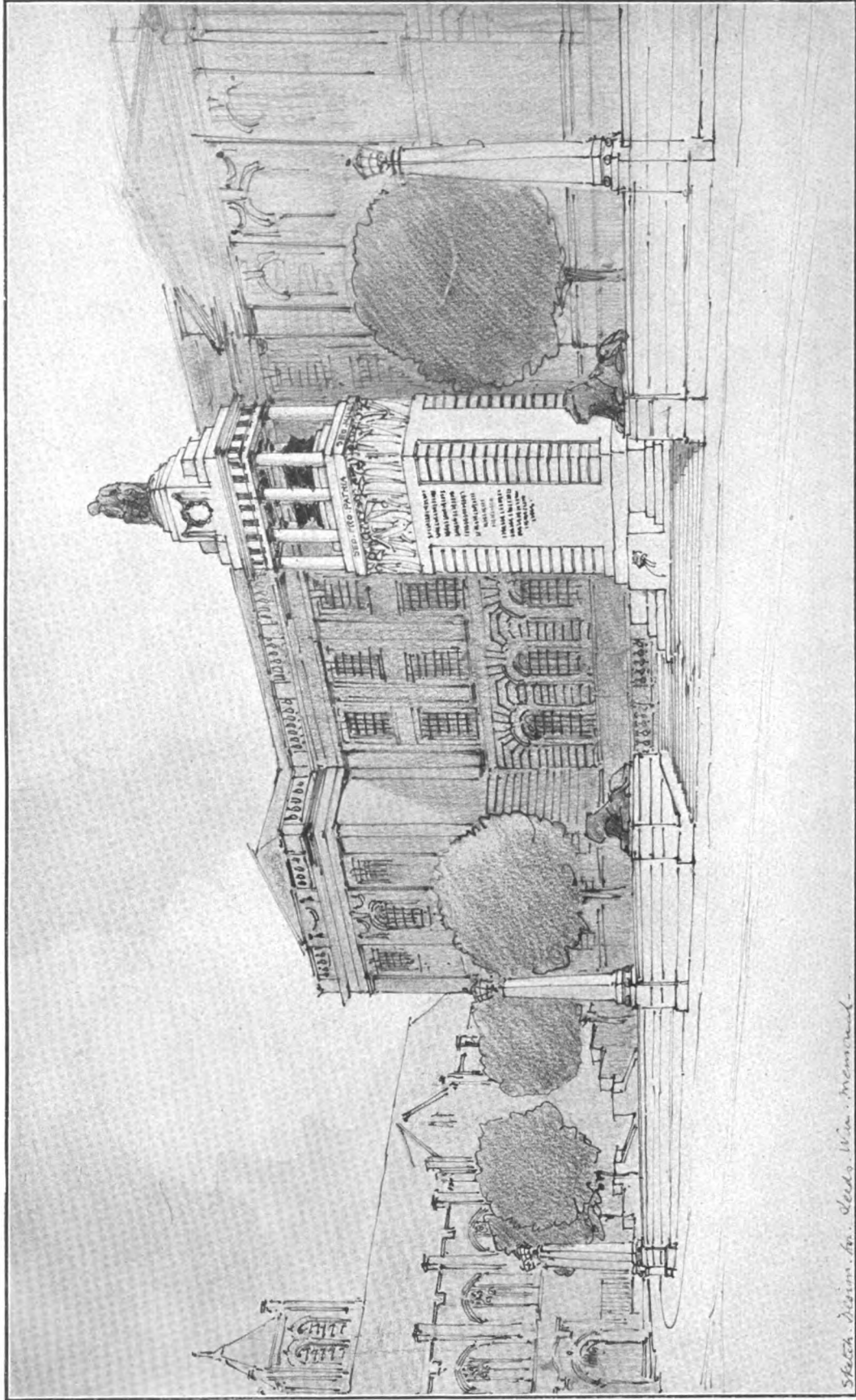
The lecture was very fully illustrated throughout with lantern slides.

(Continued on page 290.)

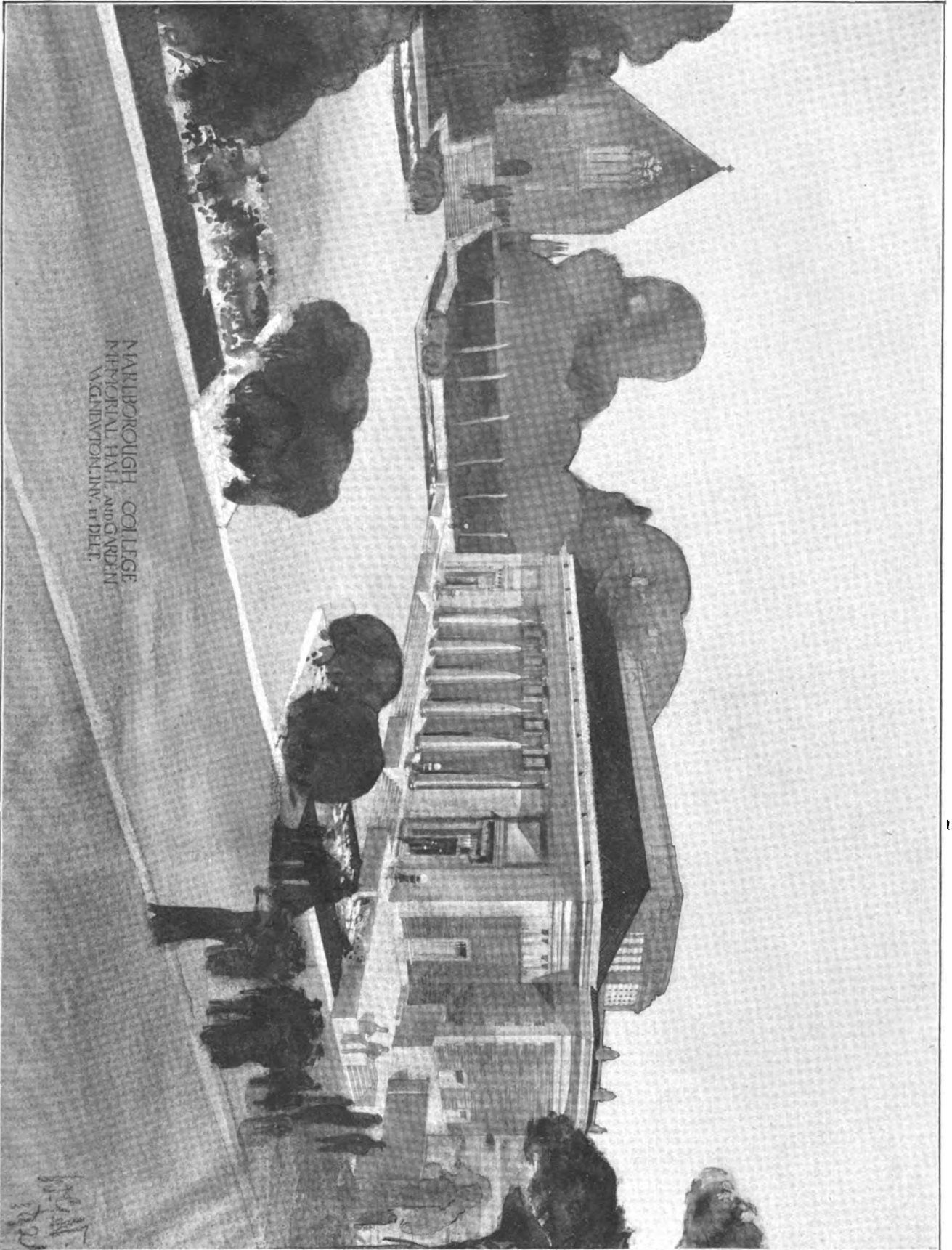


MEMORIAL HALL, SELECTED DESIGN, PRINCIPAL PLANS.
MARLBOROUGH COLLEGE.
Messrs. ERNEST NEWTON, R.A., and Sons, Architects.

THE BUILDING NEWS, MAY 27, 1921.

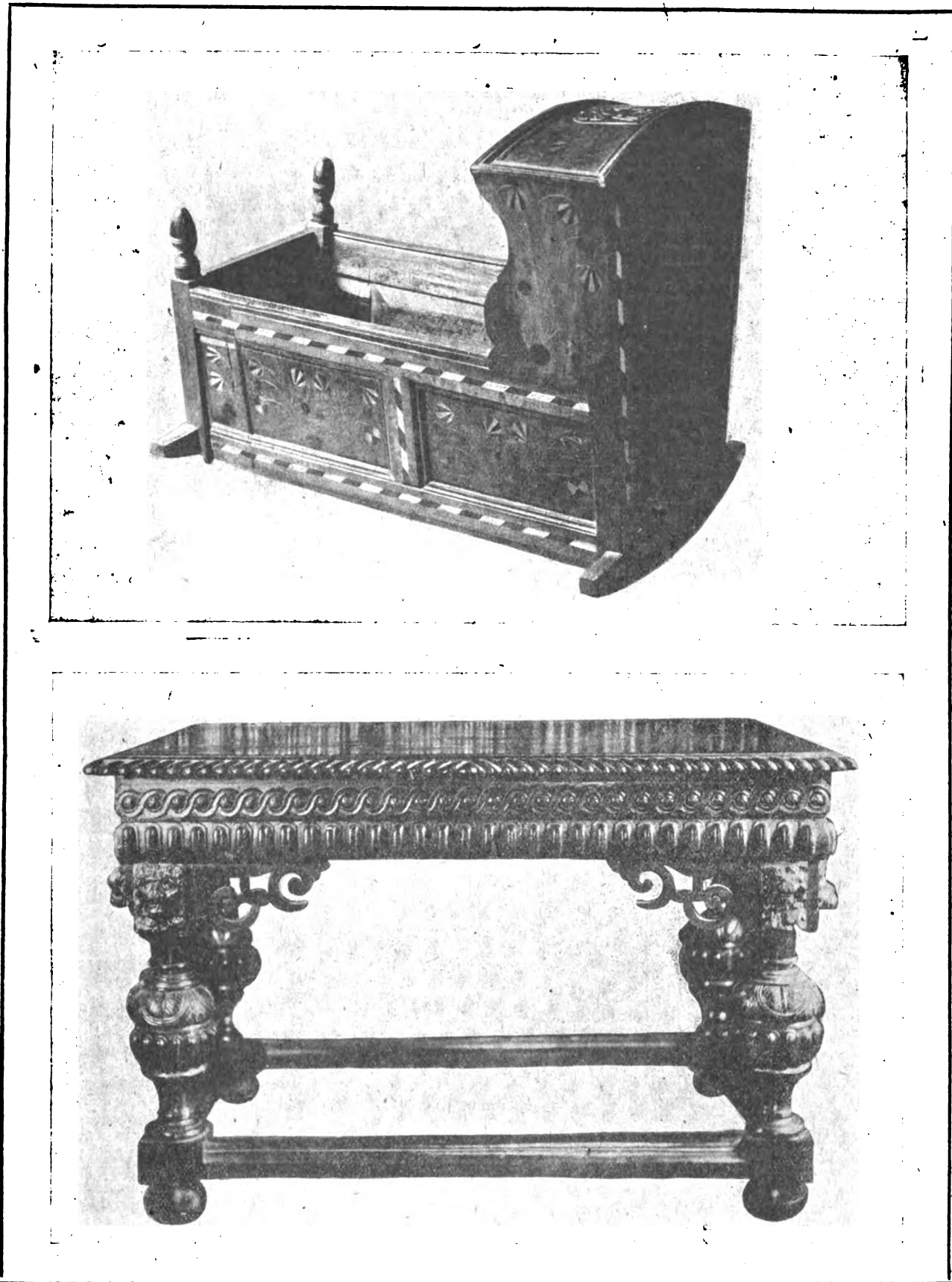


LEEDS WAR MEMORIAL: PERSPECTIVE VIEW SKETCH DESIGN.
Sir REGINALD BLOMFIELD, M.A., R.A., Litt.D., Architect.



SELECTED DESIGN, MEMORIAL HALL AND NEW GARDEN, MARLBOROUGH COLLEGE.

Messrs. ERNEST NEWTON, R.A., and Sons, Architects.



HISTORIC FURNITURE, GWYDYR CASTLE, CARNARVONSHIRE.
A JACOBÆAN INLAID OAK CRADLE, 1634, AND CENTRE TABLE, 1644.
Sold this week by Messrs. WARD, PRICE & Co., of Scarborough.

(Continued from page 283).

Mr. A. E. Newbould, M.P., moved a vote of thanks to the lecturer. He said that in 1914 reports from America were to the effect that we were at least equal to them in the development and construction of cinema theatres; but, owing to the war restrictions, it had been impossible for us to develop until recently, and even now cost was almost prohibitive. During the last seven years we had been practically at a standstill, whilst America had made enormous strides; but he was sure that some of the theatres we had now designed would be equal to anything in that country. He hoped sincerely that a theatre now approaching completion in Brighton would be an example of this. If, it was not, we must blame Mr. Atkinson. (Laughter.)

Major R. Grierson seconded the vote of thanks, and said that when Mr. Atkinson's new picture house in Brighton was opened it would be realised that England again led the world in this matter.

Mr. Walter Bayes said he felt strongly that the tremendous movement of the picture theatre should in justice bring the painter into a relation with the architect. The picture theatre had robbed the painter of the very name of the stuff that he turned out, for "picture" no longer meant a painting; it meant a movie. (Laughter.) Mr. Atkinson was an able designer. Apart from that fact, his interest in colour and willingness to tolerate in a small way the painter as a collaborator marked him as a man of great possibility. (Renewed laughter.)

Mr. Max Clarke said he had had a great deal to do with designing theatres. He had not observed that Mr. Atkinson in his lecture differentiated between these and picture houses, but it did not seem to him (Mr. Max Clarke) that one was the same as the other. The picture house was a place where people sat for a very short time exercising their vision and nothing else. But a great many of the illustrations which Mr. Atkinson had shown were of theatres, not picture houses; for almost every one of them had incorporated a stage, which was absolutely useless so far as a picture house was concerned. The question arose whether these places were designed as picture houses or as theatres. Was it true that you could not project a picture more than a hundred feet?—because that matter would have to be gone into sooner or later if we were to have buildings seating 3,000 or 4,000 people. As to fire, when people were fighting to get out of a theatre, unless the staircases were somewhat commodious and regular in shape, they were very dangerous. He had had the misfortune to make the drawings for a theatre at Exeter where many people had lost their lives through the putting of a pay-box on the gallery staircase, blocking up half of it. This had not been in his original scheme. The outside staircases used in America had been objected to, but if there was no other place for the staircase it must be put there, for it did not make any difference what the exterior was like so long as the people were not burned. Pompeian decoration had been mentioned; the first move in this direction had been made by Henry Irving at the Lyceum, and had perhaps cost ten times more than "rag and stick" decoration would have cost at that time. As to the appearance of the picture house at Brighton, so long as this brought a good return on the money invested in it the directors would not care what it looked like; but if there was not a good return the architect would be blamed.

Mr. Maurice Webb said that he did not agree that nothing mattered in the eyes of the directors of a picture palace so long as it paid. They believed the British public demanded something beautiful.

Mr. S. B. Derbyshire, speaking as a director of cinemas, said that his problem was to use art and architecture without spending too much money in that direction. The picture theatre, if not profitable, would soon be like the ruins he had seen at Athens.

Mr. Cubitt said that from the discussion one might think that Mr. Atkinson's paper had referred chiefly to the decoration of cinemas, but that paper had hinged almost entirely on the planning of these important buildings. There was a tendency among the public to think that the architect's chief function was decoration, but the primary thing was to make a building which in plan and section suited its purpose.

Major Grierson, speaking again, examined Mr. Atkinson's paper in some detail. Among other points that he dealt with was that of the rear projection of the picture. He said that with a translucent screen 30 per cent. of the light was lost, whereas with a really good opaque screen the loss was only 18 per cent.

The vote of thanks was unanimously agreed to, and Mr. Atkinson replied to the discussion. He said he agreed that an architect was useless unless he could produce a building which could be worked on economical lines; because, after all, it was a means to an end, and unless it fulfilled that end it might as well not be built. Plan and decoration should not be looked upon as two separate things. (Applause.)

The Hon. Secretary (Mr. Arthur Keen) announced that the next meeting would take place on Monday, June 6. Members would be elected, and the report of the scrutineers on the result of the elections to the Council and certain committees would be announced. The meeting would be preceded by a special general meeting, when the Chairman would move that effect be given to the resolution of the general body passed on February 28 last, that the entrance fees and annual subscriptions of honorary associates be abolished. Following the business meeting a demonstration would be given of a machine for testing steel and other metals.

The Hon. Secretary also announced that the first of the annual provincial conferences of the Institute would be held at Liverpool on June 24 and 25, and called attention to notices of the reception and garden party to be held by the President and Council at the Zoological Gardens on Peace Commemoration Day, Tuesday, June 28.

Charles Frederick Moore Cleverly, of Dunsborough House, Ripley, Surrey, a well-known artist and exhibitor at the Royal Academy, has left net personalty £27,855, gross £38,391.

Professor Martin Nyrop, one of the best-known Danish architects and an honorary corresponding member of the Royal Institute of British Architects, died on Wednesday, May 18, aged 71. M. Nyrop, who built Copenhagen Town Hall and several churches and modern public institutions, was appointed professor at the Royal Danish Academy in 1906, and director in 1908.

Mr. I. Herbert Fenyon, the Lord-Lieutenant of Berkshire, unveiled at Wallingford on Sunday the war memorial erected by the town. The memorial consists of a square pedestal raised on steps, with bronze panels on the four sides, crowned by a bronze figure of Peace, holding a wreath of bay leaves in one hand and a scroll of honour in the other. The memorial was designed by Mr. Guy Drewber, F.R.I.B.A., and the figure cast and modelled by Mr. George Alexander.

Our Illustrations.

SELECTED DESIGN, MARLBOROUGH COLLEGE MEMORIAL HALL AND GARDENS.

Mr. William Godfrey Newton, M.A. (Oxon), M.C., A.R.I.B.A. (member of the firm of Messrs. Ernest Newton, R.A., and Sons), is the architect of this building, for which his design was chosen by the President of the R.I.B.A., the assessor, in the recent competition limited to Old Marlburians. The hall is to accommodate 1,500. The site lies 10 or 12 ft. below the floor level of the beautiful chapel built from the plans of the late G. F. Bodley, R.A. The axis of the chapel was considered in the lay-out. An amphitheatrical plan was suggested, but not insisted on. The stage was not to be designed for plays. The names of fallen Old Marlburians (some 700) were to be given prominence in the design. Nine out of every ten of the audience will come on foot, and access by motor has, therefore, been made secondary, so as not to interfere with the approach of pedestrians. It was thought essential to preserve the west view from the end of the chapel, and consequently the axis has been made the centre of the forecourt. A semi-circular shaped plan has been adopted, for better hearing and seeing. On important occasions the stage is the place of importance, and it has, therefore, been planned in the most important position, with direct access from the great vestibule. As it will often be occupied by one person (headmaster or lecturer), it has been thought best not to make it over large. When many members of the school are performing, the seats on each side of the stage could be used. The names of the fallen will be on a deep bronze frieze running around the podium. A semi-circular shape having been adopted for the speech-room, the style of the building is unavoidably Classical. Harmony with the chapel is obtained by contrast. The double clerestory (where there is room for a man to walk) admits air at discretion. This can be warmed by pipes in the clerestory. Used air is extracted through openings in the risers of the stepped gallery, and in the floor of the auditorium. The passages and stairs will be warmed, so that there will be an envelope of warm air around the auditorium. There will be radiators at the head of the gallery gangways. The voice on the stage will be immediately reinforced by the solid wall behind. The speaker will be towards the middle of his audience. The ceiling is flat. The accommodation provides for 1,516 seats, of which 525 are on the ground floor and 991 on the first floor. Externally the base, quoins, cornice, and north block will be in stone, the main walling of theatre block in brick, the roof of asphalt and pantiles. The clerestory and cresting will be in light cream-coloured terracotta. Glass louvres are provided in the clerestory. Internally the auditorium will have a stepped floor of concrete covered with composition flooring; the podium will be of marble; the columns of reinforced concrete, finished with hard plaster. The accompanying perspective, drawn by the architect in water-colour, is now at the Royal Academy. We also give the two principal plans as chosen in the competition.

LEEDS WAR MEMORIAL SKETCH DESIGN.

This perspective drawing, made by Sir Reginald Blomfield, M.A. (Oxon), Litt.D., R.A., F.S.A., of New Court, Temple, is now at the Royal Academy

Exhibition. It represents the design which he prepared for the War Memorial Committee, to be erected on a site allocated for the purpose in the centre of Leeds. The scheme included the lay-out of a Grande Place. The buildings shown in the background of the view do not exist, and were included only as a suggestion for future treatment. The whole project had to be abandoned for lack of funds.

HISTORIC FURNITURE FROM GWYDYR CASTLE, CARNARVON-SHIRE.

This famous Welsh country mansion has been in the possession of the Wynn family for nearly 500 years. The castle was rebuilt about 1480 by Meredydd ap Jevan, the great-grandfather of Sir John Wynn, the historian. The house was enlarged between 1525-35, and was restored in 1828. We are assured that this renovation scarcely interfered with its antiquarian interest, so the repairs must have been carried out in a very conservative manner. The property is close to Llanrwst Station, and Conway is situated about 11 miles distant. The building belongs mostly to Early 16th Century date, but the Staircase Tower on the terraced front is much older, with small traceried windows and 13th Century gargoyles. The interior is panelled more or less throughout, and there are several finely decorated Early Spanish leather friezes. The apartments generally, replete with historic furniture dating from the 16th Century, present an uncommonly beautiful, if not actually unique, home. Some of the furniture extends to the 18th Century period. There are fine examples of Gobelins and Brussels tapestries, as well as florid fireplaces. This week Messrs. Ward, Price and Co., of Scarborough, sold the property, and the contents of the mansion were included in the auction. To-day we reproduce photographs of two specially interesting pieces of Jacobean cabinet work. The oak cradle is finely inlaid with sprays of tulips in two coloured woods, the uprights and rails being nicely inlaid in chequer pattern. The hood bears a carved shield with the inscription "R.W., 1634." The cradle was made for Sir Richard Wynn, and belonged always since his day to Gwydyr Castle. It is the only specimen of an inlaid oak cradle illustrated and referred to in Mr. Percy MacQuoid's standard work on English furniture in the volume devoted to "The Age of Oak." The Wynns esteemed this piece so highly that they placed it in the big State drawing-room of the castle. The State bedroom used by Queen Elizabeth and Charles I. is known as "Sir John Wynn's room." Herein belonged a pair of exceptionally beautiful and ornate centre oak tables, one of which we herewith illustrate. It measures 4 ft. 2 in. long by 3 ft. 7 in. wide, with carved godroon edge to the top slab. The frieze is enriched with a circular guilloche, and elaborated below with a bold godroon moulding. The fret cut and carved brackets are framed into handsome bulbous legs carved with acanthus leaves. Above are lion mask terminal members. There is an under rail, and the legs have large boss feet. The date of these tables is 1644.

It is announced by the Minister of Health that Lord Newton's Committee, who are inquiring into the present state of the law with regard to the pollution of the air by smoke and other noxious vapours, have nearly finished taking evidence, and are considering their final report, to which he attaches great importance.

Correspondence.

THE USE OF LIME INSTEAD OF PORTLAND CEMENT—A NOTE ON ADVERTISING.

To the Editor of THE BUILDING NEWS.

Sir,—After reading the very practical suggestions which Mr. Alan E. Munby recently gave at the meeting of the Royal Institute of British Architects, I have thought that perhaps the following notes may be of interest, for I do not think they are universally known, although people who have studied the use of lime may be aware of them.

Lime Concrete.—While the war was being waged, a firm had to put down a concrete floor at their works, and had difficulty in obtaining sufficient Portland cement; so they used *has-lime* concrete and floated over it with Portland cement mortar. This appeared to give a very good floor, and the only objection they had to make was the slow setting of the lime concrete. But, after an interval of three years, the floor sounds hollow here and there, owing to the $\frac{3}{4}$ -in. cement floating not adhering to the lime concrete. It has also cracked, and the surfaces adjacent to the cracks have been badly affected by the traffic—a warning not to place cement-work over lime concrete, because lime has not sufficient cohesive strength to retain the cement rendering when subjected to traffic. Nevertheless, if cement plastering on a wall is well keyed, it holds the thin coat of lime plaster which is often placed over it.

Lime Plastering.—Probably the most fatal objection to the universal use of lime for exterior plastering is that a sharp frost will crumble the work if it follows while the lime plastering is damp. There are few months in England when we can be sure that the nights will not be frosty. If Portland cement is used, it generally sets sufficiently hard to be unaffected by the frost, excepting during the severe frosts we get in the depth of winter. Labour is so expensive nowadays that it is a serious matter to do work twice over, even if the material used is much cheaper.

Mr. Munby mentioned that a patent was taken out in 1856 for strengthening lime, a process which doubled the strength of the mortar, "but nobody to-day appeared to be conversant with this patent method of strengthening lime." I do not wonder at this invention becoming obsolete; for to whose interest is it to advocate the use of lime made according to an expired patent? Who will go to the expense and trouble of demonstrating its goodness and utility? Certainly, nobody would get any financial advantage from it.

My experience of putting new methods of construction on the market is that, no matter how good they are, architects are rightly conservative because of the serious liability which attaches to an architect's adoption of anything which may be detrimental to the structure he erects. It is essential that the uses and the non-detrimental effect of any new material should be advertised; otherwise it will remain unknown; but in the year 1856 there were not the journals which now exist for publishing advertisements.

The following incident will better illustrate my meaning: One of the exhibitors at the recent Building Trades Exhibition at Olympia asked me how to make his invention known to architects. When I told him what he would have to spend before he could benefit both himself and the architects—for his invention was beneficial to the community—he departed shaking his head. Three days after, he brought his wife to me, and she told me that I had much better have advised him to give the money to her! So I suppose this most admirable invention, which is patented, will lapse for want of publicity, like several other inventions which have been introduced to my notice and which would have undoubtedly benefited the building industry.

It is an axiom amongst advertisers that advertisements cannot profitably sell a worthless article, but a worthy article cannot be sold except by advertisement.

J. H. KERNER-GREENWOOD.
King's Lynn.

LEGAL INTELLIGENCE.

LIVERPOOL COMPENSATION CASE: IMPORTANT POINTS.—The Liverpool Corporation (ultimately) prescribed the building line in Moss Lane, Walton, in order to widen the road. Mr. W. Hutchinson was the owner of the Cleveland House Estate. Plans showing the laying out of the estate had been sent to the city building surveyor by Mr. J. H. McGovern, Licentiate R.I.B.A., architect and surveyor, Hampden Buildings, 11a, South Castle Street. The land was wedge shape in form, consequently it could not be laid out successfully when the front shops were moved backwards, and would give a vista of their rear yards. No notice was taken in respect of the plans till the architect wrote to the said surveyor stating that under the Public Health Act, 1875, they should have been approved or disapproved in a month's time. The said surveyor said that they would proceed to take the land under the Liverpool Improvement (Additional Powers) Act, 1906, and referred the said architect to the city engineer. This gentleman said "that the corporation would take the land under the Liverpool Improvement Act, 1867, which was not so drastic in its operation." The architect threatened to commence building after giving a day's notice. The building line was then immediately prescribed by the Health Committee, with an objectionable condition—viz., "That compensation was not to be paid till the corporation required the land for street widening, or until the owner had built up to the prescribed line." The said Act only gave them power to prescribe the line and not attach any condition, and referred to the Lands Clauses Consolidation Act, 1845, for the purpose of assessing compensation. The owner not being able to get the corporation to make a satisfactory move, he appointed Mr. J. H. McGovern to act as his arbitrator, and gave the corporation fourteen days' notice to appoint one on their behalf, failing which he would appoint one for them, under the Lands Clauses Consolidation Act, 1845, *aforsaid*. The corporation went to the local Chancery Court to restrain the claimant doing so, and to take the opinion of the Court as to whether the Compensation Act, 1919, applied or not. Ultimately the corporation agreed to settle the matter by paying £1,300 for the land (1,900 square yards) and the claimant's costs. Messrs. Syers, Dixon, and Barrell, solicitors, acted for Mr. Hutchinson, and instructed Mr. Glover, barrister-at-law, who appeared at the Court. The Deputy Town Clerk instructed Mr. Mathers, barrister-at-law, who appeared for the corporation, whilst Mr. McGovern, architect, appeared for the claimant, and Mr. Jenkins, corporation surveyor, for the corporation at the recent final settlement.

WEEKLY OR YEARLY?—At the Birmingham County Court on Monday, before Judge Amphlett, K.C., an action to recover possession of a piece of ground adjoining the picture house at the corner of Grange Road and Coventry Road, Small Heath, was brought by Christopher Bryant and Son, of Whitmore Road, Small Heath, builders and contractors. The defendant was Frank Rogers, pleasure fair proprietor, of Coventry Road, Small Heath. Mr. Ward, for the plaintiffs, stated they bought the vacant land adjoining the picture house in 1918, subject to the defendant's tenancy, the object being to carry out extensions and alterations to the picture house, of which they were owners. The defendant's tenancy expired on March 26, 1918, and the plaintiffs' case was that thereafter there was a definite arrangement for a weekly tenancy, with a week's notice on either side. This year the licensing justices insisted upon alterations to the picture house being carried out forthwith, and this necessitated giving the defendant a week's notice to quit. He did not comply, and asked for further time. A second week's notice was given on April 18, which also was not complied with. The defendant declared there was no agreement for a weekly tenancy, that he had held the ground since 1913, and his tenancy with the previous owner was a yearly one. For the defendant, Mr. Milward submitted that, having "held on" after his one year's certain tenancy had expired on March 26, 1918, the defendant was

a yearly tenant, and entitled to six months' notice. He also contended that if his Honour held there was a weekly tenancy there were flaws in the notice to quit. A special defence was that the fair ground was "business premises" under the Rent Restriction Act. His Honour held that the tenancy was a weekly one, and said he did not consider the premises came within the meaning of the word "business" under the Act. He made an order for possession in 21 days.

STATUES, MEMORIALS, ETC.

WALLINGFORD, BERKSHIRE.—Mr. J. Herbert Benyon, the Lord-Lieutenant of Berkshire, unveiled at Wallingford on Sunday last the war memorial erected by the town. Wallingford is the oldest borough in the United Kingdom, its Charter being granted by Henry II. in 1155, three years before that of the City of London. The memorial, which stands in the Market Place immediately in front of the old Town Hall, takes the form of a square stone shaft raised on steps, with the dedicatory inscription and the names of the fallen on bronze panels on the sides, and is surmounted by a beautifully modelled figure, in bronze, of Peace, holding in one hand a wreath of bay leaves and in the other a scroll of honour, the whole standing to the top of the figure some 16 or 18 ft. The memorial was designed by Mr. Guy Dawber, of 18, Maddox Street, London, W.1, and the figure and panels modelled and cast by Mr. George Alexander, of 1, Justice Studios, Justice Walk, Chelsea, London, S.W., whilst the whole of the stonework and the erection of the memorial was executed by Messrs. Honeybone and Sons, of St. Martin's Street, Wallingford.

CHIPS.

All congratulations to Mr. Howard Martin, the Official Arbitrator under the Acquisition of Land Act, upon the celebration of his golden wedding on Tuesday, the 17th inst.

Mr. Edward Holmes, J.P., of Fieldhead, Grindleford, Yorks, and St. James Street, Sheffield, architect and surveyor, Fellow of the Surveyors' Institution since 1912, who died on February 3, left £41,917 gross and £14,533 net.

Mr. Havelock Wilson, the patriotic president of the British National Sailors' and Firemen's Union, has sent a message to British sailors at Antwerp forbidding them to strike on British ships. "Everyone," he says, "accepted by ballot the new conditions of the shipowners. We must not ruin the shipowners by demanding wages which they cannot pay."

A meeting of the General Committee of the Incorporated Church Building Society has been held to consider the appointment of a successor to the late Rev. T. T. Norgate, who had been secretary for eleven years. A sub-committee was appointed to receive applications for the post. The initial salary is £450, and applications should be sent to the Chairman of Dean's Yard, Westminster, S.W.

The fourth volume of Sir Guy Laking's "History of European Armour and Arms," in which the record is carried through the seventeenth century, is to be published by Messrs. Bell before the end of June. The fifth and concluding volume, containing important appendices and an index to the complete work, will probably be ready before the end of the year.

Mr. T. T. Wainwright, of the Old Hall, Sandfield Park, West Derby, and of Messrs. T. Wainwright and Sons, Union Court, Liverpool, architects and surveyors, a well-known valuer of property, has left £284,561 (net £276,762). The testator gives £1,500 to the Liverpool Cathedral Fund, £500 to the Surveyors' Institution of London, and other liberal legacies to various institutions and to his employees.

Recent discoveries on the site of St. Augustine's Abbey, Canterbury, were described by the Rev. R. U. Potts (formerly sub-warden of St. Augustine's College) to a meeting of the Kent Archaeological Society at Canterbury last week. The further digging on the north side has revealed the whole of the north porticus or aisle of Ethelbert's and Augustine's Church of St. Peter and St. Paul, together with the original tombs of Laurence, Mellitus, and Justus, as they were left when the bodies were translated by Wydo in 1091 to their new shrines in the eastern part of the choir.

Our Office Table.

We understand that Mr. Charles Walter Goff has been appointed to a seat on the board of directors of Messrs. Robt. Ingham Clark and Co., Ltd., the well-known varnish and enamel manufacturers of West Ham Abbey. Mr. Goff is senior partner in the firm of Messrs. Goff and Penn, chairman of Messrs. William Gowland (1916), Ltd., and a director of the Coventry Chain Co., Ltd., and the Coventry Repetition Co., Ltd.

The report of the National Art Collections Fund for 1920—the seventeenth year of its existence—embraces a list of works of art secured during the twelve months for the nation. Notable items are the S. Cuthbert M.S., purchased by the British Museum for £5,000, supplemented by £1,000 from the Fund; the grille of Mary Queen of Scots' tomb, a Fifteenth Century Florentine engraving, a painting by Sir Wm. Orpen, "The Model"; six subjects of Turner's "Liber Studiorum" in the etched state, drawings by Fred Roe, R.I.; early Persian pottery, Italian and Japanese textiles, English and foreign engraved portraits, and "The Adoration of the Magi." The last-named painting, the work of Peter Brueghel the elder (1525-1569), Flemish school, was purchased for £15,000 for the National Gallery. There are also drawings by Sir W. Orchardson and Geo. Romney in the list.

The second of five lectures on carpentry was delivered before a large audience at Carpenters' Hall on May 18. Mr. George Jack, who was to have delivered the lecture, had unfortunately met with an accident, and Mr. C. Harrison Townsend read it. The subject of the lecture was "Some Examples of War-time Carpentry," and it was illustrated with lantern slides. A section of the roof of Westminster Hall was first shown on the screen, and described as one of the noblest achievements in the carpenters' art in the whole world. By way of contrast, the roofs of buildings hastily erected by the Ministry of Munitions during the war were displayed. These were designed for lightness and speedy erection, and gave a very clear idea of the extraordinary change which had taken place in the art of carpentry since the mediæval days, when the carpenter made the designs, handled the wood, and, in fact, did all the work. Nowadays the engineer was called upon to design the work, but the lecturer saw no reason why the methods of the fourteenth century should not be reverted to. In these days, carpenters did all the work, and someone else did all the thinking; but he could not imagine why that should be so. If a change was made in the way he had indicated, the work of the future might, perhaps, be of a special style, in which beauty of design might be considered.

At last week's meeting of the governors of the College of Estate Management, Sir William Wells, the president, announced that the Prince of Wales had consented to open the college premises provided that his Royal Highness's plans for the early autumn will allow. The college owes its existence to the enterprise of the Auctioneers' and Estate Agents' Institute, and is designed to serve as a training centre for young men who propose taking up the professions of auctioneers, estate agents, or surveyors. Premises have been acquired at 35, Lincoln's Inn Fields, where the work of internal construction is proceeding rapidly. An efficient teaching staff has been appointed, with Mr. Richard Parry, B.Sc., as principal, and Mr. B. W. Adkin, vice-principal.

With the permission of the Palestine Government, excavation of the Biblical city of Beth-Shan (Beisan) is to be undertaken next month by the University of Pennsylvania Museum. The work will be under the direction of Mr. Clarence S. Fisher, Curator of the Egyptian Section of the Museum. Mr. Fisher states that he expects to unearth relics of seven or more cities which successively stood on the same site, and of nine different civilisations. Beth-shan (the Beth-shean of the Book of Judges)

lies at the eastern end of the Valley of Jezreel, on the edge of the Jordan Valley, 20 miles south of the Sea of Galilee and on the Haifa-Damascus railway. A town on this site existed in the seventh century B.C., when it was captured by the Scythians, of which the name Scythopolis (by which the place was sometime known) has been thought to be an echo. Its Arabic name is Beisan, and during the Crusades it was called Bessan, and formed a fief of the Principality of Galilee in the Kingdom of Jerusalem.

"Shades and Shadows," by David C. Lange, M.S. (London, Chapman and Hall, Ltd., 11, Henrietta Street, W.C.2., 15s.), gives practically just sufficient information to enable one to cast correctly the shades and shadows on any architectural object. It is well illustrated, and we recommend it, especially to students who receive their early training under engineering teachers, who will find the point of view of such teaching used judiciously to lead the student to an appreciation of the artistic architectural point of view so seldom developed in an engineering course—and, if we may say so, in others, judging from some of the drawings we get from time to time.

Since the declaration made in the House of Commons by the new Minister of Health to the effect that the building of 300,000 houses in England and Wales (as apart from Scotland) is regarded by the Government as the present limit of commitment under their housing policy, an endeavour has been made by the National Housing and Town-Planning Council to secure an estimate of the views of leaders in national and local life concerning the wisdom of the course proposed by the Government. Within the next seven or eight weeks fifteen conferences of local authorities will be held under the auspices of the National Council in various parts of the country, including one at Birmingham. At these endeavours will be made to gain from local authorities their views as to the actual housing needs of their areas, and the need for vigorous persistence in housing and town-planning work in the future.

The Ministry of Health is very rightly drawing the attention of local authorities to the need for payment of rates of wages on roads, sewers, and drains in connection with housing work at the same rates as those paid for similar works unconnected with housing schemes. Some local authorities have been paying building trade rates to men engaged in the sewage work on housing schemes, but the urgency for economy has made it necessary that every care shall be taken to bring such wages down to the lowest equitable point. If the local authorities do not at once reduce their wages rates on these items to those normally paid for such work outside housing schemes, any excess of payments will not be allowed to rank for financial assistance from the Government.

The refusal of the Birmingham operatives to co-operate with the master builders of the city in administering the dilution scheme for the admission of ex-Service men to the industry left the latter with but one course—to constitute themselves the competent body to work the scheme. Consequently, at a meeting of the master builders, held at the Chamber of Commerce on Tuesday, the employers formed themselves into the necessary committee, and decided that, failing the co-operation of the operatives, they will have to do their best to work the scheme, and ask the builders of Birmingham what number of men in the three crafts mentioned they can take on for training. They intend to invite the co-operation of the trading departments of the City Council, and desire to acquaint non-associated builders with the fact that their assistance will be welcome in helping the scheme to success. Applications from ex-Service men will be tabulated by the Employment Exchange, who will furnish them to the committee, which will decide whether the applicants are fitted to undergo training in the selected craft, and allot them to the builders who are in a position to take them. The committee will invite ex-Service men's organisations to nominate a gentleman, preferably one with experience of the building trades, to serve on the committee.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

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H.M. Queen Mary's Maternity Home, Upper Heath, Hampstead, N.W. View and key plan. Mr. E. Vincent Harris, F.R.I.B.A., Architect.	
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Currente Calamo.

The Council of the R.I.B.A. have organised the first annual provincial conference of architects, which will take place at Liverpool on June 24 and 25. The underlying idea of these conferences is to bring the London and provincial members of the Royal Institute into closer and more effective touch with one another, to enable the provincial members who cannot spare the time to attend many meetings in London to express their views on subjects of vital interest to the profession, and to bring home to the general public the organic unity of the organisation of the architectural profession. We hope, therefore, that all members who can possibly arrange to do so will attend the conference and take this opportunity of becoming better acquainted with the views of their colleagues in other parts of the country. On Thursday, June 23, members will arrive in Liverpool. On Friday, June 24, at 10 a.m., there will be an official opening of the conference and reception by the Lord Mayor of Liverpool. Papers will follow, and discussion on "The Unification and Registration of the Architectural Profession," "Official Architecture," "Propaganda and Publicity"; at 2 p.m., excursion to Port Sunlight and Bromborough Pool; at 7.30 p.m., banquet at the Midland Adelphi Hotel. On Saturday, June 25, at 10.30 a.m. to 1 p.m., papers and discussion on "Building Contracts," "Architectural Education," and "Present-Day Building Problems"; at 2.30 p.m., visits to Liverpool Cathedral and the Cunard building; at 4 p.m., tea at the Britannia Café at the invitation of Messrs. Willink and Thicknesse; at 4.30 p.m., trip up the river arranged by the White Star Steamship Company. On Sunday, June 26, at 11 a.m., service in Liverpool Cathedral. The headquarters of the conference will be in the Conference Room in the Walker Art Gallery, where there will be an exhibition of students' drawings on view. The conference banquet, at which ladies are particularly invited to be present, will be held at the Midland Adelphi Hotel (evening dress, medals, etc.). The price of the banquet will be 12s. 6d. each, exclusive of wine and cigars. Members who intend to be present at the conference are requested to communicate as soon as possible with

the Secretary, R.I.B.A., 9, Conduit Street, London, W.1., stating the fact, and mentioning whether they will be present at the banquet and whether they will be accompanied by any guests.

A delegation of some of the representatives of the Manchester and London building guilds saw Sir Alfred Mond at the Ministry of Health last week, and asked for the restoration of the pure guild form of contract which they obtained many months ago from the Ministry, but which was suddenly withdrawn. They were probably disappointed to find that the Ministry still insists that the building guilds shall now proceed by ordinary commercial contract—that is, they must make lump-sum tenders. The form of guild contract accepted by Dr. Addison has certainly not justified its extension, nor were the experiments of the kind at Camberwell and elsewhere very successful. Sir Alfred Mond is not likely to hinder anything tending to promote building, but he is the last man to be coerced into a surrender to a Parliamentary stunt by the Labour Party at the instance of the "pure guild" contractors!

Mr. S. G. Hobson, who, we believe, headed the deputation, is reported to have informed the University Socialist Federation that the present unemployment system is essential to capitalists. If it is so, as a correspondent of the *Westminster Gazette* aptly asks, why do capitalists spend money upon advertising? For the only purpose of advertising is to increase sales, and the effect of increasing sales is to diminish unemployment. That is to say, whatever the abstraction, called capitalism for the purposes of theory, may require, the actual individual employer trusts to earn his living, not by a system of unemployment, but by the fullest possible employment. The statement, of course, does not originate with Mr. Hobson; it is just one of those claptrap sayings which are first made in angry haste and then pass without investigation into the accepted phraseology of careless theorists. The smallest investigation would show the so-called capitalist—often a man who on the strength of small savings, but having brains and organising power, starts in business—spending laborious days in the effort to increase his

business, that is, to increase employment. As to the finance of the guild, if they are able, as is claimed, to build for £500 or less a house which in the ordinary way would cost £1,000, surely they can afford to snap their fingers at the Minister of Health and all competitors.

The Rector of St. Giles-in-the-Fields draws attention in view of the anniversary of "Oak Apple Day" on Sunday last, to the advanced state of decay of the tomb of Richard Pendrell in the churchyard of St. Giles-in-the-Fields. The tomb is an altar tomb, and consists of a horizontal slab of marble, and a superstructure of Portland stone. It is mentioned in the catalogue of tombs in the churchyard in Strype's (1720) edition of John Stow's "Survey" in these words: "Richard Pendrell, Preserver and Conductor to His Sacred Majesty King Charles 2d, of Great Britain, after his escape from Worcester Fight, in the year 1651, who died Feb. 8, 1671." Mr. Halsey Ricardo, F.R.I.B.A., who has been consulted, considers that the marble base may be of the seventeenth century, but the stone superstructure must be at least 150 years later. This stonework, in his judgment, calls for immediate attention, and may, when removed, reveal exactly the nature of the marble slab, and whether it formed the base or, possibly, constituted the gravestone, with an inscription upon its face. In the event, however, of the marble base proving to be an inscribed gravestone, it might be advisable to remove the slab to some spot within the church, and replace it, in the churchyard, by a slab of Portland stone. It is estimated that the whole cost would be about £100, and this modest sum should speedily reach the rector, the Rev. Wilfred H. Davies, 52, Bedford Square, W.C.1.

At Uxbridge Town Hall, being converted into a cinema, fine old panelling and a wooden window frame with iron bars of the Tudor or Elizabethan period have been discovered.

The monthly meeting of the Institute of Scottish Architects was held on May 26 in Edinburgh, Mr. A. N. Paterson, president, in the chair. The election took place of two Fellows and three Associates. Approval was given to a circular about to be issued to Local Authorities in connection with the Town Planning Act, 1919, which makes town-planning obligatory on large burghs after January 1, 1923. The report of the president and council for the past session, which will be issued shortly, was also approved.

EVERY-DAY USES OF PORTLAND CEMENT.

Among the marvellous evolutionary and revolutionary changes of the twenty-first century, its future historian, when he comes to deal with the social changes partly due to the greatest war of history, but in only a secondary degree to the enterprise of the pioneers of scientific research who have in so many instances pressed hitherto unutilised natural resources into the service of man, and in others taught him how effectively such may be used in undreamed of and ever-increasing ways, will certainly give a big chapter to Portland Cement. As we are reminded in the introduction to the fourth edition of the solid volume of nearly 500 pages just issued by the Cement Marketing Company, Limited, of Lloyd's Avenue, E.C.3, since its first edition was published in 1909 the use of Portland cement and concrete has grown enormously, especially in connection with building construction, and is now one of our principal building materials. In only a lesser degree has its use become indispensable in road construction and estate and farm purposes, for ships, and for other purposes; in all with equal value, as much in the simple fence-post as in mammoth buildings and engineering undertakings. Once concrete is properly made it is concrete for all time, solid, indestructible, and impervious. Cheaper than other forms of building, it can be moulded to almost any desired form, and offers as legitimate and favourable opportunities for design to the architect as any other, if only he has the genius to appreciate and utilise them.

The daily increased recognition of these facts is due in largest measure to the great combination of the Associated Portland Cement Manufacturers, Limited, the British Portland Cement Manufacturers, Limited, the Wouldham Cement Company, Limited, and Messrs. Martin Earle and Co., Limited, of which the Cement Marketing Company, Limited, is the Selling Organisation, and thoroughly up-to-date business nexus. To its beneficial propaganda all concerned owe the continuous effort to make all users realise the indispensable conditions necessary for the production of good concrete, and to illustrate its various purposes when so made and used.

To ensure good concrete, even with good cement, care, practice, and competent supervision are essential. The best designed job may be spoiled by the foreman or ganger, who, ignorant of the very simple rules that govern his part of the work, may, even with the best intentions, permit unsuitable things to be done or left undone. As surely may the inexperienced man spoil many an otherwise interesting and successful job. With this book before him no man with average brains can go wrong, whether actually engaged in the industry, or the lay-worker whose needs are many, and whose numbers are constantly increasing. The first section deals exhaustively with the origin, nature, and quality of good Portland cement, not manufactured as formerly by rule of thumb, but under the care of trained and experienced chemists, with the latest improved machinery for grinding, and sold only after the most rigorous scientific tests. The differences between such Portland cement and the low grades of so-called "natural" cement as produced in Belgium and others are detailed, and the dangers attending their use pointed out. The proper materials for mixing, to make good concrete, are given, and the fact is emphasised that the ideal of the latter is to make it strong enough for the

particular purpose in view, and to ensure necessary strength with the greatest economy. Strength in concrete is obtained by securing *maximum density* rather than by increasing the proportion of Portland cement. One lot of concrete may be made with a larger proportion of cement than another, but yet be weaker if a well-graded mixture of different sizes of material is not ensured, so that the pieces fit into each other. Then when the cement fills all the cavities, and adheres to each particle of the coarse material, an increase of the Portland cement will increase the strength proportionately, but the first essential is to secure the maximum density.

A full and complete description follows of the various forms required to retain the concrete in place and give it shape, all illustrated; methods of waterproofing are discussed, and the plastering of concrete set forth, and their respective methods of application shown. The few special tools required are figured, and their method of use explained. Moulded work is next dealt with, and the various methods of its preparation and the machines in use shown. Reinforced concrete and the fundamental principles governing its various applications are then described, and the not creditable but too common objections of architects and engineers who refuse to adopt reinforced concrete designs, owing to their dislike to placing themselves in the hands of specialists, because, as they imagine, the necessary calculations are unintelligible to them. These, as is explained, are easily followed by anyone who has had a sound technical education, as the short review of the essential principles will make the fact plain to any architect worth the name.

The section showing the various uses of concrete, which occupies the greater part of the volume, is a most exhaustive and copiously illustrated one. Not one representative form of construction is omitted; while, in addition, examples of more or less hitherto uncommon but most ingenious applications are shown, of which tree-dentistry, which gives new life to trees just reaching the last limits of their existence, will probably prove most unfamiliar, but which is proving increasingly of value to the landscape architect and the gardener. Some useful miscellaneous and general notes follow last, and a capital index renders instant reference easy to a volume which, in our experience, is unequalled as regards the complete grasp of its subject unspoiled by an inch of padding.

COMPETITIONS.

NORTH WALES HEROES' MEMORIAL COMPETITION, BANGOR.—The President of the Royal Institute of British Architects, Mr. John W. Simpson, has nominated Mr. G. Gilbert Scott, A.R.A., F.R.I.B.A., as assessor in the above competition in conjunction with Lord Plymouth.

An exhibition of students' work at the L.C.C. Central School of Arts and Crafts at Southampton Row, W.C., contains specimens of manuscript illumination, as well as examples of architecture, wood and stone carving, pottery, embroidery, tapestry, silversmiths' work, bookbinding, printing, modelling, and drawing.

In commemoration of the members of the Faculty of Advocates who lost their lives in the service of the country during the war, a tablet, designed by Sir Robert Lorimer, R.S.A., has been placed over the central fireplace of the main corridor of the Advocates' Library, Edinburgh, and was unveiled on May 26. It consists of an oak panel surrounded by an architectural framework, surmounted by a carved wreath and by the arms of the Faculty, and decorated in gold and colour.

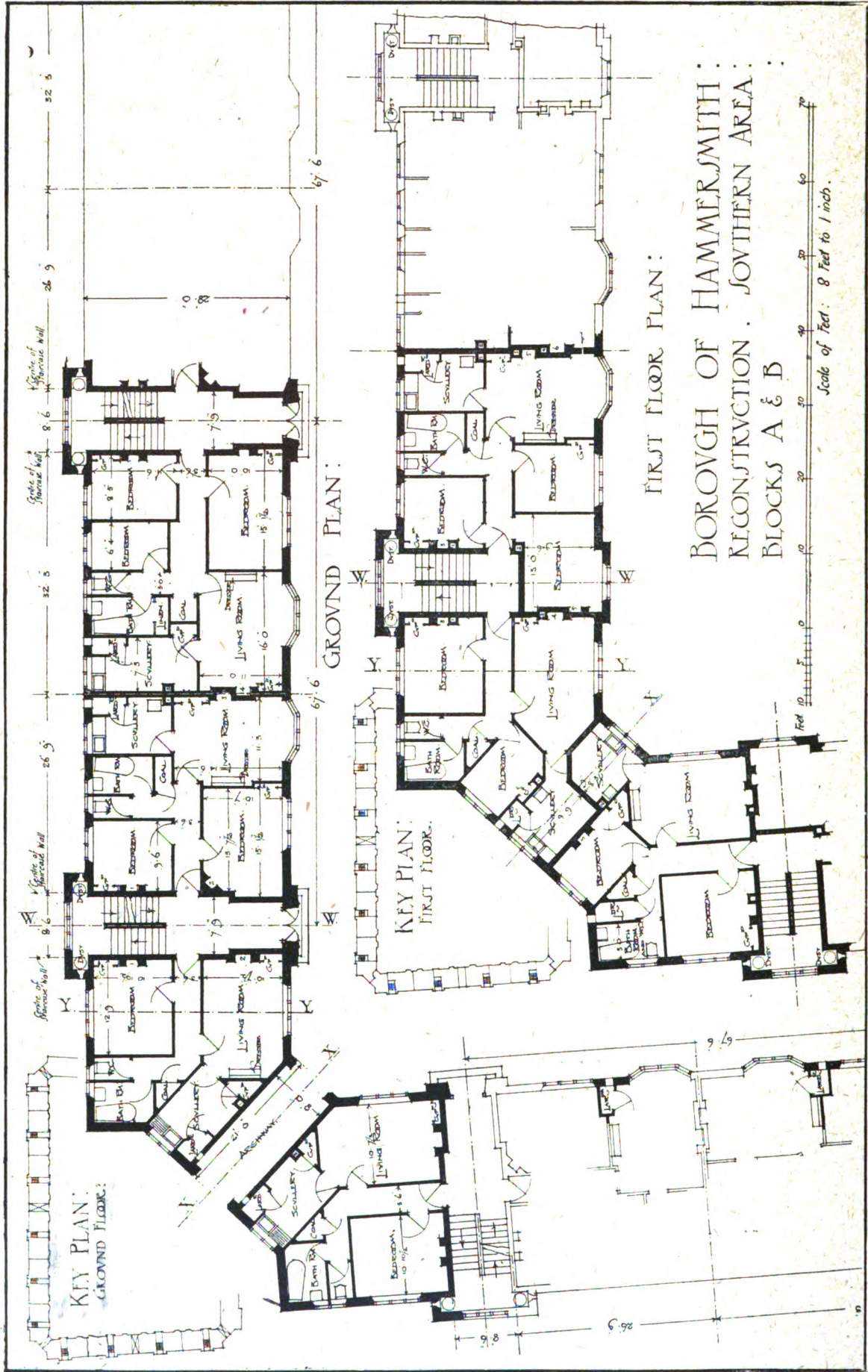
R.I.B.A.: POST-WAR CHURCHES.

At a meeting of the Royal Institute of British Architects last Thursday, Sir Charles Nicholson, Bart., described the special difficulties put by the present time in the way of those who would build churches, and offered a few suggestions to assist in getting over those difficulties. The chair was taken by the Rt. Rev. Bishop Mounsey.

Sir Charles Nicholson said the most difficult problems which the post-war builder of churches had to solve obviously arose from the abnormal cost of building—not that this had been inflated in much greater proportion than other things; except in a few districts like Yorkshire, where manufacturers, having profited vastly during the war, were in a great hurry to enlarge their mills directly after the Armistice, and so forced up building prices in their own and neighbouring districts. One unfortunate feature of the present high cost of building was that it operated more adversely in the case of buildings whose characteristic was size and solidity than in the case of those which were small and elaborate. An ordinary brick wall 100 ft. long and 30 ft. high, in a common class of building, might be only two bricks thick, but in a church would be at least three. At pre-war prices the comparative figures for such a wall in two-brick or three-brick thickness would be £225 and £337. But the difference that would have to be faced now was that between £675 and £1,012. The cost of ornamental work had also risen, though not in the same proportion, and there was a greater cost for materials also to be considered. As a consequence people had become shy of embarking on schemes of church-building; involving as they did costs out of all proportion to those of pre-war days. Facts must be faced, and we must realise the altered value of money; even in the most favourable event we were unlikely to see building prices come down to pre-war figures. They must eventually stabilise at new rates determined by the general purchasing power of money; but there was no reason to lose courage if we remembered what our forefathers had accomplished when England was far poorer than to-day. Without going back to the days when the cathedrals were built at York and Lincoln, or even to the time when the churches of London were re-built after the Great Fire, if we only went back to the Victorian Age we might take heart from the example of the great bishop to whom we owed Truro Cathedral, of successive Archbishops of Westminster, of the merchants of Liverpool, of the communities of Downside and Buckfastleigh, even from that of the famous Lord Grimthorpe, who was, at any rate, large-hearted, determined, and generous, although the best-known result of his excellent intentions was the conversion of the most interesting of English minsters into the similitude of a stable for colossal hippopotami. (Laughter.)

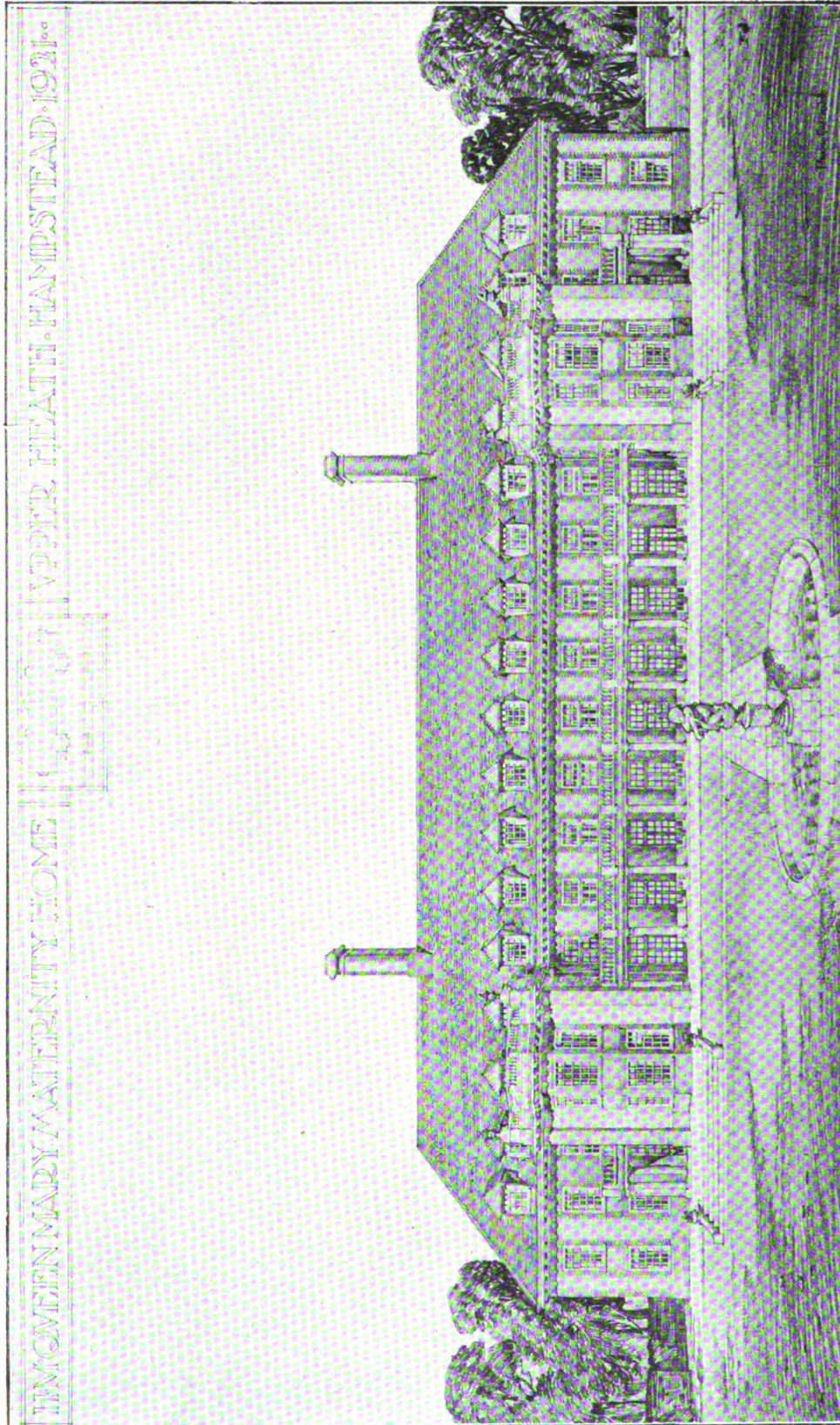
Speaking of novel methods of building, the lecturer said that the prevailing superstition that the use of reinforced concrete would solve all difficulties of cost was hard to eradicate. Further, the economic problem had provided an atmosphere in which the ingenious and plausible quack flourished; and there was in consequence every prospect of our villages and growing towns being provided in a short time with parochial halls built in fashions which were cheap to begin with and costly in the upkeep. But the clergy as a rule had too much good sense to try experiments in bizarre methods of construction so far as the

(Continued on page 303.)



PLANS OF DWELLINGS, THE SOUTHERN AREA TENEMENTS AT HAMMERSMITH, W,
 Messrs. H. T. HARE, F.R.I.B.A., and BERTRAM E. LISLE, A.R.I.B.A., Architects.

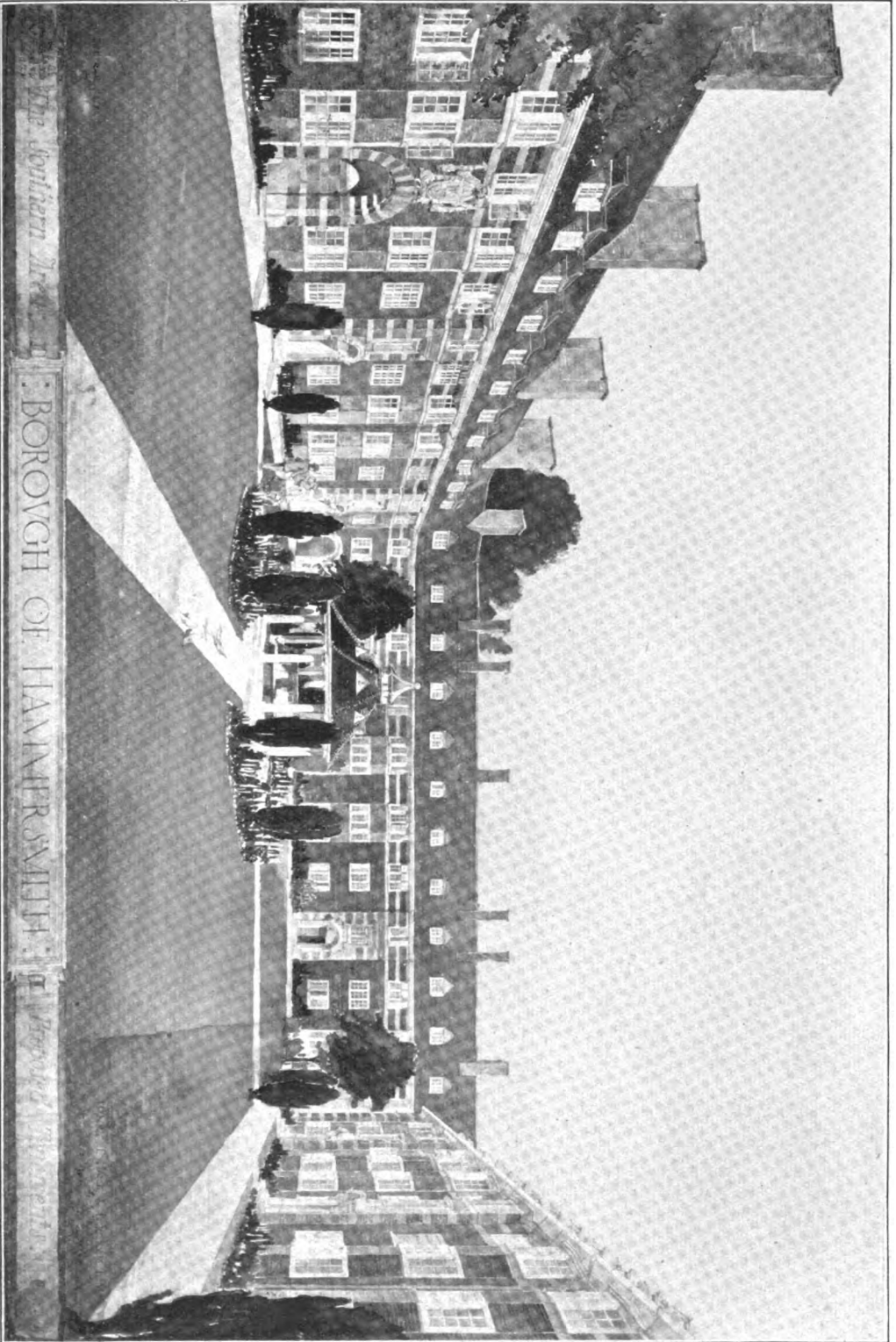
THE BUILDING NEWS, JUNE 3, 1921.



H.M. QUEEN MARY'S MATERNITY HOME, UPPER HEATH, HAMPSTEAD, N.W.

Mr. E. VINCENT HARRIS, F.R.I.B.A., Architect.

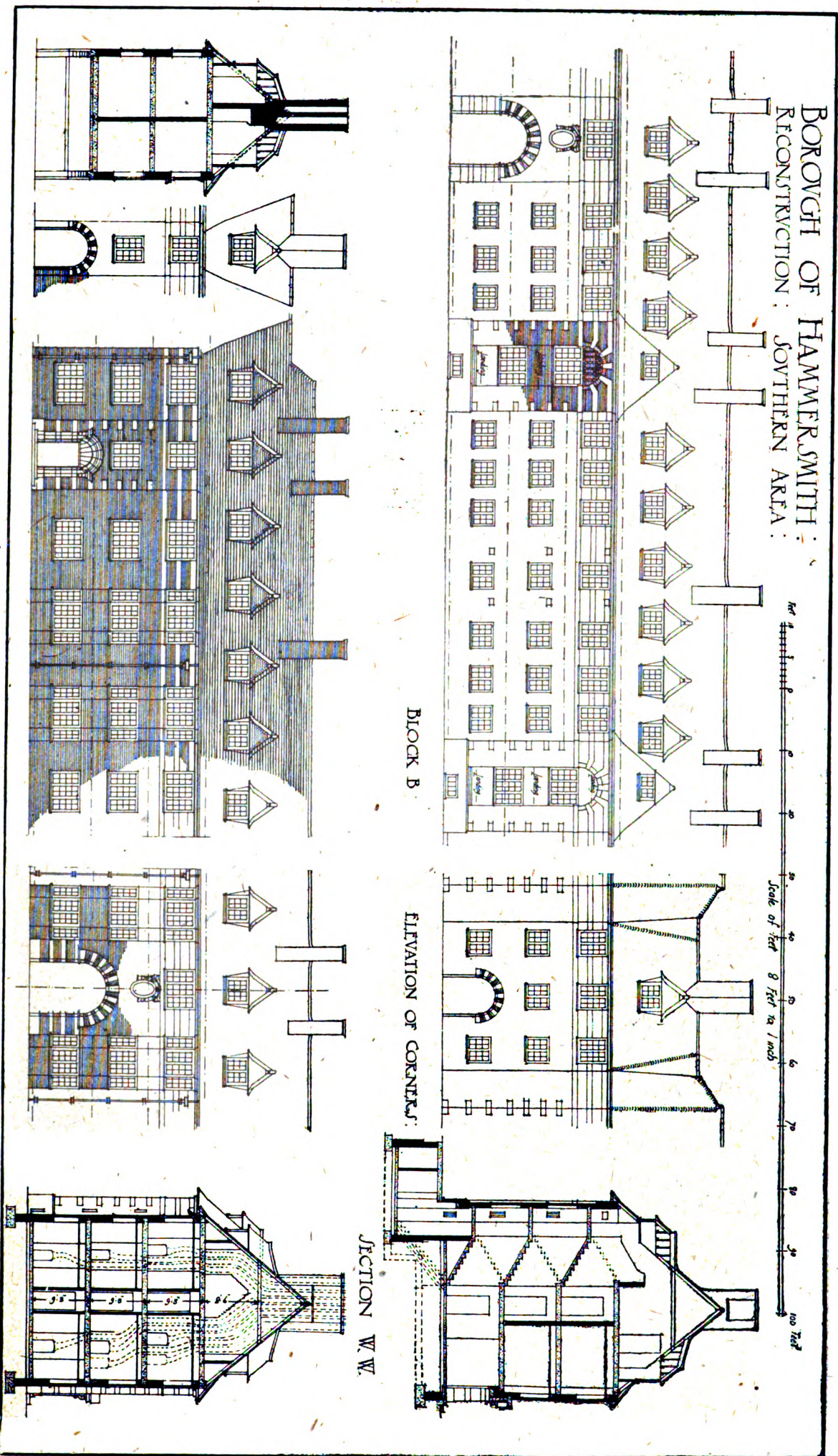
THE BUILDING NEWS, JUNE 3, 1921.



THE SOUTHERN AREA TENEMENTS, BOROUGH OF HAMMERSMITH, W.

Messrs. H. T. HARE, F.R.I.B.A., and BERTRAM E. LISLE, A.R.I.B.A., Architects.

BOROUGH OF HAMMERSMITH
RECONSTRUCTION: SOUTHERN AREA.



BLOCK B

ELEVATION OF CORNERS

SECTION W.W.

ELEVATIONS AND SECTIONS TO QUAD, THE SOUTHERN AREA TENEMENTS, HAMMERSMITH.

Messrs. H. T. HARR, F.R.I.B.A., and BERTRAM E. LISLE, A.R.I.B.A., Architects.

(Continued from page 294).

building of the church itself was concerned. Economy was not mere cheapness. Economy in building consisted in attaining the desired end with the least possible expenditure of the resources at command. The desired end would vary according to time and place. Thus the Egyptian built in the hope that his building might last an eternity; the Greek ideal was perfect beauty, and that of the Roman magnificence. As to our own ideal, a modern church was required to be spacious, durable, convenient for clergy and people, and to possess the dignity demanded by its sacred character; if in the effort to build cheaply something resulted which did not answer these requirements, an outlay had been made to attain a church and nothing produced but a makeshift. That was bad economy. Help might be got in this problem of economic building from the intelligent examination of the work of our own forefathers. There were three great characteristics of the mediæval builder's work which the modern architect would do well to imitate. First, was a thoroughly practical knowledge of materials and the uses to which they could be applied. Mediæval builders used almost invariably local materials, with certain exceptions in the case of buildings of the first importance. Where freestone could not be obtained they built of rubble, brick, or even timber. Their work was treated differently according to the material used; freestone buildings differed in character from those in rubble or brick, while timber constructions were honest carpentry that did not emulate the forms of masonry. The second great virtue of mediæval builders was a knowledge of construction from the engineering standpoint; they seldom wasted their resources by piling up masses of masonry that had nothing to do. Even in the case of the primitive Norman builders, if their work was massive it was because massiveness was necessitated by the poor quality of the materials available. A third virtue of mediæval builders was thoroughness in business; careful control of small details was as essential to economy in building as in other transactions. The modern architect, applying the example of his forefathers to his own case, should, in the first place, study carefully what materials could be most economically used, and which would best answer his purpose in the locality and under the conditions in which he was called to build. Secondly, he should use sufficient engineering skill to avoid wasteful construction; every brick and every timber should help make his building stronger, more beautiful, or more convenient. Essential details should be thoroughly thought out, and thought out beforehand.

Coming, then, to the question, "What is the poor parson to do who has to build a church somehow, and can only raise pre-war funds to do it with?" the lecturer said his own answer was that the most economical style to build it was one based upon the late English Gothic, and that the old-fashioned and well-tried methods of construction, if used with intelligence, were the most economical; but this answer still left the would-be churchbuilder to face the fact that his available funds were only about one-third of what was required for the contemplated work. Should he wait on the chance of things becoming more favourable in a year or two?

Sir Alfred Nicholson was opposed to waiting. He thought it was wiser to get as much as you could of what you wanted when you could get it, rather than trust to luck and perhaps only put off the evil day by doing so. Things in this world

as a rule got done by perseverance and determination, not by waiting for something to turn up; and his counsel would be to settle the plan of the church and build a fragment of it well, adding, if necessary, temporary accommodation of the simplest and cheapest possible description. In many cases it might be found possible to build a chapel and part of an aisle of a permanent church at once, and to do it in good and consistent style, extending the permanent floor sufficiently to give the necessary accommodation, and covering in the uncompleted parts with temporary work. Regarding this temporary work, it was worthy of careful consideration whether the materials used in it could be conveniently re-used in permanent construction. This consideration suggested the economy of using brickwork for temporary walls in preference to some of the substitute materials in the market. Roofing materials, on the other hand, were not, as a rule, capable of being re-used economically, and it would probably be better to put temporary roofs over temporary buildings. Temporary buildings need not be hideous provided they made no attempt at ornamentation. Very often they would be cheaper and less unsightly than they were if their roofs were supported by a few rough posts instead of being framed in wide, unbroken spans. Neither was it necessary or desirable that they should invariably be lined with varnished matchboarding. Unplaned boards left from the saw looked much better and were cheaper. If it was necessary to have a temporary building it might very well have brick walls whitewashed inside, standard iron casements, and an unwrought timber roof carried on posts where necessary, and covered with iron or some similar utilitarian material. The cost of guttering might be saved by making the eaves overhang well. The general result would certainly be more pleasing than the smug shoddiness of the ordinary temporary church.

Of the designing of the permanent church the lecturer said that if the architect had economy in view he must aim at effects which could be produced without extravagant construction. Fortunately the dignity of a building depended more upon good proportion than upon size, richness of ornament, or excellence of material. If it was necessary to build cheaply it was wise to avoid wide, unbroken spans of roofing, for with the latter it was necessary to make a building very lofty in order to obtain satisfactory proportions; and the loftier church not only required higher walls but thicker ones. The appearance of height was, of course, essential to a satisfactory church, but this appearance could be attained by judicious arrangement in buildings of quite modest dimensions and cost. There was a quaint superstition that pillars in churches were an invention of the Evil One devised to prevent people hearing sermons. This reminded one of the yet more pestilent heresy that churches were places to hear sermons in. But in this connection it was sufficient to remember that the acoustics of a building cut up by pillars were often better than those of a large open hall. At Wells, where the interior was more subdivided by screens and arches than in any other English cathedral, it was possible in the nave to follow distinctly prayers recited at the altar of the Lady Chapel a hundred yards away. Pillars were also objected to as obstructing the view, but the proportions of a church should not be sacrificed in order to have a large number of seats with an unbroken view of the altar or pulpit.

In a short discussion that followed, Mr.

Statham said that with regard to the apparent size of buildings, a remarkable feature of Pugin's churches was that you experienced inside them an effect of height and dignity far beyond what would be expected from the actual size. As to the use of reinforced concrete, this would not be found so cheap as people thought, and it was exceedingly difficult to get expressive architecture out of such a stubborn material.

Major Corlette said that he agreed that reinforced concrete would not get over so many difficulties as some people anticipated, but he knew of a church by Sir Charles Nicholson, extremely simple in section and plan, and with practically nothing in the way of ornament, but which gave a remarkable feeling of size, dignity, and expansiveness; and this was due to a great vault of reinforced concrete. (Laughter.)

The Chairman said the lecture had been an extraordinarily interesting one, and he could only regret that so few of the clergy had been present, for when they were concerned with the building of churches they betrayed in many cases a lamentable ignorance as to the real practical difficulties that confronted the architect in carrying out what they wanted done. He had been struck by their ignorance, but the absolutely invincible ignorance of the ordinary church warden was even more striking, and when he came to the people who got on committees he almost despaired of human nature. But might he throw out a suggestion to architects that, although a church might not be in the first place a room in which people heard sermons, it was certainly a place in which sermons were preached, and architects would do well to bear that fact in mind and pay attention to acoustic properties? He sometimes thought sermons were uninteresting because people could not hear them. Another point was that churches were places in which a congregation of Christian people foregathered to take part in a common action, and in order that they might do so they ought to be able to see what was taking place. He did not plead that the church should be built without pillars, but these should not prevent it being a place in which the congregation could both see and hear what was going on. Another point was, would architects try to save people who went to church from being stewed in the summer, frozen in the winter, and always in a draught?

The Housing Bill was read a third time by the House of Commons on Monday and by the House of Lords the first time on Tuesday.

Westminster City Council agrees with the suggestion of the First Commissioner of Works that the King Edward VII. statue shall be placed on the site of the Napier statue in Waterloo Place. The new site for the Napier statue is not yet selected.

Last Saturday afternoon, the Duke of York, who is an Honorary Freeman of the Drapers' Company, unveiled at Bancroft School, Woodford Green, of which the Company are the Governors, a memorial to the old boys who fell in the war. The memorial, which stands in the quadrangle, is from the design of Mr. Charles Blomfield, the son of Sir Arthur Blomfield, who was the architect of the school buildings; and on a tablet in the cloisters are inscribed the names of the fallen.

The employees of Messrs. Harry Hems and Sons, of Exeter, held their seventh annual walking match to Exmouth last Saturday. L. Searle repeated his success of last year, and, with his time allowance, defeated Letts by half a minute. Both Searle and Letts walked finely throughout, but Steer, the scratch man, did not walk up to his reputation. At the same time an open scratch challenge event took place on the time record of 1 hour 43 minutes, but Goodheart, who was the first to finish, failed by four minutes.

Our Illustrations.

QUEEN MARY'S MATERNITY HOME, HAMPSTEAD.

The site for this home is on the Upper Heath at Hampstead. The building is intended to accommodate 20 women patients, 13 children, 20 nurses, one cook, and the matron. In our review of the Architectural Gallery exhibits this year on April 29 last we mentioned this excellent design, giving a brief description. Mr. E. Vincent Harris, F.R.I.B.A., of St. James's Square, S.W.1, is the architect.

THE SOUTHERN AREA TENEMENTS, HAMMERSMITH.

This perspective of the courtyard, drawn by Mr. Bertram Lisle and shown at the present Royal Academy, illustrates Messrs. Henry T. Hare and Lisle's section of Hammersmith's comprehensive housing scheme, proposed to be built by the borough council. That comprises three quadrangles, and this is the first of the series. The two sheets of plans and elevations accompanying our reproduction of the view speak for themselves, though it must be remembered that their details were worked out before the cost of building rose to current rates for labour and materials, which have made anything above the utilitarian standard out of the question. A panel of architects was chosen for this municipal undertaking, and, besides Messrs. Hare and Lisle, the names of Messrs. G. E. S. Streatfeild, Mr. Matthew J. Dawson, and J. Ernest Franch were included. Mr. Dawson's section is also represented at Burlington House, and his drawing has been promised us for illustration.

THE SURVEYORS' INSTITUTION.

The fifty-third annual report of the Council was presented at the annual general meeting on Monday last. The Council during the year set to work to draft the amendments to the Charter and By-laws necessitated by the adoption of the Special Committee's recommendations, in the hope that the required sanction might be obtained in time for the election of the new Council during the present year. The legal formalities in connection with the application to the Privy Council and the agreement with the Quantity Surveyors' Association with regard to the proposed amalgamation have taken longer than was originally anticipated, and were completed only in March last. Copies of the draft Supplemental Charter, the amended By-laws, and the agreement with the Quantity Surveyors' Association were at once circulated to members, and a special general meeting was called on May 10, in accordance with the requirements of By-law 64, for the purpose of giving members an opportunity of expressing their views thereon.

During the year the Institution has lost a number of prominent members through death, among whom may be mentioned the Right-Hon. Lord Moulton, K.C.B., who first became connected with the Institution as an associate in 1888, and was elected an honorary member on his elevation to the Bench in 1906; Mr. T. T. Wainwright, who occupied the presidential chair in 1907; Mr. H. W. Bruton, to whom so much of the success of the Gloucester meeting in 1920 was due; Mr. Thomas Rule Owen, who had been a member of the Institution since 1869; Mr. Frank Gott, late Lord Mayor of Leeds and past-Chairman of the Yorkshire Committee; and Mr. C. F. Slater, who had assisted the Council

on many special committees and had for long taken an active part in the work of the Surrey Committee, of which he was a past-Chairman.

Sixteen additional names of members and others connected with the Institution who died in their country's service have been received since the issue of the last report, bringing up the total to 307. It is now possible to complete the Roll of Honour in the hall of the Institution, and an additional panel containing the thirty-four names received since the original roll was unveiled in May, 1919, is now being prepared by Mr. Alan Vigers and Mr. Grailey Hewitt.

In January last the honour of knighthood was conferred by His Majesty on Sir Edwin Savill, Vice-President, in recognition of his long record of public service. The Council take this opportunity of congratulating him on behalf of the Institution.

The balance-sheet shows that total payments out of revenue amounted to £15,608 16s. 6d., as against total receipts on revenue of 14,391 9s. 6d., leaving a deficit of £1,217 7s., which was, however, practically met by the entrance fees received (1,155). To meet the greatly increased costs it has been found necessary to increase the examination fees by one guinea, a change which will come into operation for the next examination.

The concession which was made to candidates whose membership had been unavoidably delayed by their service with the Forces, under which they were permitted to come up for election as Professional Associates on passing the Intermediate Examination on the understanding that they would present themselves for the Final within three years, will come to an end in December next. The other concessions, in the cases of candidates who owing to special reasons have been unable to sit for examination, will continue until the next examinations, after which they, too, will cease.

The number of candidates who presented themselves for examination in March last showed a considerable increase.

PROFESSIONAL AND TRADE SOCIETIES.

THE ARCHITECTURAL ASSOCIATION.—Addressing the Architects' Association at dinner, on Monday evening, Mr. G. K. Chesterton informed them how architects and architecture impressed a layman. The first thing which struck him was that architecture was the only sane art left; all others seemed to be more or less insane. Architecture had certain fundamental bases which prevented it going too far in a certain direction. If a house was built beyond a certain degree of badness it would fall down, but he had never heard of a picture falling down from that cause. Again, their art was independent of changes of fashion, which seemed to be common to all other arts. You could have syncopated music, but you could hardly have syncopated bricks, entirely disconnected and scattered about in the air. It seemed to him that the real problem was to find a place and outlet for liberty in art which would not destroy art itself. He thought Gothic architecture was the solution for them: it had found a place for liberty in a scheme of order.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.—The President has sent an invitation to all the Associates of the Institute to meet him and the hon. secretary on Tuesday, June 7, at 4.30 p.m., to discuss the steps taken towards the unification of the profession. The proceedings will be quite informal. The President trusts that the engagements of Associates will permit them to attend, and that they will express their views on the subject quite frankly.

FORMATION OF AN INDIAN BRANCH OF THE SOCIETY OF ARCHITECTS.—At an in-

augural meeting of the Society of Architects held in the Taj Mahal Hotel, Bombay, on April 15, the Hon. Secretary, Mr. J. A. Macdonald, M.S.A., read a letter from the Private Secretary to H.E. the Governor, in which his Excellency expressed his sympathy with the movement of an Indian Branch of the Society of Architects, which should prove useful in raising the standard of architectural training and work in India. In his Excellency's opinion the headquarters of the branch should be in Bombay. The first annual meeting will be held next October, when the election of members will take place. The present members are:—President, Mr. G. H. Wenyon, F.S.A.; Joint Hon. Secretaries and Treasurers, Messrs. J. A. Macdonald, M.S.A., and S. F. Bharoocha, M.S.A.; Committee, Messrs. A. Bell, M.S.A., J. A. Macdonald, M.S.A., S. F. Bharoocha, M.S.A., and V. A. Tara-porvala, M.S.A.

STATUES, MEMORIALS, ETC.

EXETER.—The Mayor of Exeter last Sunday unveiled St. Sidwell's (Exeter) parish war memorial, which takes the form somewhat of a large oak tablet divided into seven bays. Five of these are below the window, and contain recessed panels on which is inscribed the lettering in raised and gilded characters. On either side of the window richly canopied niches continue upwards, and contain statues. The central panel terminates in a crocketed cross supported by kneeling angels. One statue in one of the side niches is St. George of England, copied from the figure in the St. Albans Abbey screen, and originally modelled by the sculptors under the direction of the late Sir Arthur Blomfield, R.A. St. George is shown in mail and armour giving the death blow to the dragon at his feet. St. Martin of Tours, in the opposite niche, is depicted in full bishop's robes with mitre and crozier. The memorial was executed by Messrs. Harry Hems and Sons, sculptors, Exeter.

KING EDWARD STATUE FOR DELHI.—India's tribute to King Edward VII. is an equestrian statue, the execution of which was entrusted to Sir Thomas Brock, R.A. Last week the statue was successfully cast in bronze at the foundry of Mr. A. B. Burton, at Thames Ditton, and it will shortly be sent out to Delhi, where it will be erected on a marble plinth, and will stand fully 40 ft. high. Last Saturday afternoon the King and Queen called at the foundry to inspect the statue, and were received by Sir Thomas Brock and Mr. Burton. Their Majesties complimented the artist on the result of his work, pronouncing the likeness an excellent one, and they also expressed to Mr. Burton their appreciation of the successful way in which the work had been cast in bronze.

The Law of Property Bill was read a third time and passed in the House of Lords on Tuesday. The Lord Chancellor remarked that all points of difference had been settled.

In consequence of rumours that are current *Punch* is asked to state that the Selection Committee of the M.C.C. and the Hanging Committee of the Royal Academy are two separate and distinct bodies.

Mr. Edward Hughes, of Church Road, West Kirby, Cheshire, a member of the firm of Hughes, Cromie, and Pennington, builders, for eighteen years a member of the Bootle Council, and an alderman for the town, has left £8,131.

A regulation prohibiting boys from going upon scaffolds was advocated by the Westminster coroner, at an inquest last Friday on Albert Rolph, 15, who fell 40 feet from a scaffold at premises being erected in Aldwych, while collecting the workmen's tea cans.

The population of Bolton-upon-Dearne has increased so rapidly that the council have again had to consider the extension of their sewerage and sewage disposal scheme. At the recent Ministry of Health's inquiry, the council's proposals were explained by their consulting engineers, Messrs. W. H. Radford and Son, of Nottingham. The scheme includes a new gravitation sewer and extensions to the disposal works.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

Effingham House.

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OUR ILLUSTRATIONS.

New Library and Lecture Room, Selwyn College, Cambridge. Mr. T. H. Lyon, Architect.
 Meggernie Castle, Perthshire, Scotland. New extensions. Messrs. R. C. James, F.R.I.B.A., and Vincent Steadman, A.R.I.B.A., Architects.
 Memorial Organ and Gallery erected in Harrow School Chapel, 1921. Two sheets of working drawings. Sir Charles A. Nicholson, Bart., M.A. (Oxon), F.R.I.B.A., Architect.

Corrente Calamo.

The London Master Builders are making good headway with their agreement with the Government to assist in carrying out the scheme for the employment of ex-Service men in the building trades, and have posted notices that work will only be open to bricklayers, plasterers, slaters, and tilers willing to work with and assist ex-Service men to learn a trade. The trade union Federation some time ago rejected the dilution proposals, and issued a secret circular to branches, the terms of which subsequently leaked out. This stated:—"If dilutees are introduced in your workshop or job, under no circumstances must you assist in training. If dilutees are started, the full facts must be tabulated at once and reported to the Federation. If you are victimised by employers for refusing to train, the National Federation will support you." The secretary of the London district of the trade union Federation is reported to have said that its members had been instructed that under no circumstances were they to leave their employment because of the conditions imposed by the employers, which had not been agreed to by the unions. In the event of any members being dismissed for non-compliance with the terms of the employers' notices, they were to report to the district office of the union. The men, he said, "are quite prepared to carry on with their ordinary occupation, but he should not like to say what may develop. Much may happen in the next few days." In our opinion, whatever "happens," the London Master Builders are quite prepared to carry on, even without such "training" as the ex-Service men are likely to get from the union men!

All concerned, including his Majesty the King, the City Authorities, the architects (Messrs. Sir Ernest George, R.A., and Yeates), the engineers engaged on the work (Messrs. Mott, Hay, and Anderson), the surveyors (Sir Alex. Stenning and Partners), and the contractors (Messrs. Sir William Arrol and Co., Ltd.), are to be congratulated on the successful completion of the new Southwark Bridge, which was opened on Monday last. Our own readers will join in a special recognition of the advantage secured by the co-operation of Sir Ernest George, who celebrates

his 82nd birthday next Monday. We illustrated the work in our issue of April 11, 1913, with a double-page perspective view, and full general drawings and details, showing admirable artistic treatment of the stone piers, securing good effect and convenient recesses, without any such attempt to mask the iron construction as made the Tower Bridge a sham. The old bridge, which the present bridge replaces, was built by a private company and opened in 1819 under the toll system, and laboured under a handicap of heavy gradients. In the year 1864 the bridge was opened toll free in return for a money payment made by the Corporation to the company, and in 1867 the Corporation purchased the bridge from the company for the sum of £200,000. The chief features of the new bridge are:—The easier gradient, which on the City approach has been reduced from an average of about one foot in 22 to an average of about one foot in 40. Five arches in place of three, bringing Southwark into alignment with London and Blackfriars bridges, and so improving the navigation of the river. The lowering of the crown of the bridge is some seven feet. The increase in the width of the bridge is from 42 feet to 55 feet. The erection of the bridge has cost £375,000, the whole of which large amount has been provided by the Bridge House Estates Committee of the Corporation out of the funds under their care and management, and without any cost to the ratepayers.

The welcome change in the direction of affairs at the Ministry of Health under Sir Alfred Mond's régime is refreshingly marked by the June issue of "Housing," which is well worth ordering through any newsagent and good value for the threepence. It contains some copious extracts from Sir Alfred Mond's recent speeches in the House of Commons, a useful note on the very necessary provision in the Ministry of Health's standard specification for the fixing of dead-weight safety valves in a suitable position near the high-pressure boiler in the range—a matter too often neglected. Some type plans are given, showing a pair of houses differing from the "C" class hitherto illustrated, in that the smaller of the two rooms is treated as a parlour, and one or two other details. Some notes from the Building Research Board, especially to inventors designing new "systems of construction," appear, more plans of houses will be found

designed to promote economy, and several other items as timely as they are well chosen. For months during Dr. Addison's autocracy "Housing" went into the wastepaper basket with the wrapper unremoved, but future issues will be watched for.

The conversion of large houses into flats was very good business before the passing of the Rent Act, 1919, since repealed, and the enactment of the present statute of 1920. Where the rent of a big house was over £35 it did not come under the Act of 1915. If, therefore, a dwelling, of which the standard rent was £65, was converted into flats before the Act of 1919 raised the limit to £70, the owner could charge what rent he liked for the flats, and can still go on doing so. This was made clear by the judgment of the High Court in the recent case of "Sinclair v. Powell" on appeal from a County Court. Here the owner of a three-story house at Kensington, let in 1914 at £65 a year, converted it in 1917 into three self-contained flats. The tenant of one of these, paying £50 a year, inclusive of rates, applied to a County Court to have his rent apportioned under Section 12 (3) of the new Act of 1920. Although the landlord defended on the ground that the Court had no jurisdiction, the County Court judge made an order of apportionment. Lush and Sankey, J.J., after arguments, allowed the appeal. They held that, as this house did not come under the Act of 1915, the owner in 1917 could have let the place at any rent he liked, and, having made it into flats, he could clearly charge any rent he could get for them. When the Act of 1920 came into force it prevented such increases, but it had no retrospective operation. The High Court held, therefore, that the County Court judge was wrong, and he had no jurisdiction to apportion the rents of these flats created in 1917.

The King has done well, on the recommendation of the Secretary for Scotland, to revive the office of Sculptor in Ordinary to his Majesty for Scotland, and has approved of the appointment to the office of Mr. Pittendrigh Macgillivray, R.S.A., LL.D. Mr. James Pittendrigh Macgillivray is a native of Aberdeenshire, and was a pupil of William Brodie and John Mossman. His principal works are the John Knox memorial in St. Giles's Cathedral,

Edinburgh, the national memorial to Gladstone, the Burns statue at Irvine, and the Dean Montgomery memorial in St. Mary's Cathedral, Edinburgh. The last holder of this office was Sir John Steell, the sculptor of the statue of Sir Walter Scott in Princes Street, Edinburgh, who was appointed Sculptor to the Queen for Scotland in 1838. No successor has been appointed since his death in 1891.

The twentieth annual exhibition of the Women's International Art Club, at the Gallery of the Royal Society of British Artists, in Suffolk Street, is marked here and there by indications to do better things with less expenditure of pigment and more knowledge of the human form than is to be found among the 268 exhibits hung. "Tired Out," by Kats Cooper (105), is one of the best of such. "The Courtesy" (155), by Ethel Walker, is another. The figure is graceful and the attitude well conceived, and with less colour the work would pass. The same may be said about Margaret Fisher Prout's two flower pieces (158 and 160). Elinor Darwin's "Dancing Children" (140) is about the best thing in the room; they are something like human children, and their attitudes are good, and a welcome relief from the contemplation of our first parents in "The Garden of Eden" (169). The average of the water-colours is, perhaps, better, though not a high one. We liked Josephine Miller's "Segovia: Afterglow" (28) and "The Alcantara, Toledo" (35). The exhibition is open from June 8 to June 28.

SIR ROBERT ROWAND ANDERSON.

The death of Sir Robert Rowand Anderson on the 1st instant at his residence, Allermuir House, Colinton, Edinburgh, at the ripe age of 87, has removed one of the ablest, and in many respects the most distinguished, British architects as regards the personal impress given to his work in all the various styles of his many buildings and his skilful planning. Few others certainly have so successfully upheld the opportunities he had with early Italian Renaissance, as in the Medical Schools and the Conservative Club at Edinburgh; French Gothic, as in the Portrait Gallery; François Premier, in the Caledonian Railway buildings; Norman, early or late Gothic, as in his various churches; or Scottish domestic, as in his houses. In all these, and many others, his scholarly appreciation of the capabilities of the styles chosen are most manifest, as was his scrupulous respect for the claims to preservation of the ancient buildings with the restoration of which he was entrusted.

Born at Forres in 1832, Sir Rowand Anderson was educated at George Watson's old Hospital School, which occupied part of the site of the present Royal Infirmary. His father, a solicitor, intended him to be a lawyer, and he was for a time in the office of a well known firm of solicitors. But from his earliest years he had shown a fondness for drawing, and studied for a time at the Trustees' Academy, Royal Institution, under the late Mr. Christie, a contemporary of Dick Lauder. Afterwards he entered the office of Mr. John Lessels, one of the leading Edinburgh architects of the day, by whom he was entrusted in 1857 with the work of

superintending the restoration of the roof of Greyfriars' Church, which some years before had been destroyed by fire. Subsequently he made a tour on the Continent, visiting France and Italy and Holland, picking up work when he could find it, and filling his note-book with any architectural subjects of special interest. For a time he worked in the office of Dr. J. H. Cuypers, Amsterdam, who only died, at the great age of 93, on March 3 last. His early experiences and study were further strengthened by a period spent in the London office of Sir Gilbert Scott. When he returned to Edinburgh he was for a time in the architectural branch of the office of the Royal Engineers; then he was a partner with David Bryce, and shortly afterwards settled down, in the 'sixties, on his own account in an office in Dundonald Street.

Work rapidly flowed in, principally, at the outset, in designing churches of Episcopal and other denominations, but his first marked success was in a competition for the first new Board schools in Edinburgh, just after the passing of the 1872 Act, and from his designs the Fountainbridge, Stockbridge, and Causeway-side Schools were built. These at the time were regarded as far in advance of anything hitherto attempted in primary school building. Soon after, when little over forty, came a triumph which placed him at a bound in the foremost ranks of Scottish architects, when as "one of the six chief architects of Edinburgh" his designs were accepted for the stately new Medical School of the Edinburgh University, at the north end of the Meadow Walk. This work of magnitude took eight years to build, and it was in connection with its completion that at the celebration of the Tercentenary of the University in 1884 he received the honorary degree of LL.D.

The long list of his other works would fill a page. Among them may be mentioned the Engineering Laboratories, Dundee, illustrated by us on November 28, 1913; the National Portrait Gallery and Museum of Antiquities, Edinburgh; Pollokshaw Town Hall, illustrated August 2, 1916; the Central Railway Station Hotel, Caledonian Railway, Glasgow, illustrated August 23, 1920; the Conservative Club, Princes Street, Edinburgh; Monnt Stuart House, Bute, for the Marquess of Bute; many smaller houses in other places; the Estate Office, Greenock, for Sir Michael Shaw, Bt.; the Catholic Apostolic Church, Edinburgh; the Roman Catholic Church, Galston; Episcopal Churches in Edinburgh, Forfar, Cupar, Kelso, Helensburgh, Dumbarton, Culross, St. Andrews, Stirling, Colinton and Dunfermline, and of the parish church of Govan (one of the largest Presbyterian churches in Scotland), illustrated March 22, 1913. Other works included the National Memorial to the Duke of Buccleuch, the Montrose Monument in St. Giles Cathedral, illustrated June 27, 1902; the Memorial to Sir William Pearce, Govan, illustrated June 28, 1916; the McEwan Hall for the University of Edinburgh, and the Normand Memorial Hall, Dysart.

Sir Rowand Anderson was frequently consulted regarding schemes for the restoration of ancient buildings, and he carried out the restoration of Dunblane Cathedral, which we illustrated on December 1, 1893, the chapel of King's College, Aberdeen, Borthwick Parish Church, Culross Abbey (illustrated June 18, 1907), Jedburgh Abbey, Iona, Douglas, Lanarkshire, and elsewhere.

As the leading Scottish architect, he was chosen to represent Scotland in sending competitive designs for the Imperial In-

stitute, illustrated by us on July 15, 1887, also for the National Memorial to Queen Victoria at Buckingham Palace, illustrated November 15, 1901. Both were designs of a very high nature.

Sir Rowand was a man of many activities. He founded the College of Applied Art, which had its headquarters in the Royal Institution, Mound. His initiative resulted in the formation of the National Art Survey of Scotland, under which drawings of ancient buildings have been made from year to year by bursars of the school, and stored as Government property for purposes of reference. In the formation of the Edinburgh College of Art Sir Rowand Anderson also took much interest, and had the satisfaction of seeing almost in its entirety the scheme of the School of Applied Art for the instruction of architects adopted in the School of Art. He was elected an Associate of the Royal Scottish Academy in 1876, but he resigned in 1883 on a question as to the architectural status of members of the Academy. During the Presidency of Sir George Reid, Sir Rowand Anderson in 1896 was elected an honorary member of the Academy, and the old misunderstanding ended. A similar course marked his relations with the Royal Institute of British Architects; having resigned his position as Associate, he was later on elected a Fellow, and in 1916 was awarded the King's Royal Gold Medal. In 1902 he received the honour of knighthood. He for many years had an estate at Tangiers, and used to spend a part of the winter there. As a result of his travels in Italy, he published a book on "The Mediæval Architecture of the Middle Ages"—a work generally accepted as an authority on the subject. He was also the author of a folio of "Examples of the Municipal, Commercial, and Street Architecture of France and Italy," published in 1878. He was also a Fellow of the Royal Society of Edinburgh.

We published a portrait of Sir Rowand in our issue of May 16, 1890. In politics he was a Conservative. He married in 1863 Mary, daughter of Henry Ross, of Kinnahaird, Ross-shire, who died three months ago. One daughter, who died young, was the only issue of the marriage. Colinton, one of the most delightful residential suburbs of the Scottish metropolis, owes its existence to his perception of its prospective advantages. He was one of the first to build a villa residence there; and he was the architect of the pretty little Episcopal church of the village—one of the most elaborately and beautifully decorated little churches in the country.

ROME SCHOLARSHIP IN ARCHITECTURE, 1921, AND HENRY JARVIS STUDENTSHIP.

The Faculty of Architecture of the British School at Rome have awarded the Rome Scholarship in Architecture, 1921, offered by the Commissioners for the Exhibition of 1851, to Mr. S. Rowland Pierce; and the Henry Jarvis Studentship, offered by the Royal Institute of British Architects, to Mr. E. W. Armstrong. The designs executed in the final competition for the awards are on view in the galleries of the Royal Institute of British Architects, 9, Conduit Street, Regent Street, from June 8 to 18 daily from 10 a.m. to 8 p.m., on Saturdays from 10 a.m. to 5 p.m.

ROME SCHOLARSHIP, 1921.

Mr. S. Rowland Pierce is an original member of the Architectural Association Atelier, and holds an appointment on the staff of the Architectural Association. He was born at St. Leonard's in 1896, and received his first technical training at the

Hastings School of Science and Art. The Rome Scholarship in Architecture, of the value of £250 a year, and tenable for three years at the British School at Rome, is open to British students under thirty years of age.

HENRY JARVIS STUDENTSHIP.

Mr. Edward William Armstrong is twenty-five years of age, and was born at Fielding, New Zealand. After service in France with the New Zealand Expeditionary Force, he entered the Architectural Association with a New Zealand Government Scholarship, and subsequently qualified for the associateship of the Royal Institute of British Architects. The Jarvis Studentship is awarded on the result of the Rome Scholarship examination to the student or associate of the R.I.B.A. who passes next in order of merit to the winner of the Rome Scholarship.

SUBJECT FOR FINAL COMPETITION—A TOWN CHURCH.

The site is level, measuring 250 feet by 150 feet. It is bounded on all sides by streets, the main thoroughfare, 120 feet wide, being on the west. The church is to be planned with a view of the chancel unobstructed as far as possible by piers or columns. Neither transepts, dome, nor spire are essential, but the widest discretion is left to the competitors. Drawings Required: At End of First Day.—A plan and one section to 1-16-inch scale; these may be freehand drawings, but they must not afterwards be departed from in essential particulars. At Close of Competition.—A block plan showing surroundings to 1-16 inch to 1 foot. Ground floor plan drawn to a scale of 1/2 inch to 1 foot. One or two sections and two or three elevations to same scale. One bay internal or external or part of the west front to a scale of 1/2 inch to 1 foot. A perspective view is optional. Drawings to be on paper not exceeding double elephant size.

ROME STUDENTSHIP COMPETITION DESIGNS, 1921.

Seven competitors submitted schemes this year, and the drawings are now on view at the R.I.B.A. Galleries in Conduit Street. The subject is a Town Church for a site in the centre of a Grande Place surrounded by large civic and commercial buildings. The problem is well stated, and the scale of the undertaking necessarily is large, in order to correspond with its adjacent environments. The immediate purpose of the building is essentially unlike that of its neighbours, and a knowledge of the requirements of a big church and public worship is essential for practical results. Not one of the plans exactly realises the essentials of an efficient arrangement for contemporary and architectural needs, and apart from ecclesiastical details the competition cannot be said to have been a successful one. There can be no doubt, however, that the studentship, valued at £250 a year, has been rightly awarded to Mr. S. Rowland Pierce. His plan consists of a wide aisleless nave, rather square in shape, approached by a narthex porch set between a pair of dwarf towers, terminating above their cornices by attic stages of comparative unpretentiousness. The baptistry occupies the south tower, and the other is devoted to a library, parochial or otherwise, but it is too isolated from the sacristy or vestries for choir music or service books. The choir is very spacious, furnished with stalls and an organ on both sides. In such a church nowadays the singers would be located in a western gallery with the organ. A large Lady-chapel is placed on the

Epistle side, and one dedicated to the Blessed Sacrament is set on the Gospel side. Each chapel has its own separate external entrance. The chancel is shallow, and the altar occupies a little segmental apse. Vestry stairways with doors for the use of the clergy and choir flank the sacristy, the vestries and sacristy being in a crypt. Of this no plan is given, and the sections omit it. The design is distinguished by a lofty dome over the "crossing," a term justified by custom though the plan is not really cruciform. The cupola is too tall and built solid, so that the interior proportions seem rather stilted, though the lantern on the apex would serve to illuminate the mosaic decorations. The design is broadly handled, and the Classic style adopted would hold its own in competition with the buildings of a city. Inside the hanging rood, in contradistinction with the low screen, gives a good effect; but outside the comparatively inconsequential set offs, like those flanking the apse where the clergy and choir doors are, though typical of Italian design, are not effective in English towns, and soon lose their value by the dirt they suffer from. The external pulpit and shrine add much interest north and south of the nave.

The second best design deservedly wins the Henry Jarvis scholarship. Its author is Mr. Edward William Armstrong, A.R.I.B.A. His plan provides north and south aisles to the nave, which widens out into a central arena flanked by quasi-transepts utilised as portals with pediments over. The choir assumes more the regulation proportions than in the first design, and there is a larger apse to the altar pace. The vestries are much too small—one on the north and the other on the south—with no means of access between them. Short towers flank the west front, and are roofed by flat conical-topped turrets, square on plan, a pediment being set between, similar to those over the transeptal porches. The church would be none too light. The cupola has effective proportions, and the breadth of wall treatment is good, but more adapted to a southern climate.

No. 4 has a very fine western tower, capably drawn. It overweights the church by its dimensions, and serves as a contrast to the squat and odd stone-built lantern above the gathered-in cornice over the auditorium central space below. The chancel is inconsequential, with no location for the choir. The west end precludes a gallery there for the singers and organ. Generally, the design has a commonplace effect from its all-over detailing and lack of breadth.

No. 2 shows taste, and relies on squat proportions not adapted to towns where tall buildings are built. No. 1 has a spire and tower recalling All Souls, Langham Place. No. 7 puts six chapels in the nave aisles, reaching them by narrow gangways. The exterior is poor, rather like a big swimming bath, an idea suggested by the dwarf chapel screens looking like dressing-boxes, as seen in the interior perspective. No. 3 has ample lavatory accommodation, but no comprehension of church requirements for public worship.

Sir Banister Fletcher, F.R.I.B.A., C.C., presided at a house dinner given by the Authors' Club on Tuesday in celebration of the tercentenary of Andrew Marvell.

The death is announced of Mr. John Collen, D.L., at his residence, Kilcomain House, Portadown, on the 19th ult. Mr. Collen, who was eighty-four years of age, was the founder and principal of Collen Bros., Ltd., who have carried out some of the largest and most important contracts in Ireland.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

ELECTION OF THE COUNCIL, 1921-1922.

The following is the list of officers of the R.I.B.A. elected last Monday evening:—
President.—Mr. Paul Waterhouse, M.A., F.S.A.

Vice-Presidents.—Messrs. Professor Stanley Davenport Adshad, M.A., Alfred William Stephens Cross, M.A., Edward Guy Dawber, F.S.A., and Herbert Duncan Searles-Wood.

Members of Council.—Messrs. Henry Victor Ashley, Harry Barnes, M.P., Walter Cave, Sir Banister Flight Fletcher, James Glen Sivewright Gibson, William Curtis Green, Edwin Stanley Hall, M.A., Herbert Austen Hall, Emanuel Vincent Harris, Henry Vaughan Lanchester, Thomas Geoffrey Lucas, Sir Edwin Landseer Lutyens, R.A., Alan Edward Munby, M.A., Charles Stanley Peach, Sydney Perks, F.S.A., William Edward Riley, Giles Gilbert Scott, A.R.A., and Maurice Everett Webb, M.A.

Honorary Secretary.—Mr. Arthur Keen.
Associate-Members of Council.—Messrs. Harold Chaiton Bradshaw, Stanley Hinge Hamp, James Stockdale Harrison, John Alan Slater, M.A., Michael Theodore Waterhouse, M.A., and John Hubert Worthington, M.A.

Past Presidents.—Sir Reginald Blomfield, R.A., and Mr. John William Simpson.

Representatives of Allied Societies.—Messrs. Herbert Tudor Buckland (Birmingham Architectural Association), Charles Burrows Flockton (Sheffield, South Yorkshire and District Society of Architects), Gilbert Wilson Fraser (Liverpool Architectural Society), John Alfred Gotch, F.S.A. (Northamptonshire Association of Architects), Arthur William Hennings (Manchester Society of Architects), Llewellyn Kitchen (York and East Yorkshire Architectural Society), Thomas Ridley Milburn (Northern Architectural Association), William Thomas Oldrieve, H.R.S.A., F.S.I., F.S.A. Scot. (Edinburgh Architectural Association), and William Brown White (Glasgow Institute of Architects).

Representative of the Architectural Association.—Mr. William Godfrey Newton, M.A.

Auditors.—Messrs. John Hudson, F.R.I.B.A., and Arthur William Sheppard, A.R.I.B.A.

A STEEL-TESTING DEVICE.

A demonstration was given of the Casella machine by the inventor, Captain H. Riall Sankey, R.E. The machine is designed to test steel and other metals, and the principle on which it is worked is to bend the test piece of metal backwards and forwards until it is broken, the bending effort being measured by the deflection of a spring. A device is fitted whereby automatic records can be obtained, not only of this bending effort for each bend, but also the number of times the specimen can be bent without rupture, as well as the total energy required to break it. The machine gives all the information needed in the workshop as regards the strength of the material in respect of static stresses; and in addition it exhibits what may be described as the "leatheriness" of the material, or its power to resist the effect of alternations of stress. As compared with human effort in the direction of testing metals, this contrivance is said to be infinitely superior, performing the work with greater celerity and costing only £20.

COMPETITIONS.

HEREFORD WAR MEMORIAL COMPETITION.—Members of the Society of Architects are requested not to take part in the above-named competition without first ascertaining from the Society that the conditions have been approved by the Council.

Mr. James Baxter, of Plashet Road, Upton, Essex, retired builder and contractor, has left £5,208.

It is now stated that the plans for creating a garden city at Dagenham, beyond Ilford, are to be suspended for the time. Originally some 2,787 acres were bought, on which it was proposed to build at least 23,000 houses, providing accommodation for 120,000 of London's workers. Sir Alfred Mond has now stated that only 2,876 are to be erected.

BUILDING A HOUSE: WHAT THE ARCHITECT DOES.

Prefacing the reading of his paper with a statement that it was not intended for architects, and that he proposed to talk undiluted shop, Mr. Henry M. Fletcher, on June 2, gave an interesting lecture at the R.I.B.A. out of matters which his fellow professionals take ordinarily for granted, the object aimed at in the address being to put before the general public the architect's point of view in that piece of difficult co-operation, the building of a house.

Beginning at the beginning, the lecturer said the architect should be consulted even before the purchase of the plot. If the building owner was tied down to one position, this was less important; but even then the architect might be able to suggest the acquisition of a little extra piece which would improve access, or he might prevent the purchase of more than would be really useful. The site being fixed on, the main problem, that of placing and designing the house, presented itself. Placing was important, for wrong placing might make the best schemed house inconvenient, or spoil the beauty of the loveliest site. At this stage there were three matters to be considered: approach, aspect, and view. The ideal was a site sloping southwards to a fine view with shelter from the east and south-west winds, and with a road on the north. The house should be placed close to the road, with entrance, offices, staircase, and passages on the north side, and the principal rooms facing east, west, and south. A position diagonal to the cardinal points was even better. The three considerations—approach, aspect, and view—would usually clash, and the owner would have his preferences. In order to help discussion and decision, the architect would get out rough, preliminary, undetailed plans to a small scale, usually 1-16-inch to the foot. These plans would not only show the placing of the building and the relative positions of the rooms, but would give suggestions for the shaping of the surroundings—garden, drive, or forecourt, etc.—for the mutual influence of building and surroundings was so intimate that to set two separate men to work on them in water-tight compartments was to ask for failure. Discussing these sketch plans would probably enlighten the architect not a little about the circumstances, wishes, and, above all, the mind and disposition of the owner; and this knowledge, whether consciously or unconsciously, was bound to influence the final shape which the design would take. Every building, and a house more than any other, was the outcome of co-operation; and the designer should be helped and safeguarded against stereotyped repetition by the varying conditions which he found with every fresh job—the lie of the land, the characteristic vegetation and, not least, the character of the client. The architect need not worry overmuch about the character of that client being expressed in the building; every conversation would register itself somewhere. Neither need he worry about expressing his own individuality; if he had this it was bound to express itself; and there was this risk in the expression of an over-forceful personality—that the outcome would be a house in which only the designer could live. The houses of the past which interested and satisfied us most were not the product of a wilfully emphasised individualism nor of an art movement; they were the outcome of a state of society. The insecurity and militarism of the feudal ages, the wide-flung hospitality of the Elizabethan period, the scholarship of the Eighteenth

Century, the confusion and mutability of the Nineteenth, were all expressed in their architecture—a certain impersonality such as we found in the work of a tradition or a school made for permanence.

Supposing the main lines to be amicably settled, Mr. Fletcher said the architect now entered on the most vital and laborious part of the whole work, the preparation of the working drawings. These were customarily made to a scale of $\frac{1}{2}$ -inch to the foot, and consisted of plans of each floor, sections, two at least and as many more as might be necessary, and elevations. Everything that could be shown to so small a scale must be shown—construction, materials, disposition of rooms, passages, corridors, doors and windows, drainage, provision for heating and lighting, and, of course, the general form and visual effect of the building. Much would remain for working out in detail to larger scales; but in making these small drawings the architect must have in mind all that would be necessary for the completion of the building, and must satisfy himself that he was not forgetting anything the subsequent insertion of which would substantially modify his design. There was not a more fascinating occupation in the world than this gradual building up of a design from the elements. It was not possible to lay down any exact procedure applicable to every case, and if this could be done design would become a mechanical affair; whereas it was the constant variety of conditions that made the constant interest. Speaking generally, analysis preceded synthesis. Requirements would be classified in order of importance, necessities coming first and then desirables; while unimportant things were left to be fitted in. As a cross-classification there would be a grouping of rooms together and apart, according to aspect and convenience of service. Thus the kitchen and pantry would be near the dining-room, the staircases near the middle so as to minimise corridors, bathrooms so placed as to serve groups of bedrooms and economise plumbing and drainage, and so on. The possibilities of a shapely, economical and simple roofing scheme must from the ground floor up be strictly kept in mind. All this meant a generous expenditure of tracing paper, india-rubber, and brainstuff, for a modification in the shape of any one room might easily involve alterations throughout the whole house, amounting almost to a new plan. At this stage there was hardly a limit to the scraping and polishing which a design might undergo.

Coming to the point where the $\frac{1}{2}$ -inch scale drawing and $\frac{1}{4}$ -inch details were complete, the lecturer said that the quantity of materials required must now be somehow ascertained. Formerly the taking out of quantities was left to each contractor, but in the case of competitive tenders this led to the less honest contractors securing the job by cutting down their quantities below the standard of good work, and architects and reputable contractors now insisted on identical bills of quantities being drawn up by an independent person and issued to everyone. This was where there came in the quantity surveyor—a wonderful man whose work was too little known by the general public. He lived in a maze of figures, calculations, and accounts, unalleviated by any of the pleasures of design that sweetened the driest parts of an architect's work. It might be asked why the architect did not do this work himself, but the answer to that question was that he had enough to do as things were. The quantities having been ascertained, they were sent off to the contractors who had agreed to submit prices—the drawings were not sent, for

these had little interest for builders at this stage—and there ensued something of a lull in the pressure on the architect. But mentally this was a period of suppressed excitement, with alternating anticipation of the best and of the worst, culminating in the arrival of the tenders and the confirmation of his hopes or fears. If drastic cutting down was now called for his most difficult time set in. The design of a modern house, with all its multifarious requirements, was in the nature of a jig-saw puzzle, and it was heartrending to be asked to tear asunder all his pet pieces of planning. Any serious disturbance would inevitably lead to scrapping and starting again; so the building owner must not be surprised or indignant if the architect argued with all his might and main in favour of carrying out a design which was, after all, based on the client's requirements, and was the fruit of many toilsome weeks of special work and many years of special experience.

Mr. Fletcher illustrated his remarks throughout by showing specimens of the numerous tracings, etc., produced by the architect in the course of designing the house. Speaking of what happened when a design was accepted and the scheme went through, he said that several copies of the general drawings were required—one to be signed as the basis of the contract, two for the builder, one or more for the local authorities who controlled building in the district, one for the client, and one for general use in the architect's office. Then the specification had to be written. This document was largely a condensation of the bill of quantities. As to the contract form itself, this was a stereotyped form with gaps to be filled in according to circumstances. These matters being attended to, the preliminary incantations were complete, and the next matter was the appeasement of the local authorities. The representatives of local authorities were of two kinds—humans and red tapers—and they administered the regulations according to their several natures. The humans were those who recognised ways round an obstructive or obsolete by-law, but they administered the regulations by no means less in the interests of sound building than the others. In London every new building was under the simultaneous control of three local authorities—the district surveyor for construction and compliance with the Building Act, the London County Council for frontage lines, and the borough council for drains. The district surveyor was entirely qualified for all these purposes, and separate dealing with three authorities was nothing but waste of time and vexation of spirit.

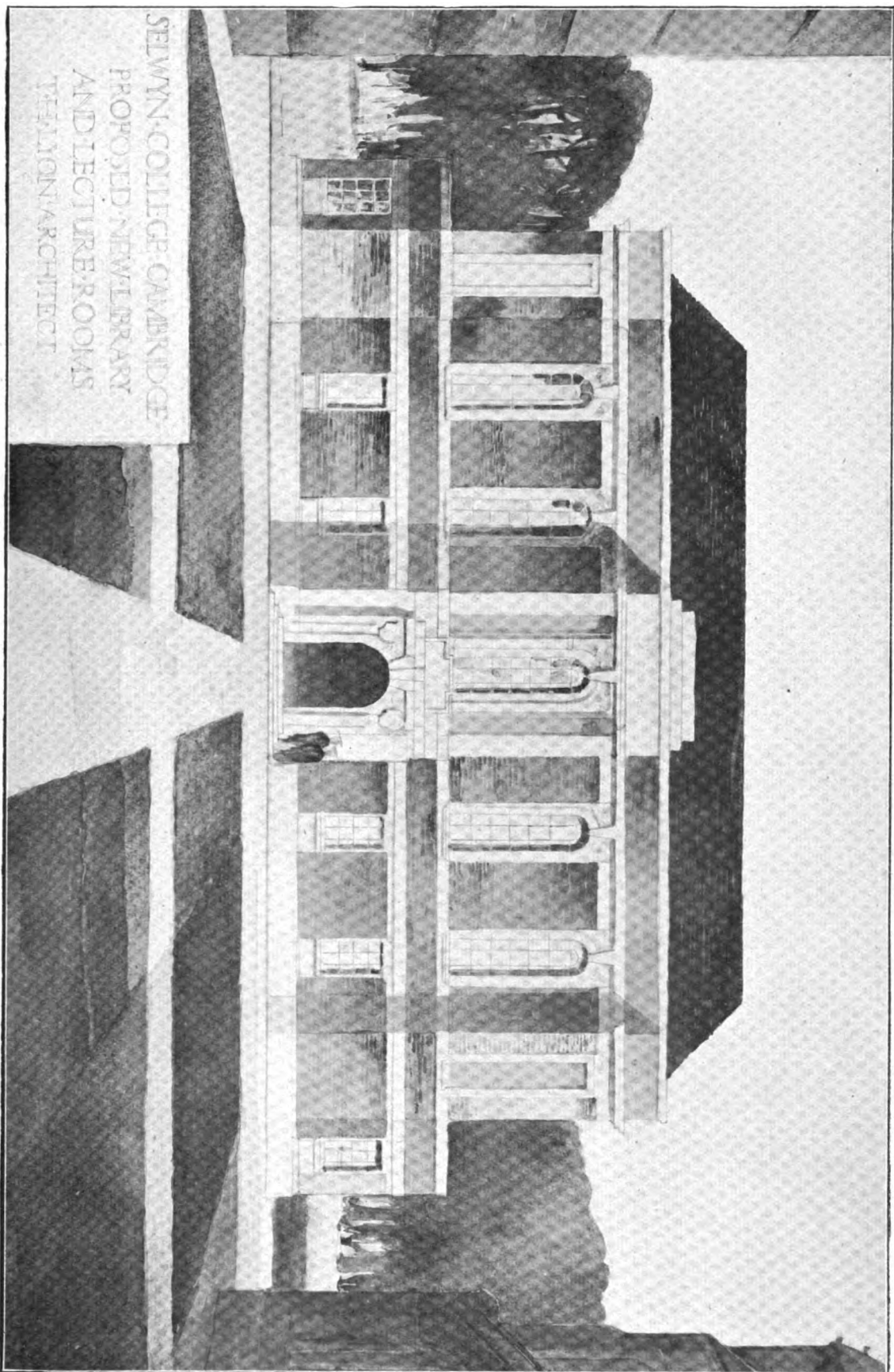
Coming to the supervision of the building in progress, the lecturer said that at this stage there were plenty of details to settle. The soil might prove unequal or treacherous, materials had to be chosen for walls—it was not enough to choose brick or stone, the whole colour could be altered by jointing or pointing. Joinery and windows had to be put in hand. Mingled with all this, and, indeed, throughout the whole course of the work, was correspondence—the proper disposal of the mountains of paper thus produced was one of the real problems of life. As the work grew under the hands of the builders it changed its appearance like a chameleon; it was impossible to judge the final effect of the work so long as it was in progress. At times the building seemed spacious, at others cramped. There were times when the architect contemplated it with a sinking heart; small!

(Continued on page 317.)



MAGGERNIE CASTLE, PERTHSHIRE, SCOTLAND: NEW EXTENSIONS.
Messrs. R. C. JAMES, F.R.I.B.A., and VINCENT STEADMAN, A.R.I.B.A., Architects.

THE BUILDING NEWS, JUNE 10, 1921.



NEW LIBRARY AND LECTURE ROOMS, SELWYN COLLEGE, CAMBRIDGE.
Mr. T. H. Lyon, Architect.

(Continued from page 308).

wonder if the layman gazed at it with terror. Not until the final smooth coat of plaster was laid and the ceilings whitewashed could the effect be told. Last came the settling of accounts. If the builder was honest and the surveyor clear-headed, there was not room for much dispute, though amongst an infinitude of small items there must always be a certain proportion open to discussion. If the builder was dishonest the architect's place might easily become a bear garden. The accounts being settled, there remained the passing of a cheque to the architect for the final instalment of his scheme, and sometimes a lifelong friendship between architect and client. A friendship based on the foundations of a house was firmly based.

The lecturer concluded that he had intended to sketch the ideal house, but the more he thought it over the clearer it became that there was no such thing. Especially was the small house a bundle of mutually warring requirements. Each of these would seem essential if dwelt on too insistently; if you hoped to pack them all in together your four walls would need to be accordion pleated. A multitude of rooms, a sense of space, and a small building account were not compatible; intercommunicating rooms saved passages but destroyed privacy, and so on.

Mr. Ernest Newton, R.A., who presided, said that after the full, excellent, and detailed paper that had been given, all present would feel that they could go away and build houses for themselves. But they should be warned that Mr. Fletcher had kept back certain secrets, without the possession of which it would be very difficult to build a house except with the aid of an architect. He (the speaker) had received in his time a very large number of sketch plans from people who wished to build houses, but he had found it very unusual to get one going beyond the crudely practical. The majority of amateur planners were perfectly satisfied when they could so arrange a plan that they were able to get into and out of the house and move from room to room. It was a mistake to suppose that only women were practical—especially in regard to kitchens, offices, linen cupboards, and all that sort of thing. Architects really gave such matters a great deal of consideration, and knew a great deal about them. As to amateur designs for the outside of houses, it might be discreet to say nothing; there might be some present who after trying to design the outside of a house had been very thankful that there were men trained to the work. The architect worked laboriously and continuously weighing, rejecting, often scrapping. Many fine visions had to be left unrealised because of the inadequate time at his disposal.

A vote of thanks to the lecturer terminated the proceedings.

A meeting of the creditors of Arthur James Moorcroft, bricklayer, residing at 96, Minstead Road, Gravelly Hill, formerly carrying on business as a builder in the name of A. J. Moorcroft and Co., was held at the office of the Birmingham Official Receiver last Friday. The debtor's statement of affairs showed a deficiency of £541. He attributed his failure to "Inexperience in estimating for building contracts and want of working capital."

The death is announced of Mr. William Patrick Ryan, J.P., C.E., F.S.I., F.S.Arc. (of Messrs. Morris and Ryan, 52, Haymarket, S.W.), rating surveyor and past-president of the Rating Surveyors' Association, somewhat suddenly at his residence, 18, Ellerdale Road, Hampstead, on Monday, May 30. Mr. Ryan was in his seventy-first year, and was a member of the Council of the Surveyors' Institution, being elected a Fellow in November, 1891.

Our Illustrations.

NEW LIBRARY AND LECTURE ROOMS, SELWYN COLLEGE, CAMBRIDGE.

This proposed building is to take the place of the temporary Library in the middle of the Court. It is on a lower level than the rest of the Court, and stands back from it with a formal garden in front. The building will contain a large library (80 ft. by 24 ft.) entered from a main staircase between two lecture rooms on the ground floor. The materials are Luton brick with Portland stone dressings. Mr. T. H. Lyon, of the School of Architecture, Cambridge University, is the architect. The drawing reproduced herewith is now at the Royal Academy Exhibition.

MEGGERNIE CASTLE AND LODGE, PERTHSHIRE.

Meggernie Estate, comprising some 40,000 acres, is situated in the Glenlyon Valley. The property has recently been purchased by Mr. E. S. Wills, for whom the proposed additions to the Castle and New Entrance Lodge are to be carried out from designs prepared by Messrs. Richard C. James, F.R.I.B.A., and V. Steadman, A.R.I.B.A. The greater portion of the servants' quarters are to be pulled down and new buildings erected on three sides of the courtyard. The new portions have been designed to be in keeping with the old work. The walls are to be of rubble masonry of stone quarried on the estate; all exterior faces to be plastered, except ashlar work of doors, windows, parapets, and eaves. The plaster is to be whitened, and the roof covered with black slates laid with diminishing courses. The interiors of principal rooms are to be panelled with oak, and the ceilings treated with ornamental plaster. The drawing reproduced is on view at the Royal Academy. We shall give a similar water-colour at an early date illustrating the Lodge and entrance gateway.

MEMORIAL ORGAN CASE AND SCREEN, HARROW SCHOOL CHAPEL.

The organ case and gallery were designed by Sir Charles Nicholson, and executed by Messrs. Bowman and Son, of Stamford. The gallery is of Weldon stone with an oak parapet, and the organ case is of oak, designed in Late Gothic style. The case of the great organ in the south aisle shows the pipes in the ordinary manner; they are grouped in towers with flats between, and are protected at the top with caryed and gilded pipe shades. The choir organ, in the north aisle, is enclosed in a swell box, and this is enclosed in pierced tracery work. The great organ is surmounted with a gilded figure of an angel blowing a trumpet, the work of Sig. Tosi, of Kensington. The organ case and gallery are gifts in memory of two old Harrovians who fell in the great war.

The Minister of Health announces that the Association of Municipal Corporations have nominated Alderman Sir Alfred Gelder, of Hull, as their representative on the Tribunal in the room of Alderman C. F. Spencer, who recently resigned on going abroad.

The highest monolithic structure yet built is said to be the reinforced concrete wireless tower built at Tokyo for the Japanese Government. It is 660 ft. high above ground, and tapers from 55 ft. in diameter at the bottom to 4 ft. at the top. The corresponding thicknesses of the shell are 33 in. and 6 in. The footings extend to a depth of 12 ft., and have an area of about 6,000 square feet, resting on gravel and clay. The work required some 6,000 cubic yards of concrete and 425 tons of steel.

Correspondence.

THE USE OF LIME INSTEAD OF PORTLAND CEMENT.

To the Editor of the BUILDING NEWS.

Sir,—In your issue of May 27 I see that a correspondent condemns the use of cement work over lime concrete, as a result of experience with a floor of lime concrete floated over with cement mortar.

Floors of cement concrete over lime concrete are largely used in India for dwelling houses and barracks, and are quite satisfactory as far as my experience goes. I think they could be used successfully at home.

For a dwelling-house floor a foundation of about 4 ins. of lime concrete is given. The aggregate is usually broken brick.

On this is laid cement concrete 1 in. thick, made with one part cement to two and a-half or three of aggregate. The latter is either crushed stone or gravel graded up to ½-in.

It is essential that the cement concrete be broken up by joints into small areas, otherwise it is bound to crack and part from the lime concrete.

It is usual to divide it into squares or rectangles of from four to six foot sides. Eight foot is a maximum.

These squares are laid alternately, so that no two contiguous squares are put down at the same time. The first and alternate squares are separated by wooden screeds or flat iron ½-inch thick. These are afterwards removed, and the joint filled in with a usual jointing material.

An alternative is to use oiled paper, which is, of course, left in the joint. The latter may be grouted up when it opens.

The concrete is beaten lightly to obtain a good surface, any local deficiency of cement being made good with a little dry cement.

On no account should any floating coat or plaster be added.—Yours faithfully,

E. DE L. YOUNG, Lt.-Col.
3, Belmont, Shrewsbury.

PROFESSORSHIP AND PUBLIC RECOGNITION.

Sir,—At the beginning of the eighteenth line from the bottom of centre column, page 280, of your issue for May 27, appears the name "Julien Guadet"; this should read "Julien Guadet."

To all interested in "organised" architectural education, now such a burning question in England, this name is of paramount importance, because his work in four volumes on the "Elements and Theory of Architecture" is the most thorough and the only treatise of its kind in any language. Guadet's method of approaching the subject is very different from Viollet-le-Duc's, but after much heartbreaking on the part of Romanticists it is found to coincide exactly with the requirements of the present epoch. It is the text-book of the Ecole des Beaux Arts.

The training of the "modern" architect, whether English, French, or American, is based upon this work, and for that I should be glad if you would kindly draw the attention of your readers to the name of "Guadet."

H. BARTLE COX, A.R.I.B.A.
25, Rue Boissonade, Bd. Raspail,
Paris.

Ill-health has compelled the city architect of Dublin, Mr. Charles J. MacCarthy, to resign his position.

Mr. Thomas Hardy celebrated his eighty-first birthday on June 2 at Max Gate, Dorchester, where he received numerous congratulations. His general health is good, but he maintains his close retirement and finds his greatest pleasure in his country walks. This week he was visited by a delegation from Dorchester, Massachusetts, bearing a message from the daughter town, but he was not well enough to receive them, and they were seen by Mrs. Hardy.

OBITUARY.

All our readers will regret to learn that the President of the R.I.B.A. is in mourning for his mother, Mrs. Thomas Simpson, who passed away last week at her residence at Brighton, in the ninety-first year of her age. The venerable lady had borne well her burden of years, retaining until quite lately full possession of her faculties both mental and physical. The funeral took place at Brighton on Wednesday, June 8. Mrs. Simpson was the widow of an architect, and of her four sons two are architects—Mr. John W. Simpson and Mr. Gilbert Simpson, the latter succeeding his father as architect to the Brighton Educational Authority and other bodies. Mr. Thomas Simpson, the father, was the successor of his uncle, a very well-known architect in his day. The other two sons are both doctors, one the senior consulting surgeon to the Sheffield Royal Hospital, the other in practice at Hove.

We regret to announce the death of Mr. J. Havard Thomas, the eminent sculptor, late on Monday night at his residence in Glebe Place, Chelsea. Born in December, 1854, Mr. Thomas won a National Scholarship, and was trained at South Kensington and at the Ecole des Beaux-Arts, Paris, and also worked for many years in Southern Italy. He was a member of the International Society of Sculptors, Painters, and Gravers, and a Professor at the Slade School, and at University College. Mr. Thomas's work will be found in several art galleries, including the Tate and those of Manchester and Bradford. He produced a number of excellent portrait-busts, among them those of Samuel Morley and Edmund Burke, both at Bristol. His statue of "Thyrsis" was rejected at the Royal Academy, and is now in the Manchester Art Gallery.

PROFESSIONAL AND TRADE SOCIETIES.

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION.—A special meeting of the above newly formed association was held in the Committee Room, Town Hall, Reading, on Thursday, June 2, at 3.15 p.m. The chair was taken by Mr. C. S. Smith, J.P., F.R.I.B.A., chairman of the Reading Society of Architects, and twenty-seven architects from Berks, Bucks and Oxon were present, including Messrs. W. R. Howell (F.), T. T. Cumming (A.), H. W. Rising (F.), C. B. Wilcocks (F.), H. Hutt (A.), W. J. Freeman (A.), C. S. Kimpton (A.) (Berks), T. Rayson (A.) (Oxon), R. A. Rix (A.), and A. Cooper (Bucks). The by-laws of the association were received and confirmed and the following officers elected:—President, E. P. Warren, Esq., F.S.A., F.R.I.B.A. (Berks); vice-presidents, C. S. Smith, Esq., J.P., F.R.I.B.A. (Berks), and H. Rogers, Esq., M.A. (Oxon); hon. treasurer, T. T. Cumming, Esq., A.R.I.B.A. (Berks); hon. auditor, R. A. Rix, Esq., A.R.I.B.A. (Bucks), with Mr. H. Hutt, A.R.I.B.A. (Berks), as hon. secretary. The various branches of the association nominated their representatives for the council. The association resolved that formal application should be made for affiliation with the R.I.B.A. Competitions were arranged, open to members and students of the association, for an association badge and measured drawings.

INSTITUTION OF SANITARY ENGINEERS.—"Hindrances to Sanitary Reform" was the subject of a paper read by Major T. J. Moss-Flower at the annual meeting of the Institution of Sanitary Engineers in London recently. We had reached a sufficiently high standard of knowledge and practice to enable us to deal with the present unsatisfactory condition of things, said Major Moss-Flower, but there was room for improvement. What was required was not so much new or additional legislation as the more effectual carrying out of laws in existence. Hindrances to sanitary reform arose from ignorance, apathy, indifference or neglect, thoughtlessness and selfishness, and all parties in the State were more or less guilty under one or other of those heads. Were it not so, we should not find hundreds and thousands of homes in the insanitary con-

dition in which they were to-day, nor should we find so many districts without reliable sources of water supply, nor would there be thickly-populated centres without systems of sewerage and sewage disposal works. In his presidential address, Mr. Nandy Hoskins suggested that the Institution had erred in its younger days in the admission of members who were not fully qualified as sanitary engineers. It had been, and was now, a common practice for plumbers and jobbing builders to add to their many qualifications that of sanitary engineer, although their knowledge of engineering did not entitle them to do so.

STATUES, MEMORIALS, ETC.

LEAMINGTON.—The design hitherto fixed upon for the war memorial in Leamington has been abandoned owing to the opposition of the townspeople, and it has been decided to accept a design by Mr. Albert Toft, who was the sculptor of the statue of Queen Victoria erected near the Town Hall. It consists of the representation, in bronze, of a British soldier, standing with arms reversed. The figure itself is 7 ft. high, and is placed on a 10-ft. pedestal of Portland stone. It will be erected in Euston Place.

BIRMINGHAM.—At St. Philip's Cathedral Church, Birmingham, on Sunday, July 3, a tablet to the memory of the officers and men of the 15th, 16th, 25th, and 26th Battalions of the Royal Warwickshire Regiment will be unveiled by General Sir Lancelot Kiggell, K.C.B., the senior officer of the regiment. The memorial, which was designed by Mr. Arthur Dixon, architect, with special regard to the style of the existing memorials in the church, will be placed near the rector's pew. It consists of a large diamond tablet in the centre, with four smaller diamonds around it. The central marble tablet bears the inscription.

ST. GILES' CATHEDRAL, EDINBURGH.—A monument to the memory of the ministers, probationers, and students of divinity of the Established Church of Scotland, the United Free Church, and the Free Church, who, as chaplains or combatants, laid down their lives in the war, was unveiled by the Lord High Commissioner, the Duke of Sutherland, on June 1 in St. Giles' Cathedral, Edinburgh. The memorial has been erected on the east wall of the south aisle of the choir in proximity to the Communion table and the Thistle Chapel. Executed in Scottish oak by Mr. J. S. Gibson, from the design of Messrs. Begg and Lorne Campbell, architects, Edinburgh, it measures 8 feet in length, and is 6 feet 6 inches in height, and contains over 100 names. A central feature composed of a canopied niche contains a massive cross set upon a pedestal which carries the main dedication, the canopy having the emblem of the Burning Bush incorporated in the tracery. Surmounting the whole is a carved cresting, the motif of which is the national emblem of the thistle incorporating four angel figures supporting shields, upon two of which are emblazoned the St. Andrew's Cross, and upon the other two a representation of the chaplain's badge, the design throughout being relieved by a reserved application of gilding and colour.

At the Birmingham County Court, on June 1, Judge Amphlett, K.C., gave judgment in the case in which O. N. Pearce, of 23, St. Michael's Hill, Handsworth, sued Benn Bros. Ltd., London, proprietors of the *Export World*, for £10 16s. for commission on advertisements, which he alleged he caused to be inserted in that periodical. His Honour said the plaintiff entered into the defendants' employment, and during that employment induced a customer to insert an advertisement in the paper. His employment came to an end before the first year of his engagement expired, and after the termination of that employment the advertisement was repeated. The question was, Could the plaintiff sustain a claim for commission in respect of that repeat order? There was nothing in the terms of this particular contract which would warrant the inference that the employee was entitled, after the termination of his employment, to claim such commission, and he therefore gave judgment for the defendants, with costs. A stay of execution for twenty-one days was granted.

LEGAL INTELLIGENCE.

AUCTIONEERS AND THEIR COMMISSION.—On Monday last, in the Mayor's and City of London Court, Mr. Charles W. Parker, of Coleman Street, failed to sustain a claim against Messrs. C. C. and T. Moore, auctioneers and estate agents, of Leadenhall Street. The plaintiff owned the unexpired residue of a lease of the first floor of premises in Coleman Street. The defendants found a firm who were willing to pay £200 a year rent and £750 for the sale of the lease. The plaintiff accepted, and the defendants received £75 as a deposit. Out of that the defendants claimed their commission for letting the premises and 5 per cent. for selling the fag-end of the lease. Mr. Ernest Charles, K.C., for the defendants, said if the plaintiff's view prevailed surveyors' commissions would be reduced by 50 per cent. The plaintiff had himself said he wanted to assign the residue of his term at a premium. It was not the sale of a leasehold property. The £750 was paid as a premium, because with City offices everybody wanted them. Judge Jackson found for the defendants, with costs, and said he would facilitate an appeal if the plaintiff so desired.

CHIPS.

Mr. J. H. Margetts, of Reading, builder, has left £37,367.

The Housing Bill was read a second time in the House of Lords on Tuesday.

Mr. William Payne, of Lebanon House, Westoe, South Shields, Durham, builder and contractor, has left £16,738.

Mr. William Greenwood Asquith, of 2, Brudenell View Park, Leeds, building contractor, has left net personalty £2,407, gross £6,238.

The roofing-in of the new County Hall, it is reported, is now practically completed, apart from the crescent block. There were on May 30 1,001 men at work on the site and in outside yards.

A bust in white marble of the late Mr. Jesse Collings, M.P., has been presented to Birmingham Art Gallery by his daughter, Mrs. H. C. Field. The bust is by Mr. Albert Toft, who exhibited it at the 1914 Academy.

The war memorial in the chapel of Felsted School was unveiled yesterday. It is a carved oak screen, on which are inscribed the names of old boys, masters, and servants who fell in the war, designed by Mr. Frank O. Salisbury.

Mr. F. W. Hamilton, the District Surveyor for Chelsea, has resigned his appointment as from June 3. For the present the district will be administered by an interim District Surveyor, and the L.C.C. Building Acts Committee is making arrangements accordingly.

Wages in the paint, colour, and varnish trade are to be reduced. The reductions will be in two instalments of 3s. each for all male and female adults, juniors being decreased proportionately. The first instalment will date from Saturday next, and the second one from July 9.

An Engineers' Club for London was constituted on June 2 at a meeting at the Hotel Cecil, held under the chairmanship of Mr. C. H. Wordingham, past-president of the Institution of Electrical Engineers. A general committee was appointed, with Mr. Manville, M.P., as president and Mr. Hill as hon. secretary.

The following have been elected Fellows of the Society of Antiquaries of London:—Professor Parsons, Rear-Admiral Somerville, Mr. S. H. Williams, Dr. W. M. Palmer, Mr. O. G. S. Crawford, Mr. A. C. Knight, Mr. J. Gibson, Major-General Mitford, Captain P. B. M. Allan, Mr. L. Ambler, Captain W. H. Murray, and Mr. W. F. S. Dugdale.

Successful cottage building is being carried out on Viscountess Rhonda's Monmouthshire estate with ex-officer labour, under the direction of a skilled foreman. One cottage has been built and another is nearing completion, and, although when they started in November the men knew nothing of building, they have done all the work, with the exception of joinery and plumbing.

Among the names of the numerous persons knighted in the list of birthday honours are: Messrs. James Charles Calder, C.B.E., chairman of Scottish Advisory Committee of the Timber Control in 1915; Charles John Holmes, Director National Gallery; Frederick Gill Rice, past-president of London Master Builders' Association and Institute of Builders; Howell James Williams D.L., J.P., deputy chairman London County Council.

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OUR ILLUSTRATIONS.

Borough of Derby Housing Scheme. Semi-detached types of tenements. Messrs. C. E. Stafford,	
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Strand, W.C.2.

A.R.I.B.A., and John Ward, M.Inst.C.E., Architects. (Plans, sections and elevations.)	
War Memorial Reredos, All Saints Church, Hursley, Hants. Mr. Alexander G. R. Mackenzie, F.R.I.B.A., Architect.	
"The Soldier of Defence." Hoylake and West Kirby War Memorial, Cheshire. Mr. C. J. Jagger, Sculptor.	

Currente Calamo.

The Court of Appeal has overruled Mr. Justice Eve's decision in the case of Messrs. Lever Brothers' joiners, and thereby affirmed the principle that a trade union cannot expel men from its membership on a "fancy" ground, such as that they are participants in a co-partnership scheme. As counsel for Messrs. Lever Bros. said, the unions threatened to expel his clients because they contended that by participating in the scheme they were, in Braithwaite's case, offending against a rule which forbade members to work on a co-partnership scheme which did not give control of the business to the workers, and, in Ashley's case, breaking a rule forbidding members working on the "premium bonus system." In fact, the scheme was neither a co-partnership nor a premium bonus system. It was a scheme by which Lord Leverhulme set aside part of the dividends which would normally come to him as holder of the ordinary shares for the benefit of workmen who satisfied certain conditions which any loyal trade unionist could satisfy. For the respondents it was argued that the scheme was both a co-partnership and a premium bonus system. For many years the unions took no objection to it. Then a dispute occurred between Messrs. Lever Brothers and other unions, and a strike occurred. The men who went back to work before everything was settled got back their co-partnership certificates; those who waited for the final settlement did not. That caused ill-feeling, and the unions changed their mind. The Court of Appeal, consisting of the Master of the Rolls and Lords Justices Warrington and Younger, on Monday held that the actions could be maintained; and rightly, surely?—unless trade unions are to impose tyrannical conditions of membership of the sort which are fast rendering such unions hateful to thousands of reasonable men who are nevertheless obliged to belong to them.

As there is nothing to pay, except a shilling for the somewhat thin catalogue, no one can complain that he has not got his money's worth at the Guildhall Art Gallery Exhibition of the "Rejected" at the Royal Academy; and there is no reason why hospitality of the kind should not be vouchsafed to more such than the 169 who failed at Burlington House, or

to as many as can be found room for, or for those who did not send at all, as is the case with three pictures, on what principle we do not know. Some of the artists who were not invited to exhibit seemed a little sore last week that some forty painters, doubtless "of established reputation," are hung twice, and in one instance three times, thus shutting out others who have not been given their chance; but nobody can please everybody, and, on the whole, the exhibition, with the exception, perhaps, of some half-dozen things shown, affords no evidence that any injustice was manifested at Burlington House this year. The majority are meritorious, and quite orthodox in conception and treatment. There are several of the newer styles, no worse or better than some at the Academy. Among the best are Bernard F. Gribble's "The Doomed Fleet (November 21, 1918)" (7) and his "Captain Cook's Last Venture" (39); Mr. George C. Haite's "Granada" (17); Mrs. Lucy Kemp Welch's "The Transient Hour" (28) and her "Glory of the Setting Sun" (58), neither of which was sent to the Academy; Mr. Stephen Reid's "A Lass that Loves a Sailor" (5); Mr. Yeend King's "September" (30); Mr. Leonard J. Fuller's "Once Upon a Time" (77); and the Hon. John Collier's "Sleeping Beauty" (34) and his "Amber Necklace" (65). The portraits include those by Mr. Walter Urwick ("Major T. Gerald Davidson") (36), Mr. Edwin Ward ("John T. Day, Esq.") (48), and Mr. Hugh L. Norris ("Mrs. Henry Stevenson") (148). The third picture not sent to the Academy is Mrs. D. R. Beresford's "Guildhall of the City of London" (110). The exhibition will remain open till July 13. The arrangements for the inspection of the pictures by the Press were not very favourable ones.

On Monday last Colonel Newman asked the President of the Board of Trade whether he would ascertain if a British trust known as the Wallpaper Manufacturers, with an authorised capital of £5,000,000, gives a 10 per cent. rebate to dealers or decorators who pledge themselves not to deal with any concern outside the combine, with a further agreement that the rebate is at once repayable if it can be shown that they have dealt with any rival concern; and was he aware how gravely this restriction operates on the

public by limiting their range of choice when making their purchases? Mr. Stanley Baldwin (for the Board of Trade) said he understood that an arrangement of the nature indicated has been in operation in connection with Wallpaper Manufacturers, Ltd., for some time past; but no complaints from consumers as to any adverse effects of the arrangement had been made to his department. Colonel Newman also asked the President of the Board of Trade whether his attention had been called to the restraint of freedom of commerce, and consequent enhancement of the price of commodities to the consumer, caused by the practice of trusts and combines, both international and British, to grant rebates of 10 per cent. to the retail purchaser or middleman if he would pledge himself not to do business with any rival concerns that are outside the trust, combine or ring and did he intend to make such rebates invalid and punishable; also whether he would seek powers to so modify the law that a manufacturer shall not be able to obtain judgment for the payment of an account under a contract containing restrictive clauses or discounts for exclusive custom unless the court, after considering all the circumstances, considers the terms of the contract as fair both towards the retailer, the middleman, and the purchasing public? Mr. Stanley Baldwin said arrangements of the kind were not infrequent. Proposals for legislation on the lines indicated raised large and difficult questions of policy, on which he was not at present prepared to make any pronouncement, but the matter would be carefully considered in connection with any future legislation in respect of trusts and combinations. A very vague promise, we think, but by some Government it certainly will, we trust.

The recent acceptance by the Prince of Wales of the Hon. Fellowship of the Royal Institute of British Architects was welcomed by the profession and by the discerning public as a happy sign of the times, as also the fact that His Royal Highness consented to open the Royal West of England Academy School of Architecture, recently established in Bristol, on the occasion of his visit to that city last Friday. The Prince was supported by the President of the Royal Academy, Sir Aston Webb, K.C.V.O., C.B., R.A., F.R.I.B.A., and the President of

the Royal Institute of British Architects, Mr. J. W. Simpson, F.R.I.B.A. Prompted by the Architectural Association, in the person of Mr. Maurice E. Webb, its then President, and in response to the appeal of local students, the Bristol Society of Architects set itself, during 1920, to the task of creating in Bristol, as a centre for the West of England, a school which, whilst satisfying the ideal as to control, should be founded on a basis broader and more enduring than could be secured by mere sectional effort; and should, moreover, by providing against the segregation of its students in an atmosphere purely technical, aim at those best results recognised as unattainable within narrow technical limits. Fortunately the Bristol Society had in Bristol, as its friend and neighbour, the Royal West of England Academy. Invited by the Society to collaborate, the Academy responded with such good effect that the school was opened for work on the 5th day of January last under the auspices of the Academy. Affiliated with the school of the Architectural Association, it is under the headmastership of Mr. H. Chalton Bradshaw, A.R.I.B.A., winner of the British Prix de Rome, 1913.

The report prepared by a sub-committee appointed by the Standing Committee on the Investigation of Prices and Trusts under the Profiteering Act on the price of slates, issued last Monday, states that the North Wales Quarry Association comprised the great bulk of the slate manufacturers in this country, and that the association was concerned mainly with the questions of wages and relations with labour, and did not exercise any definite control over prices. The price of slates at the quarry had increased by about three times as compared with the pre-war period. The main cause of that rise in price was attributable to the increase in the wages of labour, which were now three times the pre-war rate, while, principally owing to the reduction in hours, the output per man had decreased. The committee state that the quarry owners did not appear to be making excessive profits, although they were in a better position than before the war, when the trade was very unremunerative. The slate merchants as a whole appeared to be obtaining larger profits than in pre-war years. As the price of slates had risen three times, while the overhead expenses of merchants had risen in a lower proportion, it followed that the net profit per unit realised by merchants was greater than before the war. There did not appear to be any justification for the increase in the percentage rate of profit in view of the large increase in cost upon which the profit percentages were calculated. It must, however, be borne in mind that, as compared with the pre-war period, the turnover of the slate merchants had decreased, owing to the smaller output from the quarries.

Messrs. Robert Ingham Clark & Co., Ltd., of West Ham Abbey, London, E.19, have published a new and revised edition of their "Some Varnish

Vagaries," at half-a-crown, which illustrates and details some invaluable facts about varnish making and using. Varnish making, as practised at West Ham Abbey, has long ceased to be a "trade." It is a science in itself, in which experience, seconded by the long research of the firm, who beyond doubt are the world's leading varnish makers, has achieved results which, whether as regards oil varnishes, spirit varnishes, japans, or enamels, are beyond comparison. Even with these, users of varnish are confronted from time to time with drawbacks in their work due to no fault of the varnish, but to wrong methods of application, unsuitable atmospheric conditions, careless workmen, or the bad condition or quality of the old or new surface under the varnish. Often a varnish condemned by the user proves to be perfect if tested upon a piece of clean glass. No less than about forty of these bad results are tabulated, and the precaution against or remedy for their occurrence plainly set out. With this handy and comprehensive guide to their avoidance not a gill of good varnish should be wasted, and blistering, blooming, blotching, chipping, cracking, scaling, and the rest of the unsightly evidences of ignorance or neglect should be relegated to the bad memories of the evil past.

REGISTRATION IN THE UNITED STATES.

Registration in some form or another is making rapid progress in America. In addition to the eleven States which have adopted it, seven more, Arizona, Indiana, Minnesota, North Carolina, New Jersey, Tennessee, and West Virginia now have licence laws, and the Colorado and New York legislatures have approved amendments in the existing laws of those States. The new Colorado Bill was passed on April 4 last, and the New York Bill on May 6. A law for Pennsylvania has passed the Legislature, and at the date we write was awaiting Governor Sproul's signature. The new Acts are all based on the proposed uniform law as settled by the American Engineering Council last year.

In Indiana, hereafter, Engineers and Surveyors, any persons, men or women, practising or seeking to practise can only do so when duly registered by a State Board of five members, of which at least two shall be engineers and two surveyors, removable by the Governor for misconduct, incompetence, or neglect, and serving for stated periods of not less than one year. Each member of the Board must be a citizen of the United States, and have been in practice ten years, and in responsible charge of work for five. He will be paid ten dollars a day while attending sessions, and travelling expenses. A registration fee of 25 dollars will be payable by all applicants to the Board, who must be citizens of the United States or Canada, of good moral character, and have been a resident in Indiana for at least a year. Architects are not included.

In Arizona architecture is included, and assaying as well. The registration fee for architects or engineers is 15 dollars, and 10 dollars for assayers. The Minnesota law registers architects and engineers for a fee of 5 dollars and land surveyors for 2 dollars, or in all three professions for 15 dollars. North Carolina registers engineers and land surveyors only: engineers at 25 dollars, and land surveyors at 10

dollars. New Jersey does the same for 35 dollars, or 25 dollars as engineers or surveyors. In these and the other States variations in the powers and constitutions of the different Boards, fees for renewals, and other matters are numerous.

In New York a critical situation has arisen in regard to an Amending Bill introduced by members of the Licensing Board introduced to eliminate the section of the Act which permits non-engineers to practise under the guise of corporations or unrestricted partnerships. Forty-nine eminent New York engineers have bombarded Governor Miller, who signed the Act, with a strong remonstrance, which certainly has many points of reason, against the exemptions claimed for those non-professional people from obligations which the registered engineers are bound by. It further urges that the exemptions sought may easily become immoral ones, permitting aggregations of wholly or in part non-engineers serving in the dual capacity of supposedly disinterested advisers to clients, and at the same time as self-interested financiers, sellers, or contractors in connection with work about which such professional advice is given. The objectors declare that under such unregistered corporations the registered professional engineer would be relegated to a position of anonymity, or that of a servant, releasing him from all professional responsibility to the client, and placing him under the thumbs of bankers or contractors. Moreover, it is insisted that the standing of the profession is lowered by legalising that which in the penal law is declared illegal, as in the cases of law, medicine, dentistry, nursing, and veterinary surgery. Lastly, it is shown that the Bill will prejudice public welfare, forcing engineers in independent practice to abandon their purely professional work, and affiliate with contracting or banking organisations, thus depriving the public of the disinterested and effective service of the men hitherto responsible for the progress and reputation of engineering.

The rejoinders of the proposers of the Amendment Bill seem to us specious rather than convincing, but evidently they convinced Governor Miller, for he signed the revised Bill on May 6, which now provides that in New York State licences are not necessary for individuals, firms, or corporations for practice connected with property owned or leased by them unless the same involves danger to public health or safety.

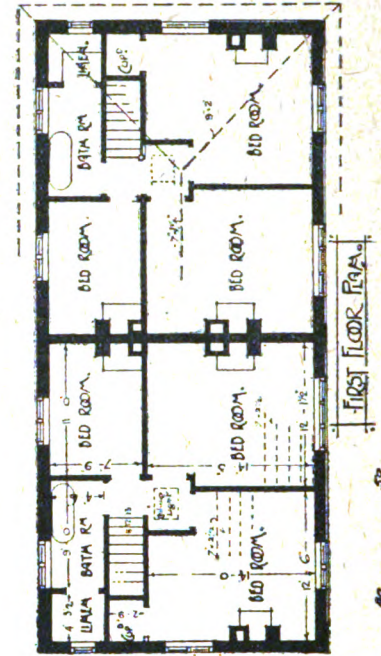
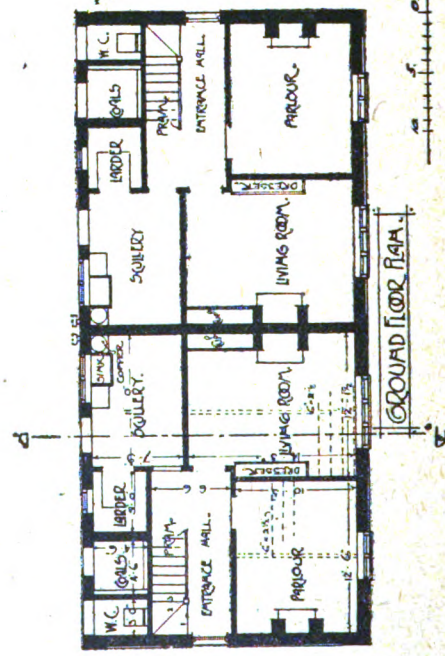
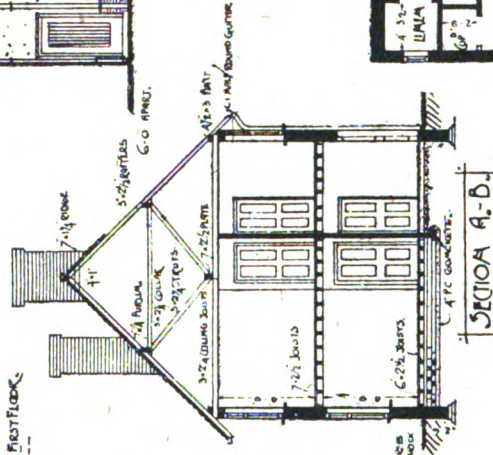
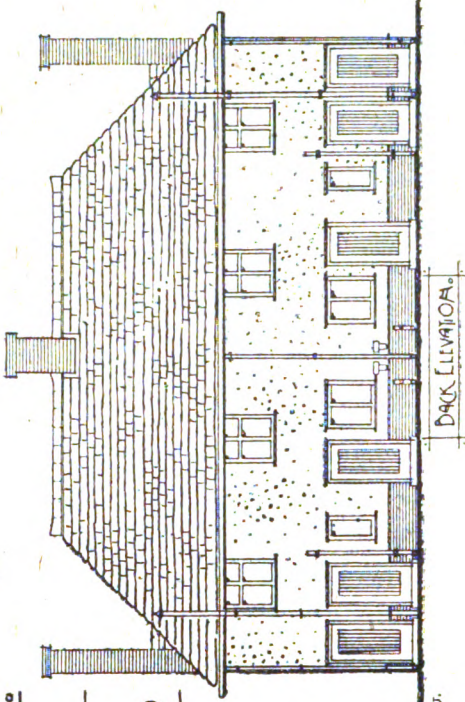
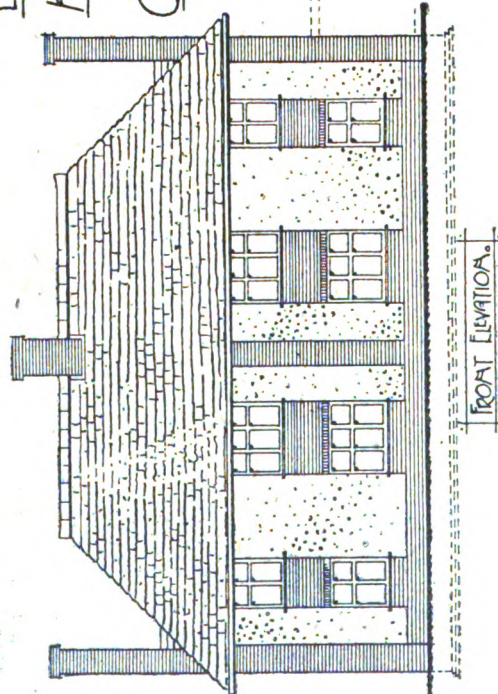
In bringing this summary to a conclusion a somewhat pertinent passage is quoted from N. J. Ware's "The Creative Ideal." It is as follows:—

"Our common characteristic is that we are all, in greater or less degree, creators. And our protest is against the increasing dominance of those who are merely owners and exploiters. What we experience is a renaissance of the creative spirit trying to throw off the spirit of the nineteenth century, the spirit of possession. . . . What is the difference between building a church and preaching in it? The difference is simple, of course. In the case of the professions, control has remained in the hands of the creator and reward has remained a by-product of service. In the case of business, control has long since passed out of the hands of the producer, master, journeyman, artist, inventor, and into the hands of the owner *per se*, the exploiter, the speculator, and service has become the handmaiden of profit. . . . The professional classes—the physician, the clergyman, the teacher, the librarian, the journalist—are increasingly conscious of the pressure. The architect cannot fail

(Continued on page 328.)

THE BUILDING NEWS, JUNE 17, 1921.

DERBY CORPORATION.
HOUSING SCHEME
— ON THE —
OSMASTON PARK RD.

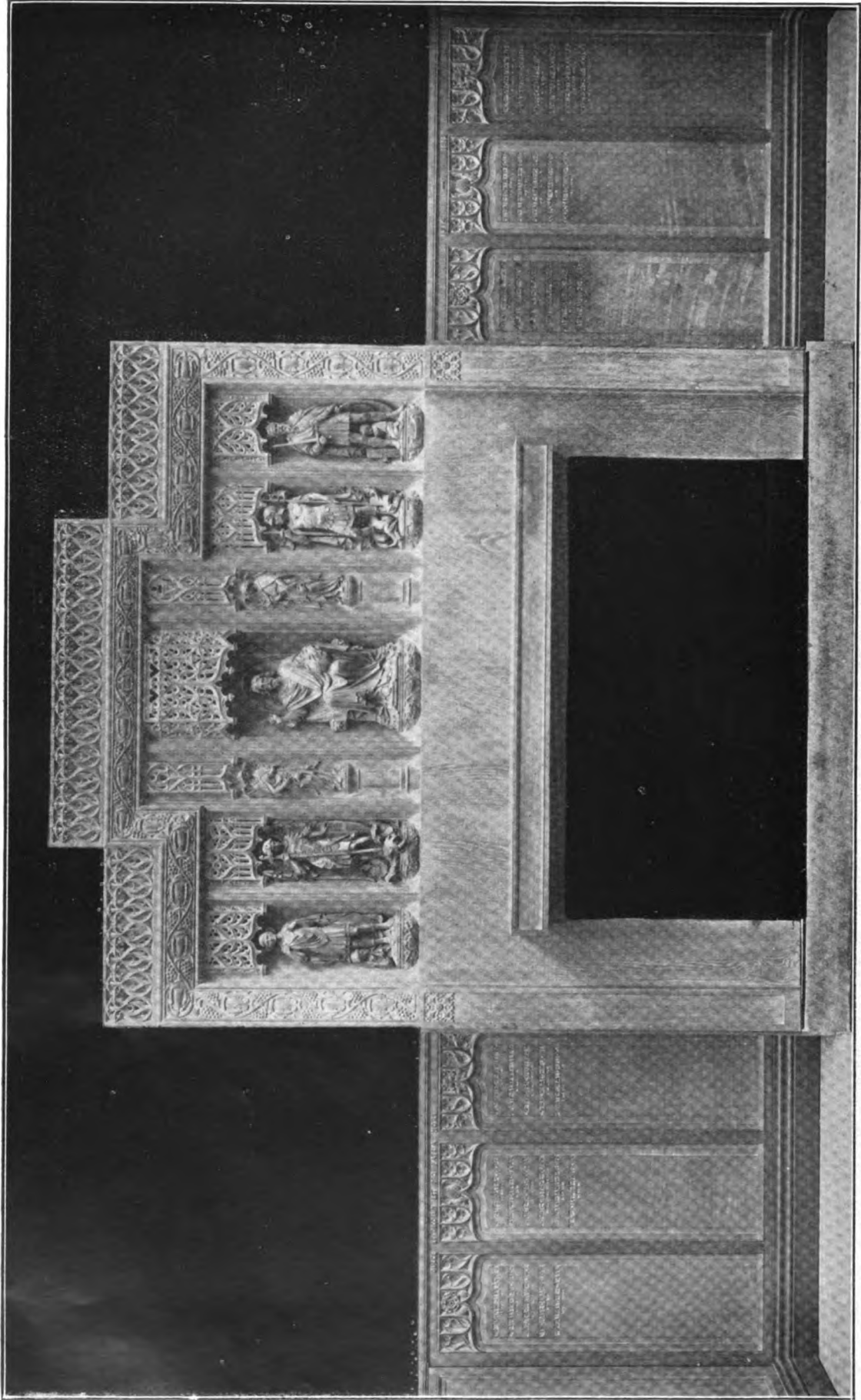


SCALE



BOROUGH OF DERBY HOUSING SCHEME: SEMI-DETACHED TYPE, "III. B."
Messrs. C. E. STAFFORD, A.R.I.B.A., and JOHN WARD, M.Inst.C.E., Architects.

THE BUILDING NEWS, JUNE 17, 1921.

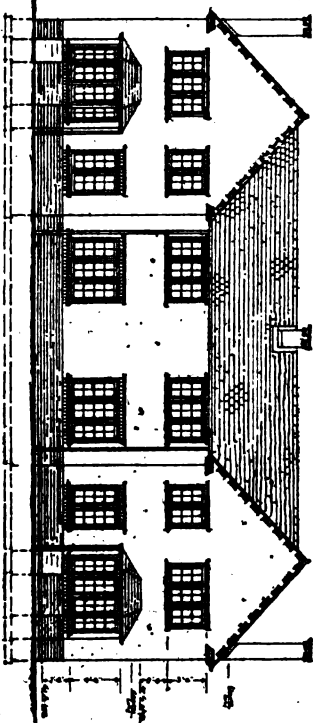


WAR MEMORIAL REREDOS, ALL SAINTS CHURCH, HURSLEY, HANTS.
MR. ALEXANDER G. R. MACKENZIE, F.R.I.B.A., Architect.

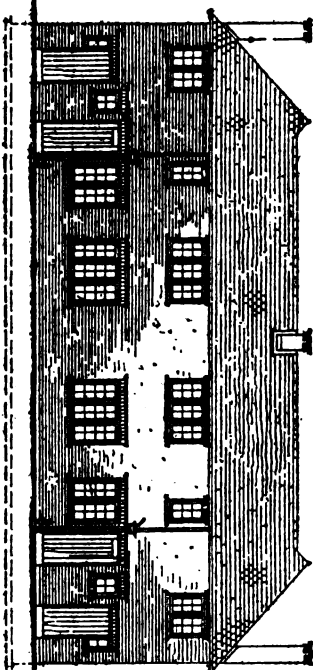


"THE SOLDIER OF DEFENCE."
WAR MEMORIAL, HOYLAKE AND WEST KIRBY, CHESHIRE.
Mr. C. J. JAGGER, Sculptor.

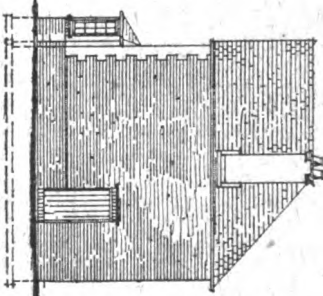
THE BUILDING NEWS, JUNE 17, 1921.



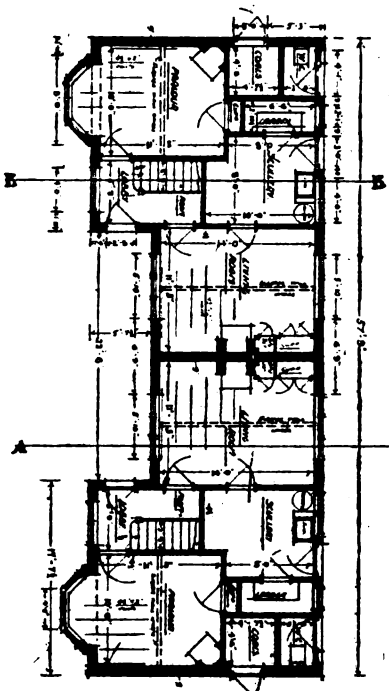
FRONT ELEVATION.



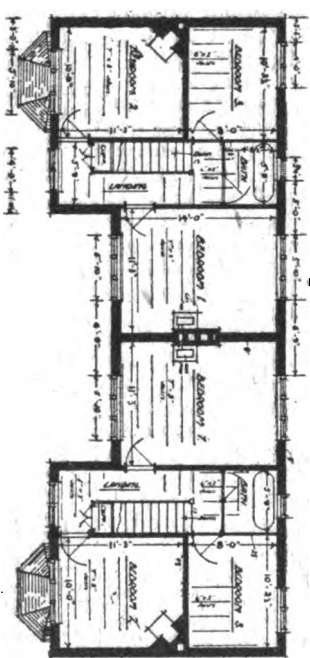
BACK ELEVATION.



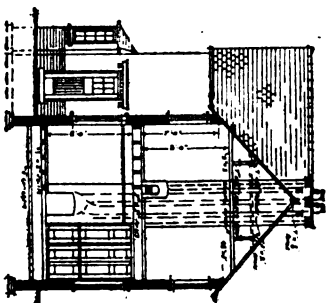
SIDE ELEVATION.



GROUND FLOOR PLAN.



FIRST FLOOR PLAN.



SECTION AA.

BOROUGH OF DERBY HOUSING SCHEME : SEMI-DETACHED HOUSES, "IV. B." (Amended).
Messrs. C. E. STAFFORD, A.R.I.B.A., and JOHN WARD, M.Inst.C.E., Architects.

(Continued from page 320).

to see the unmistakable link between his enforced idleness of the past two years, when building was urgently needed, and the amazing revelations of the Lockwood Committee in New York State that all construction materials are controlled by small groups in the interest of neither housing, nor general business, nor the public, nor the community, nor even their own reasonable benefit, but for their own extraordinary, incredible, manifold, skyrocketing profit. The engineer, in the face of evident and needed projects for liberating vast forces of nature for the use of mankind, has long felt the oppression of pathetic dependence on the financier's O.K., judged by the latter not in terms of service, not even in terms of profit to himself, but of sufficiently great profit. And herein lies the issue around which the new and better world will re-crystallise."

The summary of the whole matter will be found in the "Proceedings" of the American Society of Civil Engineers for May, 1921, which is published by the society at 33, West Thirty-Ninth Street, New York City. We advise careful study of it, especially those who, when we have effected the unification of our own calling, may be called upon to consider registration in this country. It will pretty surely be opposed by those who have further sought to enthrall the individual architect, who will probably not venture to oppose it on principle, but will seek to emasculate it by something very like a fluke of the sort that has succeeded in New York in the case of the Engineers.

SOME FASHIONS IN ARCHITECTURE.

The last of the series of popular lectures that have been given by members of the Royal Institute of British Architects, at No. 9, Conduit Street, on Thursday evenings, was given on the ninth instant by Mr. H. S. Goodhart-Rendel. It was entitled "Some Fashions in Architecture." The Rt. Hon. Earl Ferrers presided.

Mr. Goodhart-Rendel said he would not attempt an exact definition, between fashion and style. Fashions in art, it might be said, must be imposed from without, whereas styles were developed from within; but this distinction was too simple to be altogether true. Fashions sometimes developed into styles, while some styles proved so ephemeral that they might almost be dismissed as fashions. He would follow the usual practice of critics; those developments of architecture which he happened to like he would call "styles," and those he disliked he would call "fashions." (Laughter.)

Coming then to treat his subject in detail, the lecturer said that the architectural manner of the Renaissance was a style which begun in a fashion. All the pretty Italian ornament in such buildings as the Church of St. Eustache, in Paris, or Bishop West's chapel, at Ely, was nothing more than mere modishness; but the Chateau de Chambord and Long-lead were consistent works of style. In Italy Renaissance Classicism was not a mere fashion, even at its inception; it was indigenous. But the history of Renaissance architecture in England was a sad one, though fortunately the story had a happy ending. No mediæval masons had been more skilful than those who made the Chapel of Henry VII. at Westminster, but a hundred years later there did not seem to be a metal-worker or carver in the land whose productions would not have disgraced a South Sea Islander. The gracious building tradition of the Tudors had become utterly debauched by a detest-

able fashion for Low German ornament, executed with a vulgarity which even the kindly fretting of time could scarcely make tolerable to the eye; but the virulence of the growth was greater than its vitality, and it was exterminated by the disinfectant labours of Inigo Jones. The seed which Inigo Jones brought from Italy sprang up quickly and blossomed into a distinct and national style, which Wren developed and cultivated wisely. But some of the contemporaries of Wren's later life fell into eccentricity, and a reaction resulted towards the Vicenza of Palladio.

Of the fashion which then set in the lecturer said that the buildings of those who followed it were in the first place specimens of Italian architecture, afterwards contrived to be habitable houses more or less. Mereworth Castle, for example, struck us to-day as less like a dwelling-house than some ornament of the Campus of an American University. Yet there were built in England at that time no less than three houses of such design—a design borrowed from that of a summer villa by Palladio. Palladianism lasted until in the early nineteenth century a Grecian fashion superseded it, changing the model from the villa to the temple. But at this period variety was sometimes sought by excursions into styles not Greek. Thus, when Mr. Foulston, of Plymouth, was called upon to build at Devonport a collection of buildings consisting of a town hall, a memorial column, a mathematical school and a dissenting chapel, he made the town hall and column Grecian, the school Egyptian, and the chapel Hindoo. This was, however, exceptional; the common alternative to Grecian was Gothic.

Speaking, then, of the revival of Gothic architecture, the lecturer said that in the seventeenth and eighteenth centuries this was no more than an agreeable amusement for men of taste. Educated in the orders of architecture and the rules of Vitruvius, they liked in their lighter moments to flout these traditions and adorn their houses and parks with objects made in the Gothic taste; nearly a century had to pass away before there arose the school to whom Gothic architecture was not a fantasy but a passion. In the interval, other manners of building had been developed. In violent reaction from the straight lines and antique ornament of the current Greek fashion, Benjamin and Philip Wyatt in 1827 built Crookford's Club House. They called this style Louis XIV., but Mr. Collis, a later practitioner, described it with less assurance as the "Fancy Style." This was the style which blossomed more profusely than any other at the Great Exhibition of 1851. It took many forms; but characteristic features were the use of large naturalistic ferns and leaves in ornament, a fondness for coarse mouldings, a habit of rounding off angles wherever possible, a desire amounting almost to a passion for universal enrichment, and an elimination of all those kinds of enrichment which could not be mechanically produced. This preference for the product of the machine was part of the belief in art for the masses which was an article of the social creed of that day.

Another fashion of about the same period which the lecturer described was the Victorian Italian; this was largely due to Sir Charles Barry. Under its influence, Venetian and Florentine palaces became the rage, and were made to serve indifferently as club-houses, institutions, suburban residences, and warehouses. In Eaton Square, one house built about 1828 showed that Grecian forms were still the mode; in another, built twenty years

later, all was Italian, but in ecclesiastical architecture the Italian fashion was not much followed; so far as any fashion contended seriously with the growing popularity of imitative Gothic at this time, it was a form of German Romanesque.

The lecturer dealt at some length with nineteenth-century Gothic. He said that in 1812 Thomas Rickman, then a broker's clerk, published an essay in which English mediæval architecture was for the first time divided into the four classes—Norman, Early English, Decorated, and Perpendicular. In 1828, Antony Salvin designed Mainhead Hall, near Dawlish, seriously in the Tudor style. Before ten years had passed, the Oxford movement in the Church was exercising all religious minds in the country, and Pugin had appeared to revolutionise ecclesiastical architecture. He was by creed a copyist pure and simple; so was Richard Cromwell Carpenter, whom most of the Tractarian party patronised after Pugin had been received into the Church of Rome. Pugin's practice was various; he built in Norman, Early English, Decorated and Perpendicular; but with a preference for Decorated, from which style Carpenter never wavered.

After ten years of copyism, Pugin and Carpenter died, and other Tractarian architects went off in various directions. An international competition for the Cathedral of Notre Dame de la Treille, at Lille, led to the study of primitive French Gothic, while Ruskin introduced another element by his advocacy of Lombardic forms. A battle arose between architectural nationalists and architectural internationalists, in which the internationalists won. Then, after a while, the ferment of cosmopolitan fashion subsided, and the Victorian Gothic style settled down.

Another manner of design of which the lecturer spoke was one which found its opportunity in an epidemic of hotel building speculation which developed about 1857. In 1860, Sir James Knowles—afterwards founder of the "Nineteenth Century"—produced in the Grosvenor Hotel what was at once accepted as a model for similar buildings. The characteristics of this fashion might be described either as heaviness and dullness or as strength and repose.

Later fashions which the lecturer spoke of were the "Queen Anne" movement identified with the name of Norman Shaw, though it was not he, but John Shaw, who originated it. Norman Shaw fostered this style, but eventually abandoned it.

Of other fashions catalogued but not described at any length, we may mention the Louis Quatorze fashion set by Ralph Duke of Montagu in the great houses which he built in Bloomsbury, and the fashion set by Sir William Chambers's "Designs of Chinese Buildings," and by his pagoda at Kew. Nash's Turkish Pavilion at Brighton, said the lecturer, received the flattery of a certain amount of imitation; in the forties there was a revival of the coarsest German Renaissance, called "Jacobean" by its perpetrators. The Arabian manner of Owen Jones was to be noted, and some experiments in German Gothic by George Somers Clarke and John Belcher. Parisian neo-Grec, Spanish Renaissance, the strong flavour of Alexander Thomson's Assyrian taste, which seemed to be creeping over our modern street architecture, and our present pre-occupation with that section of the Greek Revival which we were learning to call by the rather misleading name of "Regency" were also mentioned. The fashion for mock antiquity leading to pseudo-timber

framed houses came under condemnation. Nothing but the London Building Act, said the lecturer, stood between us and thatch. He concluded: Are we bold enough to anticipate a favourable verdict from the future upon our Dutch bricks, our artificial rough tiles, our clouded and stippled paintwork, our woodwork of oak or pine, excoriated and blotched with wire brushes and limewash? If we are not—and I do not see how we can be sure about it—we must see to it that when all these charms have become nauseating there is something else in our buildings to justify us in the eyes of our sons. And that something will certainly not consist in fidelity to any, contemporary fashion in architecture. (Applause.)

The lecture was illustrated throughout by lantern slides.

The Chairman said that Mr. Goodhart Rendel had certainly put an extraordinary number of instances of one kind or another of fashion, and had given his hearers a great deal to think about. He (the Chairman) agreed that it was extremely difficult to draw a line between style and fashion. People built in different ways at different times and under different influences, and he thought what we had to look at was under what influence the fashion had changed. In an enormous number of the instances that had been spoken of that evening the fashion had changed under the influence of a revived interest in something that had been done before, which was copied and reproduced. In such a case an old thing was copied without any real natural reason, but there might be natural reasons for a change of fashion—some constructive development or some development of material. Natural inclination for a change played a great part. It did so in the case of ladies' dresses—for the changes were not entirely forced upon them—and also in architecture. He, personally, had a sympathy with the "Fancy" style; it was not something got out of a book or copied from something else. There was a genuine enthusiasm, and he had more respect for its practitioners than for architects who offered undigested copies of other work, whether contemporary or otherwise. At the base of it was the idea that new manufacturing processes had been developed, and that ornament could be reproduced cheaply. Often there was something genuine in the most objectionable things, and something objectionable in the most genuine. He was sure all present would wish to give a most hearty vote of thanks to the lecturer and to the Institute for organising this extremely interesting course of lectures.

OBITUARY.

The death is announced at Ottawa of Mr. David Ewart, the former Dominion Chief Architect. Mr. Ewart was the son of a Scottish builder, and was born at Penicuik, near Edinburgh, in 1843. After studying architecture at the Edinburgh School of Arts, he entered the Canadian public service as an assistant to the Assistant Engineer and Architect to the Department of Public Works at Ottawa in 1871, and became Chief Architect on the retirement of the late Mr. Thomas Fuller in 1897. Some of his work included the completion of the main tower of the Parliament Buildings at Ottawa, and the erection of buildings for the Canadian Commissioners at the Paris Exhibition and at the Chicago World's Fair. He was awarded the I.S.O. in 1903.

The excavations at Delphi by the French School in Athens have resulted, Reuter reports, in the discovery of a vase believed to be of great value, because it bears the signature of the noted ceramist, Phasides, only two pieces of whose work have hitherto been extant.

Our Illustrations.

WAR MEMORIAL REREDOS, ALL SAINTS CHURCH, HURSLEY, HANTS.

Mr. Alexander G. R. Mackenzie, F.R.I.B.A., is represented this year at the Royal Academy Exhibition by the memorial altar-piece of which we give a photographic plate to-day. The work has been executed in English oak by Messrs. Martyn, of Cheltenham. The roll of honour occupies the six panels of the dado in the sanctuary, the names being carved in the solid as shown.

"THE SOLDIER OF DEFENCE": HOYLAKE AND WEST KIRBY WAR MEMORIAL, CHESHIRE.

This heroic statue, the work of Mr. C. J. Jagger, of Tedworth Gardens, Chelsea, is exhibited in the Central Hall of the Royal Academy this year. The soldier is one of two figures. The memorial itself is in the form of a grey granite obelisk, 45 ft. high, and its site is the brow of a high gorse-covered hill near the sea. The soldier herewith illustrated stands at the foot of the shaft with his back to the wall facing the sea. The figure is in bronze 8 ft. tall. The sculptor writes, with regard to the figure: "I have endeavoured not to represent an individual, but to represent the attitude of the whole army. For us the Great War was a war of defence—not offence. That is what I have tried to convey in my soldier. In other words, it stands for an impassable barrier."

DERBY HOUSING SCHEME: TWO TYPES OF DWELLINGS.

The Borough Council of Derby decided to build 1,000 houses, and suitable sites located in the outskirts of the town were chosen. Already 684 are in course of erection. Tenders were obtained for 430 houses, 220 being with parlours and 210 of non-parlour type. The lowest tender of £338,755 was accepted. Under contract No. 1 the occupied cottages amount to 156. The second contract for 254 worked out to £218,215. The sites in this case are at Alvaston, Osmaston Park Road, Uttoxeter Road, and Walbrook Farm Estate. Of these dwellings 124 are tenanted; thus the occupied tenements are 280 at the present time. Under contract No. 2 the non-parlour types came to £769 3s. 1d. each, while the parlour houses cost £903 9s. 8d. The land figured at £35 per house in the first contract, and the sewers and streets added £75 per house, making a total average of £807 12s. 5d. and £983 17s. 8d. respectively for non-parlour and parlour houses. Under contract 2 the average cost of the land was £60, but the streets and sewers were already completed and existing. The non-parlour dwelling cost £856 3s. 1d., and the parlour ones £963 9s. 8d. These figures do not reckon an allowance on the previous expenditure on making up and sewerage other than the naturally increased value of the site, which probably may meet the case. Nine houses are being built to the acre, including roads. The tenements are in pairs or, as with type 6 A, they are laid out in rows of four with a middle through-way on the ground plan. We have chosen types 3 B and 4 B, which are semi-detached, for illustration to-day. Mr. C. E. Stafford, A.R.I.B.A., is the architect, working in conjunction with Mr. John Ward, M.Inst.C.E., the borough surveyor, who laid out the scheme. The accommodation is substantially similar throughout and uniformly well arranged. In the A type houses the bathrooms adjoin the sculleries, but in the B type the bathrooms are situate on the upper

floor. The bedrooms are approached by a good landing. Two of the three have open grates or gas fires, and efficient ventilation is provided for bedrooms without fireplaces. Ample wardrobe cupboards and shelvings in all cases are fixed. The stairs are well lighted and not too steep. The divisional walls are of concrete slabs or 4½ inch brickwork, and in some instances are of lath and plaster in the upper floor. The windows and grates are standardised. Electric light is provided. Parlour houses are assessed at £13 10s. and non-parlour houses £12 per annum. A charge is made of 1s. per week for electric light to smaller houses and 1s. 3d. for the larger ones. The forecourts are from 15 ft. to 20 ft. deep from the footpath, and all have good ample gardens at their rear. The roads are 35 ft. wide with grass verges and gravel footways. The scheme was prepared and got on with before December 31, 1920, when Mr. John Ward was in charge and supervised the work, but, we understand, he then retired.

COMPETITIONS.

ROME SCHOLARSHIP IN ARCHITECTURE.—The Rome Scholarship next year will be of the value of £250 per annum, and will be ordinarily tenable at the British School at Rome for three years. Candidates must be British subjects and less than thirty years of age on July 1, 1922, but admission to compete may be granted at the absolute discretion of the Faculty to candidates over thirty years of age, provided they have spent in War Service at least that number of years by which their age exceeds thirty. The Jarvis Studentship will be of the value of £250 per annum, and will be ordinarily tenable at the British School at Rome for two years. This Studentship will be confined to Students or Associates of the R.I.B.A., but otherwise the conditions for the two awards will be the same. The competition, which will be conducted by the Faculty of Architecture of the British School at Rome, will be in two stages: A preliminary examination open to approved candidates, and a final competition, open to not more than ten candidates selected from those competing in the preliminary examination. Application to compete in this examination must be made on the prescribed form to the Honorary General Secretary, British School at Rome, 1, Lowther Gardens, Exhibition Road, London, S.W.7, not later than November 1, 1921. The application, containing a statement of the student's qualifications, will be examined by the Faculty of Architecture, in whose absolute discretion lies the granting or refusing of permission to compete. The first part of the final competition will be held in London at the Royal Institute of British Architects, and will consist of a continuous examination of thirty-six hours *en loge*, during which time the candidate will be required to make a sketch design of the subject which will be announced at the opening of the competition. At the end of the thirty-six hours the candidate will deliver up a tracing of the sketch. In the second part of this competition candidates will be allowed for the execution of their finished designs a period not exceeding twelve weeks. Candidates may complete their designs, which must adhere substantially to their sketch designs, in their own time and place. The successful candidate in this competition will be recommended for appointment to the Rome Scholarship, and the Student or Associate of the Royal Institute of British Architects who is placed next in order of merit will be recommended for appointment to the Jarvis Studentship. All drawings must be sent to the Honorary General Secretary, British School at Rome, c.o. The Secretary, Royal Institute of British Architects, 9, Conduit Street, W.1. at the candidate's expense, and will be returned to him at his expense.

The annual conference of the Institution of Municipal and County Engineers was held in London from Wednesday to Saturday of last week.

FEES PAYABLE TO ARCHITECTS IN CONNECTION WITH STATE-AIDED HOUSING SCHEMES.

The Minister of Health has had under consideration the question of the payment to be made to architects in private practice for the preparation in connection with State-aided housing schemes of plans which are abandoned after approval by the Minister, and has decided that in such cases, except as provided in the last paragraph but one of this memorandum, the following terms and conditions shall apply.

The terms and conditions set out in the memorandum have been agreed by the Royal Institute of British Architects and the Society of Architects, and will apply in every case except where an agreement providing for a specific payment for abandoned work has been made between the local authority and the architect prior to the date of the memorandum. If the local authority have made any such agreement, the terms of the agreement should be notified to the Minister.

The modification of plans (not involving abandonment of the design) to comply with the requirements of the Minister is covered by the ordinary payment under General Housing Memoranda 4 and 31, and is not to be regarded as abandoned work for the purpose of assessing fees.

DEFINITION OF SCHEME.

In view of doubts expressed as to the method of calculating the fees payable under General Housing Memoranda Nos. 4 and 31, it has been thought desirable to include in the present General Housing Memorandum a definition of the term "scheme" as used in the memoranda.

TRAVELLING EXPENSES.

Questions have been raised as to the payment of architects' travelling expenses. The scales of fees in General Housing Memoranda Nos. 4, 31, and 52 are inclusive scales covering all out-of-pocket expenses. It is recognised, however, that special provision should be made for cases in which the architect's duties involve a considerable amount of travelling. The Minister will be prepared to allow as a charge to the Housing (Assisted Scheme) Account reasonable travelling expenses in respect of journeys over twenty-five miles from the architect's office which are necessitated by the architect's duties in connection with the housing scheme.

I.—LAY-OUT PLANS.

For preparation of lay-out plans the full fees according to the scale under the heading "A.—Preparation of Lay-out Plans" laid down in General Housing Memorandum No. 31 shall be payable.

II.—ROADS AND SEWERS.

1. In cases where the employment of the architect is discontinued on the abandonment of the lay-out plans, the fees payable for the abandoned work shall be as follows:—

- (i.) If only drawings and specifications have been prepared, one-third of the scale fees set out under the heading "B.—Roads and Sewers" in General Housing Memorandum No. 31.
- (ii.) If all the work necessary for the purpose of obtaining tenders, including the preparation of quantities, has been done, two-thirds of the scale fees set out under the heading "B.—Roads and Sewers" in General Housing Memorandum No. 31.

2. In all cases of partially abandoned schemes the fees payable for the abandoned work shall be three-quarters of the fees indicated in (i.) and (ii.) of the preceding paragraph respectively, according to the circumstances of the particular case.

III.—HOUSE PLANS.

(a) The references to "scale fees" in the paragraphs which follow mean the scale under the heading "C.—Cottages and Flats" in General Housing Memorandum No. 31, namely:—

5 per cent. upon 12 cottages or flats.

2½ per cent. upon a further 60 cottages or flats.

1½ per cent. upon a further 178 cottages or flats.

(b) For the purpose of calculating the fees hereinafter set forth, the abandoned work shall be deemed to comprise a number of houses equivalent to the number of separate designs which have been prepared. Such ordinary variations as are necessary to avoid monotony in appearance or mere change of aspect of larders or the like shall not be regarded as constituting separate designs.

(c) The fees shall be calculated on the amount of the lowest tender received, or on the estimated cost, or on the maximum amounts specified in page 3 of General Housing Memorandum No. 31, whichever may be the least.

1. In cases where the employment of the architect is discontinued on the abandonment of the plans, the fees payable for the abandoned work shall be as follows:—

- (i.) If only sketch plans have been prepared, one-half the scale fees, under heading C. in Memorandum No. 31, calculated in accordance with paragraphs (b) and (c) above.
- (ii.) If all the work necessary for the purpose of obtaining tenders, including the preparation of detail drawings, has been done, the full scale fees, under heading C. in Memorandum No. 31, calculated in accordance with paragraphs (b) and (c) above.

PROFESSIONAL AND TRADE SOCIETIES.

BRITISH ARCHAEOLOGICAL ASSOCIATION.—The British Archaeological Association is holding its seventy-eighth congress in Lincoln from June 27 to July 2 next. The members will foregather in the city on Monday, the 27th inst., and on Tuesday morning they will inspect several places of interest in Lincoln, including the Guildhall, where they will be accorded a civic reception. After luncheon they are to motor to Bardney Abbey ruins and Kirkstead Church, and in the evening they will hear the presidential address, which will relate to architectural details of Lincoln Cathedral. Wednesday is to be devoted to visits in motors to various churches, etc., and on Thursday the party will motor to Cotesby-Stow, Stow Church, and Gainsborough Old Hall, returning to Lincoln for luncheon. Subsequently they will visit the cathedral, the castle, Bishop's Palace ruins, and Vicar's Court. Friday's programme includes motor journeys to Sleaford, Heckington, and Boston. On Saturday the members motor to Somerton Castle, Navenby Church, Caythorpe Church, and Hough-on-the-Hill, thence to Grantham.

INSTITUTE OF SCOTTISH ARCHITECTS.—A conference was held on June 9 by the Institute of Scottish Architects in the Edinburgh Architectural Association rooms at 117, George Street, on the subject of architectural education. Mr. A. M. Paterson, president of the institute, presided, and was followed by Sir John R. Findlay and Mr. John Watson (Glasgow). Principal Laurie, and other members of the conference. The question was discussed from the respective points of view of the central institutions, the teaching staffs, and the practical architects. A strong consensus of opinion was manifested that the standard of architecture should be raised, especially taking into consideration that within a few years the Registration Bill for Architects might be passed. The directors of the central institutions indicated that, while they were favourable to a higher standard of general education, they could not restrict entrance to their classes to architectural students who had attained the standard of the University preliminary examinations. It was pointed out that the remedy for any shortcoming in the matter of educational attainment lay in the hands of the architects themselves, as they could refuse to take as apprentices those who had not attained the desired standard. The question of having general competitions and exhibitions for students at the different centres was discussed, and the idea seemed to be favourably received.

Mr. William Anthony Tharp, of Norton Folgate, E.C., surveyor, and of Ladbroke Grove, W., has left £38,934.

Correspondence.

UNIFICATION AND REGISTRATION COMMITTEE.

To the Editor of THE BUILDING NEWS.

Sir,—We view with some alarm the resolution of the above Committee that all Architects should be allowed to become members of the R.I.B.A.

Up to the present the Committee make no recommendation dealing with the second subject referred to them, and if the proposal is to form part of a Registration Bill we see no reason to object to it, for we are strong advocates for a Registration Bill that would be of real use to the profession, and we urge the R.I.B.A. to prepare a Bill of that nature forthwith. Unless this be done we suggest that members of the R.I.B.A., and particularly our Associates, should carefully watch developments, and that they should regard with caution, if not suspicion, any argument based on the plea of first accepting the above proposal with a view to the possible framing of a Registration Bill at a later date. Until we obtain our Registration Act the basis for admittance to our ranks should be examination, and for their own sakes, as well as for the position of the R.I.B.A. as a learned Society, we ask our members to resist any tampering with our constitution.—Yours faithfully,

ALFRED W. S. CROSS,
V.P.R.I.B.A.
H. D. SEARLES-WOOD.
GEORGE HUBBARD.
SYDNEY PERKS.
CHAS. B. FLOCKTON.
DIGBY L. SOLOMON
(Associate).

THE USE OF LIME INSTEAD OF PORTLAND CEMENT.

Sir,—I have read with interest the letter published in your issue of June 10 from Lieut.-Col. de L. Young, commenting upon my letter, to which you gave publication on May 27. I should like to point out that the floor to which I referred was in a factory.

From conversations I have had with professional men who have had considerable Indian experience, I have always found confirmation of Col. Young's remarks. Owing to the high cost and scarcity of good Portland cement the use of lime is much more prevalent in that country than it is here.

I have no doubt that the floors of the houses and barracks referred to stood up to the traffic conditions imposed upon them, and lime for such work gives a very good surface. Factory floors are continuously subjected to shocks and also to abrasion from the wheels of heavily-loaded trucks, and then the 1-inch floating of Portland cement mortar or concrete soon parts company with the lime concrete underneath, so that it is only a short time before the hollow places crack.

Unfortunately, when expansion joints are made at the junction of the cement squares, they are a source of weakness in a warehouse floor, for the wheels of the trucks soon fret away the edges, and pot-holes quickly appear at these places.

I watched with interest the experiment with the factory floor, as I thought it might point the way to an economical form of factory construction, but I was reluctantly forced to a negative conclusion, as expressed in my previous letter.—Yours truly,

J. H. KERNER-GREENWOOD.
Vyse Court, Bishop's Stortford,
June 14, 1921.

THE BUILDING NEWS

AND ENGINEERING JOURNAL.

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Strand, W.C.2.

OUR ILLUSTRATIONS.

Cottages at St. Andrews, Scotland. Mr. Paul Waterhouse, M.A., F.S.A., P.R.I.B.A. (elect), Architect.
The National Bank, James Street, Liverpool. View and plans. Messrs. T. Arnold Ashworth and Son, Architects.
House, Paekhorse Road, Gerrard's Cross, Bucks. View and plans. Mr. Robert G. Muir, F.R.I.B.A., Architect.

Currente Calamo.

Till the end of June the small assemblage of silver, copper, iron, bronze, and brass craftsmanship opened to view this week will remain on show at 35, Bedford Square, W.C., in the ground floor lobby of the premises of the Architectural Association. The work is all worthy of exhibition, though several things are by no means new. The processional cross for York Minster, designed by Mr. Walter Tapper, and executed by Mr. Bainbridge Reynolds, was illustrated in our pages in 1919 from this large photograph. The locks and hinges by the same hand are equally excellent. Perhaps the most effective samples of silversmith's work in the room is the large altar cross, clear-set with fluorspar left as a transparency, which is most effective seen against the window, though in a general way this charm would be lost in a dark sanctuary with no light behind. This is by Mr. Omar Ramsden, who sends several other pieces. The replica of the handsome box-lock of Tudor design from Beddington, by Mr. Starkie Gardner, and the big gates made for Earl Curzon at Kedleston by Messrs. H. W. Cashmore are both distinguished examples. A large photograph of Shedfield Hall, Botley, Hants, designed by Sir Edwin Lutyens, R.A., is exhibited to show metal casements by Messrs. Wainwright and Waring, who display some bronze lions' heads and other appliqué in castings. The Birmingham Art Guild show enamelled bronze plaques for wall decoration and a variety of capital specimens. The hanging lamps in the Lady-chapel of Liverpool Cathedral, designed by Mr. Gilbert Scott, A.R.A., are elaborate in tabernacle work carried out by Mr. Reynolds, who also shows Sir Reginald Blomfield's big sword, used for war shrines on the battlefields of France. Suspended on the plastered wall behind a metal lectern, it looks out of place in the corner of the gathering. Among the most suggestive items are some inscription plates, engraved with lettering of good character, well spaced.

An interesting illustrated folio, "A Mediæval City in Greece: Its Churches and Ruins," by the Rev. J. Arnott Hamilton, B.D., is published by Messrs. W. Jolly and Sons, Albany Press, Aber-

deen, at 3s. Mistra, about two miles and a-half from Sparta, now containing but a few hundred people, has experienced many vicissitudes since its castle was built in 1248-9 by William Villehardouin, Prince of Achaia, but its churches, four of which are illustrated, follow one or the other of different types of Byzantine architecture. The Church of the Evangelistria, early fourteenth century, has three apses; the drum is octagonal, decorated with a niche, and pierced with a window on each alternate face. The Church of the Monastery of Peribleptos resembles it in general plan, and dates from the end of the fourteenth century. The Churches of the Saints Theodore and that of the Panagia Odegetria stand within the precincts of the Brontochein Monastery; the former, dating from the end of the thirteenth century, having a dome resting on pseudo-pendentives; the latter, erected about 1312, being a combination of the plan of a Greek cross church and that of a basilica. The Church of St. Demetrius is a reconstruction of a basilica dating from a period long before Mistra was built—perhaps the eighth century. The Church of the Pantanassa, oriented almost due South, was built in the first half of the fifteenth century. Several of the churches possess beautiful wall paintings, some showing a breaking away from the rigid Byzantine tradition of the past. Descriptions of the Palace of the Despots, in the Upper City, now a mass of ruins, and the Fortress, now grey with age, are given, and the author's general impressions of the present aspect of the place, recalling times when the traveller in Greece forgets the Classic, forgets the Byzantine, forgets the Modern; when he feels the glamour of the romantic story of those Western adventurers who came to Greece in the thirteenth century, who erected baronial strongholds on the classic soil, held tournaments and founded schools of chivalry, and built abbeys for Latin monks in the quiet vales.

It has long been apparent that the true value of the houses built by local authorities under the Ministry of Health supervised housing schemes was considerably lower than the cost of construction. It will, none the less, come as a surprise to many that, says the "Estates Gazette," a Government valuer has fixed at £650 the sale price of a three-bedroom house

built by the Northampton Corporation last year at a cost of £1,000. Permission to sell at this price has been received from the Ministry of Health, but after a long delay. The house was let to an ex-Service man three months ago. When one compares the £350 deducted from cost to arrive at value with the subsidy given to encourage the private builder, there seems as strong a testimony as could be desired from bureaucracy itself to the superiority of private initiative. Down to date, we believe, some 130,000 houses have been built or are building under housing schemes. Most of these have cost more than the £1,000 stated in the Northampton case, but accepting that figure, we now have the testimony of a Government valuer, confirmed by the Ministry of Health, that in addition to the outlay of public money involved in making up actual rents to an economic figure the property thus created is worth at least forty-five million pounds less than has been paid for it.

Bishops' palaces will soon be things of the past. The Bishop of Lichfield, following the example of Dr. Gore when at Worcester, has moved into a smaller house, his palace passing into the hands of the Lichfield Theological College. Dr. Kempthorne says he is vacating the palace on financial grounds. The palace, which was erected in 1687, was the scene of David Garrick's earliest recorded appearance on any stage. It was in the large hall of the palace that he played Sergeant Kite in Farquhar's "The Recruiting Officer" at the age of eleven. Another "palace" to be abandoned is the famous Farnham Castle, the residence of the Bishop of Winchester. At the same time the Bishop of Birmingham is vacating Bishopscroft, the house in Edgbaston which Dr. Gore took when he became first Bishop of Birmingham, for Harborne House, near Birmingham—a larger house which has been bought for the sum of £10,000 as a residence for the Bishops of Birmingham.

Permanite, Limited, of 126, Bishops-gate Street, E.C.2, the well-known contractors to the Office of Works, the War Office, and the Admiralty, whose Permanite sheet roofing has found favour with all users for roofing, are introducing a new material, called Blanco, which has

several distinguishable good qualities, not the least being the ease with which it can be used by anyone, with the clear and practical instructions supplied by the makers on application. It is rubber-like in flexibility, and can be applied in sheets or in the form of tiles as quickly, and probably much more securely, than ordinary slates. It is as advantageously utilised in repairing the many worn-out plank or galvanised-iron roofs to be seen everywhere, thanks to the cost of renewals. Even where roof boarding is not available it can be successfully laid on chicken wire. For cottage building, if battens are used to cover the laps, quite an artistic effect can be secured, and should be accepted by any local authority.

A NEW TOWNSHIP FOR 120,000 PEOPLE.

Thanks to the heart-and-soul energy of Mr. W. E. Riley, the late Superintending Architect of the London County Council, and the support of its Housing Committees, no public body has done more for the housing of the people than that body, and it is satisfactory to know that its work is still being carried forward on right lines by Mr. G. Topham Forrest, the present Architect to the Council and Superintending Architect of Metropolitan Buildings. Of all the Council's schemes, none is more remarkable, or, when its completion is permitted, will prove more successful than the creation of the new township for 120,000 inhabitants; which is making good initial progress at Beacontree, the tract of land extending for two and a-quarter miles eastward of the developed portions of Ilford and Barking towards Beacontree Heath and the village of Dagenham, and about two and a-half miles between Chadwell Heath on the north and the Ripple Road on the south. In a most interesting paper, read yesterday by Mr. Forrest at the Folkestone Congress of the Royal Sanitary Congress, the fullest details are given of the inception of the scheme, and many difficulties encountered in its execution. Mr. Forrest dealt successively with the conditions governing the design, the design itself, and the work now in progress on a portion of the estate.

The conditions of design embraced the provision of an open belt, particularly on the western side of the estate; the retention, where possible, of existing roads, farmhouses, and cottages; the utilisation of the Parsloes Park in the middle of the estate to form a new central park for the new township; regard to the best aspects of modern town-planning; and the provision of arterial roads and sites for public and other buildings of importance. Water supply, drainage, and lighting had, of course, to be provided; and the two great problems of the time, shortage of materials and scarcity of labour, had to be faced. As regards the æsthetic treatment of the design, the absence of natural features in a flat and uninteresting area has been met as far as possible by a judicious admixture of regular and irregular planning, of which the "ring roads" are a feature, and the straight directness of the great roads is counterbalanced by a greater variety in the general detail of the sections of the town. In the houses themselves variety has been secured consistently with economy, and monotony and dreary effects avoided in the small as well as in the larger units.

The Civic Centre, from which radiate three additional 120 ft. roads, is to be an important architectural feature to house administrative and public buildings suitable for a town of its size, and immediately south of it will be the public park. Along the western and southern sides of the town will be open belts of land, on which facilities will be afforded for outdoor games, and a recreation ground of some 30 acres has been provided to meet the needs of the north-eastern portion of the town by utilising the meadows adjoining an existing manor house. Altogether 18,000 working-class dwellings will be provided, and on other land probably 2,000 houses can be erected. Institutional sites to the extent of 296 acres are reserved for ward centres, churches, schools, and hospitals.

The work at present in progress embraces 2,876 dwellings. Shortage of bricklayers made it necessary to devise some systems of building that would reduce bricklaying to a minimum. Fortunately, a large amount of gravel was found on the estate, suitable for fine quality concrete either for cottages or roads. On the section now in hand four systems of concrete building are in progress: a revised form of what is known as the "Fidler" system; a dry walls system of poured concrete, in the erection of which patent shuttering is used; and a hollow wall system and a cavity wall system, both on the Witan principle, both of which were illustrated and described in our issue of March 25 last. The Winget pressure machines are being used for making the blocks.

The concluding remarks of Mr. Forrest should be noted by every local authority and by all who at the present time are waiting to build. Mr. Forrest says the difficulties experienced so far are no greater than were anticipated, and have been reduced to a minimum. "That they have been so reduced is, I am convinced, due to the fact that the London County Council decided to place the whole of the work in the hands of one master contractor. I am of opinion that very substantial advantages accrue from one controlling organisation on an estate of this kind. These advantages might be summarised as follows: Final instructions can be given to one contractor solely responsible for carrying them out to the satisfaction of the local authority, and the great difficulties which would be experienced in dealing with a number of contractors are avoided. Materials in large quantities can be purchased, thus making for economy. The proper distribution of materials is assured. Effective control in regard to entry and distribution of all goods is practicable. Labour difficulties are more likely to be reduced to a minimum. Dealings with local and county authorities, police, railway, and other officials are simplified. The appointment of a master contractor was in accordance with precedents created by the Government during the war under conditions of extreme urgency, and in the case of the Beacontree Housing Estate it was considered that one controlling influence was just as necessary for the completion of the programme within the time stipulated as it was in the actual military operations during the later and successful period of the war."

Following upon the withdrawal of Mr. W. B. Griffin from his connection with the Federal Capital scheme, the Government has appointed Mr. Herbert E. Ross, of Ross and Rowe, architects, Sydney, as a member of the Board. His duties involve devoting one-half of his time to advising with respect to the plan and lay-out of the City.

R.I.B.A.: SIR EDWIN LUTYENS RECEIVES THE GOLD MEDAL.

On Monday evening a meeting of the Royal Institute of British Architects was held at No. 9, Conduit Street, London, W., and Sir Edwin Lutyens was formally invested with the gold medal which has been awarded him. The hall was, as usual, decorated with photographs or other illustrations of the architect's work, including on this occasion a plan of the new city being erected at Delhi.

The President (Mr. Jno. W. Simpson) said: My lords, ladies and gentlemen, there is no reward so precious to an artist as the approval and the admiration of those who practise his own craft. When his art is that of architecture, this is especially true. The architect's work appeals less directly to popular emotion than does that of the man of letters, musician, painter or sculptor, so that it is always to the judgment of his own folk that the architect turns for some knowledge and test of the qualities of his own work. It is to his fellows that he turns for appreciation and encouragement, and he turns with a very confident assurance, for it is due to my brother architects to say that admiration for fine work is never withheld by them. I have said it before in this room, and I repeat it with pride, that there is no profession so little affected by jealousy, none in which the success of another of the fraternity is welcomed with such honest pleasure as in our own. The greatest compensation to men of a strenuous calling, and a calling in which honours are comparatively rare, is the certain knowledge that those whom they strive with and defeat will be the first to rejoice in their victories and acknowledge their work. (Applause.) No other profession is so united, so loyal to its chiefs, and so generously appreciative of the achievements of its members as is that of architecture. In the case of Sir Edwin Lutyens, it is not difficult to understand why we are all very proud of him. (Applause.) His genius has brought him into great prominence, and we feel that he has carried us all forward with him. We, his brother artists, shine a little more brightly each of us in his reflected glory. We are grateful to him for the way in which he has demonstrated the supremacy of the art we all love. He has helped the public to realise and understand the functions of the architect, and we have all benefited by that better knowledge. It was therefore natural that the Royal Institute of British Architects should agree to nominate Sir Edwin Lutyens to their gracious patron, the King, as worthy to receive the Royal Gold Medal which he gives for the advancement of architecture. The position of the Royal Institute is unique; no other body of architects in the world has, or ever has had, the privilege of bestowing so great an honour as we have. The members of the Institute have been entrusted since the year 1848 with the duty of submitting to the throne the name of any architect who, by reason of the excellence of his work, they deemed worthy of especial distinction. Their choice is not limited to members of their own body, nor to men of their own country; last year it fell upon Charles Girault, a Frenchman—wherever architecture genius has arisen the Institute has been privileged to bring it to the notice of its Royal patron. Canada, Austria, America, Italy, Germany, Holland and, above all, France have seen their great architects recognised by the ruler of Great Britain equally with his own subjects. (Applause.) No honour is more eagerly coveted. An architect who receives the

Royal Gold Medal of the British Institute is marked throughout the civilised world as one of the princes of his profession. (Applause.) There is no need for me to introduce to you Edwin Landseer Lutyens; the man is known to you, and his work. He has had great opportunities, and he has been equal to them. His design is informed with a freshness of mind and a freedom of fancy all his own; and it ranges from Delhi to Whitehall. To me as an architect the Cenotaph seems perhaps the greatest of all his conceptions. It is an extremely remarkable thing, precisely suited to its site and surroundings; austere yet gracious, perfect in technique. It is the very expression of restrained emotion and steadfast solidity of purpose, of the qualities which made great those whom it commemorates, and which make great those who raised it. We congratulate you, my dear Lutyens, on the honour His Majesty does you in conferring on you his Royal Gold Medal. We congratulate ourselves on being able to add your name to the roll of the great men who have preceded you. It is no small thing to be ranked in the judgment of those best fitted to know with Cotterell, Baring, Pearson, Street, and Scott, with Louis-Duke, Garnier, Laussanier, Lomez, and others; and to you, I know, it will be especially grateful to stand beside your patron and master, Ernest Church.

The President then hung the medal round the neck of Sir Edwin Lutyens, saying: By the King's gracious pleasure I am now to invest you with the Royal Gold Medal for the advancement of architecture.

Great applause followed, and Sir Edwin Lutyens endeavoured to make a suitable reply. He was, however, obviously overcome by his emotions, and he said: Mr. President, my lords, ladies and gentlemen, thank you. (A pause.) Mr. President, I cannot say more. As I began I end. With all humility I say, thank you.

The speech was brief, but effective, because of the depth of emotion it revealed, and the applause was renewed as Sir Edwin Lutyens sat down and the Secretary (Mr. Arthur Keen) rose to move a vote of thanks to the President. He said there was a note on his agenda reminding him that this was the last occasion on which Mr. John Simpson would appear before them as their President. Mr. Simpson was getting very near the end of his term of office, and it would be well if they took this opportunity of expressing their thanks to him for all that he had done on their behalf in the two years during which he had served them as President. (Applause.) Mr. Simpson had brought to his task abilities of a very rare order; he had shown a most extraordinary capacity for dealing with affairs, and had not spared himself in any way — or his abilities. These he had devoted unsparingly to the services of the Royal Institute, having hardly known a day of respite since the time when he took up his task. He had hardly started on that task before the doctors had put him aside for some months, telling him that he must take no further duties beyond his regular work, and Mr. Simpson had accordingly to disappear from the scene of action; but as soon as the doctors had allowed him to do so he had come back, and had thereafter faced everything that had to be done in what had always seemed to him (the Secretary) a most extraordinary manner. Certainly their outgoing President's term of office had been remarkable for the amount of real, serious, significant work that had been carried out, and he (the Secretary) thought they should

express formally their thanks for all that had been done on their behalf during the term in which Mr. Simpson had held the chair. (Applause.)

The vote of thanks was carried by acclamation.

The President: Mr. Keen, my lords, ladies and gentlemen, it seems to me that we have all come here under a misapprehension. The honoured guest of this evening is Sir Edwin Lutyens, and that I should attempt to make a speech—whether in thanks for all the most undeservedly kind things that Mr. Keen has said about me or not—would seem to me to be exceedingly out of place. I think Sir Edwin Lutyens set an admirable example, which we all might follow in this room, in saying very little, but that little very much to the point. I am going to follow that excellent example, and say from the bottom of my heart, ladies and gentlemen, thank you very much. (Applause.)

The Secretary said that he had to announce that the meeting to confirm the resolutions passed on June 6 amending the by-laws relating to honorary associates would be held on June 27 at 5.30 p.m. Also, to enable special general meetings to be held during July, the duration of the session would be extended to the 31st of that month.

AMALGAMATING BUILDING INDUSTRIES.

At a luncheon given in the Savoy Hotel on June 16 by the Amalgamated Housing Industries, Limited—an organisation promoted to cheapen and accelerate building by massed and standardised production throughout the country, Lieut.-Col. Sir Waldron Sinclair, K.B.E., who presided, said one of their principal objects was to cut out a certain amount of the profits of the middle-man, especially in regard to bricks and timber.

Mr. Clynes, M.P., congratulated the company on the great undertaking on which they had embarked. He had personal experience of the deprivation which, owing to the war, thousands of people suffered in trying to find reasonable shelter at a reasonable cost. The Government had not succeeded in touching the housing problem. It would be appropriate that enlightened private enterprise should meet this national need. If anything like a State alternative could be presented, he would have preferred it, but, in the light of experience, he bade them go on and meet the need by mass production. He was sure that they would get the goodwill of organised labour if they could show results where others had failed. The shortage of the ordinary amenities of life had more to do with the under-current of discontent and with turning people's thoughts to revolution than all the preaching of Hyde Park orators. The country could never be impoverished by an over output, but it could be by an under output. Scarcity was the enemy of the workman, though he did not know it. What was wanted in the ranks of the workmen was a fuller understanding of the elements of political economy and the ordinary laws which governed the question of prices and production.

Mr. Charles Brown, director of the London Master Builders and Allied Industries Association, welcomed Mr. Clynes as a recruit to the employers' ranks in the building industry. If London was attacked for supporting the ex-Service men, there would be a fight to a finish.

Sir Charles Ruthen, President of the Society of Architects, and Director-General of Housing, said that the Govern-

ment had done its best, although the best had been a horrible mess. The difficulties of the Government had been increased by the gross and disgraceful profiteering by the various branches of the building industry. There was reduced output on the part of the workman, who would only stop "pinching his bit" when other people stopped pinching their bit. The architect had profiteered, as had the employer, to a disgraceful extent, and the workman. He was not joking, but very serious indeed. There was, however, a greatly improved outlook.

Lieut.-Col. Sir Waldron Sinclair, K.B.E., chairman of the firm of Messrs. Henry Boot and Sons (London), Ltd., builders and public works contractors, of 12, Lower Grosvenor Place, S.W.1, and 287, Upper Richmond Road, Putney, S.W.15, is chairman of the company; the committee of consulting architects and surveyors includes Sir Alexander Stenning and Partners, Sir Henry Tanner, F.R.I.B.A., Mr. Arnold Mitchell, F.R.I.B.A., and a number of other well-known men, while there is also a committee of expert advisory consultants consisting of leading authorities on building specialities.

A number of associated industries have been brought into the scheme, by which Amalgamated Housing Industries, Ltd., will own and operate brickfield, slate quarries, tile works, Portland cement factory, a plaster factory, joinery works, timber importing companies, concrete construction works, etc., which will form the basis of the new organisation to be set up in order that houses may be erected rapidly in all parts of the country at an economic cost. Inquiries are invited at the Head Offices by Mr. Charles Ouzman, managing director, Amalgamated Housing Industries, Ltd., 14, Cockspar Street, London, S.W.1.

FIRE LOSS REDUCTION DEMANDS BETTER CHIMNEY CONSTRUCTION.

By A. G. DALZELL, A.M.E.I.C.
(Consultant to Vitrified Clay Products Bureau, Toronto).

In Northern countries a chimney is one of the essential features of every inhabitable building. In the shack of the pioneer it may only be a stove pipe stuck through a window or a sod roof. In the cheaper frame building it may consist of a few bricks built on a flimsy bracket. In the higher class of home it may form one of the most artistic features of the exterior, and in the interior be the cherished place around which the memories of home will always centre.

On the proper construction of the chimney a great deal of the comfort of the home depends. The most artistically designed fireplace, instead of being a pleasure, is a source of constant irritation if the chimney smokes; and the value of a beautiful home has often been greatly discounted where chimneys have not been properly constructed.

Canada's per capita fire loss (exclusive of forest fires) is the highest in the whole world, and in 1920 was equal to 3.42 dollars per head of population. One of the commonest causes of fire is the faulty chimney or defective flue. In Ontario alone there were 9,396 fires in 1919, with losses totalling 10,514,232 dollars. Chimneys and flues were said to be responsible for 345 of these fires, and sparks on roofs, mostly proceeding from chimneys, accounted for another 737 fires.

The National Board of Fire Underwriters of the United States estimates that the average annual loss due to defec-

tive chimneys in the United States is not less than 16,000,000 dols., and class fires from this cause as "strictly preventable." With a view to reduce this excessive loss, they have recently drafted an ordinance which they urge should be adopted by State and municipal authorities.

The requirements by this ordinance are by no means arduous, and in the drafting of building by-laws the suggestions outlined by those who are interested only in reduction of fire loss should receive careful consideration, not merely from the standpoint of the conservation of national resources, but from the higher standpoint of the preservation of human life and happiness.

SUMMARY OF ORDINANCE FOR THE CONSTRUCTION OF CHIMNEYS.

The walls of chimneys used for stoves, ranges, fireplaces, heating furnaces, or other heating appliances, whatever fuel is used, should be built of brick, concrete, stone, or hollow tile, and in all cases, irrespective of the material used for walls, be lined with flue linings, made for the purpose, and adapted to withstand high temperature and the resultant gases from the burning fuel. No brick or concrete walls should be less than 4 ins. in thickness or stone walls less than 8 ins., exclusive of the flue linings.

Chimneys should not rest on wooden floors, beams or brackets, or be hung by iron brackets or stirrups attached to wooden construction, but should, whenever possible, be built from the ground up, or rest on basement walls. The foundation for an exterior chimney should start below the frost line. Flues in party walls should not extend beyond the centre of the walls.

All chimneys should be built with the best of mortar. Such a mortar can be made by mixing, dry, 200 lbs. of Portland cement and 50 lbs. of dry hydrated lime, to which should be added three times the volume of clean sharp sand with sufficient water to produce a proper consistency. The flue linings should be set in the above mortar and have the joint struck smooth on the inside, the masonry being built around each section of linings as it is placed, and all spaces between masonry and linings should be filled with mortar.

PLACING OF FLUE LININGS.

Flue linings should start at least 12 ins. below the bottom of the smoke pipe intakes of flues or from the throats of fireplaces, and should be carried up continuously the entire height of the flues 4 ins. above the top of stack at least, or terminated with a chimney top of approved design.

Flues should be built as nearly vertical as possible and there should only be one connection with a flue. Where flues change direction the linings should be chipped to fit closely, and at no point should the cross section be reduced. No broken flue linings should be used.

Not more than two flues should be permitted in the same chimney space, and the joints of any two adjoining sets of flue linings should be offset at least 7 ins. Where there are more than two flues in a chimney each third flue should be separated by a division wall of brick or concrete at least 4 ins. thick, and bonded into the side walls.

Chimneys should be built at least 3 ft. above flat roofs and 2 ft. above the ridge of peak roofs, irrespective of the chimney tops. Any increase required in the wall thickness of chimneys going through a roof should be made at least 12 ins. below the rafters.

The minimum area of flue linings for furnaces or fireplaces should be 75 sq.

ins.; for stoves and ranges, 49 sq. ins.; and for small gas stoves or heaters, 10 sq. ins.

Smoke pipe intakes to flues should always enter the chimney through the side, and should be made of clay or metal thimbles securely set in the chimney wall. Such openings should be at least 18 ins. below wooden lath and plaster or any combustible ceiling or exposed woodwork.

Flues leading from cellars or basements should have proper clean-out doors below the smoke intakes.

No wooden beams, joists or rafters should be placed within 2 ins. of the outside face of chimneys, and no woodwork should be placed within 4 ins. of the back wall of any fireplace. All spaces between chimneys and wooden joists or beams should be filled with loose cinders, loose mortar refuse, gypsum block, or other porous incombustible material. This incombustible material can be supported by sheet metal set into the brickwork and nailed to the wooden beams, forming a buckled flexible joint between; or stiff flat metal nailed to the woodwork with the inner edge close to the chimney will serve the same purpose.

The header joists or beams, carrying the tail joists of a floor and supporting a trimmer arch in front of a fireplace should be not less than 20 ins. from the chimney breast.

No wooden studding, furring, lathing, or plugging should be placed against any chimney, or in the joints thereof. Wooden construction should either be set away from the chimney or plastering done directly on the masonry, or on metal lathing or other incombustible material. Wooden furring strips placed around the chimneys to support base or other trim should be insulated from the masonry by asbestos paper at least one-eighth of an inch thick, and metal wall plugs used for nailing. The walls of the fireplace, if of brick, should never be less than 8 ins. thick, and 12 ins. thick if built of stone.

All fireplaces and chimney breasts should have trimmer arches or other approved fire-resistive construction supporting hearths. The arches and hearths should be at least 20 ins. wide, measuring from the face of the chimney breast, and be of brick, stone, or terracotta not less than 4 ins. thick. A flat stone or a reinforced concrete slab may be used to carry the hearth instead of an arch, if it is properly supported and a suitable fill be provided between it and the hearth.

The length of trimmer arches and hearths should be not less than 24 ins. longer than the fireplace opening. Wooden centering under a trimmer arch should be removed before plastering the ceilings beneath. No wooden mantel or other woodwork should be placed within 8 ins. of the side or within 12 ins. of the top of any open fireplace.—*The Contract Record.*

At one time consulting engineer to the Korean Government, Mr. J. R. Harding, of Sellarsbrook, near Monmouth, left estate valued at £79,255. His most important architectural work was the palace for the Emperor of Korea at Seoul.

The congregation of St. James's Episcopal Church, Inverleith Row, Edinburgh, have been celebrating the hundredth anniversary of the foundation of the church. Originally founded in Broughton Street, the church was moved to its present site in 1835, the present building, whose chancel is adorned with mural paintings by the late William Hole, R.S.A., being built shortly afterwards. Last Friday evening the Bishop of the Diocese dedicated the Rood Beam, erected after the designs of Sir John Burnet, R.S.A., the figures having been carved by Mr. Gilbert Bayes, sculptor. The central figure represents Christ reigning triumphant from the Cross.

CONSECRATION OF THE PAYNTERS STAINERS LODGE.

The Consecration of the Paynters Stainers Lodge, No. 4,256, took place last Friday afternoon at Painters' Hall, Little Trinity Lane.

Mr. P. Colville Smith, Grand Secretary, performed the ceremony, assisted by Sir Edward Cooper, P.G.W., as S.W.; James Stephens, President, Board of Benevolence, as J.W.; the Rev. W. P. Besley, P.G. Chap., as Chaplain; B. Marr Johnson, P.G.D., as D.C.; and A. Barton Kent, A.G.D.C., as I.G.

Mr. John Charles Nicholson, a Past-Master of the Paynters Stainers Company, was installed as first Master, and appointed the following as his officers for the ensuing year: Captain H. J. Bertram, P.A.G. Swd. E., S.W.; H. D. Searles-Wood, P.M., J.W.; R. C. Gleed, L.R., Treasurer; Archibald Campbell, P.M., Secretary; J. Higson, P. Prov. G.S.W. (E. Lancs.), D.C.; F. G. Carpenter, P.M., S.D.; E. J. Venner, P.M., J.D.; G. P. Nash, L.R., A.D.C.; R. H. Vigor, P. Prov. G.S.W. (Essex), Almoner; W. Stewart Greene, Organist; J. C. M. Vaughan, P. Prov. G.W. (Herefordshire); S. Parvin, I.G.; C. Farris, L.R., J. W. Barker, P. Prov. G.S.W. (Leicester and Rutland), T. Bain, and E. Howard, Stewards.

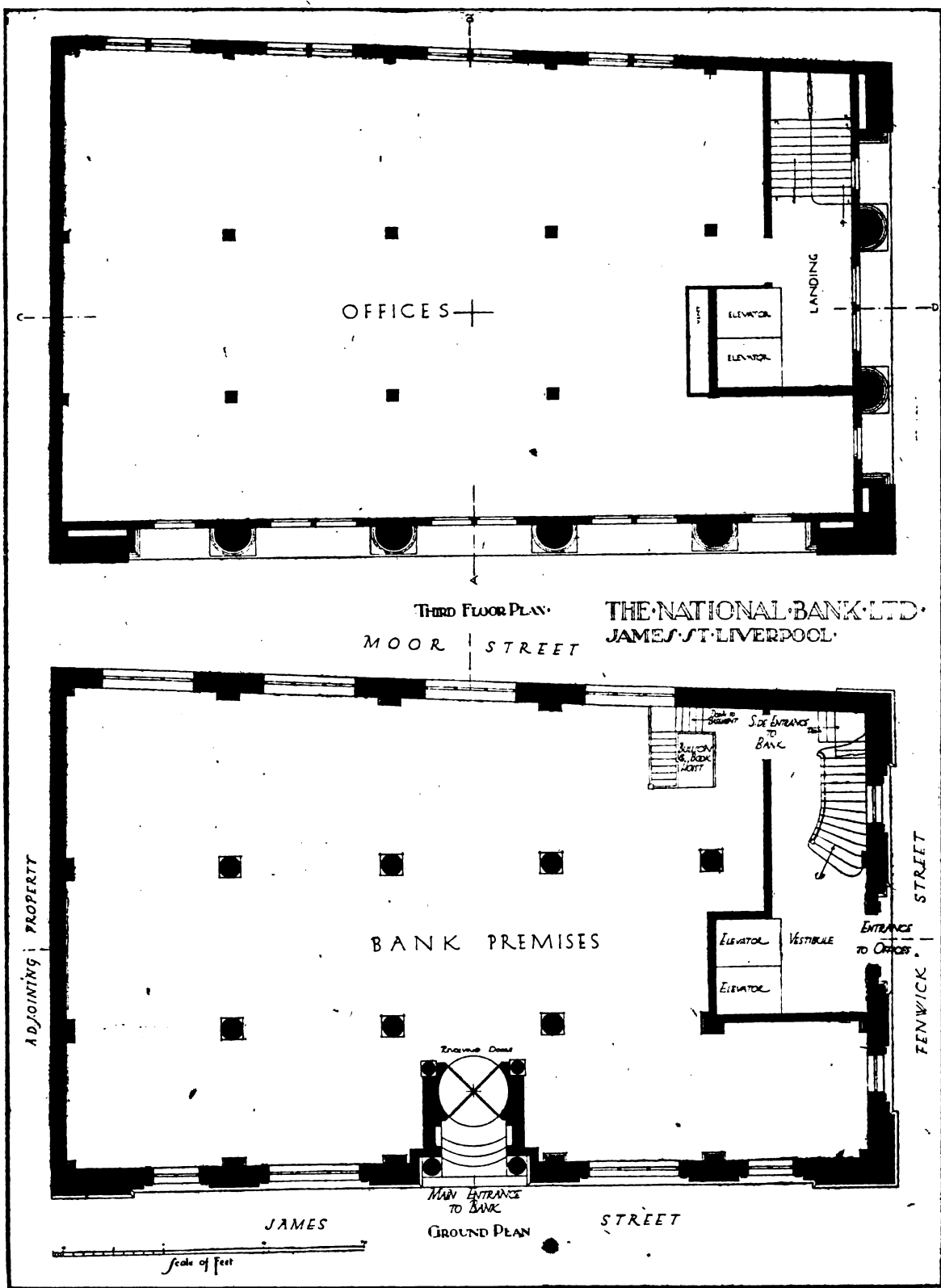
The Lodge furniture has been designed in harmony with that of the Court Room, and has been admirably carried out, the room presenting a very impressive appearance for Lodge work. The first initiate of the Lodge will be Mr. John H. Cantrell, President of the National Federation of Master Painters and Decorators. The founders are to be congratulated on the idea which prompted the formation of the Lodge and the complete success which attended the Consecration.

COMPETITIONS.

BIRMINGHAM WAR MEMORIAL.—The conditions issued to competitors state that the Memorial will be of Cornish granite next ground and a durable stone above. Bronze and marble for decorative details. Total cost not more than £30,000. Competitors are to furnish block plan to scale of 1-16 in., showing position of building and treatment of whole site; plans; two sections and four elevations of the Memorial to 1/4 in. scale; a sheet of 1/2 in. details of design, size not more than double elephant; a perspective sketch not to exceed an imperial sheet. Drawings in ink or pencil and tinted. All sections tinted red, floors grey. All drawings on strainers. Typed report and estimate stating methods of construction and material, and price per cubic foot. All questions to the City Engineer not later than August 3. All designs by October 12. If the design placed first fails to elicit tenders within the estimate, the Committee may proceed with the design placed second, and, failing that, with the third, or any other; the competitor or competitors thus failing receiving no other remuneration beyond the premiums.

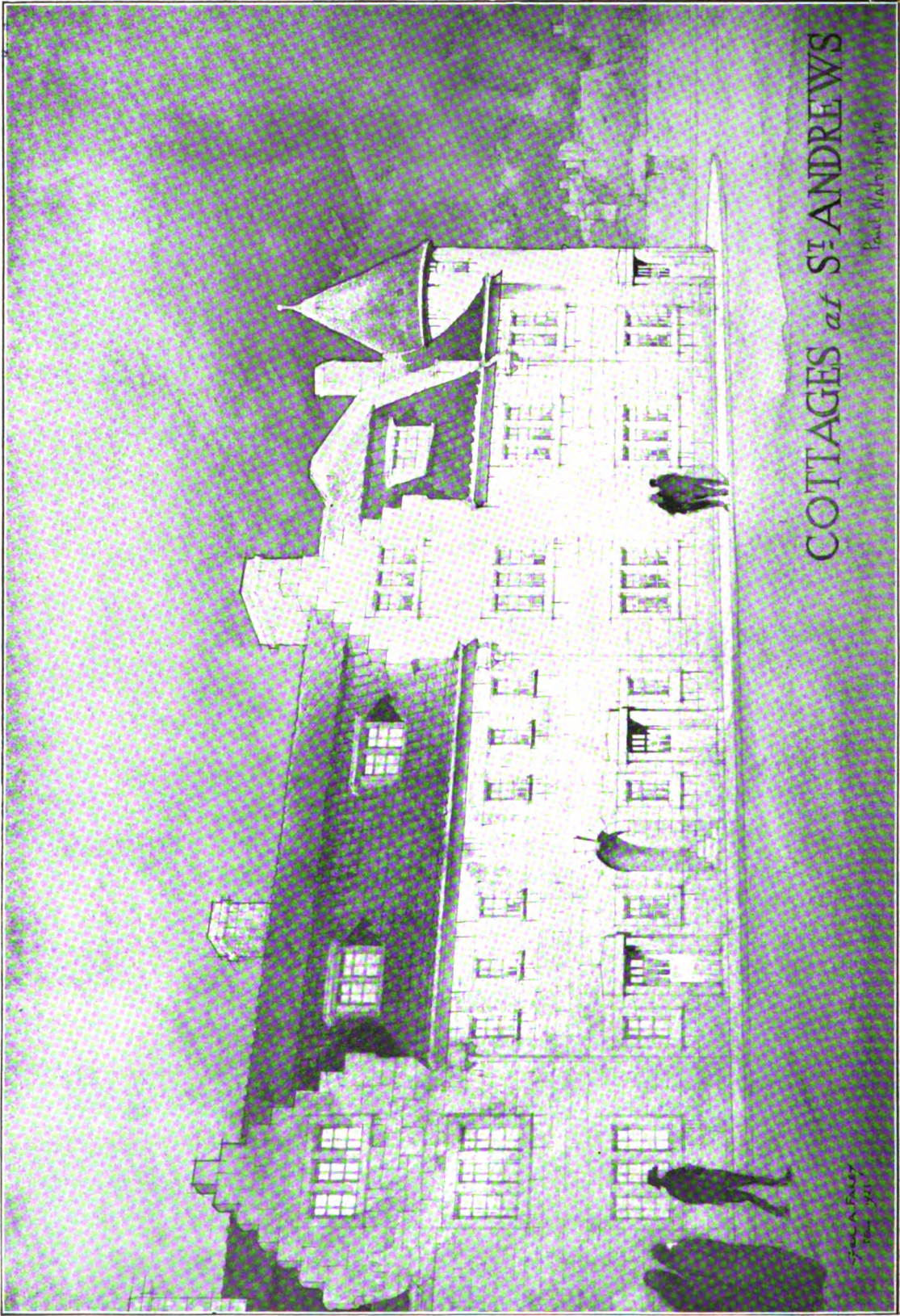
Presiding at the summer meeting of the Institute of Heating and Ventilating Engineers at Sheffield, on Tuesday, Mr. Frank Biggin said Sheffield could be lighted and warmed from the exhaust steam and water gases now blown into the atmosphere which made Sheffield notorious.

Mr. Maurice Henry Pocock, a Past Master of the Carpenters' Company, died on Saturday week at the age of 66. He was admitted to the Freedom and Livery of the Company in 1875, was elected Junior Warden in 1906, and served as Master in 1908. Mr. Pocock was the son of the late Mr. William Willmer Pocock, F.R.I.B.A., a Past Master of the Company, and architect of the present Carpenters' Hall. He was associated with his father in the building of the Hall, and in erecting many chapels and other buildings in London. His latter years were devoted mainly to architectural work in the country.



THE NATIONAL BANK, JAMES STREET, LIVERPOOL.
Messrs. T. ARNOLD ASHWORTH & SON, Architects.

THE BUILDING NEWS, JUNE 24, 1921.



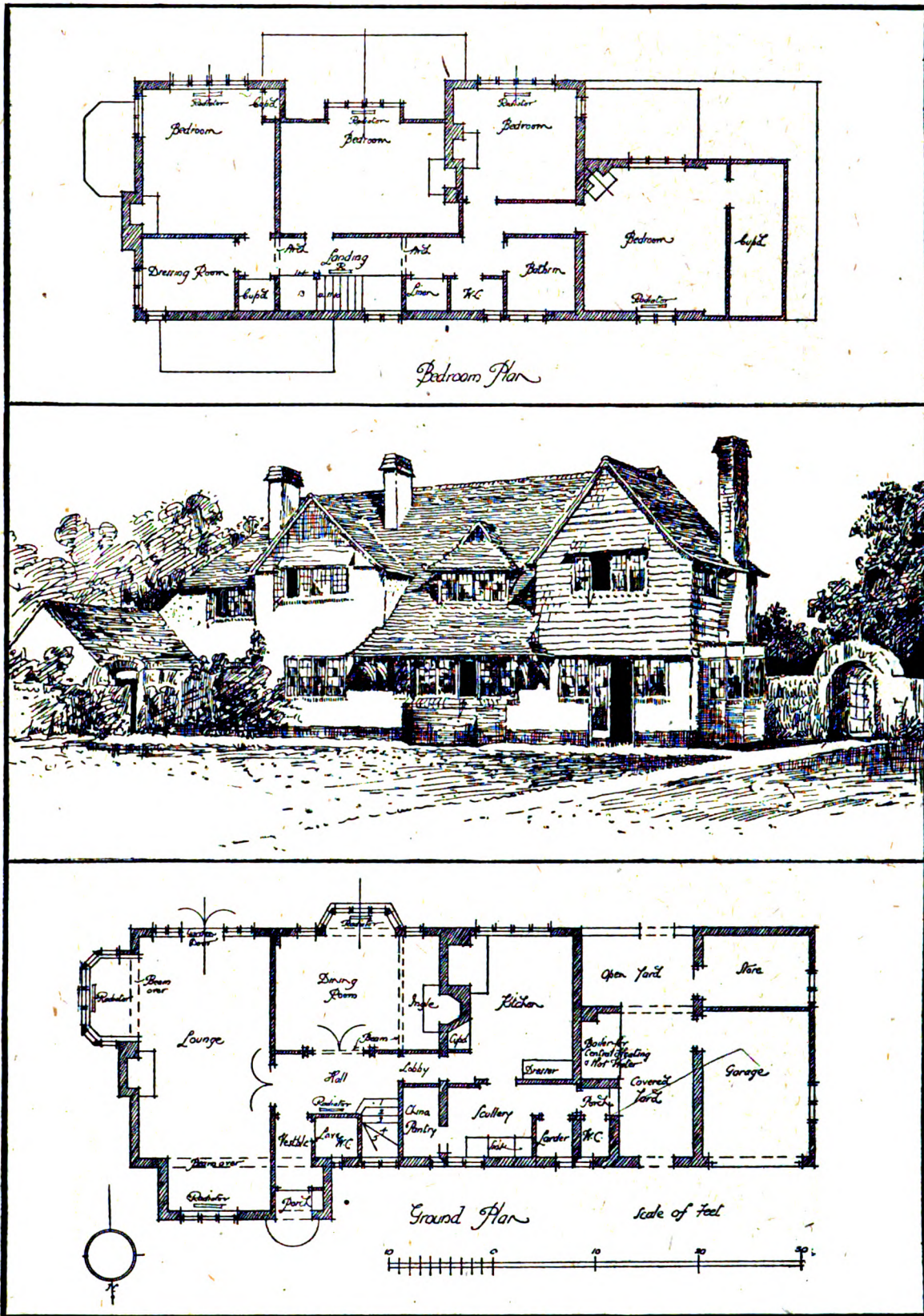
COTTAGES at ST ANDREWS

Paul Waterhouse

Mr. PAUL WATERHOUSE, M.A.Oxon, F.S.A., P.R.I.B.A. (Elect), Architect.



THE NATIONAL BANK, JAMES STREET, LIVERPOOL.
Messrs. T. ARNOLD ASHWORTH & SON, ARCHITECTS.



HOUSE AT GERRARD'S CROSS, BUCKINGHAMSHIRE.
Mr. ROBERT G. MUIR, F.R.I.B.A., Architect.

Our Illustrations.

COTTAGES AT ST. ANDREWS, N.B.

This range of cottages is being erected at St. Andrews on a site facing the sea and in close proximity to the coast. The materials are stone and local tiles. The buildings are the project of a private owner, and the accommodation is specially designed to meet the needs of the fisherman population. Mr. Paul Waterhouse, M.A. Oxon, F.S.A., P.R.I.B.A. (elect), is the architect. The drawing reproduced is now at the Royal Academy Exhibition.

THE NATIONAL BANK, LTD., PREMISES, JAMES STREET, LIVERPOOL.

A new building at Liverpool for the National Bank, Ltd., is to be erected on the site of the existing "Derby Buildings." The position is a prominent one, at the junction of James Street and Fenwick Street, fronting the open space of Derby Square and commanding the long vista of Lord Street. The architects are Messrs. T. Arnold Ashworth and Son, 14, Castle Street, Liverpool. The building will comprise a basement and ground floor, both of which will be utilised by the bank, and above there will be seven floors of offices. An eighth floor will contain the sanitary accommodation, power and gear houses, each floor being served by electric elevators. The structure will be "steel-framed," with hollow concrete fire-resisting floors. The main elevations and the attic story on each elevation will be of Portland stone. The entire building will be entirely heated by low pressure hot water, the boiler-house for which is placed in the basement. In addition to radiators, provision will be made for either coal or gas fires at the option of the tenants, and a special apparatus is to be installed for the extraction of all smoke and fumes. The vitiated air will be drawn through specially designed ducts connected up to extractor fans in the roof. In addition to this, natural ventilation will be provided for by vertical pivot-hung opening casements and air inlets. The drawing is by Mr. Frank Rimmington. We also give two plans of the building.

HOUSE IN PACKHORSE ROAD, GERRARD'S CROSS, BUCKS.

This rural house has been recently erected from the plans of Mr. Robert G. Muir, F.R.I.B.A. Mr. F. Green is the builder, both of Gerrard's Cross. The walling is lime cast, faced with tiles for the roofs, and tile-hung to the upper parts and gables. Chimneys of brick. Heating throughout radiators, also separate hot-water supply. The plans sufficiently explain the internal interest and lay-out of the building.

The people of Borrowdale have purchased Castle Crag, one of the mountains fringing the valley, and have given it to the National Trust to perpetuate the memory of the men of Borrowdale who were killed in the war. A tablet of green slate has been placed on the top of the crag inscribed with the names of the men who died, and stating that the crag was given to the Trust in their memory.

The death has taken place in Edinburgh of Mr. James Bayne, well known amongst Edinburgh artists and others as a miniature painter. Amongst his patrons was her Majesty Queen Alexandra, who purchased three of his ivories at various dates. Mr. Bayne was born in Edinburgh in 1843. He served a seven years' art apprenticeship with Mr. J. O. Brown, from whom he derived a love of architectural subjects, and a capacity for minute draughtsmanship (with both brush and pen) which, developing in the pre-Raphaelite atmosphere of his youth, found scope in many directions.

ARCHITECTURE IN RELATION TO THE ARCHITECT.*

I propose to consider the subject of architecture in relation to the architect. As we rapidly approach the end of the first quarter of the twentieth century, the significance of many of the great movements and tendencies which have taken place during the century which has passed cannot fail to be impressed on all thoughtful minds. That period is now exhibited in truer perspective than it was a generation ago, and the fierce searchlight of present-day criticism has revealed the cause and traced the effect of influences on its architecture, due to those movements, or tendencies, which appear to have been only imperfectly realised hitherto.

The steady growth of Renaissance architecture from the 15th century, ceaselessly invigorated by Greece and Rome, was checked, so far as Great Britain was concerned, by the rise of the Romantic School in literature towards the close of the 18th century. This school, typified by the writings of Sir Walter Scott, seems to have been responsible for the birth of the Gothic revival, which first showed its influence in the domestic work of the period. One example of this phase of Gothic in our immediate neighbourhood which occurs to my mind at the moment is Rathmines Castle. The house as it stands to-day was built about the beginning of the last century on the site of an older house, and exhibits features peculiar to the Romantic School, especially in its internal fittings. One is constantly reminded of the Romantic School of Gothic by some of the station buildings on the main line of the Great Southern and Western Railway, which were designed by Sancton Wood in the 'forties. Sancton Wood, who was born in 1814, became a pupil of Sir Robert Smirke about 1830, and must have been trained in the strict Classical manner of his master, the architect of the British Museum. It is strange, therefore, to find that the author of such a composition as Kingsbridge Terminus, which carries on the 18th century tradition with aristocratic dignity, should, two years later, out-Gothic the Gothicists, so to speak, in the smaller stations on the system, because that is what he has done. These station buildings, with which no doubt you are familiar, are very irregular in plan, and are loaded with Gothic features of every conceivable kind—cut barge boards and brackets with mouldings elaborate and fantastic. Obviously the picturesque at any cost was, the order of the day. The Americans, I believe, describe this period in their own country as Carpenter Gothic. These stations were being carried out simultaneously with stations on the old Waterford and Limerick Railway, where we find the Classic influence predominates—undoubtedly an opening skirmish in the battle of the styles.

THE BATTLE OF THE STYLES.

As the Romantic School began to wane the school of the Churchmen arose, and the revived Gothic attained its greatest glory in Church work. Like their prototypes of the Middle Ages, the Churches of this period will always attract the admiration of the initiated. Full of Christian symbolism, both in outline and detail, the best buildings of this school express their purpose and never fail to create the right atmosphere.

The battle of the styles was the inevitable result of the Gothic Revival. It was

* From the Valedictory Address of Mr. J. C. Dewhurst, F.R.I.B.A., to the Architectural Association of Ireland.

soon followed by the cry for a new and original style. As this cry synchronised with the worse period of unenlightened industrialism in England, it naturally produced the individualist, who, deprecating tradition, has left us examples of architecture which are now more or less at a discount. Mr. G. Gilbert Scott remarks: "It is interesting to notice the quality of architecture produced in this country during the period of individualism. That fine individual work has been done, no one can deny; but these efforts stand out as exceptions, and the average quality of work has been extremely poor, and far below the standard reached in previous ages. I attribute this to lack of collective effort. The fine work of past ages was produced when tradition was a living force; the result was cumulative."

About fifty years ago a rather severe architectural critic, Sir Edmund Beckett, better known as Lord Grimthorpe, whose name was anathema to the architects of his day, and to whom the architects were anathema—tit for tat—wrote, among other works, a "Book on Building." The philosophical part of the book is well worth reading, but I would not recommend an architectural student to accept all the author's views on technical matters, nor to crib his typical plan for a country house. In this "Book on Building" he points out that one of the greatest fallacies put forth by the demanders of a new style was that of denouncing modern Gothic as the copying of an old style. Whereas the critics of the Evelyn School, in the 17th century, denounced the Gothic style as modern, and set up the Renaissance as truly ancient. He goes on to say: "In days when there was real architecture there was no architectural philosophy. Men designed and built well simply because they understood it, and had naturally good taste, and were not always striving to appear original, or to do something striking, or to be just ahead of the fashion and yet in it, as fine ladies like to be, and they had no vulgar tastes to play up to in competitions or for ostentatious employers."

How remarkably up-to-date all this sounds!

It is now generally accepted, I think, that the theory that design is invention pure and simple, that adherence to precedent is slavish, and that the architect's function is to strike out a new line, dates from the days of the battle of the styles. We are now humble enough to admit that design consists in the putting together of existing elements as accepted traditional facts, features, and proportions. In addition to their rejection of the theory that design is invention pure and simple, modern architectural writers strongly emphasise the fact that the great Classic tradition has never died out since its revival in the fifteenth century, and that our architectural salvation depends on its being maintained.

It seems to me that the nineteenth century styles are merely episodes in the development of the underlying Classical movement—a kind of exploration of every avenue along the main route, if I may be permitted to use a political simile. As each avenue in turn proved to be a cul-de-sac, it was hurriedly abandoned, and a return was made to the main line of communication with the known past. I like to think the Gothic branch still runs parallel with the main line of communication as a medium through which our religious aspirations may be expressed.

THE ORDERS.

In considering accepted traditional facts we are brought face to face with the

Orders. They come of a very old stock, for their descent can be traced through Rome and Greece to Beni Hassan. The Orders have been described as the most persistent formula of human expression in Western Europe. Their influence, like charity, has never failed. Our eyes rest on the well-known and beautiful examples everywhere. The sturdy Doric predominates in countless examples, closely followed by the Ionic, while the majesty of Jupier Stator is presented to us in all the glory of its rich detail, in some form or other, over and over again. What could be more pleasing to the eye than the Attic Base? We know that the perfect combination of mouldings forming this base was in existence more than two thousand years ago, and we still rejoice in its unaltered presence. The same may be said of other combinations of mouldings. With what pride do we use these ancient and honourable methods of expression in our compositions! What a pleasure it is to put them down on paper, while to see them materialise brings joy unspeakable to those who are fortunate enough to possess rich clients. In the Orders we recognise a foundation on which all our work is built up, and, as we know, they need not necessarily appear in the flesh to be an influence in building; they can appear in the spirit.

A remark made by one of our members impressed me during our inspection of Scott's Lady-chapel in Liverpool Cathedral, on the occasion of the last excursion of our Association. He said: "I have a feeling that this work is rooted in the Orders." A eulogy, indeed!

What should our attitude be towards this goodly heritage of tradition? This is the chief point in my theme. We cannot all emulate the great ones who have created monumental structures. Some of us lack the skill; others lack the opportunity. All of us, however, ought to realise our responsibilities as stewards or custodians of the culture produced by the Classical tradition.

The ordinary domestic work of the country, the vernacular—which depends on local tradition for its chief interest—should be evolved in the light of that larger tradition rooted in Western civilisation. The evolution of commercial and industrial building presents a more difficult problem than that of domestic work, because the conditions are more exacting, and are ever changing. We can at least be truthful in the construction of this work, and use traditional embellishments with restraint and understanding. An increasing desire for truth is a tendency of the age; at all events, in the architectural world. Use character, civic character, and local character are recognised as desirable qualities to strive after in composition. The architectural schools endeavour to teach a unity of expression arising out of the aspirations and needs of the present age, in order to establish a manner of building which, though rooted in the past, will distinguish these times from the years that are gone.

"STYLES MATTER LESS THAN STYLE."

My peroration has got into the wrong place, and anything I say now is in the nature of an anti-climax; but in conclusion I cannot refrain from quoting the views of Mr. Ralph Adams Cram, the eminent American architect, which have a bearing on the chief theme in my address. Speaking in 1913 on the "Evolution of Architectural Style," he says: "Styles matter far less than style. From a purely professional standpoint, the most encouraging thing is the breadth of culture, the philosophical insight into the essence of

things, and the liberality of judgment that mark so many of the architectural profession to-day. Gone are the old styles of the 'Battle of the Styles.' The swords are beaten into pruning hooks, and these are being used very efficiently in clearing away the thicket of superstitions and prejudices that for so long choked the struggling flower of sound artistic development. The Goth and Pagan can now meet safely in street or drawing-room without danger of acute disorder; even the structural engineer and artist preserve the peace (in public), for all have found out that architecture is much bigger than its forms, that the fundamental laws are the same for all good styles, and that the things that count are structural integrity, good taste, restraint, vision, and significance."

SLATE DUST IN ASPHALT ROAD SURFACE MIXTURES.

From 80 to 95 per cent. of the gross production of all slate quarries is discarded as waste. The U.S.A. Bureau of Mines has undertaken a study of the industry for the purpose of devising means of reducing the proportion of waste, and of utilising the unavoidable waste. The latter has received special attention.

As intimations had been received from several sources that slate flour constituted a superior filler for road asphalt mixtures, an attempt was made to obtain more definite data as to its adaptability for such a use. The co-operation of manufacturers was requested, and as a result several companies offered to test the material in their experimental laboratories. Samples of finely pulverised slate were submitted for this purpose. Tests were made both on asphalt bonded briquets and on standard sheet asphalt pavement mixtures.

The results indicate that for resistance to impact slate flour is about equal to other fillers in bonded briquets, and somewhat superior in sheet surface mixtures. In cementing value it is superior to both limestone and Portland cement in asphalt bonded briquets, and intermediate between them in standard sheet surface mixture. Elutriation tests indicate that slate flour contains approximately 15 to 25 per cent. more of the fine dust that constitutes effective filler than either limestone, trap rock, or Portland cement. In volume weight slate is about equivalent to limestone, and approximately 10 per cent. superior to Portland cement. The cost of slate flour is little more than half that of Portland cement, but its ability to compete in price with limestone is not yet established.

PARLIAMENTARY NOTES.

EX-SERVICE MEN AS BUILDERS.—Mr. Macnamara (Minister of Labour) informed Viscount Curzon on Wednesday that over 18,600 ex-Service men had applied for employment in the building trade, and over 200 were either at work or had been allocated among employers. The continued stagnation of industry generally made it quite impossible to make any great headway. In a number of cases where ex-Service men had actually begun to work under the scheme the attitude adopted by the operatives on the sites to these men, particularly in the London area, had been so unfriendly that in a number of cases the ex-Service men concerned threw the thing up. He would endeavour to deal with those cases.

The Loughton (Essex) Urban District Council have accepted a tender for the erection of thirty-one houses at £175 to £200 under the price paid less than a year ago for similar buildings.

Correspondence.

UNIFICATION AND REGISTRATION COMMITTEE.

To the Editor of THE BUILDING NEWS.

Sir,—A letter appears in the professional Press signed by Mr. A. W. S. Cross and others who appear to be in doubt as to the intentions of the Unification Committee with regard to Registration. It appears to me that the best way of putting their minds at rest is to ask them to read the published report again. It is clearly set out in that report that one of the objects of the scheme, whether under heading A or B, is Statutory Registration. Again, in Scheme A (II.), it is proposed that the R.I.B.A. shall present to Parliament a Registration Bill, and shall prosecute the Bill with vigour until it becomes an Act of Parliament. Similar words appear in Scheme B.

Then, in the Summary of the Report (par. 7), it is pointed out that the scheme provides for Registration by Act of Parliament, and in Section 3 it is suggested that the twelve months' notice of intention to bring in a Bill should not be wasted, but that the details of the Bill should be settled during that time.

The whole of par. 3 is devoted to the Registration Bill, and it gives particulars about the Dental Bill.

In face of these facts it is difficult to see why the signatories should say, "up to the present the Committee make no recommendation for dealing with the second subject referred to them"—i.e., Registration.

Neither is it correct to say that the Committee resolves "that all architects should be allowed to become members of the R.I.B.A."; it is particularly stated that the invitation should go to all architects who are qualified, and further that these architects should enter the class for which they are qualified.

Surely nothing can be clearer.—Yours faithfully,

ARTHUR KEEN.

Hon. Secretary, R.I.B.A.

PROFESSIONAL AND TRADE SOCIETIES.

LIVERPOOL ARCHITECTURAL SOCIETY.—The seventy-fourth annual meeting of the Liverpool Architectural Society was held on Monday in the boardroom, 13, Harrington Street, Mr. T. T. Rees in the chair. The report adopted showed that the present membership consists of fifty-two Fellows and fifty-five Associates, besides five Hon. Fellows, eight Hon. Associates, and twenty-eight Students. Elections of officers were announced as follows:—President, Major Gilbert Fraser; Vice-Presidents, Professor Patrick Abercrombie and Mr. W. Glen Dobie; and Hon. Secretaries (re-elected), Messrs. R. Holt and E. Gee. Mr. E. Percy Hinde was presented with a handsome silver tea and coffee service for himself and a silver jewel case for his wife, in recognition of valuable services rendered by him to the Society during upwards of a quarter of a century. Mr. Hinde is the representative of the Royal Institute of British Architects on the Court of Governors of Liverpool University.

In an action referred to the Official Referee, Mr. Pollock, Mr. Wyndham Joseph Chant, a surveyor, of Winchenden Road, Fulham, claimed from Mr. Alfred Ospalak, architect, of King's Buildings, Smith Square, Westminster, the sum of £180 11s. 10d. as balance of account for surveyor's fees, etc. The Referee found that the sum the plaintiff ought to be paid was £26 16s., and directed that the £56 paid into Court by the plaintiff should remain until the costs were paid.

Our Office Table.

According to a patent by Mr. H. C. Badder, 27, Southfield Road, Bedford Park, London, for decorating and weatherproofing the surface of concrete, brick, or like walls, roofs, floors, and ceilings, or of separate tiles or blocks, finely ground silica, to which ground glass may be added, is saturated with paraffin wax or a melted mixture of paraffin wax, fossil resins, and asphalt, and the material, when cool, is ground and mixed with Portland cement and water, applied to the surface, and heated by means of a blowlamp or other means after it has set. The silica may be white or coloured, and mineral or earth colours may be mixed with the wax.

The members of the Old Edinburgh Club, to the number of about 120, met on the evening of the 15th inst. in St. Giles' Cathedral, when Dr. Thomas Ross, one of the elders, indicated points of interest historically and architecturally. The cathedral is the fifth in size in Scotland, the others which exceeded it being the cathedrals of St. Andrews, Elgin, Arbroath, and Melrose. All churches dedicated to St. Giles were built by the side of a highway. One of the jambs intended for a western tower still stands; no tower was ever built. The capitals of the year 1385, when the church was enlarged, were lower than the existing capitals; they were seven courses lower down. The roof of the western portion of the nave, which is of plaster and putty, was condemned as out of keeping with Gothic architecture.

The cricket match between the Society of Architects and the Architectural Association at Elstree on Friday, June 17, resulted in a win for the latter by 69 runs. The A.A. won the toss and elected to bat first. The batting at first displayed no great confidence, and when lunch was taken the A.A. had lost four wickets for 32 runs. The fifth wicket fell soon after lunch with the score at 59, but after this a prolonged stand was made by A. S. Knott and G. H. Crickmay, who put on 128 runs for the sixth wicket and completely altered the complexion of the game. The Society's bowling went to pieces, and the bowlers could get no assistance from the hard pitch; the Society also lacked the services of a really fast bowler, all the bowling being medium to slow. Knott compiled a very good 100, giving two possible chances at the later stages of his innings. Crickmay scored a fine 56, giving no chance. The seventh wicket fell with the score at 187, and the remaining wickets added 20 runs. Apart from excellent wicket-keeping by Cumberlege, the Society's fielding was ragged, but this was partly owing to the heat and the bumpy outfield. Cumberlege and Bennett opened the Society's innings, and at once commenced to score freely. After the first bowling change Cumberlege mistimed a shot to leg, and was well caught by fine leg-fielding after scoring an attractive 24. Gainsford, who went in at the fall of the first wicket, never looked like scoring, and was bowled by his third ball. Beard followed and looked like settling down when he had hard luck by being run out by a long throw-in from square-leg, which hit the stumps. Hubbard, who followed him, was quickly bowled. Bennett had bad luck in being bowled by Parker with a ball that bumped over his head and dropped on the stumps. He had compiled an attractive 41, and looked set for a century. Something like a rot had been setting in, four wickets falling for 19 runs. Capt. Kiddy tried hard to stop the rot, going in two hours before stumps were drawn and staying at the wicket for an hour and a quarter to score 17, mostly singles. Kiddy received valuable assistance from Whitworth, but when the pair looked well set to play out time, the former was bowled by a short-pitched ball from Parker that shot into the stumps. The last wicket fell a quarter of an hour before time with the score 128.

On Tuesday week Messrs. Millars' Timber and Trading Co., Ltd., held an opening reception at their new machinery depot, Kirtling

Street, Nine Elms Lane, Battersea, London, S.W., when pressmen from the principal technical and trade journals were shown over the extensive premises by Mr. Ivan Benson, manager of the machinery department, and Mr. Richwood, assistant manager. The new depot is excellently situated, with direct communication with three railways, and with a frontage to the Thames, enabling full use to be made of water transport, the new works cover a large area, with buildings having a total floor space of some 50,000 square feet. The machinery of all descriptions shown and explained to the visitors created great interest, especially the Oscar steam shovel, the Truck tractor, which turns readily in its own length and facilitates ingress or egress from the most congested yard in a fraction of the time taken by a horse-drawn truck. Other exhibits included the Springfield roller, the Lightning woodworker, various varieties of concrete mixers, portable waggon-loaders, and asphalt plant.

A cathedral "like no other in the world" is to be erected by Chicago Methodists at a cost of £375,000 in the heart of the downtown business part of the city. This monument to the centenary of mission work will, says the Central News Chicago correspondent, be a skyscraper twenty-one stories high, with offices occupying the space not given up to a huge auditorium on the ground floor, and church headquarters above. In the spire will be great chimes, which will be loud enough to be heard above the roar of the traffic. The cathedral will be pure French-Gothic in style and "American in general construction, combining the grace of medieval churches with the utility of the modern office building."

A gratifying feature of the efforts of the Home Arts and Industries Association is the inclusion of so many centres which are helping wounded soldiers to earn a livelihood, and abundant evidence of the good results achieved is given in the four days' exhibition opened at the Royal Albert Hall on Wednesday. From Queen Alexandra's Technical School, Sandringham, there are excellent specimens of inlaid cabinet production, and other stalls are furnished from disabled men's centres and workshops in all parts of the country. The Rev. B. N. Switzer, vicar of St. Luke's, Stepney, shows repoussé copper and brass articles done by the men he personally trains at the vicarage, and he has just secured for his building and decorating branch the contract to put up the bungalow cottages at the Vanguard Farm, near Maidstone (the Disabled Soldiers' Settlement). The highest award of the exhibition, the gold cross, goes to Mr. W. H. Evans, the shoeing smith, of Milton Abbas, Blandford, for door fittings in hammered iron, comprising handle, catch, catch and gride, and hinges. Mr. Evans won the silver medal in 1914.

Mr. Henry C. Walker (chairman of the company), presiding on Wednesday at the ordinary general meeting of Waygood-Otis, Ltd., held at the Cannon Street Hotel, said he felt sure that the shareholders would be satisfied with the position disclosed by the accounts. The satisfactory result of the past year's working was largely due to the number of contracts secured in the previous period, and in the early part of the year under review, when business was exceedingly good. Unfortunately, during the second half of the year, there was a considerable falling-off in the placing of new contracts owing to the unsettled position, so that at the present time they had been compelled to reduce the number employed in the works, and therefore the output was very much less than the capacity of the works. The company had a number of important contracts in hand. They were fitting the new premises of Selfridge and Co., Ltd., with 12 of their largest-size electric passenger lifts, they were installing a number of electric and hydraulic passenger lifts for Harrods, Ltd., John Barker and Co., Ltd., Dickens and Jones, Ltd., Peter Robinson, Ltd., and had just secured the contract for fitting electric passenger lifts in the new County Hall for the London County Council. He had further to record a growing demand for the small hand-power lift for household and service purposes. Dealing with the accounts, he stated that the directors were

able to recommend a dividend of 9 per cent. on the ordinary shares. The profit would have enabled a somewhat higher dividend to be paid, but in view of the falling-off in business it was considered wise to conserve their resources.

In a letter to yesterday's *Times*, Mr. Paul Waterhouse, P.R.I.B.A. (elect), writes:—"Sir Henry Japp will not mind my pointing out that the scheme which he proposes for 'over-and-under' crossings can hardly claim novelty. I find that in lectures of my own as long ago as 1906 the scheme was advocated and illustrated (R.I.B.A. *Journal* XIII., 1906, p. 381-3). I do not suggest that originality could be assumed for it at that date, for Holborn Viaduct then was, as it is now, a well-established example. The whole of the *pro* and *contra* of this device can be read in various publications of that time, and the problem is well known to those who, in the London Society, have studied these questions of traffic improvement."

At Old Street Police Court on Wednesday, Mrs. M. Samuel, of Gerrard Street, Soho, was summoned by the London County Council for £282, expenses incurred by the Council in carrying out the provisions of the Building Acts in respect of Stepney premises. The defendant: There is no property left except just the ground. Mr. Pawlyn, for the Council, explained that at the time the work was done there were buildings, but they had now been demolished. The Magistrate (Mr. Clarke Hall): It seems a great waste of money. Mr. Pawlyn said that none of the amount was spent for repairs, but in removing dangerous parts of the building. The defendant said it was impossible for her to pay, and the Council must have the ground. The Magistrate said that would probably be the effect of the order he must make for the payment of the amount, with costs.

The House of Lords dismissed, on Wednesday, an appeal from a judgment of the Court of Appeal reversing a decision of Mr. Justice Darling in a case in which the owner of a fishery claimed against the Dulverton Rural District Council for injury to trout and other fish through the discharge of sewage into the river where the fishery was conducted. The Council had succeeded in the court of first instance, but both the Court of Appeal and the House of Lords took the view on the evidence that no cause but the discharge of sewage, for which the appellant council was responsible, could account for the destruction of the fish. (Dulverton Rural District Council v. Tracy.)

CHIPS.

The King's gold medal for architecture, awarded last year to M. Girault, of Paris, will be presented to the architect at the British Embassy in Paris by Lord Hardinge of Penshurst, the Ambassador.

In a house at Elm Grove, Brighton, Mr. and Mrs. Roxburgh Smith have been found dead, evidently from gas poisoning, the result, it is believed, of an accident. Mr. Roxburgh Smith was formerly a draughtsman in the borough surveyor's office, and was about 70 years of age.

Excavations at Askalon have resulted in the discovery of the cloister round the great court built by Herod the Great, which was described by Josephus as being admirable for its workmanship and grandeur. Statues of Apollo, Venus, and Victory, and a giant statue of Herod have been found therein.

Up to date the Ministry of Health has paid over £3,000,000 in grants to private builders for the erection of 14,715 completed houses. The number of houses that private builders have announced their intention of erecting with the help of the subsidy is now 30,864, which, if completed, will mean an expenditure of £7,000,000.

The annual report for 1920 of the Society for the Promotion of Roman Studies states that a proposal for fusion with the Hellenic Studies Society has been given up for the present. Dr. G. Macdonald is recommended by the Council for election as president, Sir John Barran as treasurer, and Mr. R. Gardner, of Emmanuel College, Cambridge, as secretary and editor for one year. There was a credit balance of £15 11s. 11d. on the year's working and an increase of 45 in the membership.

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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.

BARNLEY.—For eight Class B dwelling houses, Racecomon Road housing site, for the Barnsley Town Council. Accepted tenders:—

Taylor, F., Clarke, J., Tock, G., and Squires, A., Barnsley (brick-setting), £3,900; Smith, C., Newton Street, Barnsley (joiner), £1,120; Barnsley Master Plumbers' Association, Barnsley (plumbing), £720; Fleming, E., Eastgate, Barnsley (plasterer), £344; Fleming, E., and Dawber, Townsley and Co., Barnsley (slater), £450; Stephenson, F. L., and Son, Peel Street, Barnsley (painter), £220.

BARNWOOD, GLOS.—For seven blocks semi-detached parlour houses at Barnwood, for the Gloucester Rural District Council. Mr. W. Fitzgerald Jones, architect. Accepted tender:—

Starr, A. J., Brockworth, near Gloucester, £775 per house (based on rate of wages previous to decrease in May last and including fences and drains complete).

BOLTON-ON-DEARNE.—For 77 houses and roads and sewers, Furlong Lane, Bolton-on-Dearne, for the urban district council. Accepted tender (subject to the approval of the Ministry of Health):—

Edwards and Co. £57,010 12 3

CAMELEY.—For 6 houses at Cameley, for the Clutton Rural District Council:—

Osman and Co. (accepted) . . . £5,567 19 7

CAMPDEN, GLOS.—For houses, for the rural district council:—

Hinkins and Frewin, Oxford (accepted) . . . (per house) £844 0 0

CHEPSTOW.—For proposed monument in Beaufort Square, Chepstow, for the War Memorial Committee:—

Davis Bros., Worcester (accepted) £1,020 0 0

CITY OF LONDON.—For repainting Blackfriars and Tower Bridges:—

Blackfriars Bridge.	
Fairhead and Sons	£18,994 0 0
Kilby and Gayford	15,755 0 0
Laurence, Walter	15,411 0 0
Minter	14,195 0 0
Perry	13,960 0 0
Greenwood, J. A.	13,375 0 0
Vigor	12,160 0 0
Whitehead	12,100 0 0
Beaumont, W. G., and Son*	10,124 0 0
Tower Bridge.	
Carmichael, J.	£36,675 0 0
Perry	34,249 0 0
Minter	33,890 0 0
Fairhead and Sons	30,890 0 0
Greenwood	30,485 0 0
Laurence	29,772 0 0
Vigor	27,556 0 0
Whitehead	23,700 0 0
Beaumont, W. G., and Son*	19,898 17 7

*Recommended for acceptance subject to inclusion of allowance for rise or fall in cost of labour and materials as from May 9 last.

EYE.—For 16 cottages, including drainage, at Victoria Hill, Eye, for the town council:—

Rice, Brothers, Norwich (accepted) £11,090 15 6

FAVERSHAM.—For electricity works, for the town council:—

Johnson and Son £1,544 0 0

Whiting Brothers (accepted) 1,312 10 0

GUILDFORD.—For war memorial in the Castle grounds:—

Pinker, E. (accepted) £583 10 0

RICHMOND, YORKS.—For excavating work, etc., in connection with Richmond war memorial. (The memorial is being executed by Mr. J. Armitage, 61, Eagle Street, London, at a cost of £590):—

Wade, G. R., and Son, Wellington Place, Richmond, Yorks, £390 10s.

ROTHWELL.—For houses (various types), for the rural district council. Tenders recommended for acceptance:—

Rothwell Haigh (96 houses), Dunhill Brothers, £62,271 8s.; Lofthouse (48), Stanley District Builders' Association, £32,793 5s. 6d.; Thorpe (48), Shilling, £32,676 8s.; Carlton (24), Arundel, £16,456 12s.; Carrton (24), Hanks, T., £16,411 10s.

SIDMOUTH.—For 56 workmen's dwellings, including draining and fencing, on Great Royal site, Sidmouth, for the urban district council:—

Conway, Weymouth (accepted) £45,835 0 0

WILLINGTON.—For houses at Willington, for the urban district council:—

Blackett, Darlington, for 20 Type A houses at £728 per house and 58 Type B at £825 per house, accepted subject to conditions.

LIST OF TENDERS OPEN.

COMPETITIONS.

July 15.—For Designs for the proposed Council Chamber in Calcutta, for the Legislative Council of Bengal. Three premiums of £500, £250 and £100. Assessor, Mr. Henry Crouch, F.R.I.B.A., Consulting Architect to the Government of Bengal. Architect placed first to be employed to carry out the work.

Aug. 13.—For Designs for a War Memorial at Wolverhampton. Premiums of 150 guineas, 100 guineas, and 50 guineas to authors of Designs placed first, second, and third by Mr. John W. Simpson, P.R.I.B.A., the Assessor.

Oct. 3.—For Designs for the new buildings of Qasr el 'Ani Hospital and School at Cairo, for the Egyptian Government. Two stages, the first preliminary, open to all architects; the second and final, restricted to twelve architects, six to be selected from the most meritorious in the preliminary competition and six others nominated by H.M. Government, with the advice of the Assessor, Mr. John W. Simpson, P.R.I.B.A., Memb. Corr. de l'Institut de France, whose judgment will be final and binding.

Oct. 12.—For Designs for a War Memorial, for the Birmingham War Memorial Committee. Premiums offered of £500, £300, and £200 respectively for the first, second, and third chosen designs. Assessor, Sir Reginald Blomfield, Litt.D., R.A.

BUILDINGS.

June 27.—For 50 houses at Bittacy Hill, Mill Hill, N.W.7.—For the Hendon Urban District Council.—Mr. A. O. Knight, A.M.I.C.E., engineer and surveyor, Town Hall, Hendon, N.W.4.

June 27.—For erection and completion of 68 houses.—For the Holsworthy Rural District Council.—Mr. M. V. Treleaven, M.S.A., F.I.A., Bude, Cornwall, architect.—Tenders to C. Kinsman, clerk, Station Road, Holsworthy.

June 27.—For 380 houses on a site situate in King's Road, Wombwell.—For the Wombwell Urban District Council, in accordance with drawings, specifications, and bills of quantities prepared by Mr. D. H. Roberts, M.S.A., architect, Park Street, Wombwell.—Tender to P. M. Walker, clerk, Town Hall, Wombwell.

June 27.—For 195 houses, Alton Street, Crewe.—For the corporation.—Mr. L. St. G. Wilkinson, M.Sc., A.M.I.C.E., borough engineer and surveyor, Municipal Buildings, Crewe.—Tenders to the Town Clerk, Municipal Buildings, Crewe.

June 27.—For 100 houses.—For the Swindon Corporation.—Tenders to Mr. R. Hilton, town clerk, Town Hall, Swindon.

June 27.—For a secondary school at Barking.—For the Education Committee of the Essex County Council.—Mr. J. Stuart, F.R.I.B.A.,

county architect, Old Court, Springfield, Chelmsford.—Tenders to the architect.

June 29.—For 86 houses at Ashton-under-Lyne.—For the Housing Committee.—W. H. George and Son, architects, 7, Warrington Street, Ashton-under-Lyne.—Tenders to F. W. Bromley, town clerk, Ashton-under-Lyne.

June 30.—For 300 houses at Marton Grove garden colony.—For the Middlesbrough Corporation.—Mr. S. E. Burgess, M.I.C.E., borough engineer and surveyor, Municipal Buildings, Middlesbrough.—Tenders to P. Kitchen, town clerk, Municipal Buildings, Middlesbrough.

June 30.—For extensions to Victoria Central Hospital, Wallasey, Cheshire.—Messrs. Briggs and Thornley, Royal Liver Buildings, Liverpool, architects.

June 30.—For alterations to Pilton Hospital, Edinburgh.—For H.M. Works Commissioners.—Drawings, specifications, etc., may be seen at H.M. Office of Works, 3, Parliament Square, Edinburgh.—Tenders to the Secretary, H.M. Office of Works, Storey's Gate, Westminster, S.W.1.

July 1.—For 149 houses at Millhouses.—For the Darfield Urban District Council.—Architect, Mr. H. Smith, Wentworth, near Rotherham.—Tenders to W. Robinson, clerk, 17, Regent Street, Barnsley.

July 1.—For 52 maisonettes on Latchmere Estate and 4 in Savona Street, Battersea.—For the borough council.—Tenders to E. Austin, town clerk, Town Hall, Battersea, S.W.11.

July 2.—For 100 brick houses, Lord Lane, Failsworth.—For the urban district council.—Architect, Mr. G. H. Fletcher, L.R.I.B.A., 26, Corporation Street, Manchester.—Tenders to H. C. Broome, clerk, Town Hall, Failsworth.

July 3.—For 25 houses, Moor Road site, Millom.—For the urban district council.—Mr. H. T. Fowler, A.R.I.B.A., 6, Cornwalls Street, Barrow, architect.—Tenders to W. T. Lawrence, clerk, Council Offices, Millom, Cumberland.

July 4.—For 28 houses on the Southbroom site.—For the Devizes Town Council.—Architects, Harvey and Wicks, 5, Bennett's Hill, Birmingham.—Tenders to J. T. Jackson, town clerk, Devizes.

July 4.—For 100 brick-built houses.—For the Rhymney Urban District Council.—Mr. A. F. Webb, M.S.A., architect.—Tenders to W. H. Trump, clerk, 57, High Street, Rhymney.

July 4.—For erection of new sorting office at Oldham.—For H.M. Works Commissioners.—Drawings, specification, etc., may be seen on application to the district surveyor, H.M. Office of Works, New Bridge Street, Manchester.—Tenders to the Secretary, H.M. Office of Works, King Charles Street, Westminster, S.W.1.

July 4.—For 54 houses on Mansfield Road site, Alfreton, and 20 houses at Swanwick.—For the Alfreton Urban District Council.—Mr. Bailey Deeping, 12, Gluman Gate, Chesterfield, architect.—Tenders to H. R. Cleaver, clerk, Council Offices, Alfreton.

July 6.—For 90 houses on Wilthorpe site, Huddersfield Road, Barnsley.—Mr. C. F. Moxon, 3, Regent Street South, Barnsley, architect.—Tenders to A. D. Mason, town clerk, Barnsley.

July 8.—For alterations and additions to Oldmill Hospital, Aberdeen.—For H.M. Works Commissioners.—Bills of quantities, etc., may be obtained from the architect, H.M. Office of Works, 3, Parliament Square, Edinburgh.—Tenders to the Secretary, H.M. Office of Works, Storey's Gate, Westminster, S.W.1.

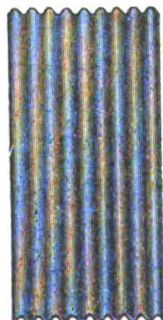
July 12.—For erection of new telephone exchange at Gateshead.—For H.M. Works Commissioners.—Drawing, specification, etc., may be seen at H.M. Office of Works, 63, Westgate Road, Newcastle-on-Tyne.—Tenders to the Secretary, H.M. Office of Works, King Charles Street, Westminster, S.W.1.

July 14.—For 68 brick and concrete houses (various types, in blocks of four) on South Farm Road site, Worthing.—For the corporation.—Tenders to J. K. Allerton, town clerk, Municipal Offices, Worthing.

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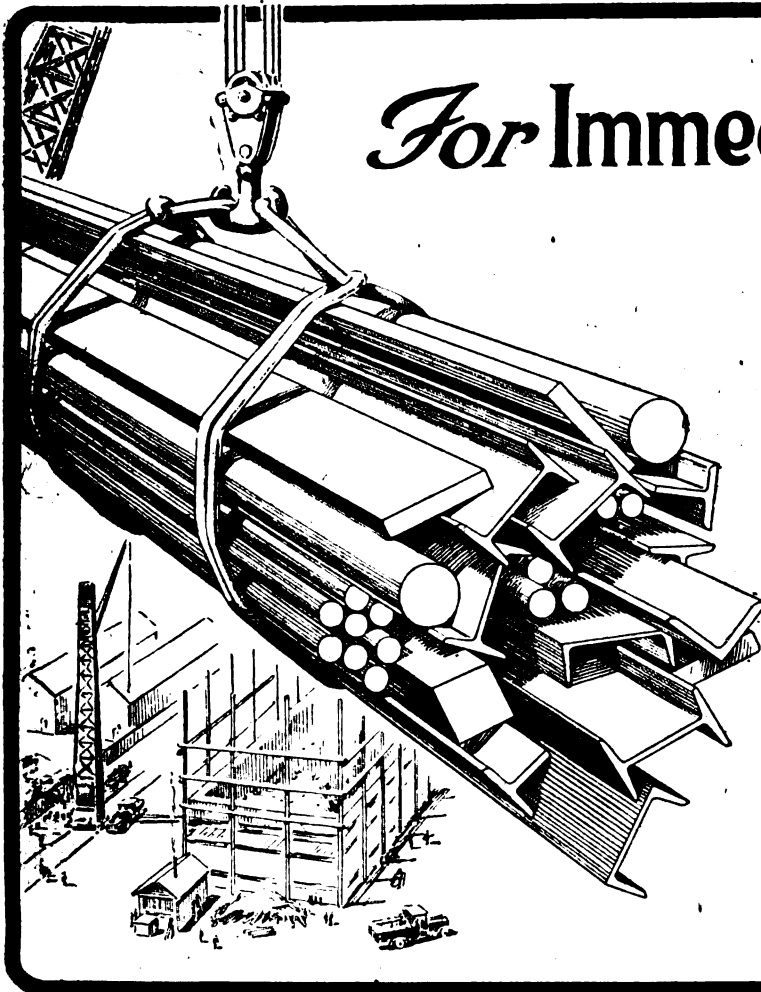
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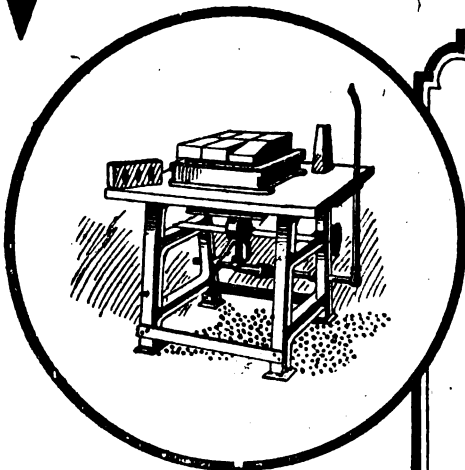


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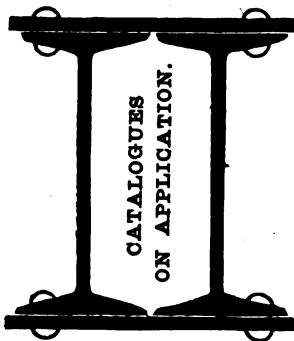
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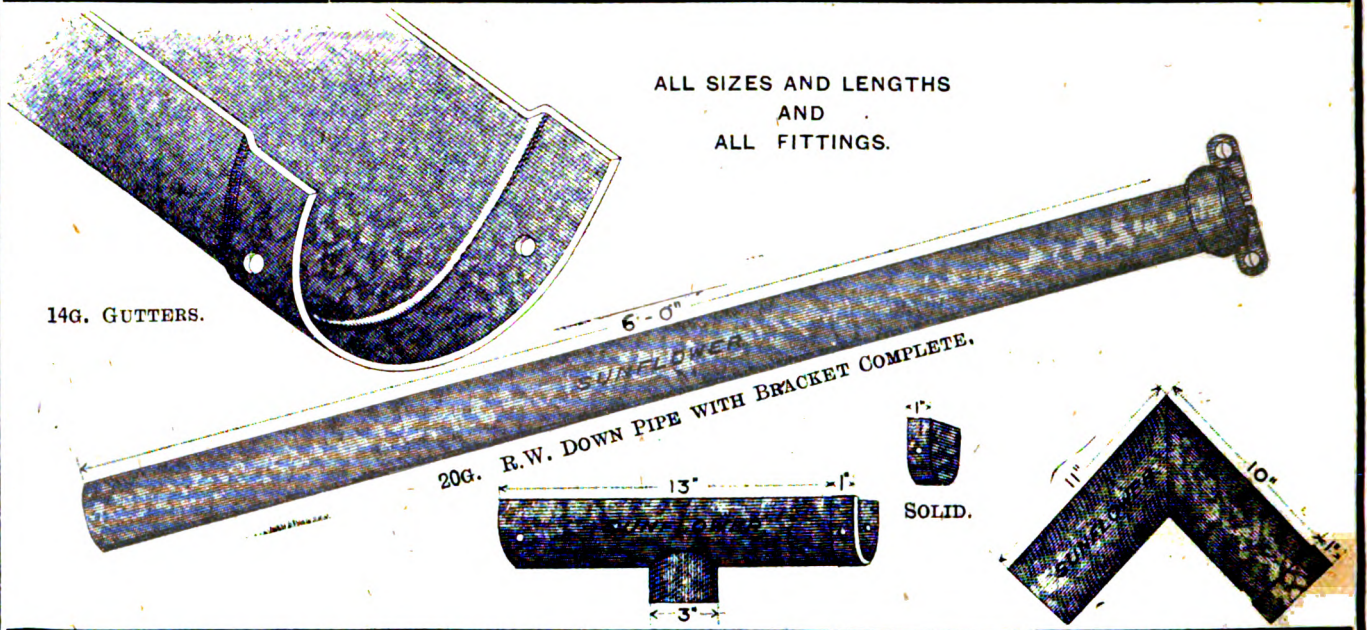
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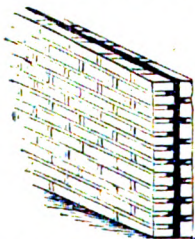
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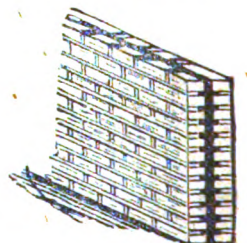
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Table with columns for 'GOOD BUILDING RED.' and 'PLANNED BOARDS.' listing various wood types and their prices in £ s. d.

PLANNED BOARDS.

Table listing planned boards with dimensions and prices.

T. AND G. OR P. E. FIG.

Table listing T. and G. or P. E. Fig. with dimensions and prices.

MATCHINGS (BEST).

Table listing matchings with dimensions and prices.

BATTENS.

Table listing battens with dimensions and prices.

SAWN LATHS (BUNDLES).

Table listing sawn laths with dimensions and prices.

METALS.

Table listing various metals (Lead, Copper, Tin, Zinc, etc.) with prices per ton.

SOLDER.

Table listing different types of solder with prices.

BRICKS.

Table listing various types of bricks with prices.

WHITE AND COLOURED GLAZED BRICKS.

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Table listing sand and ballast types and prices.

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Table listing cement and lime types and prices.

STONE.

Table listing various types of stone with prices.

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Table listing slates with prices.

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Table listing various types of oils with prices.

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Table listing glass in cases with prices.

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Table listing glass in crates with prices.

* As supplies are available. † Supplies not yet available.

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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.

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NOTICE.

A few bound volumes of Vols. XXXIX., XLII., XLVI., XLIX., LIII., LXI., LXII., LXIV., LXV., LXVI., LXVII., LXVIII., LXIX., LXXI., LXXII., LXXIII., LXXIV., LXXV., LXXVI., LXXVII., LXXIX., LXXX., LXXXI., LXXXII., LXXXIII., LXXXIV., LXXXV., LXXXVI., LXXXVII., LXXXVIII., LXXXIX., XC., XCI., XCII., XCIII., XCIV., XCV., XCVI., XCVII., XCVIII., XCIX., C., CI., CII., CIII., CIV., CV., CVI., CVII., CVIII., CIX., CX., CXI., CXII., CXIII., CXIV., CXVI., CXVII., CXVIII., and CXIX. may still be obtained, 12s. each, post free 13s.; all other bound volumes are out of print. Handsome Cloth Cases for binding the BUILDING NEWS, price 4s., post free 4s. 6d., can be obtained from any Newsagent, or from the Publisher, Eppingham House, 1, Arundel Street, Strand, W.C.2.

*Our Direct Subscription Agents for Japan, The Maruzen Co., Ltd., 11-16, Nishinashi Tori Sancho, Tokyo, will receive subscriptions at £1 10s. per annum on our account. Copies of the paper will be sent by us direct to the subscriber's address.

RECEIVED.—K. A. A.—C. S. and E., Ltd.—M. and Co.—S. U. D. C.—W. U. D. C.

A. P.—No. INVESTOR.—We should wait awhile.

Mr. E. J. Silcock, M.Inst.C.E., F.S.I., F.G.S., late of Sanctuary House, 33, Tothill Street, Westminster, and 10, Park Row, Leeds, has removed his London address to No. 17, Victoria Street, S.W.1.

Offers from Mr. Andrew D. Taylor, F.R.I.B.A., to present two prizes of £5 each for the next two years for award in the Bartlett School of Architects have been accepted with thanks by the University of London.

Birmingham Housing Committee, at its meeting on Tuesday, decided, subject to approval by the Minister of Health, to accept tenders for the erection of 183 houses on authorised sites. It was stated there was a distinct drop in prices. Nevertheless it was thought that the Ministry of Health would look askance at the tenders. It was expected there would be a further drop in prices in the near future.

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T. LOUIS COLLARD,
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Bridge, near Canterbury,
20th June, 1921.

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57, High Street, Rhymney, Mon.,
June, 1921.

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VOL. CXX.—No. 3444.

FRIDAY, JANUARY 7, 1921.

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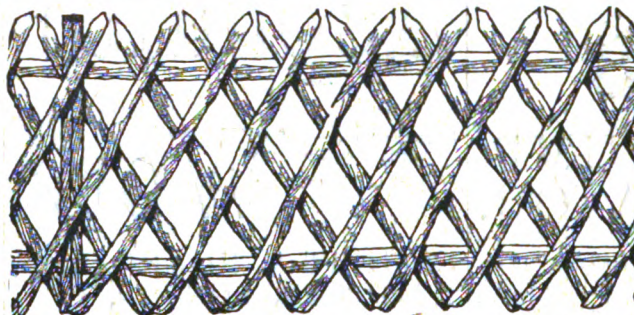
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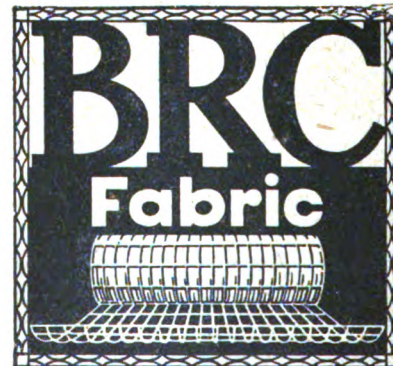
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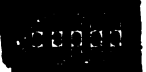
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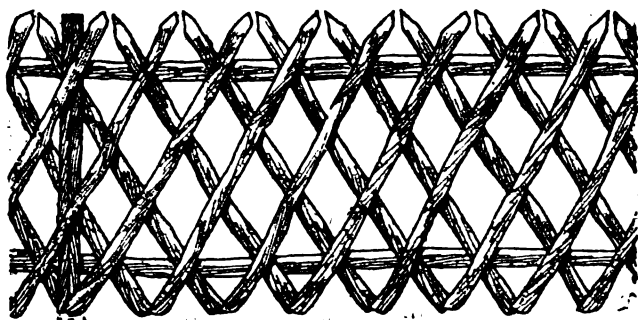
 
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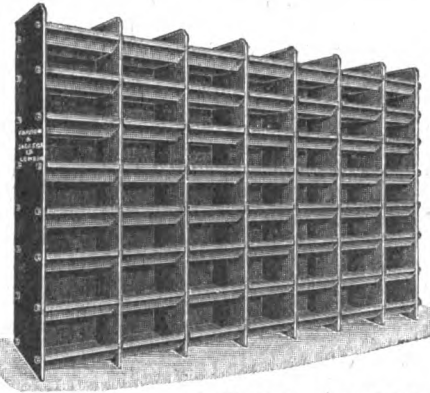
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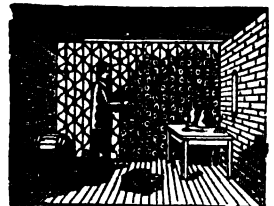
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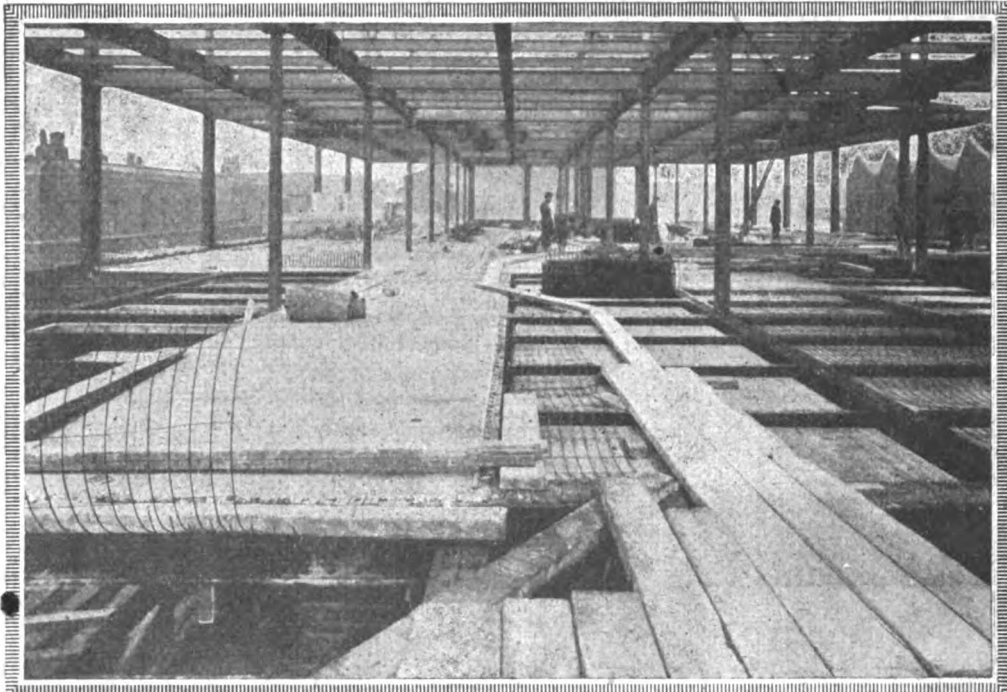
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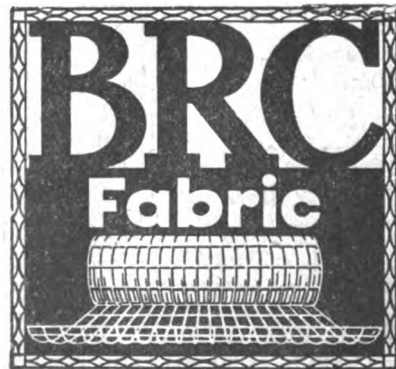
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