CAMERA CRAFT

A Photographic Monthly

VOLUME XV

JANUARY TO DECEMBER, 1908
INCLUSIVE

Published by
FAYETTE J. CLUTE
713-715 Call Building.
San Francisco, California.

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XV No. 1 JANUARY, 1908 Price, 10 Cen

Camera Craft

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WESTERN CAMERA NOTES

San Francisco, California

PORTRAIT OF MISS H.
By DR. A. WILHELMJ

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, JANUARY, 1908. No. 1

Modern Portraiture

By Dr. A. Wilhelmj

With Illustrations by the Author

We live in a time of great changes. New things are coming to light, the old and customary is no longer so easily accepted, and for a reason—we have become more sceptical than heretofore. Before we accept anything as a fact, we must first satisfy ourselves that it fits into our present conditions. This desire for honesty, this demand for truth, has also taken possession of the arts. Since Richard Wagner, sixty years ago, produced "The Flying Dutchman," and through it turned musical progress in a direction which has made its present high position possible, all arts have had a Renaissance, everything is more true and natural. This progress of the arts made possible the improvement along artistic lines of things with which art had had little to do, as witnessed in the added beauty given to our modern furnishings, even the playthings of our children. To-day we find everywhere simplicity; we find graceful, natural lines in place of the impossible whirligigs; we enjoy the predominance of quiet and harmonious coloring. The furnishing of our modern houses is toned to the nature of the occupant, showing his personality. It is for this reason astonishing that a people so modernized in other respects should not demand more of photography, and art with one of the highest missions to fulfil, the protrayal of the personality of the people themselves.

Our present day portrait photography is based upon an entirely erroneous conception, or otherwise the expressionless dolls' heads which are supposed to picture human beings, would not be tolerated upon the walls of our salons. And this in spite of the fact that an English painter, David O. Hill, proved, some sixty years ago, that it was possible for photography to produce highly artistic results. His pictures which are still in existence, leaving aside their faulty and imperfect technique, can be favorably compared with the best that is produced to-day. Why is it that during this period in which the other arts have come to such high perfection, portrait photography has failed to advance except at the hands of a few high-minded amateurs?

It will be interesting to review this decadence which seemed to have gone hand in hand with the increased perfection in photographic technique. Starting with the Daguerreotype, the first practical and useful method of photographic portraiture, we find that it gave a portrayal that was natural,

PORTRAIT OF MRS. A.

true in line and sincere in its results; the retoucher could not alter the image. Its technique had one drawback, the pictures could not be manifolded. To overcome this, recourse was had to the paper negative, devised about that time. This, however, failed to give the sharp detail of the Daguerreotype, on account of its rough and uneven surface, and the resultant prints were unpopular, although this same lack of sharpness makes Hill's pictures so satisfying to-day. A substitute was demanded and found in the collodion plate. This last could be used only shortly after being made, and it required a skilled workman to prepare and use it. It had another drawback, its tendency to give "hard" negatives, the difference between light and shade appearing much stronger in the picture than in nature. The photographer was forced to use a very soft light to secure weak shadows. To still further soften the shadows, varnish was used on the transparent parts of the glass plate carrying the collodion, and small holes in the easily-damaged film were filled with India ink or pencil. "Retouching" was thus originated, and with the right idea—to remove faults due to poor technique. There is little to be said concerning the "posing" of that time. The subject, as these old pictures show, stands or sits fairly natural, often supported by a ballustrade or railing; but these accessories were at least real.

The disadvantages of the collodion plate created a demand for something better; for a plate that could be carried about and that was always ready for use. In the later seventies this demand was supplied by the introduction of the modern gelatine or "dry plate," as it was called. This new power, the dry plate, is responsible for the present day extensive use of photography, but it is also blamable for much of the decadence in photographic portraiture. Over night, so to say, photographic studios sprang up, where one could have his portrait taken for a modest sum. The photographer felt that he must give his work a personal touch; "art," as the photographic mechanic understood it, entered his studio. He tried to secure pleasing poses and built up impossible structures in which no one could live, feeling comfortable. Painted backgrounds were introduced.

Every photographer of the old school possessed at least half a dozen, and at a moment's notice one could have a salon, a garden, a balcony; anything to imply that the sitter really lived in such uncomfortable, painted, paper grandeur. The dry plate gave a much softer effect, and for that reason there was no necessity of using the soft lighting formerly employed. Despite this, we find, even to-day, that ninety-five per cent of the photographic lighting effects can nowhere else be found in the world, except in

ALEXANDER AND LILY PETSCHNIKOFF

the studio of the photographer. Another element of the dry plate's "fatal facility" lies in the case with which its image can be retouched. We have retouchers by the hundreds who can so improve(?) the photographic image that the resultant portrait is almost unrecognizable. One has only to study the pictures turned out by the average photographer. All lines are smoothed out; lines that have been engraved in the face through a long life, lines that denote character and produce likeness; these the thoughtless retoucher removes in a few minutes. Their beauty and their worth do not appeal to his mechanical mind.

Taking up the progress of photographic technique, from the simple, natural, Daguerreotype, we come to an era of pretense. Backgrounds are painted, poses are theatrical, lighting is unnatural, and all the needed character is removed from the face. A halt must be called. Photography, portrait photography, is following a blind lane; there is no going ahead, only turning back—back to the natural and the simple we must return. It may be argued that the public approve of the work turned out by the photographer along these lines, and that its taste will have to be humored. The public, the majority, never did anything for progress, except that it has sometimes failed to oppose. Progress has always been the work of a few, who, through their power and personality, put their imprint upon their time and forced the lazy-minded masses to follow. He who says that he cannot breast the stream, while admitting that his energies are misdirected and against his own artistic conscience, had better take up another work. He is only in the way of advancement; he only hinders the reaching of the heights by those who make for progress. "To the stake with him."

What we demand, are pictures that carry the impress of truth; first truth and then art. There has been so much written about art that truth has been nearly overlooked. Truth is the first consideration, and in ignoring that fact a great many sins are committed by even prominent photographers. Some of them seem to think that it is a question of how the artist "sees" his subject, rather than how the subject is in reality. A picture made under such consideration is not a portrait; it is a representation of a human being into which the photographer has put his own personality and used the subject only as a model.

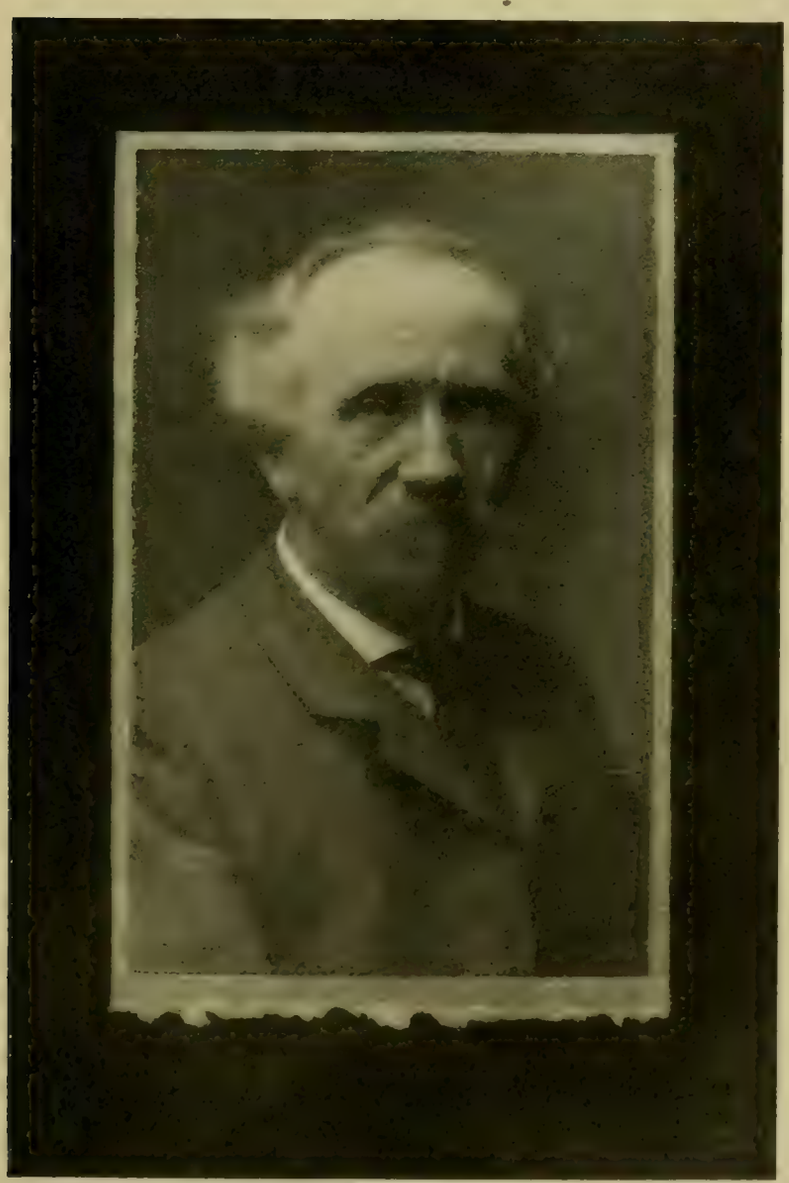
I wrote in honor of Eugen d'Albert, the greatest master of the piano that modern times have produced ("Argonaut," March 22nd, 1905): "The graphic element is prominent with him; it is never an impressionistic plain-air, but always an artist's proof. His masterliness lies in that he plays not as he wishes to, but as the composer meant it to be played. It is the curse of almost all pianists of our day that they render only their own conceptions, and do not know how tedious and painful it is for one truly cultured to listen to flashy chatter and insipid technique. In the interpretation of Beethoven, there are no possibilities for differences of opinion. The problem is Beethoven's; this is to be solved. The world has very little use for the grotesque creations of petty minds full of dry, soulless, finger-gymnastics." What I then said about Beethoven, holding good of every other composer, holds as well in photography, where it is alike essential to portray the subject in all his peculiarities.

Our times are characterized by an equalizing influence; strong personalities are less in evidence, while the average type is becoming more uniform. The photographer should therefore try the harder to emphasize the characteristics of each individual subject that comes before him. Herein lies the difference between modern and old schools of portrait photography; not in the use of dark backgrounds and fuzzy outlines.

We have arrived at the main point of this paper—the importance of emphasizing character in a portrait. That this is difficult, far more so

than the artistic posing of a model, everyone will admit. Recall your own feelings when entering a photographic studio and again when the photographer says: "Look pleasant, please." Even if that instrument of torture, the head rest, is not used, all personality and all character vanished from your face long before the actual picture had been taken.

The modern portrait photographer, the one who is modern in the conception of his art, came up, as a rule, from the ranks of the amateur. He has the new ideas because he is free from the bonds of old traditions. It was he who first taught the public that amateur photography, even if technically faulty, portrayed better than the customary studio work. It was he who proved that retouching is not necessary or even desirable, that a portrait showing the peculiarities of the subject was more desirable than one with a smooth, wax-like effect. How many of our friends will affirm that their best portrait is a small amateur production? Is not this a solution of the question as to what constitutes real portraiture? The amateur photographer was probably an acquaintance, in whose presence he felt no constraint; the surroundings were such that he was entirely at ease, and the exposure was made at a moment when the expression was thoroughly characteristic. Such conditions are favorable to good portraiture. Away with the equipments of the ordinary studio, for they only hinder in our efforts to portray personality. Away with the stenciled whirligig, the impossible chairs, unnatural landscapes (a landscape by studio light!); away with the reflector, the head rest and the like. If we want to portray a human being, we must first make that human being feel at ease. This done, we may hope to record his personality.

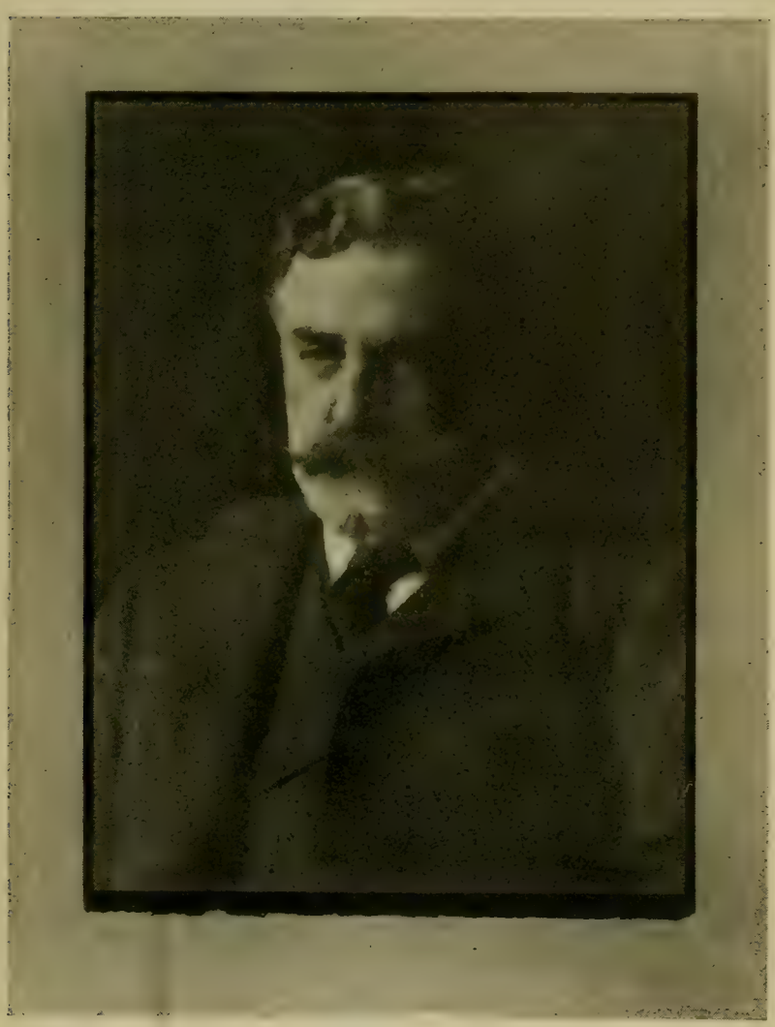


PORTRAIT OF PROF. ALVIN SCHROEDER

The studio of the portrait photographer should be changed completely. It should be nothing else than a very comfortable and essentially simple living room, quietly furnished and differing from any other such room only in this, that it may have available a greater amount of light. Our

best photographers have accepted this condition, but their number is as yet very small. Following this idea still further, we are forced to the conclusion that the subject's most natural and satisfying environment is his own home. There he moves easily and without self-consciousness. Striving for the best in portraiture, we must photograph our subjects in their own homes. I am thoroughly convinced that in time this will become the practice, and a studio will be employed only when a sitting at home is not possible.

Home portraiture is nothing new. Books have been written telling how the light should be used, how the subject be placed and every detail be observed. It is not my intention to add to this store of information. I mention it because it seems strange to me that the professional photographer has not taken up the work along these lines. Perhaps it is that he prefers his own studio because he "knows his light." This leads me to another point—mannerism. One prefers this kind of lighting, the next man another. Still another photographer affects a certain type of background, and so on through the list, marking the monotonous way of the specialist, the lazy-minded craftsman whose desire is to make money and make it as rapidly as possible. Should it be our ambition to possess an automobile or may we have a higher ideal? Can we not experience the satisfaction of doing something worthy, and doing it with a higher incentive, trusting that the worldly reward — the money—will come of itself? Can we not employ our skill in the improvement of our work, and photograph our patrons in their own homes and amidst congenial surroundings?



PORTRAIT OF P. N. LILIENTHAL

While the field is full of difficulties, the possibilities are inexhaustible and great if one will but take the opportunity and avoid working according to rule. The greatest possibilities lie in the variety of lighting that will be encountered. Do not try to imitate the lighting secured in the studio. Use the light as it is found, for it will give the lighting that is natural. Do not feel that the oft-recommended north light is essential. The painter demands a north light because that is the one in which colors

change the least. The photographer practically may use any light. The study of lighting should not be learned from books, but from the faces of those around us. It is only in this way that light, as it influences the results in photographic portraiture, can be studied to advantage. Doing this, we find that pleasing effects are so limitless that it condemns the photographer who produces all his portraits with the same lighting. The home photographer escapes this danger. He is not even bound to a room; he may use a balcony, a porch, the garden; in fact, any place that he may select as congenial to his subject. As with any picture, care should be taken that superfluous objects are not included. The background should be quiet, but this is easy to manage when the subject is not too close upon it. In working out-doors, one does not need to fear the sun; pictures can be taken even against the light. There are no rules in art that cannot be broken if for a reason and knowingly.

As we have an advantage in this more natural lighting, so we have added opportunities in the posing of the subjects. Are there still any educated people who do not abhor the usual "Look pleasant, please"? Do they enjoy being forced into a "pose" that is unnatural and untrue? Has not every one his own pose and movements? Why not use these that are characteristic and dispense with the work of "posing" the subject, confining our efforts to simply giving him a general idea of how he will best fit into the surroundings, not touching him except to correct some wrong folds in the garments. Pose and expression will have to be secured in another way, and herein lies the high art of the modern photographer. Formerly the photographer needed only practice in the handling of his instruments and a knowledge of the right exposure to secure a "brilliant" negative. The expression mattered but little; just let the subject look in a certain direction, ask him to "Look pleasant," "Close the mouth a little more," then take the cap off the lens with an affected movement and replace after counting the seconds very loud at that—and a "Thank you." It was thoroughly mechanical and well within the possibilities of anyone not entirely unhandy.

The modern portrait photographer requires an entirely different equipment. He must have personality; he must be a whole man, not one of a dozen. He must be all things to all men, in order that he may secure that essential, the confidence of his subject. This will also require patience, and that in turn is another requisite of success. He must overcome the desire of his patrons to have their pictures taken in the shortest possible time. He must have an opportunity of studying their personalities. The painter is more fortunate, as he has, during the long sittings, every opportunity of studying his model, of looking into the soul as it were. Often the photographer is expected to portray a subject that he has never met before, and yet secure a characteristic portrait. It is here that his judgment of humanity will come into play, allow him to lead the sitter spiritually to other spheres, and make him forget that he is before a camera for the purpose of securing a portrait. When this is done the expression will be characteristic, the timidity will have vanished and the awkward pose changed to a natural one. To do this is sometimes easy, often quite difficult. Altogether, it is a mission

for any man that is inwardly free and whose ambition lies in the mastery of difficulties.

The results so obtained should not be spoiled by retouching; what little is done being only to correct defects due to the mechanical part of the work. This means at most to only soften the lines that come a little too hard on account of the non-actinic color of the shadows. One may also take away unnecessary things which detract from the effect as a whole. Here the mission of retouching should end. Lines of the face show character, and should not be removed. They will certainly be missed and their absence will destroy the likeness and the value of the portrait.

A few more words before I close. Whoever aspires to become an expert portrait photographer should not forget as long as he is in the field, that he must continue to learn. This is the ambition that must dominate the man who follows so difficult a calling; there are new difficulties constantly making their appearance, and they must be conquered. New ways must be found to secure the desired influence with the model, to prompt the desired expression, often one that is quite rare. Pictures produced by the employment of such skill will never grow old because they portray personality. To achieve success along these lines is an ambition worthy of the most earnest endeavor, for many are called while few are chosen.

THE OLD HOMESTEAD By DR. A. WILHELMJ

Flat Tank Development

By Samuel Purnell

This may also be called tank development without a tank. The development of exposed dry plates by the tank or stand method has become increasingly popular, and deservedly so, giving as it does a negative much superior to the old and quick method of developing in a tray for four or five minutes only. It is also a saving of time, labor and materials where many plates require attention. By the tank process there is comfort, ease and certainty; there are practically no failures; there are cleaner negatives, finer grain, more details, less contrast, no fogging, no blocked high lights, very much less halation, and always the best possible results produced from the exposures. The leading requisite is full and correct exposure of the plate; that is, full and fairly correct within its latitude, for absolutely correct exposure cannot be expected. Juggling with a developer during development is nearly useless, as the exposure has unalterably fixed the gradations.

In ordinary tank development a water-tight tank or box of wood or metal is provided with vertical grooved sides in which a dozen or more variously exposed plates are placed on edge; a standard developer at a standard temperature is poured into the box till the plates are covered; a light-tight cover is placed over it, and the whole left to work for a standard time; then, with or without examination of the plates before a red light, they are put in the fixing bath. This method gives, generally speaking, very fine results for all plates, whether over or under or correctly exposed. The negatives will present quite different appearances as to density and intensity, but the contrasts and gradations will be correct, according to the exposures, and each will produce the best possible print.

Ordinary tank development, as briefly described, has its drawbacks. It is expensive and troublesome and time-wasting where one has but a few plates to develop; the solution has to be stirred up several times during development, or the plates taken out and reversed, to prevent stratification in case the time is prolonged more than about twenty minutes; owing to the movement of the developer the contrasts are apt to be made greater than agreeable and less detail secured than desired. The plan I am about to describe avoids all objections, produces the finest possible negatives and the best results from any kind of exposures, on any kind of plates, and is one I have used for some time with satisfaction. It takes some time, but not more time than any other form of tank work.

Flat tank development is done in an ordinary tray, and all that is required is a fairly exposed plate, and a standard developer used at a standard temperature for a standard time. Suppose there are four 4x5 plates to be developed. Take an 8x10 tray, and provide a light-tight cover for it of any substance, such as a larger tray or a paper box. Next prepare the standard developer, which may be any of the substances usually used for tank work, such as Edinol, Glycin, Ortol, Rodinal and the like,

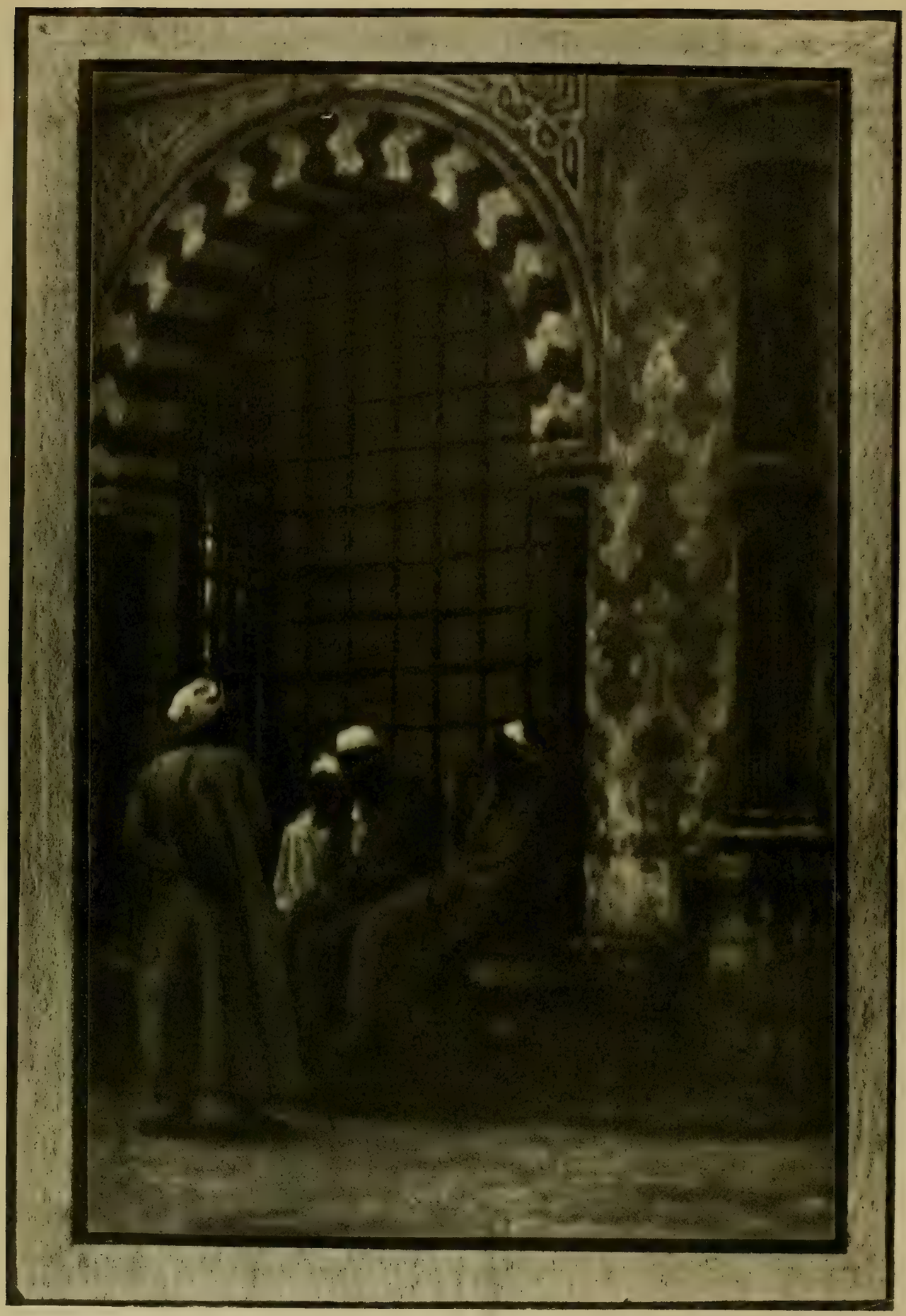
and one is as good as another, but as I have commonly and successfully used Ortol for this purpose, I shall here consider its use only. Get from the dealer a set of the Ortol tubes, as they can be relied on, and make them up as directed into two solutions, dissolving them separately, each in sixteen ounces of water. Take one-quarter fluid ounce of each of the A and B solutions, making half an ounce of both, and add sixteen times as much water, that is, add eight ounces of water. By the use of warm or cold water, as needed, bring this to a temperature of sixty-five degrees, as tested by a Fahrenheit thermometer. Bring the tray also to the same temperature, and try to have the room at about the same. Next place the tray on a table that is perfectly level, and see that the tray lies on it level. This leveling is very important for best results, as otherwise the negative may become streaked by flowing bromide of soda, contrasts may be increased, and the object of flat and still development be defeated. We want to keep this formed bromide still, so it will restrain development where the light has acted most strongly, until the shadows have full opportunity for development.

In the dark room, or in any room that can be made dark (for no red lamp is needed as soon as skill is obtained), remove the plates from the holders, place them in the leveled tray, film side up, flow the developer over them, gently swab them back and forth a few times with absorbent cotton, to sweep off air bubbles, put on the cover, then go away and leave them alone for one hour. During this hour do not disturb them in any way, do not rock them, nor move them, nor look at them. Go away; go anywhere. At the end of one hour, in darkness, and without examining the plates before a red lamp, remove them all to a plain hypo fixing bath previously prepared, and after thorough fixing, wash as usual. This is all there is to it, and by it anybody can do just as perfect development as anybody else, as but little skill and experience are required. Except when learning or experimenting, it is useless to examine the developed plates before a red lamp to judge the gradations and intensities, for they have been determined once for all by the exposures, and the eye is but a poor judge of them in a red light. This duration of one hour gives me the kind of a negative I like, which is a strong one, but it may not be the kind you like or require. In this case all you need do is to develop for a longer or a shorter time; shorter for a thin negative, longer for an intense negative. Do not change the developer, nor the temperature; change only the time, and you will get what you want. The details are all brought out fully before much contrast is secured.

Any one trying this method of development will be both surprised and delighted with the excellence of the results. The negatives are the most perfect and useful that it is possible to produce from the given exposures, and produce the best results in the prints, whether for landscapes, interiors or portraits. It is as easy to work orthochromatic or panchromatic plates as the ordinary kind, as no red light is required at any time. If a severely over-exposed plate has developed too dense, that is no objection, the gradations will still be correct; it only requires a longer

time in printing; it can be reduced, if preferred. Where the contrasts of light and shade are violent, as in interiors where open windows are in the view, the negatives will usually develop softly, without extreme contrast and without objectionable halation. Due to the quiet solution and the level plate, the development of the high lights can only proceed till the developer is exhausted in that vicinity and must then cease, but it will be sufficient, and in the meantime the shadows are slowly gaining detail. As large trays, or as many of them, may be used as needed to develop many plates. If a more contrasty negative is desired than this plan naturally gives, the tray may be rocked occasionally, but then the results will be only those of ordinary vertical tank work. Development may be conducted at any temperature, from fifty to seventy-five degrees, but its duration must be increased or lessened accordingly, as may be determined by trial. It is usually not desirable to prolong any development more than two hours, lest fog may appear. One hour with the solution named is ample to get out all details and sufficient contrast. Longer development with a weaker solution would be used only for personal convenience. Do not add bromide of potash nor anything else to the Ortol solution; if you do, you will have to change the duration. In tank work, develop to considerable density, as negatives developed in very dilute solutions lose much in the fixing bath. Use enough developer to cover the plates in the tray to a depth of about one-quarter inch. Keep the hands out of these very weak solutions as much as possible, as the finger nails may become stained. A double-coated plate should be developed a few minutes longer than a single-coated one, and fixed and washed for double the time.

PRINCE AND THE PAUPER — By BELLE JOHNSON



"IDLERS"
By C. CHRISTIANSON
First Prize, Genre

Our "W. C. N." Monthly Competitions

By C. Frederick Potter, Jr.

FAITH OF THE PROSPECTOR By D. H. BROOKINS
Second Prize, Genre

As stated in the December issue of "Western Camera Notes," I had found that these print competitions had to be conducted in some different manner to secure the support necessary to their success. The plan which had been originated by the editor of "Camera Craft" appeals to me as one that should bring forth hearty response. Each contestant whose picture is worthy of consideration as a possible prize winner is assured a rating and an award that will not only be instructive, but well worth the effort of sending a print for consideration by the judges. Contestants are absolved from any mercenary motives, and in allowing their own pictures to be awarded as prizes they are encouraging and inspiring others as they themselves are favored.

Herewith are reproduced the prize-winning pictures in the July competition, which was unavoidably crowded out of our December issue by the report of the Fourth American Salon. With them are the criticisms of Mr. Marshall, adding greatly to the value of the pictures themselves as lessons in pictorial photography.

A Critical Review

By A. G. Marshall

While the entries for this contest are by no means large in number, the pictures submitted are of more than usual variety, and, on account of the human interest, exceptionally satisfying as examples of the capabilities of the camera in skillful hands. With the exception of the one by Mr. Christianson, they are all, as far as background and subject are concerned, well within the possibility of the most isolated worker; thus refuting entirely the all too common belief that good pictures can be obtained only by those workers who are fortunate in the matter of subjects and accessories.

KENTUCKY THOROUGHBREDS By A. F. FRANCE
Fourth Prize, Genre

Faith of the Prospector

By D. H. Brookins

A strikingly virile picture, simply and finely constructed. The forceful movement of line perfectly expresses the dignity of the human engine in powerful, rhythmic action. Placing the sky well up towards the top helps to impress the idea of the man's interest in the solid earth, further emphasis being given by the firm thrust of his feet towards the soil, as well as by his energetic handling of the windlass. In type of subject, and in the way of seeing it, something of Millet's sympathetic attitude towards all muscular toilers is suggested.

"Idlers"

By C. Christianson

A praiseworthy effort to strike a new note in a well-worn theme, the success of which may be admitted in the achievement of quiet—actual repose—of mass and line, with materials which ordinarily irritate with bizarre unrestfulness, even when laziness reigns supreme in the picture motive. The horizontal grouping of the white turbans symmetrically under the arch has chiefly to do with this effect of repose. This picture is distinguished by fine tonality.

Madam Butterfly

By W. and G. Parrish

Realism—a bit theatrical of necessity—yet refined and expressive. The head and arms form the most effective part of the figure. The foreshortening beyond the knees, and the lines of drapery about the thighs are not so fortunate. Note the crushing effect secured by the great weight of dark above the prostrate figure.

ON A HOLIDAY By D. H. BROOKINS
Honorable Mention, Genre

MADAME BUTTERFLY
Third Prize, Genre

By W. AND G. PARRISH

On A Holiday

By D. H. Brookins

Here is a classical composition with a vengeance—pyramidal arrangement —perfect balance—strengthening of main lines by subordinate parallels—effective contrast—and **focus** of interest just at the spot to which everything forces the eye and nails it there. Also, to satisfy the up-to-date-and-way-beyond fellows, there is magnificent **mystery**, both as to aim of the camerist and identity of subject. Furthermore, the following amazing artistic paradoxes are to be noted—with constructive formality and conventionality of line-work fit for an Egyptian temple, there is discoverable a total absence of the formal and conventional in presentation of the subject; and with a majestic solemnity of slope appropriate to an Alp or a Gothic meeting house, there is ne'er a suggestion of awe in the ensemble, unless it be an awful fear that the compound tripod-biped subject will presently fail to maintain equilibrium in the Colossus of Rhodes pose, and collapse into the purling brook.

A SHOWERY DAY By FLORA VON COELLN
Honorable Mention, Genre

Seriously, the humor is good, and of delicate flavor. And the means of its attainment—the incongruity between pictorial construction and sentiment—are very happily employed.

A Showery Day

By Flora Von Coelln

Evidently a winter thaw. Well spaced, and good lines, but rather spotty. The dark branches in the upper left corner are intrusive; and the square topped dark post at the right would also favor the picture by its absence.

The Tinker

By C. M. Whitney

An interesting genre study for its quaint and homely realism. The portable furnace, at the left, would fall better into the composition if set in place of the saucepan, and the latter placed in front of the tinker's left foot. Note the horizontal and upright lines, the dominant big circle and echoing smaller ones at various angles of foreshortening. There is a certain dryness and lack of atmosphere around the figures. Plate was, perhaps, a little undertimed also.

Kentucky Thoroughbreds

By A. F. France

Just a little too cut o u t—what painters term "tight" in the outlines. Space relations, contrasts o f color values, action of figures and rendering of interesting textures, all commendable. A rather remarkable snap-shot for fulness of tonality throughout the scale.

"CHEYENNE" By FRED E. CRUM
Honorable Mention, Genre

"Cheyenne"

By Fred E. Crum

This would not only bear, but be improved by enlarging and printing in sepia, with a softening down of the whites and some pushing down of the too assertive background. Cutting an eighth of the height from the top helps the general effect greatly. The action of the figures is somewhat mixed, and does not result in particularly graceful lines, but the whole mass of light drapery and hat is not bad. The white line up the horse's face balances the action of line in this column of drapery.

"THE TINKER" By C. M. WHITNEY
Honorable Mention, Genre

The Lumiere Autochrome Plate

By H. D'Arcy Power, M. D.

It is now many months since I gave the readers of "Camera Craft" an account of the method which Messrs. Lumiere announced as the solution of a direct rendering of natural colors by photography. Now that theory has become practice and we have the plates on sale in San Francisco, any one is free to convince himself that the long promised is really here, and we can perpetuate the maiden's blush or the pathological beauties of a smallpox papule with absolute fidelity to the original. What is a Lumiere Autochrome Plate? It is a plate coated, as usual, with silver gelatine emulsion, like any other, but, developed in a special manner, yields a glass transparency or positive, absolutely reproducing the colors of the original.

How is it done? Let me try to explain, although the press, both photographic and lay, for the last three months has been full of descriptive account, I still find the average man, even though he be a photographer, supplied with very hazy notions. To begin with, let us remember that all the various tints of Nature, including white, can be produced by the admixture of red, blue and yellow; secondly, that the light from red, blue or yellow objects can only pass through substances of the same color. You can only see a red rose as red when viewing it through red glass, not through blue or yellow; and what is true of the eye is still more true of the sensitive emulsion on a dry plate. The red of the rose will affect the silver and produce a negative if it first traverse a red color screen, but not if it traverse a yellow or blue one. Now, let us see how this explains the Lumiere plate. The plate is first coated with a layer of starch granules, colored red, blue and yellow, then with a varnish, thirdly with silver emulsion. The colored starch granules are transparent and form a mosaic between the glass and the silver. They are comparable to a million little colored glass windows through which the silver emulsion looks out on the world. When the plate is exposed, the glass side is turned toward the subject to be photographed, and the rays of light from it must pass to the emulsion through these little colored windows; the red in an object passes through the red granules, and affects the silver behind the granule; the blue or yellow in a similar way, through blue and yellow granules.

For example, the image of a red rose with green leaves falls upon the plate; where the rays from the rose falls the silver is changed behind the red. Where the image of the leaves strike the silver is affected behind the blue and yellow granules. If the plate is now developed (not fixed) and held up to the light, it looks like any other photographic plate with a black image on a white ground, for the emulsion hides the colored starch granules. If the plate is now put in a bath (acid permanganate) that dissolves the black silver and does not affect the white silver bromide, it

naturally follows that the underlying starch granules are exposed and the light passes through them at this point, bringing out their color. As behind the image of the rose, silver was only deposited over red granules, and behind the leaves only over yellow and blue granules, it follows that when the silver is removed the cleared space looks red in one place and green (blue and yellow) in the other. In other words, when the black silver deposit is removed, the effect is like cutting a stencil plate, the colored starch behind the silver becomes visible and forms the image.

Now, let us note that over the region of the rose image, where the red light found a passage through red granules, there also existed blue and yellow, behind which no silver was deposited. The white silver bromide covering these is therefore left behind after development and clearing with the permanganate, and weakens the image of the rose by its presence. Similarly, behind the image of the green leaves, the unchanged silver emulsion behind the red granules remains to weaken the green; in fact, all over the plate, except where the image of some white object falls, there is a large amount of silver left on the plate. To get rid of its diluting action, the plate is exposed to light and redeveloped, whereby the white silver bromide is changed to black metallic silver, and by contact with this the colors become much more brilliant. Nevertheless, the existence of this black deposit, invisible though it be when the plate is viewed by transmitted light, is still a detriment, for, though it in no wise affects the purity of the colors, it necessitates the use of a strong light when viewing the finished plate or throwing it on the screen as a lantern slide. In fact, it may be roughly estimated that only about one-third of the light passes through colored areas, which is the reason that an autochrome plate cannot be copied on bleaching-out paper, nor perfectly printed on another autochrome plate. So much in explanation of what an autochrome plate is.

Next, as to the practical working and use of it. I do not propose to give the details of making and using the various solutions, the instructions accompanying the plate being ample and excellent. On reading, they sound formidable, but in practice they are simple, and a plate can be exposed and put away, perfect and finished, in fifteen minutes.

My own experience has been very satisfactory. I purchased eight plates and I have eight perfect transparencies, absolutely reproducing the colors of the originals, which were chosen to test the plates in delicacy of color rendering. For example, in one case a lady wearing a white felt hat, a white feather boa and white collar and cuffs, all the whites differing but slightly in tint, yet reproduced with perfect fidelity. Let me add a few words as to the various steps of the process. The exposure through what is practically two color screens, that of the colored granules and the special screen, which must be Lumiere's, to cut off the ultra-violet rays, is necessarily long—about a second out of doors in summer sunshine. I took my portrait studies on the steps of a porch by somewhat weak and diffused mid-day light in December, exposed five seconds and got correct exposure. European writers maintain that better results are obtained by

short exposures in strong light than by long exposures in weak light. Development is for two and one-half seconds by dark green or very dark red light. I would strongly advise workers to accustom themselves to work in complete darkness. Have three trays in a row, one containing the pyro-ammonia developer, a second large tray, full of water and a third containing the acid permanganate. Turn out the light, remove the plate and slide it sideways under the surface of the first solution. Rock the tray well, cover with a board and turn on the safe light, allowing thirty seconds for these manipulations; develop for two minutes, turn out the light, remove the plate to the pan of water, lave it gently backwards and forwards while counting thirty, then drop it into the third pan and carry it out into the light and proceed according to the directions.

These latter tell of the possibility of frilling and the means to avoid it, but, personally, I met with no tendency of this kind. I can quite understand that a careless worker, using his solutions too warm and recklessly rocking his plate, might easily detach the film. According to an article recently read in a German paper, this frilling trouble was in reality due to the hurried manufacture of some of the plates, consequent on the immense demand following their introduction. It was not noted in those first put on the market, and seems not to be met with in those recently sent here. After the redevelopment of the plate, the directions are to intensify it. This is advice which, while usually good, is not to be blindly followed in every case. Some of my plates would have been better without it, and if in doubt, the plate can be fixed, washed and dried, and if lacking in vigor, can be then intensified. This is not stated in the directions, but I have demonstrated it quite satisfactorily; in fact, in one case I slightly over-exposed on an autumn landscape and on redevelopment, the image, while strong and dark, was flat. I therefore refrained from intensifying, but when fixed and dried, it looked dull. I thought I would treat it like a similar case, an ordinary transparency, so I reduced it considerably with Farmer's reducer, washed it and then fully intensified with the Lumiere formula of silver and pyro. The result was excellent, and gave me a beautiful reproduction of the sunlight on green banks and autumn leaves, backed by blue pines. To the man about to try this process, I would say, master your directions in advance, and, if possible, understand their purpose. Have all your pans and solutions ready, and do not deviate from the modus operandi that the Lumiere's have indicated; they are master technicians, and to leave the path they have marked out is to court failure.

Let me finally say a word or two as to the value and the weak points of the process. I suppose most people think of color photography in connection with picture making. I will not say pictorial art, for that is another matter. Well, if you think a beautiful color scheme on the ground glass (and occasionally we do), you will be able to reproduce it on the autochrome plate; and you will have wrested a color picture from Nature. But, I do not think that color photography, however worked, can replace the artist in color. Its great, its enormous value, lies in its power to

accurately record all visible things, man, Nature and art. Photography has hitherto given us only correct drawing; values were false, colors impossible; now we can fix and keep all the visual attributes correctly. We can preserve the liniments of our dear ones as they really appear; we can record Nature as she has never been recorded; and in some departments of science, as in my own province of medicine, the ability to record rapidly and accurately is of inestimable value. Photomicrography has hitherto been of limited value in recording the revelations of the microscope; black and white could not show what was easily demonstrated in tissue stained with colors. Now it will all be changed, and an autochrome plate of a magnified image will give us all that the microscope reveals.

As to the weak points, they are not numerous, and will probably be overcome. The plate is too slow to record color in motion. That will certainly be remedied. It is too dense to be viewed in poor light, or easily copied. This is inherent in the use of colored starch as a light filter, but will not exist when the Warner-Powrie plate is perfected, as it certainly will be. The starch granules are visible when the image is magnified, but this is a minor defect, remedied by a proper viewing distance. The colors are aniline colors, and therefore not permanent. This is probably the most disturbing of all considerations. Some of the aniline dyes are very fast, and these used may be among them; but, obviously, we have in these plates nothing approaching the indestructibility of platinum and carbon. It is therefore well to pay heed to the advice of the makers, and not leave these expensive transparencies exposed to the strong sunlight or excessive heat. Finally, when all these deficiencies are granted, we can still congratulate ourselves on having witnessed the greatest step in photography that has occurred since the silver emulsion plate superseded the Daguerreotype.

SCANT PASTURAGE — BY BELLE JOHNSON

An Enlarging Convenience

By E. R. Plaisted

In the course of my work with the enlarging lantern it became desirable to make, by projection, some new negatives with clouds printed into them, from which bromides could be made without the trouble of faking in the clouds for each separate exposure. The first step in the process was the making of some glass positives, and in doing this I had to mask the sky in one exposure and the foreground in the other. To do this properly and at the same time uncap the lens when the exposures ranged between ten and twenty seconds seemed to call for an extra hand or two, but a little study of the case soon suggested a simple and convenient way out of the difficulty.

In front of the lantern, close to the lens, and a little at one side, I rigged a wooden upright about ½x1½ inches, firmly fixed to the bench at its base. On this I fitted a sliding wooden frame arranged to clamp a couple of sheets of 4x5 glass (one orange and one ruby), and held against a stop near the top by a heavy rubber band reaching from a pin in the top of the upright to a screw eye in the sliding frame. From this same screw eye I then ran a strong flexible wire down through a gimlet hole in the bench to a small pedal on the floor beneath.

In using the arrangement I first place my plate on the easel, which has special guides, against which the masks and cutouts are worked back and forth within certain small limits, and then uncap the lens. An image is then thrown on the plate, but through the two thicknesses of colored glass, and, therefore, without actinic power. After getting the masks arranged just as I want them, and in motion to soften and blend the joining, a pressure of the foot on the pedal causes the colored glass screen to drop or slide down out of the way, and allow white light from the lantern to reach the plate on the easel. After counting the proper exposure time, the pedal is released, when the glasses rise and again safely screen the plate.

By means of a secondary pedal under the far end of the bench where my developer trays stand, I can correctly expose one bromide enlargement, while developing another previously made, and without having to leave my developing print at a critical moment. The whole rig cost practically nothing, except the price of the colored glasses, and did not take a great while to make and put together. It is worth much more than it cost in added convenience and certainty of operation.

Guiding Forces

Two forces guide our material and intellectual life. We possess two means of acquiring knowledge and of practicing art: reason and experience. Impressions from without are the everlasting source of all our conceptions. —G. G. Zerffi.

Selective Construction

An artist desires to make something beautiful, or something appreciative; an inventor, something useful. They begin with this vague thought, to select their images, and as the construction proceeds, it is as new to them as to others, and satisfies them, if it meet the general requirement of their first thought. Later in the growing process the end becomes more definite, as the possibilities of the creation become evident. The artist then projects lines of possible combination, to be filled in by actual representations.

NATURE'S MIRROR — By H. B. GERMAN

The further element is a feeling of adaptation to this end. It seems to consist in a sense of the adaptation of means to end. Only by it is the exclusive and selective attention guided in its choice of elements. As a feeling, it extends throughout our entire mental and active life. We pass involuntary judgment on the fitness of an instrument for its use, of the material for a garment, of an officer for his office. This feeling, in its variations in individuals, is in large part the basis of artistic talent. The general proportions of things, the relative value of details, the harmony of discordant meanings, the reduction of varied elements to a fundamental motive—these and many other problems of the artist call this feeling prominently into play.—Charles Kendall Adams.

Fundamentals in Art

The highest authorities consider all the arts as one in fundamental principles, if not in aim. Phidias, Giotto, Leonardo da Vinci, Michael Angelo and the greatest artists of all times were not specialists in one art, but students of every form of art. They were painters, architects, sculptors, musicians, and poets.

The arts reflect each other; the terms which are applied to the arts are borrowed from each other. We speak of the tone of a picture and the color of a piece of music. The sculptor must have a sense of color and music or his work will be cold. Each art may definitely require a special set of faculties to be trained, but these are co-relative and must be brought into harmony for power in any one art. Hence a certain amount of training in different arts develops the art capacities and enables the mind to grasp the elements that are fundamental to all arts.—S. S. Curry.

The Stock Dealer—Studio Man

You all know how many of our stock dealers have a developing and printing plant in connection with their regular business. Lately the druggists are branching out in that direction, and, not content with so doing, are going further and doing view work.

Suppose the professional photographers would set up a side issue in the way of a stock of druggists' sundries? Wouldn't there be a wail go up? I guess yes; particularly if we cut rates on the goods as the druggist does on photographic work. Only a short time ago one of these druggist-photographers very coolly asked the writer to "loan me a few 20x24 view negatives." Mr. Druggist only "wanted to print a sample of each for his show case," and it took some time to impress upon his mind the fact that negatives were not made to be loaned. Finally, Mr. Druggist furnished the paper, and paid a small sum for the work, as they were "only samples for his show case."

Result: They were sold by the druggist at a lower price than the photographer asked for the same prints to regular customers, the druggist totally ignoring his promise and professional courtesy. Of course, he lost the trade of the writer, and will lose that of other professionals. That, however, is of small moment; the real result is an unfortunate cut in rates and a diminution of the work which should go to the local photographic studios.

If the smaller cities and towns continue to be blessed with the druggist-photographer, there is likely to be a movement tending to assist the local professional photographers as their needs may deserve. Possibly the National Convention can take up the matter and devise a method which will give relief to a long-suffering craft.—"Old Forty."

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, JANUARY, 1908. No. 1

Our Thanks

We wish to thank our many kind friends who remembered us with greeting cards, kind words added to their letters, and other forms of expression, all characteristic of the season's good will and good wishes. We would have liked to have replied to each one in kind, but so doing was simply out of the question. Our appreciation is none the less sincere, and we trust that our friends will forgive us for this rather formal way of discharging our obligations.

"Western Camera Notes" Joins Hands with "Camera Craft"

Beginning with this issue, subscribers to "Western Camera Notes" will receive this magazine in place of Mr. Potter's magazine, the latter being discontinued. Mr. Potter will retain his interest in his subscribers' welfare by collaborating with us in the capacity of associate editor. Owing to the large number of names to be transferred to our list, after first being checked off to find if they duplicate our own, this issue will reach many of you a little later than usual. Where subscriptions have been paid to both magazines, the date of expiration will be extended to cover both subscriptions. Such subscribers will kindly note the address slip on their February number, and if the expiration date is not right, kindly advise.

Arrangements for the consolidation of the two magazines were only taken in hand November 25th, and consummated only within the week of this writing. It was therefore impossible for us to make an announcement in either magazine of December date of issue. We, both Mr. Potter and myself, trust that the old subscribers of "Western Camera Notes" will feel that they have the same personal interest in "Camera Craft" that they have shown in the former; and we assure them that we will have their interest and good will as much to heart as before. We want to hear from you all. Unless we hear from you, we can only guess at your wants. The closer the editors of a magazine can get to the subscribers, the more successful they can make the magazine and the more pleasant is their work. We would gladly give the time to keep another stenographer busy with correspondence with our subscribers alone. If our subscribers would make this necessary, we would have the most successful photographic magazine in the field. Let us hear from you—you, personally. The magazine is for you, and we want your co-operation.

The American Photocolortype Company

We have received several letters asking why the writers were not able to hear from the above firm. As near as we can learn, the firm became financially embarrassed, and the responsible head, Mr. Anson, committed suicide on November 14th, last. Upon receipt of the advertisement, we delayed its publication one issue, to secure a report on the firm. This was such that we felt justified in admitting them to our pages. We are mentioning this for the reason that this issue contains the advertisement of The Albertype Company, of Brooklyn, New York, a firm that is in every way responsible and trustworthy. Any publisher of souvenir albums in the larger towns and cities will confirm our statement, as the firm is one that practically monopolizes this class of work in the gelatine process. We strongly urge our readers to correspond with The Albertype Company, as they will be surprised at the beauty of the cards, the low prices made, and the prompt shipments which they can guarantee. No hesitation should be had in entrusting orders and payments covering them to this old and reliable firm.

Information Wanted

We are desirous of hearing from readers of "Camera Craft" who have purchased lenses from the Scientific Lens Company, U. Nehring & Company, or any firm giving 442 or some similar number on East One Hundred and Sixty-sixth Street, New York, as their address. All communications will be considered confidential, and will not be published without the consent of the writers. We have material sufficient for our purpose, but desire to hear from others who have had dealings with the parties doing business under these various names.

We are Feeling Better, Thank You

Our Boston contemporary recently gave itself much felicitation because it claimed to have discovered that a certain "well known annual" had gotten out an issue that mentioned only itself and "Camera Work." Thinking that possibly our wounded pride might find some consolation in further details, we closely examined the last "well known annual" to come to hand —the "British Journal Almanac." The most important part of that annual, with the possible exception of its editorial article on color photography, is its "Epitome of Progress" department. Here its editor attempts to gather together all that is new, published during the past year. Six American publications are credited with fifteen excerpts. Eliminating articles originating in the "Newark Evening News," addresses delivered before the Photographic Society of Philadelphia, and the like, leaves these six magazines quoted ten times. Of these quotations, five are from "Camera Craft." In other words, the editor of the best known and most authoritative annual published, finds as much that is new and worthy of comment in the last twelve issues of our magazine as he does in all the issues of all our contemporaries for the same period. Furthermore, the quotations from our pages are not, as in the case of our Boston contemporary, all from the pen of one writer and on one subject. Now is the time to subscribe.

Our New Headings

Our readers will notice that this issue, the first of the new volume, is greatly improved by the use of some new and very artistic specimens of the designer's art as running heads and department headings. The design used in the former capacity we are also employing on our stationery where it gives a much more distinctive and pleasing effect than the ordinary typographical lettering. Aiming, as CAMERA CRAFT does, to be as near right as possible in an artistic way, we entrusted the work to Alfred Jackson, Puck Building, New York, feeling sure that the designs would be not only pleasing but artistically correct. Mr. Jackson's work is well known in many Eastern cities on account of his ability to combine the highest art value with the best commercial utility, in his work; and while his prices are not the lowest, they are consistent, and we would advise correspondence with him if the employment of good work in his line is contemplated.

Mr. Smith on the Coast

James H. Smith, the genial and popular manufacturer of Victor Flash Powder and other specialties of like high grade, paid our office a visit just before Christmas. He certainly has a remarkably effective flash powder, and made most gratifying sales by simply demonstrating the efficiency of Victor powder as compared with any other brand the dealer might desire, using a photo-meter which he carried ready for use. His other specialties are well worth the investigation of all photographers. We will shortly have an article on flash-light work in the studio, by one of the local workers who uses Victor flash powder exclusively for all his sittings.

Our Competitions

Entries are coming in for our first Competition, closing January 31st. The subject for the February and following ones are as follows: street scenes with figures, home portrait of an adult, snow scenes, flash light pictures, animal studies and genre subjects. This brings the list up to the competition closing July 31st and should give all intended competitors plenty of time in which to send in their pictures. As we have advised before, the lines will not be drawn too closely and there are no annoying restrictions. Send any number of prints if you are in doubt as to the best you have of any particular kind. It does not matter whether your name is on our subscription list or not; you are evidently a reader or you would not know of these competitions. You may be either a professional or an amateur; we will never trouble to enquire. What we want to do is to give our readers a chance of seeing how their pictures are rated by a competent jury when put in open competition and give them an opportunity of seeing the actual print that is considered a little better than their own by the same jury.

CLUB NEWS and NOTES

Club Secretaries and others will oblige by giving us reports for this Department.

CALIFORNIA CAMERA CLUB

On Friday evening, December 13th, were shown interchange slides from the Columbus Photographic Society and the Chicago Camera Club. A demonstration on Artura paper, by M. C. London, was given the same evening. Both numbers were very good. From Monday, December 2d, to and including Wednesday, December 18th, an exhibition of prints was made. These were sold at auction on the evening of December 18th.

Dr. Thos. Fletcher, who has so kindly been giving the members free instruction in bromide enlarging, is organizing a new class for any of the members who wish to join. The Demonstration Committee is arranging for several lectures on different branches of photography, to be given within the next few months. The first of these demonstrations will be upon simplex intensifier, and a process of reducing, by W. Rob Whyte, a leading member of the Club.

Friday evening, December 27th, was given a Christmas entertainment that was greatly enjoyed by the members who crowded the rooms. The program included: Recitation—Tying Her Bonnet Under Her Chin, by Miss Ida Day. Piano solo—"Camera Craft" March, by Albert Le Breton. Flute solo, by Miss Agatha Cotter, accompanied by Miss Adelyn Brickley. Prof. T. H. d'Estrella gave "A Fishing Story," and "The Lovers," both shown very effectively in pantomime. Piano solo, by Miss Daggett. Recitation—"The Irishman's Dream," by A. H. Johannsen. Slides from the Toronto Camera Club, followed by refreshments and distribution of presents by Santa Claus.

THE WORCESTER EXHIBITION.

The Fourth Annual Exhibition of Photographs at the Worcester Art Museum, which opened November 1st, and closed a month later, was not only the largest but the best from a pictorial point of view, yet held. Three hundred and thirty-nine pictures were hung. The Worcester workers were credited with fifty-five; the Department of Photography of the Brooklyn Institute with forty; Portland Camera Club, twenty-nine; Wyoming Valley Camera Club, thirty-two; the Pacific Coast group, forwarded by "Camera Craft," thirty-one, and the remainder by individual workers of the highest standing throughout the country.

Pacific Coast exhibitors showed pictures as follows: Laura Adams Armer, Berkeley, two; Ethel Phoebe Bailey, Hollywood, two; Annie W. Brigman, Oakland, three; George C. Bull, M. D., Alameda, two; E. S. Curtis, Seattle, two; W. E. Dassonville, San Francisco, three; Dr. Gustav Eisen, San Francisco, four; Frank Harrold, San Francisco, one; George F. Holman, Portland, two; Oscar Maurer, Berkeley, two; Emily Pitchford, Berkeley, four; William S. Rice, Stockton, two, and Hana Robinson, Los Angeles, two.

There has been no studied criticism of the exhibition available, and for that reason we can hardly comment with safety. Of the ordinary newspaper reviews, several have come to hand, and the writers seemed to have favored the following Pacific Coast productions: "Mother and Child," Laura Adams Armer; "The Moon Cave," Annie W. Brigman; "In the California Redwoods," George C. Bull, M. D.; the two by E. S. Curtis; "In Constantine," Dr. Gustav Eisen, and "Hervdiade," by Hana Robinson. The Pacific Coast group of pictures was an invitation one, and Mr. Davis writes expressing the keen appreciation of the management for our kindness in sending such a fine collection. We trust that in another year we will be able to send even a larger and better collection. The Oregon Camera Club will no doubt send a number that will entitle them to separate recognition in the catalogue should the date not conflict too greatly with that of their own exhibition.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department
Should be Addressed to its Editor.

Edited by
H. D'ARCY POWERS, M. D.
Burlingame, California.

AUTOCHROME NOTES

For the last three months the European photographic press has been largely occupied with experiments and experiences connected with Lumiere's wonderful plates. I have refrained from abstracting or commenting on them, knowing that they were of little value to our readers until we could obtain the plates. Now we have them, and the enthusiastic among us are bankrupting themselves in their use, so it is in order for me to help them along the road to ruin. Lest my European readers should think me extravagant in language, let me state that the American price for whole plates is only twenty-five dollars a dozen, five pounds, one hundred marks—a hundred and twenty-five francs for an afternoon's debauch in color, at a time when our banks are bursting and our millionaires running away to Europe. In another part of this number I have given a general explanation of the mode of action of the Autochrome plates.

Overexposed Autochromes

In Gaedecke's Wochenblatt, the Lumieres give an account of a series of experiments made to determine the possibility of rectifying over and under exposure by means of modifications of the developer. They found that in the case of overexposure this could be readily effected, and summarize their results as follows:

For overexposure not exceeding four times the normal, it suffices to shorten the time of development from two and a half to one and a half minutes. For greater overexposure, both the development time and the developer are modified, as follows:

In place of solution A (alcoholic pyro), a fifteen per cent aqueous solution of pyro is used; and solution B (potassium bromide and ammonia solution) is diluted one in four. Then for overexposure of from four to eight times take: Modified A, twenty cubic centimeters (five drams); modified B, twenty cubic centimeters (five drams); develop for six and one-half minutes.

For overexposure of from eight to fifteen times, take: Modified A, twenty cubic centimeters (five drams); modified B, twelve cubic centimeters (three drams); develop six and one-half minutes.

Temperature and Development Time

In the same paper, the Lumieres give the coefficient for variations from the normal temperature (60° Fahr.) for development, as follows:

10° Cen. (50° Fahr.) = 1.6
15° Cen. (60° Fahr.) = 1.
20° Cen. (68° Fahr.) = 0.8
20° Cen. (77° Fahr.) = 0.6

So that the normal development time of two and one-half minutes at 15° Cen. (60° Fahr.) would be four minutes if the temperature were 10° Cen. (50° Fahr.), two minutes at 20° Cen. (68° Fahr.), and one and one-half minutes at 25° Cen. (77° Fahr.) It is to be hoped that workers will keep clear of these higher temperatures. That is when frilling occurs.

Copying and Reducing Autochromes

As we cannot transfer Autochromes to paper, the ability to copy them onto another color plate, or reduce large sizes to lantern size, becomes of great importance. R. Child Bayley, editor of "Photography," has successfully accomplished both these processes. He says that this may be done in four ways, but it would seem that for practical purposes copying in the camera is the only one likely to be employed. Concerning this he gives the following account:

"An Autochrome positive was fastened up over a hole cut in a board, and behind it was placed a mirror reflecting the cloudy sky. In order to secure as brilliant a result as possible, the space intervening between the Autochrome and the camera

front was covered over with a focussing cloth, so that no light reached the lens except what had come through the Autochrome. The general arrangements, in fact, were the same as those employed in the ordinary way when making lantern slides by reduction, except that as it was not practicable at the moment to tip the whole apparatus up to face the sky, and as a white reflector tended to prolong the exposure unduly, a mirror at an angle of 45° was employed instead. A preliminary trial of the light showed that the Watkins meter turned towards the sky at the mirror itself, darkened to the standard tint in forty-five seconds, and by exposing a plate in strips, it was evident that an exposure of about half an hour would be correct. The lens was used at f/8, and the degree of reduction was such that the original seven inches wide was reduced to a width of three and one-fourth inches.

Slides as Bright as the Originals.

"A number of slides were subsequently made under the same conditions, the exposure in each case being half an hour, increased to an hour in the case of one original which was exceptionally dense. When reducing in this way from larger than half-plate to an image of ordinary lantern plate size, the slight falling off in brightness already referred to was no longer perceptible. In fact, some of the slides seemed even more brilliant and intense in their coloring than did the original Autochromes.

A Matter of Economy

"The slides made so far have all been upon 9x12 centimeter plates, as these can be utilized to give two slides on each plate. As it is certainly not advisable to cut the plates while in a sensitive condition, if this can be avoided, a carrier one-half of which was covered up was used, and the plate turned round after one exposure had been made, so that there were two exposures on each. The cutting was done after the two pictures had been varnished, and to avoid all risk of stripping the film, two knife cuts were made in it, a sixteenth of an inch apart, and the diamond cut on the other side was made between the two.

Lantern Slides by Reduction

"There can be no doubt that the demonstration—that it is possible to make perfectly successful lantern slides by reduction in this way—will widen very considerably the scope of the new plate. One is no longer tied down to secure a tiny image if it is to be shown in the lantern, but can make the original transparency of such dimensions that it can be looked at comfortably by itself, in the confidence that as many slides as may be necessary can be obtained from it at some subsequent time. It is an application of the plates which ought to have a very extended use."

Reversing Autochromes

Of the many proposed alterations in the procedure of making Autochromes there is, at any rate, one that we find to be useful. M. Gravier does not keep the reversing solution of permanganate and sulphuric acid ready mixed, but adds the acid to the other solution just before use. Quite independently of M. Gravier's suggestion, we have also arrived at the conclusion that the freshly mixed solution is far more satisfactory. The mixture of permanganate and acid after long keeping will dissolve the silver image, but it does not by any means act in the clean fashion of the fresh solution. With a very stale solution the whole image is covered with a brown scum, and generally sprinkled over with specks that are not readily removed, but with a freshly mixed solution a clean result is obtained. We have, therefore, adopted the practice of keeping separate solutions of permanganate and sulphuric acid, and we do not mix them until just before use. It has been stated by some that the stain produced by the reversing solution is of no consequence, as it disappears in the redeveloper. We are, however, doubtful if the heavy deposit produced by a very stale solution does completely disappear. In any case the specks of manganese compound do not do so at all readily, and the attempt to remove them by wiping often results in damaging the film. The scum referred to can be wiped off readily with cotton-wool, but the specks remain. With fresh solution there is no necessity to wipe the film at all; there is therefore less risk of damage, and time is saved.

Intensification of Autochromes

Intensification of Autochromes with the silver intensifier sometimes produces bright metallic specks over the image that cannot be completely removed. There are two causes of this, and both can be avoided

by taking a little care. The stock solution of silver invariably precipitates metallic silver if kept for a little time. This deposit falls to the bottom of the bottle, and, if not disturbed, does no harm, but if a nearly empty bottle is drained into the measure when preparing the intensifier, or if the deposit is stirred up by refilling the bottle just before use, the silver particles get into the intensifier and on the plate. The precautions that should be taken are obvious. The bottle should be cleaned out before refilling, and it should neither be shaken up before use nor drained right out to the last drop. The other source of silver specks is the use of dirty measures, etc. The measure employed should always be cleaned before re-use, and the neck of the silver bottle should be wiped free from dust and silver deposit. In fact, the matter of cleanliness cannot be overdone when dealing with silver intensification. If it is desired to intensify after fixing, the plate should be washed for a few minutes to free it from hypo, and then be immersed in water just tinted pink with plain permanganate for about twenty seconds. If the solution loses its pink color, more washing is required, but if the pink is retained, intensification can be proceeded with after about half a minute's washing. After intensification, the usual clearing and fixing baths are used, and the plate is given its final washing.—"British Journal of Photography."

Nature of the Autochrome Emulsion

Questions as to the nature of the above have been set at rest by a communication from the manufacturers to Herr Gaedicke, to the effect that it is a pure gelatine emulsion, and devoid of collodion.

SOME NEW FACTS OF STAND DEVELOPMENT

The following, just issued as a circular by Messrs. Wratten and Wainwright, will be seen to contain the results of experiments made in the firm's research laboratory on this method of development Messrs. Wratten's experiments show that dilution of a developer to, say, one-tenth strength, does not prolong development ten times, but that the time required with the weak stand developer varies according to the quantity of air dissolved in the water. Glycin is found to be least subject to irregularity from this cause. Messrs. Wratten also point out the necessity of precautions to avoid fog and markings during the necessarily protracted period of "stand" development. Following is the paper:

A method of developing plates which always appeals by its apparent simplicity and economy, is that which is known by the name of "Stand Development." For convenience, we write of "Stand Development" in the sense described below. By "Time Development" we understand development for a fixed time with a developer of about the normal strength. "Time Development," as users of our plates know, is advised by us in the case of color-sensitive plates. In "stand" development the plates are placed in a grooved tank with a dilute developer, and are left to soak until finished. At first sight this method seems easy, and at the same time, owing to the dilution of the developer, economical—in actual fact, however, we doubt whether it is easier.

It can scarcely be considered economical in the first place, because the tanks made for the purpose, ingenious and convenient as they are, require a very large quantity of developer; one of the smallest, for instance, requires twenty-nine ounces of developer to develop six half-plates; and after a development lasting for half an hour the developer would be so oxidised that it would not be advisable to use it a second time; so that the claim of economy can scarcely be justified.

It must also be remembered that in dealing with "stand" development we cannot go away and leave the plate to develop itself for an indefinite time any more than one can with any ordinary development. If a plate would require three minutes in an ordinary developer, and thirty minutes to give the same result in a "stand" developer, then if it were left for an hour in the "stand" developer it would be just as much spoiled as if it were left for six minutes in the ordinary developer; so that it is essential with stand development to know the time which the development will take.

Inasmuch as we recommend time development with our color sensitive plates, a large number of the users of those plates have adopted "stand" development, and have appealed to us to give them the time

which developers of various formulae should take. At first sight it would appear to be a simple thing to give this time: Suppose, for instance, that the metol-hydroquinone formula which we recommend, requires five minutes for development, then it might be supposed that if this developer were diluted ten times it would require fifty minutes for development, or that, at any rate, if it did not require fifty minutes for development, we could give the amount it did require; such, for instance, as fifteen times instead of ten times the time given on the cards.

If a pyro-soda formula be diluted ten times, the time of development should be increased fifteen times; the following formula requires fifteen times the time of development given on the cards with the plates.

PYRO-SODA

(1) Sodium sulphite.....6 ounces
Pyro .....1 ounce
Sulphuric acid .....1 dram
Water .....600 ounces
(2) Sodium carbonate...6 ounces
Water .....600 ounces
Take equal parts of 1 and 2.

For glycin we recommend the following formula, which will require ten times the time of development given on the plates:

GLYCIN

Glycin .....1 ounce
Sodium sulphite ....3 ounces
Potassium carbonate.5 ounces
Water .....1200 ounces

Another point to which we wish to call attention relates to the defects arising from general fog, and from edge markings, on plates developed in "stand" development tanks. A plate during development is peculiarly susceptible to fog, as much so as at any period of its existence, and particularly to chemical action, so that the long development time of a stand-developed plate always tends to produce a danger of fog. In tanks made of zinc, the zinc may not only be attacked by the chemicals used, but may itself also fog plates. All bad air fumes of burned gas, stagnant water, and the multitude of chemical impurities in the air and solutions of a badly ventilated and not always thoroughly clean dark-room, will unite to attack plates which are soaking in a developer, whilst tanks, which are also used for the purpose of fixing, are always liable to a suspicion of hypo contamination. It may be pointed out that the developers given here contain no bromide. The addition of a small quantity of bromide will generally diminish any slight trace of fog, but when using bromide it must be remembered that for moderate amounts of bromide the time of development should not be altered, but the time of exposure must be increased; that is to say, a plate which is to be developed in a bromided developer will require a somewhat fuller exposure than one to be developed in an unbromided developer.

Edge markings are frequently accompanied by a lack of gradation in the high-lights. The cause of the edge marking and the lack of gradation is the same; it is that in many of the tanks on the market the plates are too close together, and are too close to the bottom of the tank; the result is that the plate is to a certain extent starved of developer, so that the development progresses more rapidly in the half-tones and shadows than in the high-lights of the plate, producing a flattening of the high-lights; while the marking on the lower edge is caused by the solution of the backing which falls to the bottom of the tank and accumulates on the lower edge of the plates, the backing from one plate affecting the face of the plate immediately behind it.

This can be to some extent prevented by placing all plates face to face and back to back in pairs in the tank.

In conclusion, we do not as a general rule recommend "stand" development, though it is sometimes convenient, but if it is desired that it should be used, then the details given here will probably prove of service.

The AMATEUR and HIS TROUBLES

Conducted by
FAYETTE J. CLUTE

CARBON WORK

The rapid sensitizing solution for carbon work which we gave some months ago has been referred to by one of our readers as the spirit sensitizer, and he claims that it has no merit whatever. From his letter we can only surmise that he has been trying to employ potassium bichromate. This is wrong. Potassium bichromate can only be used in the ordinary bath made up with water. Alcohol would cause the potassium salts to precipitate. If our reader will employ ammonium bichromate he will find his trouble will no longer exist. In developing carbon prints, tissue that has been rendered partially insoluble by overexposure or long keeping, should be treated to a bath of caustic soda dissolved in water. A strength of about one per cent is all that is required, and an immersion of a second or two in such a bath will be found all that is needed. On returning a print so treated to the developing water it will generally be found to act as if normally exposed.

PHOTOGRAPHIC POST CARDS THAT FADE

In our July issue we printed a paragraph clipped from the "Publishers' Weekly" going on to say that cards made by photographers on sensitized paper were unsatisfactory to the dealers on account of risk of their fading. This statement should have been qualified. There are many photographers turning out cards that are as permanent as the paper upon which they are printed. On the other hand, there are being placed on the market photographic cards which are open to suspicion on the score of permanency, if we may judge from some which have been shown us recently. These cards are gotten out by people who make enticing claims as to the cheapness of their work. About three years ago we wrote an editorial covering the experience of a local photographer who lost a very fine order for several hundred large bromide enlargements because the work was accepted by one of these "cheap" concerns that made a price at which the local photographer could not buy the paper. The "cheap" enlargements began to fade before they could be distributed, as was intended, as advertisements. Our editorial only treated the question of price. The fading was reported to us later. We mention this, as it is evident that a correspondent, who wrote recently in condemnation of the paragraph in our July issue, is evidently in ignorance of the large amount of cheap and untrustworthy work that is turned out in the name of photography. While we regret that we did not qualify the too sweeping statement of the "Publishers' Weekly," we must admit that its complaint is not entirely lacking in foundation.

VARNISHING AUTOCHROMES

A paragraph in a recent issue of the "British Journal of Photography," deserves a place here for the reason that the suggestion is a most excellent one, and also because it will, to a certain extent, anticipate queries addressed to this department. The paragraph mentions that all Autochromes should be varnished, and for that purpose celluloid dissolved in amyl acetate is a splendid varnish. In a few cases it has been found that there is a tendency on the part of the film to leave the plate and curl up at the edges, taking the varnish with it. This can be prevented by the following expedient: A ruler is laid on the plate about one-eighth of an inch from the edge, and a cut made through the film with a knife. Before removing the ruler a small flat chisel is run along the edge so as to pare off all the loose film outside

the cut, repeating the process on the remaining three edges. If the plate is then varnished a perfect seal is given the edge of the film, which cannot well raise or frill.

STAND DEVELOPMENT

Wratten & Wainright, a leading firm of English plate makers, have recently issued a circular covering the results of some of their experiments in stand development. The most important deduction made is that a large number of developers are unsuited to stand development for the reason that they oxidize too rapidly, or that their speed of working is not only disproportional to the amount of dilution, but dependent upon the amount of air which the solution, or rather, the water used in making up the developer, contained. In one case a certain developer mixed up with distilled water required forty-two minutes, and mixed up with ordinary tap water, fifty-three. They recommend a Glycin developer, as follows:

Glycin	½ ounce.
Sodium sulphite	1½ ounces.
Potassium carbonate ..	2½ ounces.
Water 600	ounces.

This requires about forty minutes for complete development of fairly correct exposures.

SOME RAIN EFFECTS

A visiting amateur, one from a small interior town, called at our office a few days ago with some of the best pictures I have seen in many a long day; that is, taking them as the results of one or two days' work with a hand camera in a field that is always at hand at this season of the year. He had reached town to find a constant drizzle of rain the prospects for at least a day or two. He had little else to employ his time, and so he bought a square of rubber focusing cloth material and had an obliging tailor, in a little shop on a side street, make him a rough cover for his camera with flaps extending over holes provided for such parts as the focusing screw and the shutter release. The lens, of course, was left exposed, but a sort of collar protected it from the rain. The results obtained were certainly well worth all the trouble. The effects to be secured in the streets of a city, with the hurrying throngs, the entire absence of posing idlers, the truthful rendition of the atmospheric conditions, and the general novelty of this class of work, makes for results that are most satisfying. Strange to say, his fears as to possible under-exposure did not prove well grounded. The reflections from the wet sidewalks, combined with the relative clearness of the atmosphere on account of the rain, seemed to have resulted in suitably-timed negatives, with an exposure of a little more than one-twenty-fifth of a second, using either stop f-6.5 or f-8, according to the needs of the case. There is still a chance of the same kind of work being done before our rainy season comes to an end, and I would advise our city residents at least to be prepared and make a few exposures on this promising class of subjects that are always available almost at their very doors. In this connection I would suggest that often a doorway or a friendly awning can be used, and the necessity of a covering for the camera while in actual use, avoided.

WARM TONES DIRECT

A correspondent writes to ask how he may best secure warm tones on developing paper by direct development. About the only satisfactory method is by increasing the exposure and restraining the developer. A good developer, perhaps the best for the purpose, is Eikonogen. A stock solution should be made up as follows:

Eikonogen 100	grains
Sodium Sulphite (crystals) 1	ounce
Potassium Carbonate ... 160	grains
Water 8	ounces

A little experimenting with this developer, and increased exposure, will give one a fairly wide range of results. Using the developer above, diluted four times and adding ten drops of bromide solution (the ordinary ten per cent solution), gives, with an eight times normal exposure very satisfactory sepia tones. Increasing the exposure about one-quarter more, diluting the stock solution about one-quarter less, and increasing the amount of bromide to almost double, will give good reddish-brown tones. An acid hypo fixing bath should be used, and time given the prints to fix thoroughly and gain their proper tone. In a plain hypo bath the prints fail to regain their pleasing tone, but remain a dirty yellow color, which they acquire when first placed in the bath.

NOTES *and* COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

THE ONLY DOPE

(Inspired by an advertisement in "Camera Craft.")

To the poor amateur whose photographic way
Is strewn with pitfalls that puzzle and dismay,
His soul proud science often sought to teach
A formula to bring within his reach
The means to save some cherished film or plate,
Whose weakness "he discovers all too late."

In vain with noxious potions does he try
His many "flat" ones to intensify,
He sees them bleach and blacken in the tray,
And shouts triumphant, "I have found the way."
Alas! indeed for his too transient joy
That which should have strengthened did but destroy
The very things he labored most to save,
And sent them sadly to an ash heap grave.

At last some kindly fate in pity at his plight
Guides his wandering footsteps to the light,
And "Simplex," flashing with a guiding star,
Illuminates the darkness near and far.
Eureka! Simplex! voice of hope,
Thou art the real, the true, "the only dope."

JOHN F. NORTON,
Portland, Ore.

CONTROLLING CONTRAST OF IRIS

Iris paper will adapt itself to a wide range of negatives without special treatment of any kind. Following are suggestions for use in exceptional cases:

When making prints from flat negatives, increase the amount of bromide in the developer to a considerable extent, and time prints so that they develop freely. When making prints from extremely contrasty negatives, give normal exposure and use iodide as directed in the formula. When iodide is used, the amount of bromide in the developer should be doubled. After this is done, and without any further addition of bromide, the iodide may be added until the desired softness is obtained. It will not be necessary to use iodide except on "Ironclad" negatives.

Sometimes prints from good negatives are slightly under-timed, and, consequently, lack full detail in the highlights. This has led to the use of iodide as a remedy when it was not necessary. Under-timed prints are sure to lack detail in the highlights, and sufficient exposure should be given to penetrate the highlights of the negative. Otherwise it will be impossible to obtain detail in the highlights of the print.

"ELEMENTS OF ESPERANTO"

Arthur Baker, editor "Amerika Esperantisto" ("American Esperantist"), writes us as follows: "Notwithstanding the immense amount of publicity which has been given to Esperanto, the international language, I find that at this time not more than one-tenth of the people of the United States have even a vague idea of its purpose and scope, and perhaps not one in a hundred has a reasonably definite conception of it. As a sort of counter-irritant to the irresponsible criticism which is occasionally circulated by the uninformed, I have printed for free distribution a second edition of one hundred thousand copies of a small primer, "Elements of Esperanto," setting forth the grammar, word construction and purpose of the language, and will mail a copy to any person who requests it, sending stamp for postage. While you may not be personally interested, there are thousands of your readers to whom this movement for an international auxiliary lan-

guage, which now covers every country on earth, will appeal as something more than a fad, and they would appreciate your giving publicity to this letter."

We have long been acquainted with ease, practicability, and value of Esperanto, taking much interest in one of our photographic exchanges published in that language. The booklet mentioned by Mr. Baker should be in the hands of everyone desirous of being well informed. Address "Amerika Esperantisto," 1239 Michigan Avenue, Chicago, Illinois.

AN UNSOLICITED TESTIMONIAL.

Indianapolis, Ind., 12-10-07.

Mr. O. C. Wold,
157-161 W. Madison St., Chicago.

Dear Sir:—I have been using your brush for the last two months and I am so highly pleased with it that I want to tell you what I think about it.

It is certainly the finest article on the market. I have had no trouble with it whatever, and I have used it practically eight hours a day for the last two months.

I have been a mechanical artist and a photo-retoucher for a number of years. I have used several other air brushes, but this one is the best of them all.

Two of the greatest features of the brush are: The ease with which it can be cleaned, and the fact that a line as fine as a hair can be drawn, and from that to a spray of color as thick as it comes from a well mixed jar of Chinese white. This last is a great advantage, as it gives the artist a chance for plenty of speed.

Probably the greatest feature of the brush is the control the artist has over it. It being perfectly sensitive to touch, the slightest touch will bring a perfect line of color. This brush never spatters or spits on drawings; a very disagreeable feature of all other brushes.

I could add a great many more good things about the brush, but its very appearance and simple mechanism would recommend it more than anything I could say.

I wish to thank you for all past favors and for the kind treatment you have shown myself and several of my artist friends.

Yours truly,
PAUL RANDALL.

"THE KODAK BABY BOOK"

One of the handsomest of the handsome series of booklets that has been gotten out by the Eastman Kodak Company for the benefit of amateurs, and particularly those using the Eastman Kodak and the "Daylight" system, is the new one entitled "The Kodak Baby Book." Ask your dealer for one or write direct to the Eastman Kodak Company, Rochester, New York. The booklet has a beautiful cover, lithographed in colors and is illustrated by a large number of fine examples of child portraiture, the work of the author, C. H. Claudy. Mr. Claudy will be remembered as a contributor to our pages, whose articles were always full of good suggestions and sound advice, and in the booklet before us he has certainly sustained the high reputation which he bears as a writer on photographic topics. No charge is made for the book, and our readers should not delay in supplying themselves, as there is bound to be a large demand for copies.

"A DIARY OF AN UNSUCCESSFUL PHOTOGRAPHER"

Write the Sprague & Hathaway Company, West Somerville, Massachusetts, for a copy of this entertaining little booklet. It will inspire as well as instruct. You cannot read it without feeling that you have been helped, that a new idea has been given you. And here are a few lines from the back pages of the same little booklet, just to show what it is like:

"Benjamin Franklin never added to the solvency of his signature by sitting down in January and figuring that he couldn't do any business till the following October—he laid his plans in January for more business. He did business twelve months in a year."

"And right here is where some men differ—some good men—some photographers. They don't attempt to do business twelve months in a year—they figure on doing business—a big business—in the fall. The rest of the year they take what happens. 'What happens,' never swells a bank account."

"ARTURA RESULTS"

This is the title of a handsome forty-page booklet that is being sent out by the Artura Photo Paper Company of Colum-

bus, Ohio. It is one of the most comprehensive manuals ever issued by a manufacturer of photographic papers, and our readers should not delay in sending for a copy. It is full of good hints for the worker who desires to turn out a superior quality of prints and turn them out with the least amount of waste or expenditure of time. Despite the complete manner in which the booklet covers the ground, it advises that any further information desired will be gladly furnished by the makers if the reader will but write and ask for the desired information.

DALLMEYER LENSES

Burke & James, of Chicago, have recently been appointed the sole wholesale United States agents for the lenses manufactured by J. H. Dallmeyer, Ltd., London. This cover includes their full line, with the exception of the portrait lenses, and includes the following types of the well-known Dallmeyer instruments:

Stigmatic, Rectilinear, Bergheim, Landscape, Wide Angle, Cinematograph, Adon, and Lantern lenses.

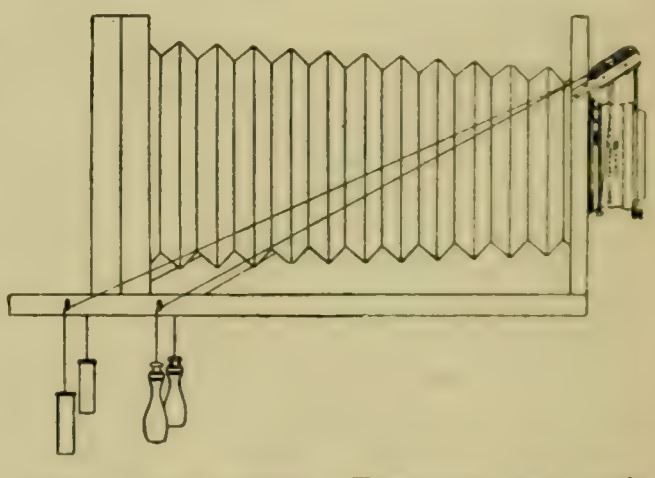
The firm of J. H. Dallmeyer, Ltd., is known throughout the world as the foremost manufacturers of the high-grade photographic lenses. They are one of the oldest established houses, with the highest reputation for excellence of quality, and their products are in general demand. Burke & James have a large stock of these lenses now on hand, and have another shipment on the way, so that they can fill orders from their stock for any lenses manufactured by J. H. Dallmeyer, Ltd., with the exception of their portrait lenses. Furthermore, they have made a general reduction in the list prices of all Dallmeyer lenses, except their portrait lenses, of about twelve and one-half per cent discount from the former American list prices.

ANNOUNCEMENT

The Artura Photo Paper Company, Columbus, Ohio, wish to announce that the Northern Photo Supply Company, of Minneapolis, Minnesota, is now Northwestern distributor for Artura paper and anyone using or desiring to use Artura products, is requested to send orders to this firm for prompt and immediate attention. The above firm carries a complete stock of all grades and sizes, and are in a position to fill all orders for our papers promptly. We dare say that the time is not far distant when developing papers will be universally used, so why not start now while the dark, short days are upon us. Artura paper has a world-wide reputation and is beyond a doubt the best developing paper on the market. It is used by all the leading photographers in the country, and why not you? The Artura Photo Paper Company, Columbus, Ohio.

A NOVEL DIFFUSING ARRANGEMENT

Photographers who aim at artistic portraiture will be interested in the new Cooke portrait lens, Series VI, working at f-5.6, fitted with an ingenious diffusing arrangement. The illustration herewith will give some idea of the appearance of the lens when



fitted to the camera. There are two cords at each side of the camera, near the back. By pulling one of them the photographer can secure any desired amount of diffusion. The other cord operates the iris diaphragm, so that the operator can focus and adjust the diaphragm without having to pass to the front of the camera. The advantage of this will be apparent to all professionals. The lens, fitted with pulleys and cords, sells: thirteen inch, $135.00; sixteen inch, $190.00, and eighteen inch, $220.00. We are again mentioning this appliance for the reason that in doing so last month, the cut was left out, not reaching us in time for insertion. Furthermore, so convenient a piece of mechanism is worthy of a second mention, on account of its utility and value.

"THE BRITISH JOURNAL ALMANAC"

The 1908 edition of this welcome and helpful annual is again on our desk, as large and interesting as ever. Possibly it is larger—certainly not smaller, and as it contains a very exhaustive article on color photography, it is

this year doubly interesting to those who wish to keep posted on what is being done along this line. The department headed "Epitome of Progress" is of more than usual interest, as it seems fuller and more complete than heretofore. Not the least interesting part of the book is the wealth of well-illustrated advertising matter. The volume is stocked by all live dealers, or can be ordered direct from the American agents, George Murphy, Incorporated, 57 East Ninth Street, New York. Cloth binding, $1.00, postage 37 cents; paper covers, 50 cents, postage 27 cents.

A COMPREHENSIVE CATALOGUE

The Northern Photo Supply Company, of Minneapolis, Minnesota, have just gotten out a new and very complete catalogue of photographic supplies. It is a handsome book of nearly two hundred pages, and should be in the hands of every photographer. Professionals and dealers should not fail to mention the fact in writing, as some tempting discounts are made on case and quantity lots. Special prices are also made on complete outfits, and the regular prices are surprisingly low. The catalogue is sent upon receipt, of five two-cent stamps.

"THE PRACTICAL PHOTOGRAPHER"

We are advised by Burke & James, Chicago, that they are the sole distributors of the deservedly popular "Practical Photographer" series of books, edited by F. C. Lambert, A.M., and Thos. Harrison Cummings. These books treat on the various subjects of most interest to the amateur and the professional photographer. They are handsomely bound in a good quality of cover paper, printed on enameled stock, and are replete with beautiful half-tone illustrations, demonstrating each given subject in the most effective manner. The series comprises seventeen different titles, as follows: Pictorial Printing Part 1, Pictorial Printing Part 2, Artificial Light and Night Photography, Photographic Retouching, After Treatment of the Negative, Work with the Hand Camera, Platinotype Printing, Landscape Printing, Architectural Work, Winter Work, Lantern Slide Making, Pictorial Composition, Animal Photography, Gum-bichromate Printing, Floral Photography, Portrait Photography, and Orthochromatic Photography.

The books sell separately at twenty-five cents per copy, or in complete sets, put up in cardboard boxes, at three dollars and seventy-five cents. They make a valuable addition to any photographic library, and at the price quoted, are bound to be in great demand.

HIRSCH & KAISER IN NEW QUARTERS

Hirsch & Kaiser, the progressive and popular local stock house, will remove to their large and commodious quarters, the Hirsch & Kaiser Building, 216 and 218 Post Street, about March first. Their present location, 1757 Fillmore Street, will be retained for some months as a branch store for the convenience of their up-town customers.

JOHN DIEBELS WITH LASKY'S

Mr. Diebels, whose two fine wave studies in the American Salon, shown here before the fire, received so much praise, has been in charge of the photographic finishing department of "Lasky's" for some time. Many of our readers will remember the excellent work turned out in this line by Kirk, Geary & Company, whose finishing department was in Mr. Diebels' charge until they discontinued business, and the same care and attention is assured patrons of the firm with which he is now connected. An excellent dark-room and all conveniences have been provided, and a full line of kodaks and photographic supplies is carried. The address is 1319 Fillmore Street, this city.

THE "AGFA" PRODUCTS

We would like to call the attention of our readers to the superior quality of the developers marketed under the A-G-F-A trade mark by the Berlin Aniline Works, sole United States agents, 213 and 215 Water Street, New York, and carried by all dealers in photographic supplies. The Metol supplies under this mark is known the world over as an article of the highest merit, and their other developers bear as enviable a reputation. Rodinal, in particular, on account of its suitability to tank development, is coming more than ever into demand. The next time that a developer is purchased, see that it bears this well-known trade mark, and you can be assured that no ill results can be laid at its door. There is a satisfaction in using a developer of this kind, that is well worth the trouble of seeing that it is supplied. Give any of their developers a trial and you will be pleased with the results.

THE SECRET
By GEORGE T. POWER

Camera Craft

WITH WHICH IS
INCORPORATED

CAMERA
NOTES

San Francisco, California

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, FEBRUARY, 1908. No. 2

The Amateur and the Lantern

By F. W. Kelsey

Illustrated by the Author

Many amateur photographers, and, perhaps, a few professionals, admire and appreciate good lantern exhibitions, and would gladly apply their own efforts to this extremely interesting branch of photography, were they not deterred by a vaguely defined idea as to the expense involved, the complicated mechanism of the projecting lantern, and the difficulties attending the process of making the slides. Personally, I derive so much pleasure from this branch of photography that, with the kind forbearance of such readers of "Camera Craft" as may understand the subject, I shall endeavor to dispel these ideas from the mind of the novice who may have aspirations in this direction, that they may also find added enjoyment in their photographic work.

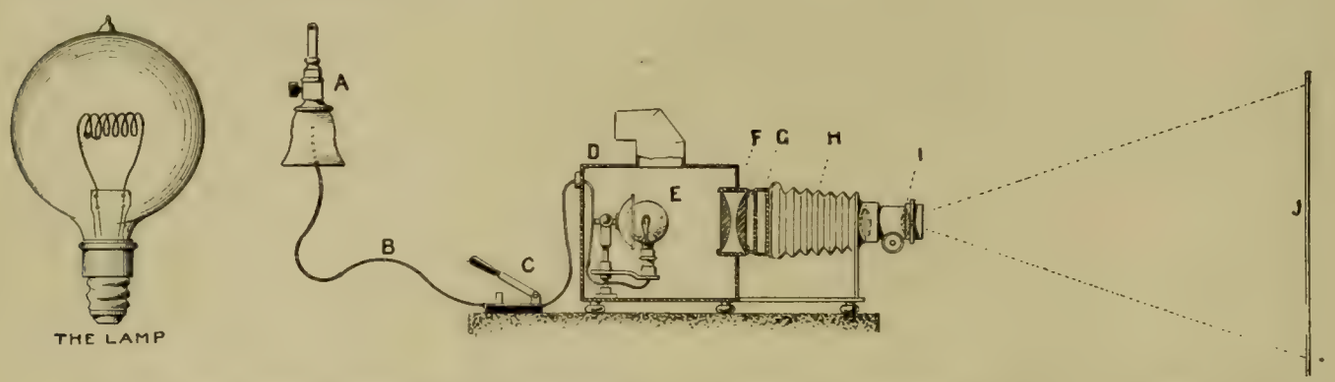
Although many of our high-grade lanterns, having especially fine lenses, accompanied by dissolving devices or other convenient appliances, cost several hundred dollars, very creditable results can be obtained with a comparatively inexpensive outfit. The lantern which I use for home entertainment, together with its curtain, ready for use, cost me less than forty dollars, a sum no greater than many of you have paid for a small hand camera or kodak. The method of operation is very simple, and for the benefit of those who are timid about handling new mechanical combinations, nearly every firm manufacturing lanterns issues a book of instructions which will be found of value and all sufficient in smoothing the road of the beginner.

The illuminant is one of the most prolific sources of apprehension to the novice, but at the present time, when most dwellings are lighted by electricity, annoyance from that source is reduced to the minimum. My home is wired for a one hundred and ten volt, alternating current, and the lamp for the lantern is of one hundred candlepower, made especially for the purpose, with the filament in the form of a spiral, as shown on the next page. This is connected with the lamp socket of the chandelier by an extension cord. For convenience and safety, this cord is attached to an ordinary lever

switch, located on the base upon which the lantern rests, which allows the operator to turn the current on or off, at will.

For the benefit of those who do not understand the mechanism of a lantern, I will say that, with the addition of the condensing lens, it is nothing more nor less than a reversed camera, the slide taking the place of the sensitive plate or film; the image being projected from the slide outward, through the lens, upon the screen.

This may be more readily understood by means of the accompanying rough sectional drawing:



A is the lamp socket in chandelier, or wall bracket; B is the extension cord; C, the switch; D, lantern body, generally made of Russia iron, used to prevent the room from being filled by the strong projecting light, thus reducing the strength of the image upon the screen. E is the projecting light; F, condensing lens, for collecting and condensing the light before it passes out through the slide; G, space for slide carrier, which is simply a frame to hold the slide. H is the bellows, for adjusting focus of projecting lens; I, the projecting lens, generally provided with rack and pinion for finer adjustment, and J, the screen. This last may be any smooth, white surface, as a hard-finished wall, or a curtain of heavy, bleached muslin, free from wrinkles. My own, which I find to be a very good one, is ten feet square, and of white oil cloth, using the cloth side for the picture, as the glossy surface causes a reflection. This is mounted on a Hartshorn curtain roller, and is rolled up out of the way when not in use.

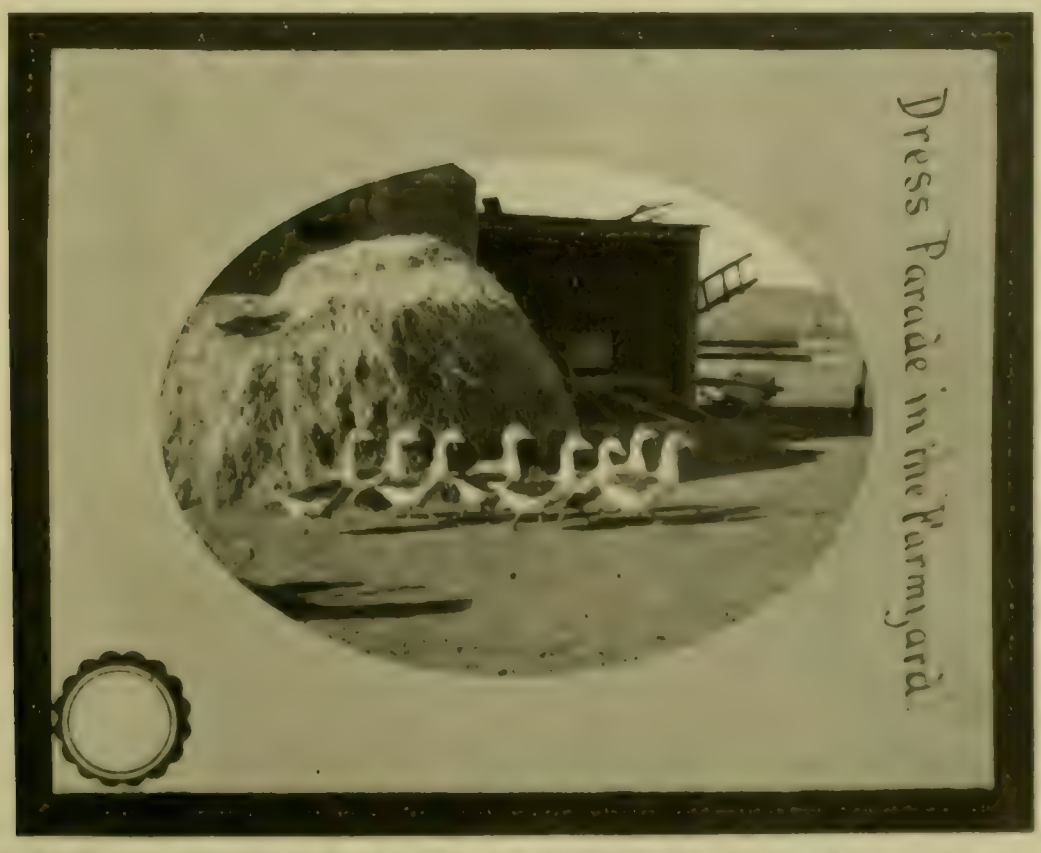
To produce the best results, the lantern should be placed, as nearly as convenient, on a level with the center of the curtain. This is easily accomplished by placing a good-sized box upon a table, thus forming a firm base upon which to rest the lantern. The beginner will sometimes experience some difficulty in producing on the screen an evenly-lighted field, free from dark blotches or shadows. This is generally due to the light not being properly centered, and a little careful adjustment with reference to the condensers, considering both position and distance, will almost always obviate the trouble.

When the light has been properly adjusted and all other lights in the room extinguished, we are ready to show the pictures. It is hardly necessary to say that the slide is inserted in the carrier up-side down, so as to appear in the proper position on the screen, as the image is inverted by passing through the lens. The size of the image upon the screen will depend upon its distance from the lantern. It will also be found that the larger the picture, the weaker will be the light, and vice versa.

We will now pass to the making of the slide: In this connection, I will say that almost any professional or amateur photographer who delights in making a good negative, will also enjoy making a good lantern slide, which is only a positive, made on a specially-prepared plate. These plates are 3¼x4, and are made by most of the reputable plate manufacturers. They differ from ordinary negative plates in two particulars, namely, that the emulsion is much thinner, and not so rapid. This allows the plate to be developed in a stronger light than the ordinary negative, and gives the operator a better opportunity to watch the progress of development.

The negative best calculated to produce a good slide is clear and sharp, having plenty of detail and a considerable degree of contrast. There are two ways of exposing the plate. The first, known as the contact method, in which one works entirely in the dark room, or in a darkened living room, with a ruby or dark orange lamp. The negative to be used is put in a printing frame, and a carefully-dusted lantern slide plate placed upon it, the same as we place a piece of velox or printing-out paper, the two emulsion surfaces being in contact. We then make the exposure by holding at a given distance, say, two feet, from some artificial light. An ordinary negative at this distance will require, perhaps, five seconds' exposure. This method of exposure is only desirable when negative from which we wish to make the slide is small, say, a Brownie, or a 3¼x4¼ plate, or when a portion of a larger plate contains a well-arranged picture, complete within itself, and suitable in size for a slide. The following picture represents a slide made by contact from a 3A Folding Pocket Kodak film, with the undesirable portions of the plate matted out:

I have made many interesting slides by contact from the film of the little Eastman's Pocket Kodak. These films are only 1¼x2 inches, but when



DRESS PARADE IN THE FARMYARD Made by contact from [illegible] Film

the subjects and distance are well selected, often make a snappy slide which produces a very pleasing result.

The second method is known as the reduction method and necessitates the use of a camera. The one which I use is a 4x5 long focus Premo with a 3¼x4 kit fitted to one of the plate-holders, to accommodate a lantern plate. The lower part of the window of any workroom I have fitted with screen of half-inch redwood, held in place by two simple buttons. Near the middle of this there is an opening supplied with buttons to hold an 8x10 kit or negative and fitted with kits to hold 6½x8½, 5x8, 5x7 and 4x5 negatives. It is well to cover the outside of this opening with ground glass or white oiled paper, to insure the even lighting of the negative.

The negative to be used is placed in the proper sized kit and fastened before the opening by means of the buttons or grooves prepared for it, with

THE SALUTE Reduced from a 4x5 Negative

the film side of the negative toward the operator. A table of suitable height is the most satisfactory support for the camera, and to insure its being square with the window, a straight-edge can be nailed on the top of the table, at right angles to the window, at a point that will bring the camera lens opposite the middle of the 8x10 opening in the screen. The camera being set upon the table against the straight-edge, can be slid back and forth, until the image on the ground glass is the right size for the slide, namely, 3¼x4, and a space of that size may be marked on the ground glass to assist in determining both the size and position of the image. After carefully focusing, the plate-holder is inserted and the exposure made.

With good strong daylight outside and the diaphragm indicator at sixty, an average negative may need about ten seconds' exposure. The devel-

opment is the same as that of an ordinary negative, although a weaker developer may be used and I recommend the addition of a goodly amount of bromide and potassium, which adds a warm tone to the slide that is pleasing to the eye.

The plate clears in the fixer in much less time than the ordinary negative plate, and after clearing and washing, great care should be exercised to keep it free from all dust, lint, finger marks, and the like, and when dried the film slide should never be handled.

The positive plate finished the next thing is the binding or making-up process. The developed picture is often so grouped as not to produce a pleasing and well-balanced effect when shown as a whole, and to obviate this trouble one must resort to a mask or mat, preferably of dark paper, with an opening of the size and form best adapted to the particular subject. A very good assortment of these, comprising different sized ovals, circles, squares, and the like, can be bought from the photographic supply house, but I find it convenient to keep on hand a supply of paper, one side of which is white, suitable to be written upon with a pen, and the other a glossy black or brown. This I cut to a size, say one-sixteenth of an inch smaller each way than the plate, and with a sharp knife, by the aid of a straight-edged ruler, cut an opening to suit my picture, which should naturally be located as near as possible in the center of the slide.

The number of the slide, the name of the subject and a few words of description are generally written on the end margin of the mask, on the white side of the paper, and the other side placed in contact with the film side of the plate. The whole is then covered with a carefully cleaned cover glass,

of the same size as the plate, great care being taken to see that all dust is removed before closing it up, a flat camel's hair brush being a very convenient form of duster.

The two glasses are then bound together by means of a strip of gummed paper, preferably black, a convenient form known as the "Ideal Binding Strip" being sold by dealers. Last of all, a little gummed label, known as a "thumb tag," is placed on the lower left-hand corner and the slide is complete. The finished slide should have the general arrangement of the accompanying sketch.

Much valuable advice concerning the details of slide-making can be had by reading number nine, volume one, of the "Photo Miniature," while in this, as in the manipulation of the lantern, much valuable knowledge is attained by one's own experience and observation, and a little inventive genius and originality of ideas will often supply conveniences which one would scarcely expect to purchase. The illustrations herewith representing lantern slides may offer some suggestions to the beginner about matting out the undesirable portions of larger pictures to produce good lantern effects.

The Law of Progress in Art

The course of artistic or other discovery appears to be very much the same as the succession of processes followed by an artist in the construction of a single picture, only that in the great field of human progress the work is accomplished by the race, and taken up successively at its different stages by relays of innumerable workers.

The construction of a picture is usually effected very much as follows: First, a rude charcoal sketch to get things in their places, and to indicate the division of the future labor. This first sketch is rude to such a degree that persons not conversant with art would not know what was meant by it, most of the curves being represented by angles and straight lines, even by the best figure painters; but, however rude, it is extremely useful as a marking out of boundaries.

Then comes a careful outline of the principal of these boundaries; that is, the lines enclosing the great masses. Then within these lines the dead color is roughly laid—roughly, though with consummate foresight. Then comes a second painting in detail, then a third in still minuter detail, and, with some men, even a fourth, fifth and sixth, of detail within detail, film over film, till the work has reached the highest excellence possible to the painter.

Now, the history of human art in its great relations to the whole race is merely a repetition of this process on a vast scale, extending its minor processes through ages, and employing not merely the fingers of one workman, but of all the best workmen in the world, generation after generation.—Philip Gilbert Hamerton.

Pictorial Photography and the Reflex Camera

By H. D'Arcy Power, M. D.

Illustrated by the Author

The reflex camera has long been with us, and enthusiastic photographers with long pockets and strong enough to sustain heavy burdens are familiar with its use. These are manifold and obvious facts, but just as the ability of the telephoto to take distant objects at great magnification obscured its greater value to photograph near objects without distortion, so the ability of the reflex to instantly catch the passing event outweighed all other uses, and this type of camera became the exclusive possession of the press photographer who has thus captured for the delectation of future ages the beauty of the Rooseveldian smile and the seraphic physiognomy of the football team in chivalrous contest. The writer has long used photography for many purposes, scientific and esthetic, but the illustrations accompanying advertisements of reflex cameras never appealed to him, and it is probable he would still be oblivious of its best uses had not one of these remarkable little Premograph cameras recently fallen into his hands. Here was a camera costing ten dollars instead of a hundred or two, and weighing as many ounces as the average reflex weighs pounds.

The first impression was that I was dealing with a toy, possibly a useless one. I had knowledge of a noisy and fatally vibrating shutter, and other defects of the early types of reflex cameras, and fully expected them present in such a ridiculously cheap instrument. However, I proceeded to do the usual things—took the ferry boat at full steam and at right angles, stalked persons in various attitudes in the back yard, and bertillioned the neighbor's baby. To my surprise they all came out sharp, and bore testimony to a practical mechanism. But I have no abiding interest in ferry boats, cats or babies, and the camera would have joined company with other photographic lumber had chance not taken me for a walk over the hills and through a wood. I have two dominant photographic interests; the photographing of diseased humanity, dead or alive, whole or in parts, and the making of pictures. As my walk was to a hospital, I took the Premograph with me to serve science, but going through the wood I opened it and looking into the mirror as I walked, found that I possessed a handmaiden to art of superlative value.

I have a fair knowledge of the principles of art and am trained to look for pictorial compositions. I was under the impression that if I walked through a lane half a mile long, looking for subjects, I would miss little worth taking. Now I know better, and my teacher is the reflex camera. My eye would have revealed perhaps two good compositions in that walk: the Premograph brought to my notice a dozen. As I walked along, my eye fixed on the shifting panorama that traversed the mirror, lines of beauty appeared and disappeared; contrasting masses revealed themselves in their

A GROUP OF PREMOGRAPHS

photographic and not the deceiving visual value. Every step enforced the truth that the eye and the camera record vastly different impressions. To the eye the distance is everything. If it have any pictorial characters it absorbs the whole attention. The foreground disappears, the mid-distance unregarded; but to the lens it is but a fraction of the picture plane; two blades of grass in the foreground reduce it to insignificance. On the other hand, the eye, even when trained, has difficulty in perceiving the compositional value of foreground lines and masses. The reason is physiological and not artistic. The eye can not be stopped down to increase the depth of focus; each object in nearby planes must be viewed separately, and so the effect of their combination is lost; but these same foreground lines and masses brought to a common focus in the mirror of the camera immediately reveal any pictorial qualities they possess. And so it happens that he who walks along a country lane or through a wood with his eye on the mirror of a reflex camera, scanning both foreground and distance, will discover pictures unseen by the best trained eyes, and the hunt for pictorial subjects is proportionately simplified. It may be said that the same power is resident in an ordinary camera having a mirror hinged to the ground glass (I used such an arrangement for years), but it is difficult to comfortably carry such an apparatus and rapidly change the position of the camera to alter the relation of a line or mass, something which the carrier of a reflex can do instantly and almost automatically. My experience has convinced me that the universal camera of the future will be a reflex. While I think that its greatest triumphs will be in extending the

ANOTHER GROUP OF PREMOGRAPHS

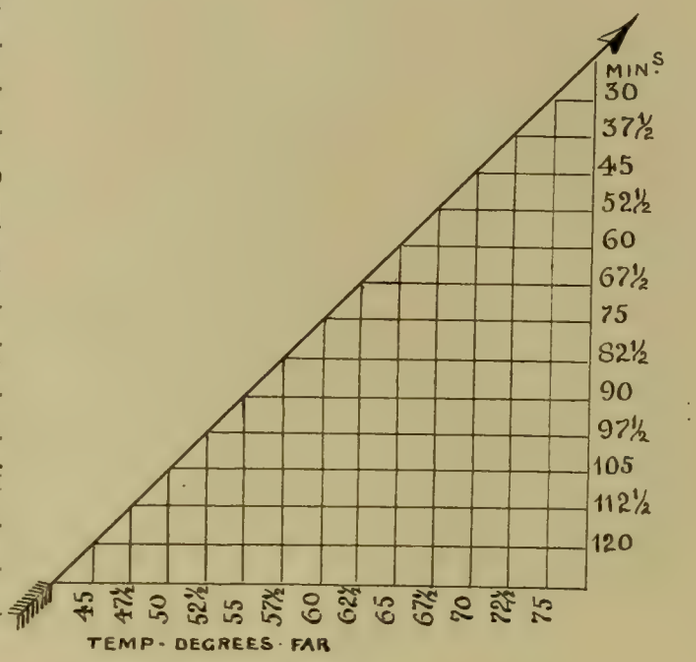
field of pictorial work, it can easily be constructed to serve all purposes. For all round work the little instrument to which I have referred in this article is excellent. It is very light, it is very simple to use, it makes a lantern plate by direct printing, and gives good enlargements. It takes time exposures, and the shutter works fast enough for moving objects and detective work. Its chief fault is the limitations of the lens, which is a single fixed focus achromatic. This means that good light is a necessity. Personally, I had no difficulty in overcoming this defect. I bought a Bausch & Lomb, six-inch, Rectographic lens for $5.00, mounted it in a focusing tube, and thus am able to work at f-8, and at any distance. To this I have added a lenshood with a slot in front, in which I can drop a color screen, or a plus or minus lens. With the first I can focus objects quite close to the camera, such as flowers or living insects; by adding a one diopter minus lens, I can utilize the draw of the tube and get a little larger distant view on the plate. This little arrangement has usurped the place of my old favorite, and is now always with me. It meets more requirements than any other camera I can obtain, and while thus fulfilling the needs of an advanced worker, it is the simplest thing the beginner can use. Being thus cheap and good I cannot understand why the makers do not make it better. Why not give us a twenty dollar reflex with a focusing rectilinear as well as a ten dollar camera with the limitations of a fixed focus lens? Until they do, it is a paying proposition to do as I have done and change the four and a half inch original for a six inch compound in a focusing tube. But even with the single lens it is an instrument capable of doing a wide range of excellent work.

Development Table

By Samuel Purnell

I have often been asked for a table showing the time of tank development for any given practicable temperature, when the developer is standard; as it is not always convenient to maintain the specified temperature of sixty-five degrees Fahrenheit.

Referring to my article on "Flat Tank Development" in the last issue, I submit the adjoining diagram, which is based on experiments made with rigid exactness to insure results that may be relied upon as correct. The diagram shows the time in minutes required for development, when using any standard developer at any temperature between forty-five and seventy-five degrees Fahrenheit; if with approximately correct exposure, sixty minutes at sixty-five degrees Fahrenheit gives a satisfactory negative.



To use the diagram: Find the temperature in degrees at bottom of diagram, follow the vertical line till it joins the diagonal arrow, then follow the intersecting horizontal line to the right margin, where the adjacent figures show the time of development in minutes.

Art Principles

Modern artists the world over, in defining art in the simplest words, agree that "Art is arrangement." We may add that its study is not a matter of asking for recipes from this or that school, this or that national or racial it is the acquiring of certain simple principles that underlie all art of all times. By applying these principles, growth comes, insuring insight into art, this or that period, classical, renaissance or modern. On the contrary, more complex methods of reasoning, and bringing the power to execute difficult problems.

In art we are dealing strictly with the mental and emotional faculties more or less developed in each individual. These faculties respond when, on a flat surface such as paper, we find certain emotional and intellectual records of things we have seen or experienced in nature. And it is the manner in which these records are made that affects us as art. Every stroke, touch, spot, and patch of light and dark governed by the mind and hand of the artist interprets first an emotion, second a meaning.—Otto Walter Beck.

My Outfit on a European Trip

By Dr. Gustav Eisen

With Illustrations by the Author

THE HYPERGON CAMERA
Showing lens in normal position with film pack adapter slightly raised

"You must agree with me," said a friend of mine, who is himself an experienced amateur with the camera, "that when it comes to serious work, nothing but plates will do." The remark was not flattering to my own judgment—all the ninety-odd bromide enlargements lately exhibited in the California Camera Club rooms were made from negatives on films, and I had expected that they, if nothing else, would at least be considered "serious." The editor of "Camera Craft," who happened to know of our conversation, felt interested in the "serious" aspect of my efforts, and requested me to write out for his journal my experiences with films and lenses during my late journeyings across the pond.

I had gathered some experience on a previous trip to the Mediterranean, had experienced failures as well as some successes, and was anxious to prepare properly for my coming work. I had noticed that in taking cathedrals and towers the tips of the latter were always cut off just a little below the apex. This may not be a fault in an artistic sense, but in lantern slides illustrating architectural features it certainly detracts from the value of the slides. Then, what about steep streets and the interior of churches? The foreground with its uninteresting pavements is certainly worth much less than the high doorways and ornamented ceilings. I decided to add a wide-angle lens to my outfit, and purchased a Hypergon of an angle of one hundred and thirty-five degrees, large enough to cover a plate 6½x8½. It was then that my trouble began. I bought a new folding

THE HYPERGON CAMERA
Showing lens raised to upper left corner by means of rising and shifting front

camera with all the latest improvements and a special adapter for the wide-angle lens. It did not take many days to find out that the camera and the lens were as unsuited to each other as they possibly could be. The bellows cut off the angle and my lens was almost worthless.

The firm that sold me the lens came to my rescue, and after much study and deliberation a special camera was constructed without bellows; just a simple box about three and one-half inches wide, with front movable in two directions. The back was fitted for a film pack and plates. We then, three of us, began pilgrimages to Mt. Tamalpais, Sunday after Sunday, and spoiled more films and more plates than I did in all my previous years put together. I will say nothing of the leakage of light into the film pack, and the terrible ordeal of working the bulb which drives the windmill in front of the lens. The greatest trouble was that on seventy-five per cent of the negatives there was a dark circle the size of a fifty-cent piece, which, of course, printed clear white. On my way to Europe, I interviewed the Goerz people in New York, and for several days the whole establishment was experimenting with the Hypergon, each individual giving all the gratuitous advice of which he was capable. The end was that a general verdict was given that I was unskillful with the "windmill" arrangement, and the manager advised me to take it off. This I did, and started for the Mediterranean, happy and content with all I had learned. It did not take long, however, before I discovered that, do what I might, the dark circle remained, and spoiled my negatives almost as fast as I could take them. I discovered one thing, however: the circle only appeared when the camera was held at a certain angle to the light. When, after a year and three months' tribulations, I returned to New York, I made a visit to the Hypergon people and explained my difficulties. The clerk told me that I did not know how to handle the lens, and that he had many friends who were experts in management of the Hypergon. The last word I heard, as I passed out of the door, was that the fault was with my having taken off the "windmill."

The solution of the mystery was not solved until I returned to San Francisco, when, through the efforts of Mr. Torka, who took up the study of the lens, relief was found. He listened carefully to my explanations and experiences, and in a few days he discovered that the defect in the film was due to the reflection of light from the outside casing of the lens. He covered this circular casing with velvet, and by so doing changed the Hypergon into the finest wide-angled lens made. As the camera now stands it is simply a box four inches wide, working at a fixed focus. The "windmill" is assigned to the scrap barrel; there are no bellows; the peculiar and ingenious shutter which was four times as wide as the camera, has long ago been returned to the factory, and in its place is simply a cap. The camera works to perfection. There is no swing back, as none is needed; in fact, no focussing is required. The front board is always raised to its highest capacity when making an exposure, and the excessive foreground is thus cut off. Incidentally I will state that this cannot be done with the regular wide-angle lenses of the same focal length. If you raise them to

TEMPLE OF AUGUSTUS, POLA, AUSTRIA
By DR. GUSTAV EISEN

YARD OF THE ZOOLOGICAL STATION IN TRIESTE, AUSTRIA

the same extent the top of your 5x7 negative will be circular and you gain nothing.

I will now explain the five photographs illustrating this article. The Amphitheater in Pola has never before been taken from this point of view. It is situated on the hill, and with my other wide-angle lens a part of the top was left out of the field. The picture reproduced herewith is from an exposure of one-half second with the Hypergon at f-32. In the yard of the Biological Station in Trieste, the beam overhead was situated eight feet from the camera. It was given one second exposure at f-32. With my other wide-angle lens just about one-third of the height was left out. And then the Narrow Street in Algiers! With my ordinary lens the negative showed the door to the left, and nothing above. With my other wide-angle, one-half of the height was cut off. Only the Hypergon, raised to its utmost limit, took in the whole wonderful street. Two seconds' exposure with f-32 stop was given. This photograph could not possibly have been taken with any other lens, except from an upper window, of course; but then the artistic merit of the view would have been utterly lacking. Next we come to the Temple of Augustus, in Pola. It has never before been photographed from the level of the street. The two persons standing to the left, by the house, show that quick work can be done with this lens. I simply removed and replaced the cap as quickly as I could, the exposure being about one-half a second, using f-32 stop. The camera was placed about forty feet from the temple and my other wide-angle lens cut off the top of the beautiful gable of the Anta. The interior of the Biological Laborator in Rovigno is a sample of an

A NARROW STREET, ALGIERS

ROMAN AMPHITHEATER AT POLA, AUSTRIA

interior taken with the Hypergon working at f-32, four minutes' exposure. The foreground was cut off by raising the lens. Some who have had little experience with wide-angle lenses claim that they greatly distort the perspective. This is not true of the Hypergon. The unusual perspective of the Temple of Augustus is not due to a distortion, but simply to the

INTERIOR BIOLOGICAL LABORATORY RAVIGNO, AUSTRIA

fact that we are not able to take in a building of this size, except by raising our head. Enlargements of this negative to 14x17 or more, show us at once that the negative is perfect as far as perspective. A very slight movement of the head, up and down, changes entirely our conception of the perspective.

The Aquarium in Naples is an enormous building, about four hundred and fifty feet in length. It is surrounded by trees on three sides, and cannot on that account be photographed. I tried with a wide-angle lens, one of one hundred degrees, but failed to include the top of the near corner; my Hypergon more than covered the building. It had one-half second exposure at f-32.

THE AQUARIUM, NAPLES

My other outfit consisted of a Goerz, series III, with a focus of four and three-fourths inches, and a Bausch and Lomb Zeiss, series II, for a 5x7 plate. When I started on my trip I took along a folding pocket camera for roll film 3¼x4¼. It proved useless for taking artistic pictures, and while in Berlin I discarded it for a Folding Pocket Rolda, made by the late Ingemar Anschutz. My shutter to both the last-mentioned lenses was the Koilos, which I, up to that time, considered the best shutter made. As regards films or plate, I have little to say. Those who prefer plates will do so in spite of anything I may say. If I had used plates I would certainly have brought home less than four hundred negatives, instead of twelve hundred, and I would have in all probability been still developing

them. Before I would have a chance to put in my plate holder, my most interesting views would have been things of the past. With plates in my outfit I would have only been able to visit one-half of the countries that I did, my trunks would probably have been smashed up, my negatives held for duty by Uncle Sam's industrious custom house officers, and, finally, but not the least, I would probably have been crippled by carrying the heavy load of fifteen to twenty plate holders in my pockets. Summing it all up, I would have had to pay dearly for the honor of being classed by my friends as a "serious" amateur.

Nearly all my views of street scenes and landscapes were taken with a wide-open lens, and as regards street scenes, generally without a tripod. My landscapes were all taken with the camera on a tripod; not with one of the folding kind, but with one of those despised yellow canes, made by the Eastman Kodak Company years ago, and which opens in a few seconds and is ready without drawing out any legs. When not in actual use as a tripod, it fills its place as a cane for driving away strange canines. A small, very small, collapsible, brass pocket tripod is useful in taking views in the museums or in Pompeii, or the Roman Forum and Palatin, where tripods are forbidden, but where five centimes paid to the guardians will facilitate matters, provided they do not attract any undue attention.

How do I develop? Possibly most amateurs have their own special methods. I do not intend to convince any one, but simply state facts. I save up my films until I have a dozen or more rolls of twelve. Then I buy three cheap buckets which I afterwards give away. In one I dissolve enough pyro powders—Eastman's or Lumiere's will do—to make half a gallon or more of developer. The next I fill with hypo solution, and the third with alum water. I unroll the film spool, and after wetting the films in a washbowl, I fold the film on itself so that one-half of the film's back rests against the other half. I then stick a safety pin through the two ends and simply dip the film up and down in the developer for six or seven minutes. Those films which are over-exposed I reduce afterwards; those that are under-exposed would not have been specially benefited by having been developed one by one, as many consider the only proper way.

As to color filters, I always use a yellow filter whenever I can. Those who claim that they have as much success without filters as with, no doubt tell the truth, but their negatives cannot and do not show the proper color values, and their skies certainly never have any cirrus clouds to show. The screens of yellow glass should retard the exposure not more than ten times, and preferably only five times. The glass should be tested by a spectroscope, and a trifle of the faintest blue rays should be left; otherwise, your skies will look like those represented in some catalogues of lenses, where they look like broken bales of cotton scattered about in order to terrify the natives and warn the intending purchaser to seek shelter in some cave before the skies drop on his head

A Child and a Camera

By M. Freeman

Illustrated by the Author

A child and a camera are a happy combination. To be sure, there are a few exceptions to this general rule; but children are certainly preferable to adults as subjects for photography.

My experience has been that children are more photographically inclined between the ages of three and six years. To photograph a babe—a wee bit of humanity, as it were—toothless, thoughtless and speechless, requires almost superhuman qualities, of which patience is the most essential. Activity, not only of mind, but also of body, is absolutely necessary in getting the desired results. Consequently, the tripod has its limitations; and I have found it is better to "snap as snap can," whenever place, light and subject are feasible. The results, if satisfactory, are due more to luck, if the expression will be permitted, than to skill; as in "Fore" and in "Aft."

FORE— A FOOT TOO LARGE AND AFT

Sometimes one is fortunate with a tripod. "A Foot Too Large," proves that this subject had developed a very happy disposition in his six months' existence, and showed no irritability against a tripod. In the end, tripod pictures always pay for the extra time and trouble.

With children who have attained the inquisitive, talkative age, kodak work is a "thing of beauty and a joy forever." It is the age of unconscious posing. The paramount reason why "grown ups" fail to get satisfactory photographic results, is that they are conscious of their good, bad or indifferent looks, as the case may be, while they are before the camera. There are endeavors to show dimples and efforts to make a large mouth assume a rosebud size. A big nose, too, has its drawbacks when exposed to the sensitive eye of the kodak. In fact, if a picture does not hide defects or enhance charms, it is not due to the efforts of the poser, for nearly every adult desires a picture to be a trifle—if not more—flattering. Alas! That

"cameras never lie." However, retouching will never become a lost art, which is the only consolation for cameric veracity. A child has the great advantage of being unconscious of personal shortcomings or attractive features. Occasionally one does find a diminutive beauty whose vanity is uppermost in mind; but such a subject is best passed by.

At the ages of from three to six years, children live and play in the realm of fancy; and, if the camera enthusiast can assume this imaginative frame of mind, he or she wins the interest and confidence of every child. At this period a child looks upon having his picture taken as a great lark, the elements of duty and gratification of vanity being absent. He does not demand his best suit of clothes; in fact, the more grotesque his costume, the better is he pleased Often there is a rivalry as to which one shall be arrayed in the most ragged or absurd clothing. Upon second thought, I shall restrict that statement to my experiences in photographing small boys; for I recall a very warm afternoon, two maidens and one dainty parasol, wherein neither age nor dignity of the subjects claimed precedence, but strength alone determined who should hold the fascinating adornment.

In getting the most natural and, therefore, the best results, I have found that the child must enter into the fun with you, for it always must play, never work; a dislike of the latter develops at an extremely early age. It

POTTED PLANTS TWO SUNFLOWERS DARK REFLECTIONS

is also well if the child does not suspect that you are especially anxious for the picture. Treat the whole process as play, weave in a story, press the button, and you have what you want—"Two Sunflowers." The expressions show that neither distaste of dusty vines nor fear of caterpillars obliterated the delight of being a "really and truly sunflower." "Potted Plants" would have been tedious work, standing in the sun and balancing one's self in a barrel; but, when one was transformed into a wondrous tree, the ordeal was forgotten. That a bent pin, a string, and a pole often serve photographers, is seen in "Dark Reflections." A time exposure of indefinite length could have been secured.

One cannot be too brisk in getting preliminaries ready for a picture. The slightest ennui on the part of the subject-matter spoils all. I have watched many fond mothers fuss and delay until the child was worn out. The inevitable follows—rebellion drives out spontaneity. It is difficult to

A YARD OF WATERMELONS
LOOK PLEASANT
A MOMENT OF SUSPENSE

FAREWELL TO 1906
GOOD MEASURE

MY LADY'S COACH
VIRGIL—CHILD OF NATURE
VANITY FAIR

keep a child's attention away from the camera. The moment the camera becomes the center of attraction, his eyes are glued to the shutter, awaiting "the birdie"; a blank, staring look monopolizes the subject, and the frantic photographer should at once fold his tripod and silently steal away. Such was my experience in "Look Pleasant" and "Virgil—Child of Nature." I did not have sufficient courage to leave my victims, as it was their first experience before the cameric footlights. Nothing in my power could divert their attention from the eagle eye of the kodak; so, in final despair, I had to repeat the threadbare "Look Pleasant" and accept the smiling results. "Virgil," true to his illustrious predecessor in imagination, insisted that the picture should drop from the camera ready for framing, and refused to be resigned to waiting patiently twenty-four hours for such a trivial matter.

Promised rewards make "being took" all work and no play and Jack a very stupid poser. Not so if the reward is edible. In a "Yard of Watermelons" I attempted to portray on a 4x5 plate an eleven-foot fence, eleven boys, and eleven slices of watermelon. It was like getting order out of chaos. There was so much animation present that I expected nothing less than broken bones or a fusillade of rinds. The picture lacks only the wild cries from eleven pairs of healthy lungs, to be a true copy of the original. "In Vanity Fair" and "Farewell to 1906" there is such excellent material that failure would have been unpardonable. "A Moment of Suspense" belongs to the genre class that needs no elucidation.

The Fixing of Developing Papers

By Wm. Thunen

Since the introduction of development papers, a great deal has been written, from time to time, concerning their proper fixation. But in all the articles on the subject that have come to my notice, the principal cause of fixing bath troubles has been overlooked by the writers. If the water adhering to each print as it goes into the hypo solution would immediately diffuse itself through the fixing bath, there would not be so many imperfectly fixed prints as there are. But it is not natural for water and hypo solution, nor water and most other solutions, to act that way.

In making up solutions I make it a practice to but half fill the bottle with water in order that plenty of rattle and motion may assist in the rapid dissolving of the chemicals, adding the remainder of the water and giving a final shake after the chemicals are dissolved. Recently my developer balked badly, although it was carefully compounded according to the paper manufacturer's formula. I was puzzled to account for it until it occurred to me that I must have forgotten to give the bottle the final shake in making up the solution. Examination showed concentrated developing solution in the bottom of the bottle, and apparently nearly pure water in the upper part. The water and the solution had not combined, although they had been together for a week. This is a slight digression from the subject, but it illustrates the principle that I want to demonstrate. Hypo solution or almost any other kind of solution would act the same way. You must get the water adhering to the print mixed with the hypo solution, or it will protect the emulsion from the action of the hypo, somewhat like a coat of varnish.

After developing and rinsing in clean water, hold the print for a couple of seconds over the tray of water, with one corner down, in order to drain off as much water as possible, and place face down in the fixing bath. Move it about for a few seconds to get the adhering water well diffused into the fixing bath, and then let it take care of itself. A strip of thin wood about two inches wide and eighteen inches long, with the corners and edges rounded off, is the proper implement to use. If the print be placed face up, the slight curling is apt to project a corner out of the bath, and the developer remaining in the emulsion will darken it the same as if it were left in the developer for a longer period. Besides, the water on the under side of a print is much less likely to remain undisturbed than the water on the upper side; hence the under side should be the face of the print. Moreover, the paper of the print will protect the emulsion from the action of the light during fixation if fixing should be slow.

Before taking the exposed sheet of paper out of the printing frame, I always mark on the back of the sheet the time of day, as 8:05, 8:15, 8:20, etc., using a soft lead pencil for the purpose. I can thus easily tell within a few minutes how long each print has been in the bath. With a quart

bottle full of fixer in a 10x12 tray, eight or ten 5x8 prints will not be crowded over much. When the tray begins to get crowded a little, five or six of the prints that have been in longest may be removed and placed in a tray of clean water. The other prints are not removed until four or five more have been developed and placed in the fixer. In this way each print gets at least half an hour in the fixing bath without taking any more of the printer's time than would be required to fix them ten or fifteen minutes, except an extra fifteen minutes at the end to give the last print its full quota of time. This time quickly passes while you are cleaning things up, replacing negatives in their proper places, and the like. Ten minutes may perhaps fix a print, but half an hour will certainly do so. A prolonged stay in the hypo bath will do no harm unless the bath is very much warmer than it ought to be, in which case it would show a slight tendency to tone the prints to sepia. The shadows and half-tones are not reduced in the slightest degree, and absolutely thorough fixing is assured. If the prints are then carefully washed by hand, instead of trusting to the faucet to change the water and keep the prints moving, there will be no stains of any description, and the prints will not fade nor change color.

On a slate which hangs in my printing room, I make a note of how many prints are fixed each time I print. When the last print is fixed the hypo is returned to the bottle, to be used again. When the solution has fixed about fifty 5x8 prints, or their equivalent of other sizes, the bath is discarded and a new one made up. This applies, of course, only to the acid-alum bath, which is cheap if you buy it ready-made, or easy to compound if you desire. It is so much better in many respects than plain hypo, that the latter is hardly to be considered.

Our Work

A bit of work of the highest quality is a key to a man's life, because it is the product of that life and it brings to light that which is hidden in the man as truly as the flower lays bare to the sun that which was folded in the seed. What a man does is, therefore, an authentic revelation of what he is and by their works men are fairly and rightly judged.—Hamilton Wright Mabie.

The Study of Art

It is just as allowable to investigate a work of art as it is to investigate a plant or an animal. There is no more need of discarding experience in the first case than in the second; the entire process consists in discovering, by numerous comparisons and progressive eliminations, traits common to all works of art, and, at the same time, distinctive traits, by which works of art are separated from other productions of the human intellect.—H. Taine.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, FEBRUARY, 1908. No. 2

Our Competitions

This month we will not name any new subjects for the future competitions. As already announced, the subjects for the February and following five competitions are street scenes with figures, home portraits of an adult, snow scenes, flash light pictures, animal studies, and genre subjects. The first mentioned closes the last day of February, and following ones the last days of the five following months in their order. For the benefit of our new readers we would advise that the first prize will be a good example of the work of a master in the line indicated by the subject for the month; the second prize will be the picture winning first prize, and so on down the list, as far down the list as we find the pictures worthy of criticism by our judges. We will try and send each contestant, winning mention, a brief criticism of his own picture, together with an explanation of why the judges considered the picture sent him as next highest in the list, a little better than his own. The closing date of the first or January competition is not yet here at this writing, but we will try and give a full report in the next or March issue.

The Autochrome Process of Color Photography

The photographer, who today is so critical that a negative rarely meets with his complete and full approval, requires but little exercise of his memory to recall the moments of exultation and satisfaction afforded at the beginning of his career by the discovery of a real image upon the plate he had exposed and subjected to the mysterious powers of the developing solutions. The first image was to him well worth, in both time and trouble, all that the complete outfit cost. Despite the extravagant eulogizing that many of our leading workers have bestowed upon the Autochrome process, the reported marvelous prices offered for examples of their skill, and the effusive praise lavished upon the results by the lay press, we are quite certain that all this is but another case of the first glad sense of gratification this time at finding an image in colors reproduced upon the plate. The results, with certain classes of subjects, subjects in which widely varying planes and considerable intervening atmosphere do not offer too extended

a range of illumination, subjects in which the juxtaposition of colors not too varying in actinicity is avoided, are often quite pleasing, if not examined too closely. While we have given considerable space in our pages to the subject as investigated by contributors whose opinions are well worthy of careful consideration, we have all along refrained from expressing an enthusiasm which we could not feel, even after closely examining examples that had been brought to this country as specimens of the best productions by the process. We are, however, far from desirous of detracting in the least from the credit due the inventors, as such, of the starch-grain process. Despite the fact that the New York branch can hardly be commended for placing a price upon the plates that enables local workers to buy at the advertised retail price in London, pay duty and expressage on small shipments, and secure the plates cheaper than the local dealers, the firm should be thanked for their extreme kindness in withdrawing the restriction, "Export to the United States strictly prohibited," and allowing us to try them for ourselves.

A Correction Re Dr. Power's Autochrome Article

Owing to a mistake in spelling out figures and amounts written in characters in the original manuscript, two and one-half minutes was made to read "two and one-half seconds," in the second line on page twenty-two of our article on the Autochrome Plates, in the January issue. While the mistake is one that will be detected by the most casual reader, and one that could not possibly lead a serious worker astray, we have thought it best to mention it here in order that Dr. Power might be absolved from all suspicion of carelessness in the production of his manuscript.

More Back Numbers Wanted

To fill out sets for several of our old subscribers, we want the following issues of "Camera Craft": We will extend subscriptions one year for each returned whole copy of either the May, June, July or October issues of 1900: six months for each copy of the March, July or September issues of 1903; and three months for each of the following issues: January, June and July, 1904; May or June, 1905; and May or June, 1906. If you have any of these numbers in good condition as far as the reading pages and illustrations are concerned, send them in. Do not wait for some one else to do so. Several of our friends have complete sets with the exception of a few numbers, and they are particularly anxious to complete them and have them bound.

Recognition

An age which understands and honors creative artists must have a certain breadth of view and energy of spirit; an age which fails to recognize their significance fails to recognize the range and splendor of life, and has therefore, a certain inferiority.—Hamilton Wright Mabie.

The AMATEUR and HIS TROUBLES

Conducted by
FAYETTE J. CLUTE

ABOUT THIS DEPARTMENT.

For the benefit of a few thousand new readers, I would advise that this department is a standing invitation to our readers to send in their requests for advice and information. The five notes immediately following are replies by Mr. Potter to enquiries sent "Western Camera Notes" too late for attention in our January issue.

RED CHALK TONES ON BROMIDE PAPERS.

Those who are users of the re-developing or sulphide toning process, and what photographer nowadays is not, may be interested in the following variation by means of which red chalk tones can be obtained. The method involves the use of a bath, as follows:

Ammonium sulphocyanide	100 grains
Gold chloride	10 grains
Water (distilled)	10 ounces

The print, after the sulphide bath, is well washed and then toned in the above solution in which it takes on a color almost indistinguishable from red chalk carbon.

A SEPIA SENSITIZER.

A correspondent wants a formula that he has seen somewheres for sepia prints by the ferro-prussiate process. I am afraid he is either mistaken as to the ferro-prussiate process or else has in mind some formula for toning the blue image to a sepia. However, there has been a formula going the rounds of the foreign magazines that has some resemblance to the ferro-prussiate method. It reads as follows: Dissolve fifty-five grains of silver nitrate in half an ounce of water and then add ammonia drop by drop until the white precipitate is just re-dissolved. Next add dilute sulphuric acid until the odor of ammonia almost entirely disappears. Then add forty grains of green ferric ammonium citrate that has been dissolved in six drams of water. Keep the solution in a well stoppered bottle. It is coated on paper the same as blue print solution. Fixing is done in a solution made by adding one hundred grains of hypo and fifty grains of sodium sulphite to seven ounces of water.

SOFT EFFECTS ON DEVELOPING PAPER.

The following is a good formula for obtaining soft effects on any developing paper:

Metol	½ ounce
Sulphite soda (dry)	4 ounces
Hydroquinon	½ ounce
Carbonate of soda (dry)	6 ounces
Bromide of potash	1 dram
Water (hot)	1 quart

When all are thoroughly dissolved, add enough cold water to make up to one gallon. To every eight ounces of this developer, add three drops of a ten-per cent solution of potassium iodide, and six drops of a ten-per cent solution of bromide.

SEPIA PLATINUM PRINTS.

The use of zinc oxalate for obtaining warm brown tones, using ordinary black platinum paper, was first suggested by Dr. R. Jacoby. He now states that rich, warm sepia tones can be produced by using the following developer:

Potassium oxalate	200 parts
Ammonium phosphate	50 parts
Copper sulphate	2 parts
Water	1000 parts

The prints should be allowed to remain for at least five minutes in this bath, otherwise they lose density in the fixing bath.

HINTS FOR PLATINUM WORKERS.

If the paper, before printing, shows a number of white specks, dust from the calcium chloride used in the tube has no doubt settled on its surface. Calcium chloride used in storage tubes should not be in lumps or powder, but in the form of "asbestos compound" sold for the purpose.

If the oxalate solution alkaline, turning red litmus paper blue, it is unsuitable for developing and oxalic acid should be added until it just turns blue litmus paper red.

Platinum prints can be distinguished from bromides or gaslight prints by applying a drop of a saturated solution of mercuric bichloride. This will bleach a silver print, but does not affect a platinotype.

PYRO STAINS ON HANDS.

A correspondent wants to know how he can remove pyro stains from his hands. He uses all care and rarely meets with trouble but at times a large brown spot will show that his care was of other than complete avail. Being a dentist, he is desirous of having his hands free from such disfigurement. I would advise the use of a strong solution of chloride of lime, in which the stained fingers are dipped and the offending spots afterwards rubbed with a large crystal of citric acid. Applying the chloride of lime and citric acid alternately will remove the stain, when the hands should be well washed and dried.

EXPOSURES AT NIGHT.

An Oregon correspondent writes to ask if there is not a mistake in the excellent article on "Night Photography," by M. A. Yauch, in our August issue, where the exposure is given as nine seconds for a certain picture, illuminated by a single arc light. The exposure in question should read minutes instead of seconds. The mistake was called to the editor's attention too late for the second following issue, one issue going on the press before the last is in the hands of the subscribers, and so no correction was made, particularly as the mistake seemed rather obvious as compared with the others. The mistake was made in copying the data from the prints rather hurriedly, the original intention being to put the requisite information under each reproduction. One cannot go very far wrong in timing this class of exposures after a few experiments. The effect is governed mainly by the amount of printing, or rather, the depth to which the print is carried. It is much better to give full exposure and then if too much detail shows an inclination to come up, stop development a little sooner. With too short an exposure, development must be forced and halation will result in a more pronounced form than would otherwise be the case. With full exposure one can use a developer a little weak in alkali, thus avoiding the forcing of the image lying next the glass where the halation effect is always secured. For the same reason a developer like pyro is advisable, as the detail or weaker light action comes last, and much excessive detail and possible halation can be avoided by shortening the time in the solution, particularly when a full exposure has been given.

AMMONIUM PERSULPHATE STAINS.

A correspondent complains that his efforts to reduce negatives with persulphate of ammonia result in ugly brown stains of a patchy form that spoil the negative completely. These are the results of using the solution too long, or for a number of negatives. When the ammonium persulphate solution is poured on the negative a milky tinge will become apparent and shortly afterwards a chalky sediment will form on the surface of the negative. This is a danger signal and the solution should not be allowed to remain on the film but a few moments after this takes place, as staining only occurs after this sediment makes its appearance. Remove the negative at this point and wash well, subjecting it to a new solution of the persulphate if further reduction is desired.

PICTURE HANGING.

I was visiting a friend recently, one who is quite an enthusiastic amateur, and he showed me one of his best pictures, with the remark that while he could not find any serious fault with it, it had persistently refused to give him the satisfaction that he felt it should. It was a beautiful study of tree trunks, with fine gradation and detail, yet atmospheric and full of mystery. The whole trouble came from the disregard of a very simple rule that is never disregarded by painters in the hanging of their pictures, namely, that the light should fall upon the picture from the same direction as it fell upon the subject. I suggested to my friend that the picture be hung in a different part of the room, where this condition might maintain. He has since advised me that that particular picture is much more pleasing, and is actually beginning to grow upon him, as he believes all good pictures should.

CLUB NEWS and NOTES

Club Secretaries and others will oblige by giving us reports for this Department.

AMATEURS' CLUB, OF RIVERSIDE.

For the purpose of stimulating interest in photographic work and provide for the helpful interchange of ideas, a number of Riverside amateur photographers have organized themselves into an Amateurs' Club. The first meeting of the Amateurs' Club, of Riverside, was held Wednesday evening, January 15th, with the following members present: F. J. Welsh, R. C. Best, Miss E. L. Post, J. Walter Collinge, C. M. Foster, Ray H. Jessup, F. E. Wright and Vernon Freeman.

F. J. Welsh is president, and F. E. Wright, secretary, of the new club. The first exhibit will be held March 2nd to 5th, inclusive, in the Chamber of Commerce board rooms. Committees for this event were appointed.

The following rules will govern the exhibit: Any number of photographic pictures may be exhibited, providing that they are in suitable shape to be conveniently hung upon or fastened to the walls. All exhibits must be in the exhibit rooms on or before February 27th, 1908.

An accurate description of the materials and methods of producing the exhibited picture must accompany each picture, together with the name of the maker of the negative and of the picture exhibited.

INTERNATIONAL PHOTOGRAPHIC EXPOSITION, DRESDEN, 1909.

The International Photographic Exposition, at Dresden, which will be open from May to November, 1909, is the most important photographic exposition which has ever been projected. It will be held under the patronage of the Kingdom of Saxony and the City of Dresden, and no effort or expense will be spared to make it a complete representation of the progress and importance of modern photography.

The exposition will be held in the great Exposition Palace and Park of the City of Dresden, one of the largest art galleries in Germany. The use of it has been donated by the city. This gallery is large enough to accommodate four or five thousand paintings, and the whole of it will be devoted to the hanging of the professional and amateur photographs sent in from every country in the world.

All of the important photographic manufacturers of the world will exhibit their products in buildings to be erected in the park. Among them will be a complete Astronomical Observatory, constructed by one of the largest lens firms, half-tone engraving and printing plants, and other technical exhibits of the highest value.

Especial attention will be devoted to both amateur and professional photography. To this end commissioners have been appointed in every country in the world, who will make special collections. American professional photography will be represented mainly by the collection which has been made in the past few years by Rudolph Duhrkoop, of Hamburg, to which, however, important additions will be made.

The collection of American amateur photographs will be made by Frank R. Fraprie, editor of "American Photography." He has been appointed American Commissioner, and he will also assist Herr Duhrkoop in completing the collection of American professional photographs.

The Photo-Secession will exhibit as a whole, and will have a special room for their collection.

An English announcement will shortly be ready, and may be obtained by any intending exhibitor from Frank R. Fraprie, 6 Beacon Street, Boston. Any request made to him for fuller information, will be promptly answered.

WISCONSIN CAMERA CLUB.

Harry Osborne entertained the members of the Wisconsin Camera Club on Tuesday evening, January 7th, with clever cartoons and bright remarks protraying the tribulations of the "press photographer." The ever present reporter, tab and pencil in hand, was pictured running to the scene of a fight, where presumably the photographer would be sent, after it was all over. How the editor is sometimes compelled to use his inventive genius to make a picture of a building furnished by the architect to represent a fire, and how the press photographer at times would pursue an unwilling subject, and take his picture without the "look pleasant, please," were humorously described and pictured by Mr. Osborne.

A number of prints were received in the enlarging contest, but it was thought best to postpone the final closing date one week, when the prize offered by the Milwaukee Photo Materials Company will be awarded. A contest for the best lantern slide made on the club's reducing camera also closes the same date. The prizes, consisting of boxes of lantern slide plates, are given by the club.

The making of prints by the Ozobrome process, a new and pleasing method of printing, was demonstrated by Dr. F. H. Berry, for the benefit of members of the Wisconsin Camera Club, on Tuesday evening, January 21st. Dr. Berry has succeeded in attaining wonderful results by the new method, and explained the handling of the prints to club members. Accompanying the demonstration was an exhibit of a home-made photographic apparatus by means of which, in spite of a severe simplicity of construction, superior results have been obtained.

The advance sheets of the catalogue of the Fourth American Salon, to be held in this city on February 12th to 26th, accompanied by a number of copies of the pictures which will be on exhibition, have been received by the Salon committee. The best of these pictures will be published in "The Sunday Sentinel" in the near future. The exhibit will be held in the Grand Avenue club rooms.

The enlargement contest, with which the club has been engaged for some time past, closed Tuesday evening, January 14th. The contest proved a popular feature, hundreds of beautiful photographs having been entered. Owing to the desire on the part of the judges to secure contact prints from the original negatives, the awarding of prizes has been delayed.

The lantern-slide contest, which was to have opened on January 14th, has been postponed indefinitely, but will be taken up as soon as the present enlargement contest and the general print contest, to close on January 31st, have been brought to a close.

MISSOURI CAMERA CLUB.

The closing of the Third Annual Exhibition of the Missouri Camera Club prompts the statement that, for a number of years, nothing of its kind has been attempted in St. Louis. Several attempts have been made to form a club devoted solely to pictorial work, and while all have died aborning, that the efforts of the above club have not been in vain has been demonstrated in their recent exhibition in their club-rooms this year.

The exhibition opened December 30th with one hundred and fifty-five framed entries presented to the public, and, in the opinion of Messrs. Carl Gustav Waldeck, Prof. F. O. Sylvester and Wolf T. Kandelar, the artists who judged the work, it is a long step in the right direction, and worthy of the support of the art-loving classes of St. Louis.

The club has commodious quarters at 3546 Washington Avenue, corner Grand and Washington Avenues, which were elegantly lighted, and which tended to show its work advantageously to the hundreds who participated nightly in the club's hospitality. The club is a member of the American Federation of Photographic Societies.

OF INTEREST TO CAMERA CLUBS AND THE LIKE

Folmer & Schwing have again gotten together a most interesting and instructive series of lantern slides, which they intend loaning to camera clubs, photographic societies, schools and other organizations interested in photography. These slides are now ready, and clubs desiring the use of this collection are invited to correspond with the Folmer & Schwing Division, Eastman Kodak Company, Rochester, N. Y. This affords clubs and the like an opportunity of securing material for an excellent evening's entertainment and the offer so generously made should not be overlooked.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department Should be Addressed to its Editor.

Edited by
H. D'ARCY POWERS, M. D.
Burlingame, California.

SULPHIDE TONING OF PRINTING-OUT PAPER.

I have already referred to this subject and have had fair success in obtaining good tones. A. T. Hall in the "Amateur Photographer" gives a new technique as follows: "Print rather deeply and straightway immerse into a dish of clean water; this is to eliminate the presence of free silver which may be perceived by the milkiness of the water; leave therein until this milkiness entirely disappears and leaves the water quite clear. Now place into a five per cent solution of sodium chloride for ten minutes; afterwards thoroughly rinse in water and remove to the hypo bath, which must be freshly made and not have been used for anything else—the strength of the bath should be about three in twenty—and remain for at least ten minutes to assure thorough fixation which is most essential to success. The print should now be washed in several changes of water for about an hour, when it will be ready for toning, as follows: Five minims of ammonia sulphide is added to twenty ounces of distilled water; in this solution the print is left until toned, which should take about forty-five minutes to reach a purple brown, beyond which it is impossible to proceed. The writer lays great stress on the slow action of toning by the sulphide process, which is perhaps the main secret to successful results; the strength of the ammonia sulphide should not be increased under any circumstances, the slower the better. After toning, wash in several changes and hang up to dry."

STAINED GELATINE POSITIVES.

From the same source we have a description of a method of making the above by Didier, who says: "At the present time we have many staining methods which depend on the graduated absorptive properties of a gelatine film; these methods having of late years come much to the forefront in connection with three-color heliochromy. Didier (Photographische Industrie, June 5, 1907, page 662) describes the following process: A transparency is made on a usual transparency plate developed by means of some developer other than pyrogallic acid, the result being ordinarily a film which is evenly absorptive or nearly so. The fixed and washed transparency is now soaked in a quite weak bichromate solution, to which a considerable excess of ammonia has been added, the following being suitable: Water, 200 cubic centimeters; ammonium bichromate, two grammes; ammonia, twenty grammes. When dry, the back of the plate is exposed to light, and as a guide to exposure it is convenient to place a sheet of printing-out paper under the plate, the exposure being continued until details in the deep shades become visible. The bichromate is now thoroughly soaked out of the plate, water containing a five per cent of ammonia being an aid at this stage. The silver image is now dissolved out by means of the Howard Farmer reducer in rather a strong form (two volumes of twenty per cent "hypo" solution, mixed with one volume of ten per cent potassium ferricyanide solution) and after washing, the plate is ready for immersion in the dye bath, an aniline color being used ordinarily."

OIL PRINTING.

Whatever we may do in the erecting of sky scrapers, there is no denying that in matters photographic we are dreadfully slow in comparison with Europe. Oil printing has long been a leading feature in the best work over there, whilst on this side it is to all practical purposes unknown. And yet oil is not difficult in its technique. I gave a demonstration the other evening at the California Camera Club, and made

a group of converts who I trust will not turn out backsliders. I promised those who were unwilling to make their own gelatine-coated paper, or wait until they could obtain a supply from London, where an excellent quality is prepared by Messrs. Griffin & Company, that I would mention in this section the numbers of the double-transfer papers for carbon printing that I have found useful. They are: the Autotype Company's Number 76, and Inglingworth's Number 625.

A SIMPLIFIED OIL PROCESS.

M. Ernest Constet has recently published in the "Photo Gazette" (French) a method of using ordinary bromide prints, direct or enlarged, that offers great advantages. The print is développed with anidol, fixed in plain hypo, washed and emersed in a bath consisting of:

Ferricyanide of potassium.....	5 parts
Nitrate of lead	5 parts
Water 100	parts

In this the image is bleached, then washed, and inked in the usual manner. The finished print will contain a sub-image of silver and lead, which might possibly darken and undesirably reinforce the print in course of time. This can be entirely removed by immersion in a hypo bath. The author gives no directions on the point, but I would advise workers to defer this fixing for several days, that the inked image may completely set. If this process is really as workable as described, it will supersede the bromoil process, and permit the making of oil prints by the aid of artificial light.

CONCISE WORKING DETAILS OF DUSTING-ON GUM.

Herr Quedenfeldt's new method, the general nature of which is indicated above, appears likely to be an easy one for the amateurs, but one appliance, not usually found in the amateur's outfit, is required, namely, a dusting box, of the kind used by photo-engravers for producing the stippled grain on the resist. A convenient form of dusting box is figured on page fifty-six of Herbert Denison's Treatise on Photogravure, and dusting boxes of various patterns may be obtained from firms that supply materials for process work. Gum mucilage is mixed with its own volume of one and ten ammonium bichromate solution, and smooth or sized paper is evenly brushed over with the solution. In about ten minutes, or while the layer of gum is still adhesive, the paper is placed on the slide of the dusting box, which contains the selected pigment, and passed in, the dust storm having been raised a convenient time beforehand. In from five to ten minutes, the paper will be found to be sufficiently coated by the settling dust, and, after drying, any excess may be blown off by means of a bellows. Printing and development in water are as in ordinary gum-bichromate work. In the actual dusting box recommended by Herr Quedenfeldt, the dust storm is raised by means of a bellows, and not by the rotation of the box, as in the case of Mr. Denison's device, but the exact form of the box is of secondary importance, while experience rather than rules must teach the amount of deposit required for each kind of work. —Amateur Photography (Eng.).

LOCAL TREATMENT IN DUSTING-ON GUM.

The above described method allows of local treatment at all stages in printing; also during the development and drying, as parts or the whole of the sheet may be resensitized (gum mucilage one, bichromate solution one and one-half to two) and again dusted with the original pigment or with any other pigment; indeed, few methods can offer such delicate means of control as the dust-on gum method. If the paper is put into the drying box soon after the dust storm is raised, a coarse, thick deposit will be formed, and conversely, if the dust is allowed to settle longer before the insertion of the paper, a finer deposit will result. As an alternative, the pigment may be dusted on from a sieve or bag of fine muslin, the dusting box being thus eliminated, but this procedure may tend towards diffusing the pigment over the workplace in a somewhat undesirable fashion.—Amateur Photography (Eng.).

DRYING MARKS.

That peculiar defect known as a drying mark is one of the most annoying of any from which a negative can suffer, because it is not easy to account for its presence,

and there is no remedy whatever. It is a curious thing that if a negative is allowed to dry partly at one rate and that then the rate of drying is altered, there may be a distinct difference in the density of the two parts, a difference which will show in the prints, and one which quite defies all attempts to retouch it out. The commonest form of drying mark is a spot. A drop of water may remain, as a drop, on the film after all the rest is dry, and the result is a distinct circular patch, lighter in density than its surroundings. Almost as common is the drying mark that forms a margin or border to the negative. The plate may have dried partially, but so slowly that the photographer loses patience and puts it where the rest will dry very rapidly. Or conversely, he has put it where it has begun to dry very quickly, out of doors perhaps, but then has to take it in from fear of rain or some other cause, and the rest only dries very slowly. The result in either case is an ugly mark. There is no real need for the photographer to be troubled with drying marks. If he knows their cause and how incurable they are, very slight precautions are sufficient to remove all risk. The principal thing is to make it a rule always to put the negative up to dry where there is no doubt that it may be left undisturbed until it is dry, and another is to select a place for the purpose where the drying will be fairly quick.—Photography (Eng.)

RESTORING NEGATIVES OF UNEVEN DENSITY DUE TO NON-UNIFORM DRYING.

The following note on a mishap which frequently falls to the photographic beginner is worthy of extract from the pages of our contemporary, the *Photographic Times*. The method is certainly worthy of trial.

I recently made two negatives on double coated non-halation plates, and, by reason of a sudden change in the weather while the plates were drying, portions of each negative showed much greater density than the remainder, making them totally unfit to print from. Since circumstances prevented my repeating the exposure, it was especially desirable to save the negatives, and local reduction, the only method I had ever heard recommended, seemed rather dangerous, so a means was sought which would affect the entire negative, and afford more desirable results.

Prolonged soaking in water and careful drying had no effect, nor did soaking in an acid-alum hypo bath, followed by washing and drying, make any visible difference.

The next method tried was rehalogenisation, as described in the *Photographic Times* of April, 1907, redevelopment being effected by means of a dilute pyro-soda solution, and the results were all that could be desired. The negatives, viewed by transmitted light, show perfectly uniform density, and prints from them are perfect.

Both negatives were portraits, in one case the line of demarcation lying across perfectly uniform density, and prints the sitter's cheek, in the other across a prominent portion of a white dress, so that any variation would be readily visible.

I would caution anyone trying this method against removing the plates from the developer too soon, as the action seems to be uneven in the earlier stages.

THE PERMANGANATE REDUCER.

A note in *Eder's Jahrbuch* by Professor Namias draws attention to a modification in the permanganate reducer which may be of service, particularly in preparing the reducer in a dry state for solution at the time of use. Professor Namias dispenses with sulphuric acid, using instead ordinary alum, the acid character of which is apparently sufficient for the purpose. He adds one-fifth of one per cent of potass. permanganate to a cold saturated solution of alum; in other words, the reducer contains about one grain of permanganate and about fifty grains of alum per fluid ounce. Thus compounded, it is found to work better than the sulphuric acid formula, as it keeps well and does not attack the gelatine film. The alum-permanganate solution stains the gelatine a deeper brown than the acidulated bath owing to the precipitation of manganese oxide, by the use of a five per cent solution of sodium bisulphite this stain can be readily removed.

Photographic Post Card Exchange

Announcements in the last few issues of "Western Camera Notes," resulted in the enrollment of a large number of members of an exchange to be confined to workers desirous of exchanging photographic post cards only. As the matter now stands, the publication of a complete roster will be delayed for the time being, in order to allow "Camera Craft" subscribers who may be desirous of joining, to send in their names for the roster that will be published in book form. For the benefit of these last, and the new subscribers, we will explain that the Photographic Post Card Exchange was a popular feature of "Western Camera Notes," and can be made doubly so with the added publicity secured in this magazine. Membership is free to all subscribers, it being only necessary that the applicant send a sample of his work to the editor for approval. If this specimen be judged as of sufficient merit, membership will be granted and the applicant's name published. Each applicant must agree to make prompt exchange; to send only photographic cards, and cards equally as good, if not better, than those received, and to notify the Director promptly should he wish to withdraw. A Director will be selected and his name and address given at the head of this department, as early as possible. A list of new members will be printed in this column next month, together with further announcements.

$100-PRIZE FOR FISH PICTURES.

The Fourth International Fishery Congress will convene in the City of Washington, United States of America, in accordance with the decision of the Third International Fishery Congress held in Vienna in 1905. The meeting, which will be under the auspices of the United States Bureau of Fisheries and the American Fisheries Society, will extend from the 22nd to the 26th of September, 1908.

In connection with the Congress there have been arranged competitive awards for the best or most important investigations, discoveries, inventions, etc., relative to fisheries, aquiculture, ichthyology, fish pathology, and related subjects during the years 1906, 1907 and 1908. The awards will be in the form of money, and aggregate $2,200; and, although the individual amounts are not large, it is hoped that the conferring of the awards by so representative a body as the International Fishery Congress will induce many persons to compete and will result in much benefit to the fisheries and fish culture. The prize that will interest photographers is the eighteenth, and reads:

By Messrs. Henry Holt & Company, publishers, New York City: For the best series of photographs, with brief descriptions, illustrating the capture of food or game fishes, $100 in gold.

Conditions Governing Competition.

(1) Any person, association, or company may compete for any of the awards

(2) Each competitor shall, before July 15, 1908, notify the general secretary of the Congress as to the particular award for which he competes; and he shall duly qualify himself as a member of the Congress.

(3) Each paper or exhibit offered in competition shall be in the custody of the secretary-general on the day of opening of the Congress.

(4) Papers may be written in English, French, German, or Italian.

(5) Each device, apparatus, process, or method for which an award is asked shall be represented by a sample, a model, or an illustrated description; and each shall be accompanied by a complete statement of the points for which an award is asked.

(6) The Congress reserves the right to publish, prior to their publication elsewhere, any papers or photographs submitted in competition, whether or not such papers or photographs receive awards.

Communications regarding the Congress should be addressed to Hugh M. Smith, Secretary-General, International Fishery Congress, Washington, D. C., U. S. A.

NOTES *and* COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

KODAK ADVERTISING CONTEST.

For the 1908 contest there will be awarded sixteen hundred dollars in cash prizes; one thousand dollars in the professional class, and six hundred dollars in the amateur class. In our last year's Photographic Advertising Contest we offered one thousand dollars as a first prize for the three best negatives, 8x10 or larger, to be used in advertising the kodak. It was our idea that we could secure photographs which would be better for camera advertising than anything we had had in the way of paintings. We believe that the results of this contest showed our ideas to be correct. Relatively, we are offering more in the 1908 contest than in the previous one. The first prize for one negative in the professional class is to be five hundred dollars. This is more money than we have ever paid for a painting for advertising purposes, and should bring out good work, work that is not only good from the photographic but from the advertising standpoint.

Pictures which are simply good photographs and contain nothing showing the use or the pleasures of the kodak system of photography are of course valueless from an advertising standpoint. What we need are pictures that forcefully and pleasingly drive home the kodak idea, and for these we are willing to pay liberally.

We expect, through this and similar contests, to not only secure valuable material for our own advertising, but to demonstrate still further the great possibilities that await the photographer in the illustrative field.

The terms are as follows:

1: Each picture is to contain a figure or figures, and is to be suitable for use as an illustration in advertising the kodak or the kodak system of amateur photography. 2: Each print in Class "A" must be from a negative 5x7 or larger. Each print in Class "B" must be from a negative 4x5 or 3¼x5½ or larger. 3: Prints only are to be sent for competition—not negatives. 4: Prints must be mounted but not framed. (Mounts should show about one inch margin.) 5: No competitor will be awarded more than one prize. (This does not prevent a competitor from entering as many pictures as he may desire.) 6: Due and reasonable care will be taken of all non-winning prints, and, barring loss or accident, they will be returned to their owners at our expense, but we assume no responsibility of loss or damage.

7: The negatives from which all prize winning prints are made are to become the property of the Eastman Kodak Company, and are to be received by it in good order before payment of prize money is made. 8: Contestants who are awarded prizes must also furnish to us the written consent of the subject (in the case of a minor, the written consent of a parent or guardian) to the use of the picture in such manner as we may see fit in our advertising. 9: All entries should be addressed, Advertising Department, Eastman Kodak Co., Rochester, N. Y.

10: In sending pictures, mark the package plainly, "Kodak Advertising Contest," and in the lower left-hand corner write your own name and address. Then write us a letter, as follows:

I am sending you today by (Express or Mail), charges prepaid, ...prints. Please enter in your Kodak Advertising Competition. Class.....

Yours truly,

Name .....

Address .....

11: The name and address of the competitor must be legibly written on a paper and enclosed in a sealed envelope in the same package in which the prints are for-

warded. There is to be no writing on prints or mounts. 12: We will promptly acknowledge the receipt of pictures, and when awards are made, will send each competitor a list of prize winners. 13: Only recognized professional photographers conducting a studio will be allowed to compete in Class "A." Class "B" is open to all photographers not in above classification. 14: This contest will close October 1st, 1908.

The prizes are as follows. Class "A," for professional photographers only; negatives to be 5x7 or larger:

First prize	$500.00
Second prize	250.00
Third prize	125.00
Fourth prize	75.00
Fifth prize	50.00

Class "B," for amateur photographers only; negatives to be 4x5 or 3¼x5½ or larger:

First prize	$300.00
Second prize	150.00
Third prize	75.00
Fourth prize	50.00
Fifth prize	25.00

The jury will be instructed to award the prizes to those contestants whose pictures, all things considered, are best adapted to use in kodak, or Brownie Camera, advertising. As reproductions of the pictures will often be in small sizes, too much detail should not be introduced. The pictures should be snappy and vigorous, for they lose much by the half-tone process.

Where apparatus is introduced, it must be up-to-date. If you haven't the goods, you can borrow. There may be possibilities in introducing the Kodak Tank Developer idea. It is highly probable that we shall want to secure some negatives aside from the prize winners. In such cases special arrangements will be made.

The jury of award will consist of photographers and of advertising men who are fully competent to pass upon the work submitted. Full attention will be paid therefore to the artistic and technical merit of the work as well as to its strength from an advertising standpoint. Announcement of the names of the judges will be made later.

EASTMAN KODAK CO.,
Rochester, N. Y.

"AMERICAN ANNUAL OF PHOTOGRAPHY."

Although we mentioned its preparation and advised our readers concerning its scope, in a former issue, we would again call the attention of our subscribers to the importance of securing a copy of this valuable annual. This year it was edited by John A. Tennant, the editor of the "Photo Miniature" series, and this alone is a guarantee of the value of the articles and pictures selected. The matter is well illustrated, and it seems as if every topic connected with photography has come in for treatment at the hands of at least one contributor. The paper covered edition sells for seventy-five cents in the stores, or will be sent by mail for seventeen cents extra; cloth covers, one dollar and twenty-five cents; postage, twenty-two cents. Published by George Murphy, Incorporated, 57 East Ninth Street, New York.

AN IMPORTANT COMBINATION.

Below we condense, from a lengthy article in the "Union & Advertiser," of Rochester, New York, of December 19th, relative to the combination of two important American firms with one of the highest standing in Germany.

"The Bausch & Lomb Optical Company, Bausch, Lomb, Saegmuller Company, of Rochester, N. Y., and the Carl Zeiss Optical Works, of Jena, Germany, join interests for the purpose of carrying to the highest possible development the production of optical, physical and engineering instruments.

"The new year will mark the formal beginning of the association of the above mentioned firms, each of which enjoys an international reputation, and is recognized as a leader in the production of the various lines of its manufacture. The association is unique, both by character of the principals thereto and the results already, and those sought to be attained. The Bausch & Lomb Optical Company has for years produced, under license agreements, photographic lenses and field glasses invented by the Zeiss works. For years it has supplied George N. Saegmuller with the optical parts of his engineering and astronomical instruments. The three firms have confidence in their ability to accomplish still more by closer co-operation.

"It is the intention, ultimately, to manu-

facture, and to market in the United States and its possessions, the productions of the Carl Zeiss works, of Jena. The new association has at its command the inventive genius and wonderful resources of the three organizations, including the scientific staff of the Zeiss works, which is composed of twenty-eight of the most eminent specialists in their fields, a group of collaborators impossible of duplication, inasmuch as they are the picked men from German universities, chosen because of their particular fitness for this special line of work.

"The Bausch & Lomb Optical Company has not only been a pioneer in the manufacture of eyeglasses and lenses in the United States, but it has also made possible the more general use of the microscope in the home, schools and colleges and scientific laboratories of the country. This was accomplished not without great sacrifice and for a long time the business suffered much from the financial strain imposed upon it by the unwavering determination of the company to carry out its purpose. It stands unsurpassed in the manufacture of photographic lenses and shutters, and here, in the beginning, its experience was similar to that in developing the microscope department. In the manufacture of naval searchlights, and in fact optical work generally, it ranks among the first in the world. In 1903 they celebrated the semi-centennial of their existence.

"It is not alone the production of optical instruments of the highest merit that gives to Carl Zeiss a pre-eminent place in the manufacturing world. Its work along strictly scientific lines, made possible by the development of its scientific staff, makes it a unique institution, and has built up its well-deserved reputation for supreme scientific attainment and technical skill.

"The world owes to this institution an incalculable debt. It developed the modern microscope; it invented the anastigmat lens upon which the modern art of illustration is absolutely dependent; it made the first successful application of the prism principle to field-glass construction; it has invented many new instruments for scientific research and for the trades which will tend, ultimately, to revolutionize present methods of measurements.

Advantages of Association.

"The Zeiss Works is part owner of the Optical Glass Works, of Schott and Genossen, Jena, and naturally derives many advantages from such connection, in which, of course, the new association will share. It was Professor Abbe, then owner of the Zeiss Works, who instigated and directed the experiments which led to the production of the new glasses which are indispensable to the construction of the modern types of lenses.

"When the best thorough scientific German skill is combined with progressive enlightened American manufacturing methods the world is bound to become enriched."

PAPER SENT PREPAID.

In our last issue, we published an announcement whereby the Northern Photo Supply Company, Minneapolis, Minnesota, were appointed Northwestrn distributors for Artura products.

Since then, we have been informed by the above firm that they will prepay charges on all orders to any one in their territory, on Artura paper amounting to two dollars or over. The above is quite an item, and should be considered by the photographer, as it will mean a great saving to him the year around.

The Northern Photo Supply Company carries a most complete stock of all grades and sizes, and can fill orders immediately. Any one in their territory in need of Artura products, should send their orders to them for prompt and careful attention.

A NEW FILM.

We have recently had brought to our notice the Ensign Films which G. Gennert, of New York and Chicago, are now importing. This film has for years enjoyed the confidence and patronage of amateur and professional photographers in England, and should receive a favorable reception from kodakers in the United States. The film has a very high speed, does not easily fog, remains flat in developing, and for gradation is everything that can be desired. Those we have seen are certainly very nice, and we hope before long to give them a practical trial ourselves. In the meantime, we recommend our readers to send for a sample, which, we understand, will be sent on receipt of the regular list price, postage paid by Messrs. Gennert. The descriptive circular accompanying the film tells you more about its virtues, and for success the importers are satisfied to leave the trial in our readers' hands. The same firm is sending out a very useful

book, entitled "Faults in Negatives, and How to Prevent Them," a copy of which should be in the hands of all our readers. This book treats, also, of the merits of the Imperial Plates, a plate that has a very high reputation wherever used. Samples can be had for the asking, so why not ask?

ROBERT L. DUNN AND HIS OPINION OF ARTURA PAPER.

The picture of Mr. Dunn, reproduced herewith, was taken by the light of the Midnight Sun.

Robert L. Dunn, the famous war photographer for *Collier's Weekly*, who has just returned from a tour around the world with Secretary of War Taft, has written the following letter to the Artura Photo Paper Company, of Columbus, Ohio:

"After using forty gross of Artura Iris on my 'round the world trip which covered Japan, China, the Philippines, Manchuria, Siberia, Russia, Germany and other countries, involving the crossing of America and the Atlantic and Pacific Oceans, without losing more than 2 per cent of the prints made, I think it no more than right to acknowledge to you my indebtedness for the remarkable utility of your product under all sorts and kinds of hard conditions. *No better photographic paper has ever been made for the photographer who wishes to accomplish on artistic result without unnecessary trouble.*

"Under all conditions of climate and weather and hampered with all of the discomforts involved in a rapid fire journey of twenty-five thousand miles and over, the paper gave absolutely uniform results, and the hundreds of autographed Artura prints of Secretary Taft presented by me to the sovereigns and famous men of the countries we visited, elicited so much favorable comment that I hesitate to put them all on paper.

"Truly it was a wonderful showing of a remarkable photographic product.

"ROBERT L. DUNN."

A CHANGE IN A LOCAL FIRM.

The Schooley Manufacturing Company, owing to the large increase in their business, have been compelled to seek larger quarters. The firm will shortly occupy a new and larger factory at Broadway and Battery Streets, this city. Offices will be located at the same address. The personnel of the firm has been slightly changed by the retirement of Mr. Griesemer. Louis Saroni entering the firm and assuming the duties of president. The increased capital and enlarged facilities at its command insures the continued increased business which this enterprising firm enjoys and so richly merits. Mr. Schooley will continue, as heretofore, to give every detail of the business the advantage of his long experience in the production of the best in mounts, folders and the like.

FROM A SMALL ACORN.

In the August "Camera Craft" we announced a new stock house, to be known as the R. B. Marsh Company, doing business at 747 Market Street. As was predicted, Mr. Marsh's twelve years' connection with the Eastman Kodak Company soon made it apparent that the very limited space then at his disposal was inadequate. It is only another evidence of the optimism of this enterprising firm, that we now record its removal from 747 Market Street to permanent and more commodious quarters at 712 Market Street, in the Magee Building, directly opposite Third Street. Here will be carried not only a full line of photographic supplies, apparatus and the like, but a complete line of stationery, office supplies, artists' materials, pictures and frames.

Hereafter the firm name will be the Marsh-Girvin Company. Patrons are assured that the same courteous treatment they have received in the past will still be forthcoming, as the change is in name only and will not alter the policy of the management. W. H. Girvin, while connected with the company from the start, will probably soon take an active part in its affairs. Mr. Girvin was formerly Supreme Court Reporter for the State of California, and enjoys an extremely large acquaintance.

The best wishes of this magazine are hereby expressed for the new concern, and we feel sure that we are voicing the sentiments of a large number of our readers in wishing the Marsh-Girvin Company the success and ever-increasing patronage they so justly merit.

A NEW PHOTOGRAPHIC MAGAZINE

"The South African Photographic Journal" announces that, beginning with its seventh issue, that for January, it will be equal in size to the British photographic weeklies. It will contain illustrated articles and a number of interesting departments. The subscription price is two shillings, six pence, and adding six pence for foreign postage should bring the price about seventy-five cents. We will be glad to forward any subscriptions sent in, or the magazine can be ordered direct from 116-118 Adderley Street, Cape Town, South Africa. While we have not yet seen a copy of the new issue we believe it will be well worth the low cost if only as an instructive demonstration of the progress of photography in that rather distant location.

ESPERANTO GRAMMARS FREE.

The editor has received the following communication, which is published for the reason that this new language appeals strongly to all who have the interest of humanity sincerely at heart, and especially to those who believe in the ultimate victory of peace, brotherhood and good-will among mankind. In Europe, Esperanto has already attained immense popularity in all classes and conditions of life:

"Dear Sir: Notwithstanding the great amount of publicity which has been given to Esperanto, the international language, I find that at this time not more than one-tenth of the people of the United States have even a vague idea of its purpose and scope, and, perhaps, not one in a hundred has a reasonably definite conception of it. As a sort of counter-irritant to the irresponsible criticism which is occasionally circulated by the uninformed, I have printed for a free distribution a second edition of 100,000 copies of a small primer, "Elements of Esperanto," setting forth the grammar, word-construction and purpose of the language, and will mail a copy to any person who requests it, sending stamp for postage. While you may not be personally interested, there are thousands of your readers to whom this movement for an international auxiliary language, which now covers every country on earth, will appeal as something more than a fad, and they would appreciate your giving space to this letter.

Cordially yours,

ARTHUR BAKER,

Editor Amerika Esperantisto

1239 Michigan Avenue, Chicago, Ill."

"The American Esperanto Book," which we mentioned recently in this department, a three hundred and twenty page compendium of Esperanto, and a year's subscription to "Amerika Esperantisto," together with Camera Craft for one year, will be sent upon receipt of one dollar and fifty cents. Send subscriptions to Camera Craft office.

PHOTO-SECESSION EXHIBITION.

An exhibition of drawings by Rodin will be held at the Little Galleries of the Photo-Secession, 291 Fifth Avenue (between Thirtieth and Thirty-first Streets), New York, opening on January 2nd, and closing January 21st. The galleries are open from 10 A. M. till 6 P. M., daily, Sundays excepted.

THE WOLD AIR BRUSH.

Chicago, Ill., Dec. 5, 1907.

Mr. O. C. Wold,
Chicago, Ill.

Dear Sir:—Permit me to voice a word of praise to you for your new "Brush."

Twelve years of experience with air-brushes of all kinds and makes in every day work has given me a fair conception of their relative worth and usefulness, and I unhesitatingly pronounce your present air brush the best I have ever used.

Simplicity of mechanism, absolute control of the spray, and without that bugbear to artists, "spitting," your brush stands king over all.

Accept my thanks to you for all past favors, and your gentlemanly treatment in all our business transactions. I subscribe myself,

Very respectfully,
H. L. FOMAN.

"THE BRITISH JOURNAL ALMANAC."

We all look forward to the arrival each year of the "British Journal Almanac," with its wealth of information and almost wanton profusion of advertisements, both covering the field so completely that after going through its pages we feel that there is nothing with which we are unacquainted in the field of photography, at least, up to its date of publication. The current edition contains thirteen hundred pages, and although a lot of them are advertising ones, they do not lack in interest. "Epitome of Progress" is an exhaustive and detailed digest of all that has been published during the past year worthy of consideration as being new. The leading article on screen plate photography is particularly timely, and so complete in its thorough treatment of the subject that little more could be asked. The frontispiece is a carbon print from a negative by Langfier, of London, and there is a handsome color plate, a reproduction of a color photograph by the Sanger-Shepherd process. It is stocked by most dealers, or can be obtained direct from George Murphy, Incorporated, 57 East Ninth Street, New York. Paper covers, seventy-five cents; postage, twenty-seven cents. Cloth covers, one dollar and twenty-five cents; postage, thirty-seven cents extra.

TO WHOM IT MAY CONCERN:

By a Bill of Sale, given me this day by Benjamin F. Ager, the sole owner of "The Photographer," published in New York City, I have become the sole owner of that publication, and purchased all its rights, titles, name, and assets, giving me absolute title and ownership to the said magazine, which will be incorporated with "The Bulletin of Photography" in future. All accounts due "The Photographer" are now payable to me only. Mr. J. C. Abel is no longer connected with the magazine, and has no authority to transact any business for "The Photographer" or "The National Photographer" whatever. The office has been removed to 608 Sansom Street, Philadelphia.

Yours truly,
FRANK V. CHAMBERS,
Owner of "The Photographer."

BABY PICTURES NOW EASY.

One of the best and most useful inventions recorded during the past year in the photograph business is the new invisible baby holder invented by Frederick Pohle, of Buffalo. This device makes the taking of baby and child portraits a pleasure. The device holds the child in any desired position, but causes no inconvenience. It cannot be seen, and it saves time, temper and plates. It is sold by the Pohle-Werner Manufacturing Company, 9 West Chippewa Street, Buffalo, New York, and all live dealers. We predict for it a large demand.

"THE LAW OF FINANCIAL SUCCESS."

This is a book by Edward E. Beals, dealing with such subjects as money, mental attitude, fear and worry, latent powers, ambition, and so on through a list of some sixteen chapter heads. It is well worth the ten cents necessary to secure a copy by mail. Address the Fiduciary Press, 986 Tacoma Building, Chicago, Ill.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

PUBLISHED AT SAN FRANCISCO, CALIFORNIA

Entered at the Postoffice in San Francisco as second-class mail matter. Copyrighted 1908, by Fayette J. Clute.

FOREIGN AGENTS:

New Zealand . . . . . A. J. Watkins, Auckland
Kepthone, Prosser & Co., Ltd., Wellington

Australia . . . . . Harrington & Co., Ltd., Sydney
Baker & Rouse Proprietary, Ltd., Brisbane

Subscription Price; $1.00; Canada, $1.25; Foreign, $1.50.

CAMERA WANTS

Advertisements under this heading will be charged for at the rate of 50 cents each insertion for twenty-five words or less. Each additional word, two cents extra. Advertisements of positions wanted will be inserted free of charge

For Sale—5x7, Universal View Camera, 6 Plate Holders, Convertible Lens, Regular Shutter Carrying Case and Tripod, cost $35.00, Bargain Price $14.00, also 1 Conley 5x7 View Camera, Convertible Lens, Regular Shutter, Tripod, Carrying Case, 6 Plate Holders, Cost $40.00, Bargain Price $18.00. Wollensak Portrait Lens F 5., Regular Shutter 5x7 size, Cost $28.75, Bargain Price $15.00. M. R. Baird, Oceanside, California.

For Sale—A1 negatives, 2a Brownie, of Boyhood Homes of Mark Twain and Huckleberry Finn, Hannibal, Mo. and Henry C. Work, author of "Marching through Georgia," Quincy, Ill., $1 each. Unique for Postals or Enlarging. Proofs sent. Rev. John Davis, Hannibal, Mo.

Wanted—Two or three half size Darlot lenses in good shape; give lowest price. Address C. E. Calvert, 567 Hawthorne Terrace, Portland, Oregon.

Wanted—Position by a young man and lady in a view company; can come at once; salary $7.50 each per week, including expenses; good operator, callers, canvassers, etc. Address L. M. Slater, Elkhart, Ind.

For Sale—4x5 Century Grand fitted with Royal Anastigmat for $40.00. Robt. B. Turpen, Marion, Ind.

Wanted—A good live agent for a high grade lens for the Pacific Coast States. Address Lens, care CAMERA CRAFT.

Wanted—Amateurs having cameras (not Kodaks), 4x5 or any size larger, can earn $5.00 per week by taking pictures for us at home. Send stamp for particulars. Oval Portrait Co., Caxton Bldg., Chicago, Ill.

For Sale—6½x8½ King View Camera, eighteen-inch bellows with additional square bellows, back extension to make a focal capacity of forty-one inches. Accessories: Adjustable tilting table, tripod, four extra holders and sole leather case for holders. Address, N. T., care CAMERA CRAFT.

For Sale—Photo Studio in growing town; county seat; railroad now building; only studio in county; price $200.00, rent, $7.50. Address Box 92, Tillamook, Ore.

For Sale—In first-class condition, New York studio outfit, 8x10 camera and stand, Benster 8x10 holder, six 5x7 curtain holders, 8x10 Dallmeyer lens and other accessories very reasonable. Address Miss E. P. Bailey, East Hollywood, Cal.

For Sale—Long Focus, Reversible Back Graphic Camera, 6½x8½, no lens or shutter. These cameras are no longer obtainable except as made to order. Was listed at $55.00 when last made regularly. A handsome box with Folmer and Schwing good quality. Will take $40.00 cash. Has never been used. Address L. F., care CAMERA CRAFT, San Francisco, Cal.

For Sale—One forty-eight cup Williams flashlight machine in perfect order. A bargain; guaranteed in perfect condition. Has been used but a few times. Owner is no longer doing flashlight work. Will sell for one-third original cost. Address Dept. C., CAMERA CRAFT, San Francisco, Cal.

Have you a camera or kodak? If so, send me your name and address, and I will do the rest. Dealey, Fotographer, 11 East Street, San Francisco, Cal.

For Sale—A ten-inch Cirkut camera fitted with a Turner-Reich Convertible lens. A bargain, in excellent condition, used but a few times. $225.00. Address R. A. Leet & Co., 1111 Broadway, Oakland, Cal.

Bargains—We have in stock five Special Portrait Lenses, size 8x10, fitted with the improved Iris Diaphragm and Diffusing Attachment. Regular price $60.00, our price, for thirty days only, $50.00. Description: 3⅜ inches diameter, 15½ inches equivalent focus, 11½ inches back focus. For further particulars address Jungkind Photo Supply Co., Little Rock, Ark.

Wanted—An active Partner in a well established commercial photographic business in Eureka, Humboldt County, Cal. A thoroughly practical photographer desired. For particulars address Photo Studio, 518 Fourth Street, Eureka, Cal.

A photographic operator, demonstrator or printer wishes a situation in San Francisco

or vicinity; understands all classes of paper, also enlarging. Address M. C. L., care "Camera Craft."

All-round photographer, always conducted business of his own, doing all work, desires position in California, south of San Francisco. Must be permanent. Married, sober, reliable. Box 172, Hayti, Mo.

For Sale—The leading studio in city of 100,000 inhabitants in mountain district. Having mining and other interests that demand my entire attention, I offer for sale my studio at a very reasonable figure for cash. My business in studio for October and November and December amounted to $7,123.40 in actual figures. With universities, schools and other contracts, it will run fully as much for the coming three months. If you have $5,000 cash, this is the best opening in the western country for a good live man. Business is so thoroughly systematized that any one can handle it. If you are in the market and can come through, address Mountain Studio, care "Camera Craft."

For Sale—The only studio in town of 2,000. Two other towns to draw from. Doing good business. Must sell at once. Have other interest. Address, Box 127, Santa Paula, Cal.

For Sale—One 18x22 Portrait Camera, Gundlach lens and large holder; also Dallmeyer portrait lens, cabinet size. All in fine condition. Address, 813 K Street, Sacramento, Cal.

Send only ten cents for tube making a full quart of perfect Metol-Quinol Developer, and for the biggest Photo-Paper offer ever made. Mirmont Photo Paper Co., Glendale, Brooklyn, N. Y.

Situation Wanted—Operator, retoucher, and general workman; 18 years' experience in city studios; salary, $20. J. L. Cox, Missoula, Mont.

For Sale—$100.00 takes fine photo outfit, consisting of studio camera, stand, Voigtlaender lens No. 2, Harrison lens, four backgrounds, Enterkin burnisher, two chairs and headrests. Address, Theo. Schmidt, Enumclaw, Wash.

Wanted at Once—Photographs—Kodak Pictures. Good prices paid for photographs (any size) of people, animals and scenery. Comic, grotesque, artistic, chic. Send prints, which will be returned if not wanted. Reference furnished, if desired. M. K. Bell, Box 10, Station B, Cleveland, Ohio.

I Furnish Kodak Films Free—Write today how to secure Eastman film for your kodak, free. Homer Howry, Kodak Finishing, Department B, 606 Carondelet, Los Angeles, Cal.

Operator and Retoucher and Air-Brush Artist wants situation, or would rent a studio. Address, Thos. Scott, 800 Edgeware Road, Los Angeles, Cal.

Photograph Gallery for rent; fine location; ground floor; over 15,000 population to draw from; near U. S. Army post; opposite old custom house; land of sunshine, on Monterey Bay. Address, J. W. Bagby, Monterey, Cal.

Vol. XV No. 3 MARCH, 1908 Price, 10 Ce

Camera Craft

WESTERN CAMERA NOTES

San Francisco, California.

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, MARCH, 1908. No. 3

A $20,000.00 Shutter Speed Tester

By W. C. Marley

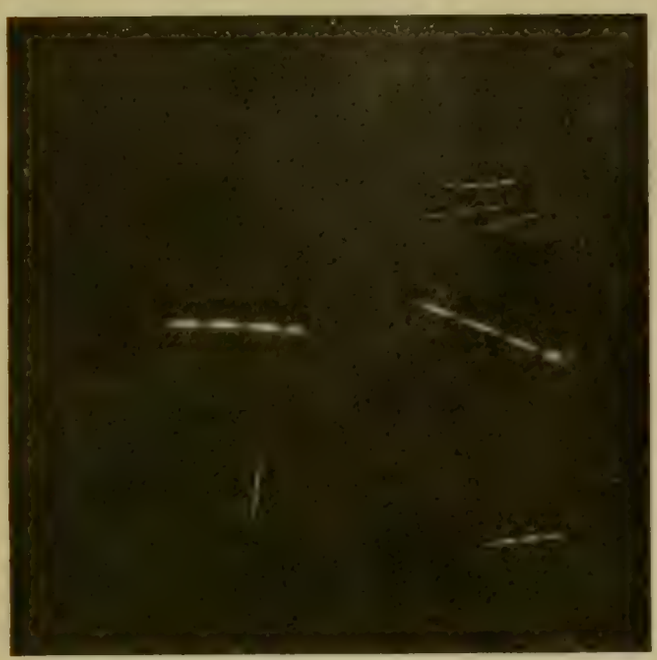
With Illustrations by the Author

One evening in January, 1906, I was trying for a few night scenes, street scenes in my home town, using a stereo film camera. The shutter of this particular camera was addicted to spells of stubbornness when subjected to a low temperature. On this occasion the weather was quite frosty, and on making the last exposure on the roll, the shutter succumbed to the cold. I had selected the view, opened the shutter, made an exposure of fifteen minutes and then, supposedly, closed the shutter; then walked towards an electric street lamp to unscrew camera from tripod, closing up the camera and turning film key along last. Upon developing the roll, there appeared upon this last film, a weird skein of curved lines, somewhat blurred by halation. What had happened was this: The lens had been directed towards the light, with the shutter open, while I had removed the tripod screw; every movement of the light across the field being recorded as a line harmonizing with the movement of the camera.

I made and mounted a stereo print from the negative and found true stereoscopic value. The appearance was of ropes of light apparently unsupported in the air. Since then I have designedly made several much better examples by opening the shutter and walking towards a street lamp from a distance of about two hundred feet, keeping the image of the light oscillating continually in the small finder. Movement was made more rapid as the light was approached, to overcome the greater liability of halation. The results give interesting proof of the inability of the eye to detect what the lens and dry-plate does easily, namely, the intermittent character of the light, due to the alternating current. The lines in the negative are not continuous, but made up of beats and intervals, uniformly arranged and spaced. This rendition of the current pulsations furnishes an easy and exact method of testing the speed of shutters, all that is necessary being, that we learn the exact number of alternations per second, of the current used for the light on which the exposure is made. This information is easily obtainable from the power house of the company furnishing the lights.

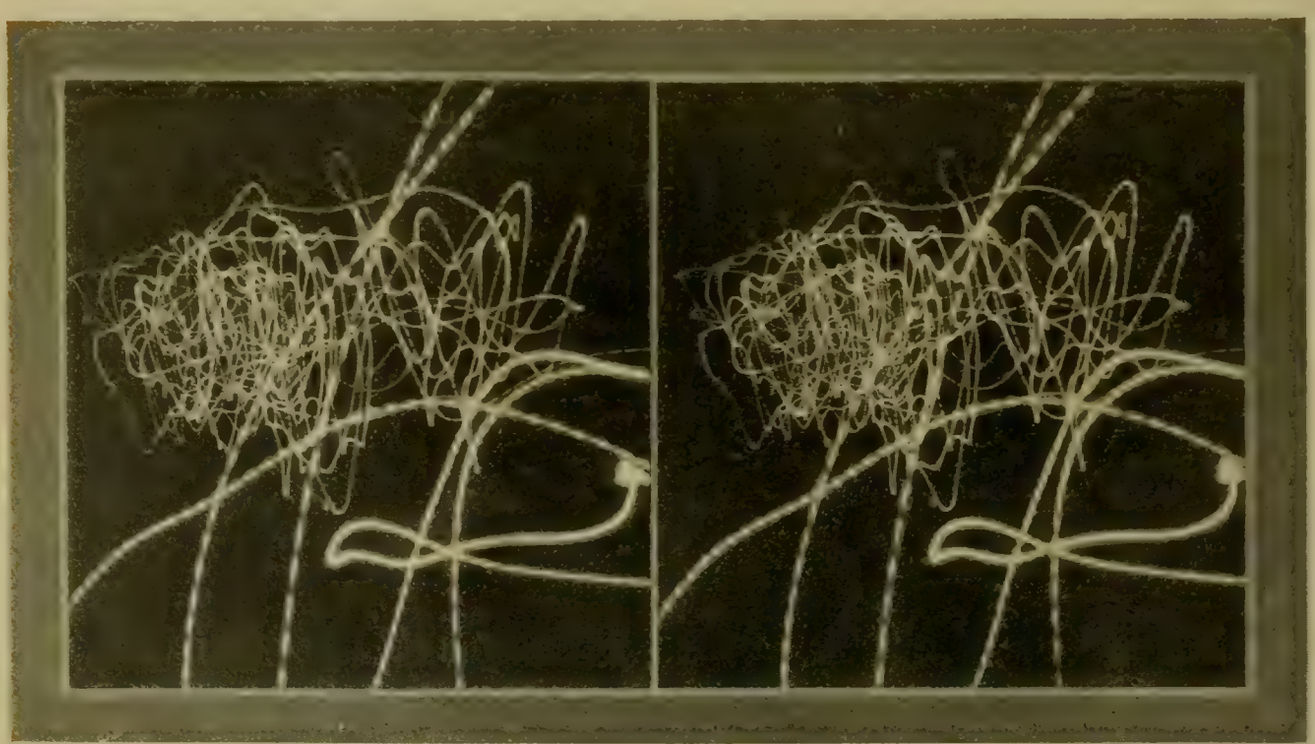
The method of using our $20,000.00 shutter speed tester, is as follows: At a distance of from fifty to seventy-five feet, let a person snap his shutter

while passing lens "across" the light. To make more certain, let him repeat the performance several times without changing the shutter speed, or the film or plate. Upon development there will appear a number of perfect "strings" of pulsations, identical in number of beats. The speed of the shutter can then be easily calculated by dividing the number into the number of alternations per second, to which the current is subjected. The use of films or backed plates is advised, although not necessary.



Herewith is reproduced one of the stereoscopic pictures made as described, and also an example of the record made by a shutter being tested. As can be seen, the several sets of pulsations number about three and one-half. The current was found to alternate one hundred and twenty times each second, being the ordinary sixty-cycle or 7,200 alternating current, making speed of shutter about one-thirty-fourth of a second. It will be seen from this that one can easily test his shutter speeds whenever he feels so disposed and has the time at night, using, free of charge, a piece of apparatus costing many thousand dollars to install.

A further note, however, will save the worker from wasting time and plates on a direct-current lamp, this form showing no pulsations. I can hardly do better than quote from a letter from H. G. Aylesworth, a prominent member of the California Camera Club. He writes:



DUPLICATE OR STEREOPRINT

"As you are aware, the Nernst lamp requires alternating current for its operation. Our salesmen were in the habit of carrying along a plug and cord to which a small high-resistance buzzer was attached, and before approaching a customer regarding the lamp, always attached the above piece of apparatus on the circuit. If the buzzer buzzed, he could go ahead and make a sale; if it did not, he would know it was direct current and therefore useless to waste his time. I discovered, however, that by moving a stick rapidly back and forth under the rays of an arc lamp, one could easily determine whether it was alternating or direct current. If direct current, the effect on the eye would be the same as in daylight, but if alternating current, the stick would look like a picket fence. It never occurred to me to test this with a camera."

Still another matter is worthy of mention, and that is: In the case of a large camera it may be difficult to swing it so that the image of the light trails across the right part of the plate. This difficulty is easily overcome by having an assistant squeeze the bulb while the operator uses both hands to hold the camera. Working in this way, it is possible to secure records of several speeds of the shutter on one large plate by confining the two or three images made with each indicated shutter speed to some particular part of the plate, employing a finder for the purpose. As one will have to use U. S. 32 stop, or when lamp is quite close, U. S. 64, the shutter will make a little better showing by this test than would be the case with a larger opening. This is because most shutters open and close from the center, and the smaller the stop the less travel is employed in the actual making of the exposure, although the shutter blades travel the same distance. A focal plane shutter is, of course, not influenced in this manner.

IN THE LOWER ALPS BY E. SHELDON PENNOVER

THE THAW
By ANNIE W. BRIGMAN

Just A Word

By Annie W. Brigman

ANNIE W. BRIGMAN

"Things cease to be supernatural when we understand them."—Hubbard.

"But there is one photographer in this group who reaches the limit of what may be called accidental imagination. Curious things happen to plates, by accident or design, and prints from these plates may be used to represent almost anything. The artist to whom I have referred is Annie W. Brigman, who, I believe, lives in Oregon. One of her pictures is called 'Thaw.' It seems to represent oozing snow and ice on a mountain side, all slipping slowly and majestically down. In the midst of the mountain side there is a sort of crevasse or cave, and in this is posed a beautiful nude female figure, seeming to pour something from a bowl. As it is impossible to suppose that the lady posed in this condition on the mountain side in winter, I am compelled to infer artistic 'monkeying' with the plates; and this is what I do not entirely like in some of the Photo-Secessionists."—Joseph Edgar Chamberlain.

The above fragment of a clipping from the New York Mail of November 20th last is so sure in its analysis that it is most delightful, even to the odious phrase, "artistic monkeying," a phrase that is thrown at photography whenever it veers from the stern path of its iron-jawed ancestors and tries to grow a soul.

Columbus made an egg stand on end by tapping it on the table. I make my negatives do things; but there is no black art, no combined negatives, no "stage claptrap," as another New York newspaper art critic accuses them of having in their backgrounds. They are honest little negatives in their creation—the settings, backgrounds, lightings, all found in the wonderful wilds of the high Sierras, all planned for, and the psychological moment waited for, sometimes for days or weeks.

The etching tool is one of my closest allies. With it, all that is useless is etched away. Even the **effect** of mystery steals through its keen edge, revealing itself in the finished print. So line of harmony is rendered more perfect and the motive, or underlying thought, enabled to appeal more clearly to the observer who understands and responds according to his ability.

I believe it is Elbert Hubbard who says that reading is a collaboration between author and reader.

To refer again to the clipping: "Curious things happen to plates, by accident or design, and prints from these plates may be used to represent almost anything." In a way, he is right; for, though I use Sierra trees and crags and thunderstorms, they, the negatives, are not records of the topography of that country; they might be anywhere in the wide world. They hold, in pictorial form, stories of the deep emotions and struggles or joys of the human soul in the form of allegory.

I realize that these "picture children" of mine are not understood because there has been no word of explanation sent with them into the mostly

THE BROOK By ANNIE W. BRIGMAN

kind world. This little "Brook" of mine, for instance. A brook, a **real** brook, symbolizes joy, purity, glorious poise and strength, with the eternal reserve of the snow-clad peaks above it for its continued life. Lift this thought to the softly glowing figure in "The Brook."

This, then, is my defense for daring to leave the beaten path, of using the camera as a partial means of expression, of using its unswerving ability for fact and glorifying it with fancy and making the blessed little black box my faithful slave.

The negative of "The Thaw" was made in glowing midsummer, and there was not more than a million acres of snow in sight!—A. B.

The Powrie-Warner Screen Process of Color Photography

By A. C. Austin

When I look back I can hardly realize that fifteen years or more have passed since color photography became an actuality by means of the Dr. Joly or McDonough method. Previously there had been much theorizing, but before this time we had not seen color portrayed by means of photography. The results in the beginning were crude; colors were not quite true to nature, and the obtruding lines were in painful evidence, but they surely were photographs in color.

Whether Dr. Joly or Mr. McDonough deserves credit for the original idea of a linear plate of alternate colors I have no means of determining, but the idea marked the birth of a practical principle that time has fully demonstrated in the Powrie-Warner process of today.

McDonough or Joly, rival claimants, either the one or the other, as you choose, had the inspiration, but both lacked the perception necessary to ultimate success.

McDonough went after the problem commercially before it was perfected. The International Color Company was formed, and great promises held forth to investors who poured money into the company's treasury, enabling them to plan and build ruling machines that should rule the alternate lines with sufficient fineness and accuracy to warrant the commercial success of the method.

I do not know how many thousands of dollars were wasted in the building and the discarding of these machines, but I do know that the company made very little actual progress beyond the experimental stage.

Sometime in the later 90's another company was formed in America to exploit Dr. Joly's idea, and a small plant was established in Montclair, New Jersey, but this company, as also the International Company, were laboring in the wrong direction. Both were striving to perfect ruling machines, seeing no other way to accomplish the desired result. Both companies made ruled "taking screens," and "viewing screens," and sold a few, but none of the results were ever more than novelties, the coarse ruling being very objectionable.

I was personally interested, in a minor way, in the efforts of the Dr Joly Company, to find better adapted dyes for the coloring of the ruled lines, and I had and still have, as souvenirs of misdirected effort, a "taking screen" in its original plate-holder, and several "viewing screens" that were the marketable product of this company, and I did make some passably creditable color transparencies more than ten years ago But the International Color Company and the Dr. Joly Company got into litigation, and the latter company was soon absorbed by the former. The International existed for a while, but finally succumbed to the inevitable Neither company accomplished much beyond paving the way for future experimenters

I am giving you this bit of history to show my early interest and knowledge of the idea, in order to justify in your mind my enthusiasm and absolute faith in the Powrie-Warner process, which I feel certain solves the problem, and is successful. There were two especially great difficulties in the McDonough-Joly method—the ruling of color lines on glass, and the necessity for registration in viewing a resultant picture. Fine lines could not, nor cannot, be ruled on glass; and registration was, and always will be, exceedingly troublesome.

The International Color Company is a thing of the past, and all that remains of a once bright promise and the barrels of money that were spent in an attempt at fulfillment, rest and rust in a store-house in the Middle West; elaborate, intricate ruling machinery that is absolutely worthless.

However, the basic idea was correct, and it remained for John H. Powrie and Florence M. Warner to successfully take up the problem laid down by their predecessors and to practically produce a linear plate of extreme fineness; and to formulate a method of working at once simple and beautiful.

If you do not already know, I want to tell you of Mr. Powrie's ingenious machine, which **prints** by means of actinic light on a colloid coating, spread over the surface of a glass plate, a series of lines which are alternately dyed to the required color. You observe the lines are **printed,** not **ruled.**

It is a significant fact that in any way in which the problem of commercial manufacture of a color screen plate is approached, that the difficulties encountered, outside of the Powrie-Warner method, are very nearly of the same magnitude, whether ruled by pens or wheels, as in the McDonough-Joly process, or the particles be laid down with infinitesimal grains of colored potato starch, or whether printed with greasy inks, as suggested by Du Hanron. One might think that the ingenious Krayn process, where the sections cut from blocks composed of colored layers of celluloid, might not be so difficult, but eminent authorities tell us the limit of fineness is reached in mechanical ways long before sufficient fineness is obtained to give a proper rendering of the detail of the picture or to obviate the obtrusion of the lines. The method suggested by Dr. Smith of printing the lines upon celluloid-coated paper and the transferring to the glass and crossing the lines introduces much black at the intersections, and, besides, the printing upon presses carrying greasy inks is quite impractical, owing to the continual variation.

In the Powrie-Warner process, which at first consideration may appear most impractical, it is, however, after years of patient labor and great expense in the construction of special machinery, possible to produce screen plates of extreme fineness of greater transparency and of greater uniformity, than by any other suggested methods, while the cost of production is so small that the plates may be sold at a price not greatly in excess of the best panchromatic plates made today.

The machine consists of an octagon frame rotating on a table. In the skeleton frame of this part of the machine eight special printing frames, each carrying two of the opaque lined negative plates or moulds, are fitted

and the ingenious construction enables the operator to put in the previously sensitized plates to be printed and remove them after proper exposure, with remarkable facility. The adjustment mechanism is so perfect that it scarcely impedes the operations of printing, which are controlled automatically by the machine itself, regardless of the many external conditions that are inseparable from bichromated colloid printing and its subsequent absorption of color matter in solution.

Furthermore, it is not only possible to produce linear glass plates for subsequent emulsifying, but with certain modifications it is possible to produce lined celluloid film twenty-four inches wide and one hundred and sixty feet in length, which makes possible the roll film for the thousands of kodak cameras and for the cinematograph and innumerable other moving picture machines. The Powrie-Warner method is unquestionably wholly practical, and from its very simplicity in after manipulation is bound to appeal to every one.

The making of a negative is attended with no more difficulty than goes with an ordinary exposure, and development of a panchromatic dry plate and **positives** in color may be printed from the color **negative** with facility as an ordinary lantern slide may be produced. And the fact that it is not necessary to chemically reverse the negative image into a positive image on the original plate makes possible the employment of the regular panchromatic gelatine emulsions with their high-speed sensitiveness.

I am not one sided in my estimate of the Powrie-Warner process. I think the Lumiere brothers deserve much credit for their autochrome plate, which is undoubtedly the first color plate on the market. I have purchased several dozen of the autochrome plates, and have made some successful transparencies that were quite true to the originals, but there are so many limitations to the autochrome plates and so many possibilities in the Powrie-Warner plates that I feel justified in asserting its superiority. The principal objection to the Lumiere plate is its slowness and its narrow latitude, or margin for error in exposure. The chemical reason for the slowness I do not know, but the narrow latitude is due, of course, to the thinness of the film made necessary because of the reversal operation. The Powrie-Warner plate is developed as a negative, the colors showing complimentary to the original, and from this negative one may easily obtain any required number of transparencies without difficulty, and because of this feature the film is of normal thickness, consequently admitting of much greater latitude. Mr. Powrie lately made a negative of a jumping horse in Kensington Gardens, London, and the exposure was brief enough to insure absolute sharpness and at the same time admit all the needed light to impress upon the plate every color and subtle tone of color with which the place and subject abounded.

What a field of opportunity is opened to the amateur in connection with the roll film!

Finally I might predict that we are on the eve of a revolution in magazine illustration. Every amateur and professional photographer will be after pictures in color, and the Powrie-Warner negatives lend themselves

so readily to the needs of the photo-engraver that it can be but the question of a short time when every event of importance will become the subject for color illustration in our monthly magazines.

A. Horsley Hinton

AN APPRECIATION BY WALTER A. SCOTT

The news of the death of A. Horsley Hinton has come to the amateur photographers of the Pacific Coast with a deep sense of personal loss. Many of us feel all the grief of the passing away of a near and dear friend, for a long time intimately associated with us.

Known to us only through his reproduced prints, his books and his writings as editor of the "Amateur Photographer," his personality has so strongly permeated his work that we seem to have known him intimately and had learned to look to him as the foremost exponent of pure pictorial landscape photography.

Most of those who have attained such success in pictorial photography have seemed to set themselves upon pedestals, but Mr. Hinton has companionably conducted us through all the successes and failures, trials and tribulations, incident to producing pictorial work, giving us an intimate insight into his methods, always impressing us with his desire to aid those who are striving toward pictorial ideals.

His reproduced work has shown his reliance upon pure, straightforward landscape, depending for its effectiveness upon the interpretation of Nature's various moods, without reliance upon figures or bizarre effects. His prints betoken close communion with Nature in her unusual aspects and evidence that his mind had always been open to grasp the many beautiful impressions which she spreads before those who have eyes to see and minds to understand.

We are at this time especially reminded of his article, "Some Pictures of Mist," p. 357, "Amateur Photographer," for 1906, in which the closing lines now seem to have a deeper significance:

"Autumn drops
Her chilly mantle, like a funeral weed."

Though we are far distant, our hearts go out in sympathy to his afflicted family, and the impressions left upon our minds by A. Horsley Hinton shall not soon fade away.

The highest expression is to show to others what we possess. Art, whether it lasts for the five minutes or for a thousand years, is the unfolding of personality.—S. S. Curry.

Flash Light Portraiture

By Charles R. Ogilvie

By H. W. DECKER, OAKLAND
Using three grains Victor powder

O me, one of the most mysterious manifestations of the conservative mental attitude of mind held by the average professional portrait photographer, is his failure to avail himself of the facilities placed before him by the manufacturer of a good, reliable flash powder. It is really unaccountable. Deep rooted as their aversion to flash powder evidently is, any attempt to locate definitely and determinably the reasons for its lack of popularity, simply shows that the subject has never been investigated. There are, of course, exceptions to the rule. But the average professional does not take the trouble to investigate. He has a dim recollection, perhaps of a banquet group, with its resultant smoke, and later, a proof that showed harsh shadows and ghastly faces, a travesty on the art of photography.

A professional photographer, one of the better kind, came to me recently and asked what I would suggest in the way of an artificial light for portraits at night. The only current available was not suited to the Cooper-Hewitt light which he had used in another city, and he further feared that the necessary current could not be secured for an Aristo lamp. Could I recommend acetylene or a group of incandescent gas burners, or what? My reply was (don't laugh): I would advise the use of flashlight. He respected my suggestion, but put forth a few objections.

By G. D. MORGAN, PHILADELPHIA
Using four grains Victor powder

that, to him, at once set aside the proposal I had made. But I would not have it so. Getting rid of the smoke was no more of a hardship than getting rid of his wash water. Hard negatives could be made under a skylight by the same lack of judgment in exposure and development. The time and steps required for placing a few grains of powder in position is insignificant, and repeated flashes, made for a variety of poses, are much less trying to the subject and make it possible to secure much more animated expressions than those obtained in the glare of any continuous strong light.

As I have set down a few of the stock objections, it is only right that I should at once mention a few of the many advantages. The main one is, of course, entire independence of sunlight. As I write this I have in mind the opportunities that exist in many of the smaller cities for doing a handsome business during the warmer months of the year by utilizing the enjoyable evenings. Particularly keen is my recollection of a certain small city in the interior part of Southern California where I spent a week last Summer. For weeks, no part of the feminine population cared to undertake an elaborate costume and a wearying half-hour in a warm studio during the middle of the day. In the evening the streets were thronged with this same feminine population, with little more to do than stroll about and enjoy an occasional nod or more effusive greeting between friends and

By H. W. DECKER, OAKLAND
Using three grains Victor powder

By H. W. DECKER, OAKLAND
Using three grains Victor Powder

acquaintances. The cheap post-card photographer, with his dummy automobile, crudely painted background and disfiguring mercury light, was, of course, in evidence, but his services were monopolized by a class that expressed its enjoyment of the opportunity afforded in a manner almost as loud and assertive as the photographic paraphernalia placed at its disposal. A vacant store made attractive, a tastily arranged booth, even the regular studio of one of the local photographers who were on the ground floor, could have been kept thronged with the most desirable subjects, and all of them in the best of humor with both themselves and everything about them. And the same would apply to any city of any size, and at any season of the year, on streets thronged by pedestrians during the evening hours.

By VARNEY, CHICAGO Using the apparatus shown on next page. His first attempts at flash light work.

But to return to our advantages: there is next the power to catch the most fleeting expression, owing to the short duration of the flash. The time involved is less than one-twentieth of a second, and with a good powder, even shorter. The experienced photographer will recognize the value of this, particularly in the case of children. To be sure of the desired expression, and that there will never be a failure, because of a move, are of inestimable value, and should commend it to all, for occasional, if not for regular use. One has absolute control over the amount of exposure given. If a certain number of grains of powder are found to be right, one has but to measure out the desired amount each time, and the negatives will develop automatically and be of exactly the same quality throughout any number of sittings. The necessary amount of retouching is greatly reduced. The difference between flesh texture and white drapery is always rendered correctly. Both of these advantages are due to the somewhat orthochromatic

A FLASH LIGHT APPARATUS

quality conferred by the light. The rendition of drapery, either light or dark, is perfect, and the quality of the hands against either calls for no attention from the photographer; that is all taken care of by the soft yet searching light.

The cost of each exposure is a fractional part of a cent. A good, serviceable apparatus costs less to install and maintain than an ordinary set of studio blinds. Any room that is large enough for the lens employed, can be used, and the portability of the apparatus prevents much of the necessity of shifting the sitter about for varying effects. In addition, there is no trouble with leaky skylights and broken glass, no expensive electrical repairs or unexpected breaking down of delicate mechanism.

I am showing herewith some reproductions of everyday work by photographers who make all their portrait negatives by flashlight, and in doing so I must apologize to the makers for selecting some of the least pleasing of their pictures. I have done this in order that elaborate gowning of the subject and the theatrical style of pose might not conflict with a full appreciation of the technical quality of the prints. Mr. Decker uses three grains of Victor flash powder, and Mr. Morgan four, for each exposure; the latter using his light "wider open," or rather, illuminating a larger surface with the flash. It will be found impracticable to use, in any smoke-confining flash apparatus, many of those old brands of powders which are weak in actinic rays, and, therefore, require a great increase in the quantity consumed, in order to get sufficient light. One reason is, that the concussion produced by the increased quantity of powder necessary, is liable to burst the enclosing fabric; as well as the further reason that it will be hard to dispose of the increased quantity of smoke thus produced.

As to the apparatus used, its forms are as varied as are the skylights employed by different photographers, in fact, the scope for variety is even greater. The most effective arrangement is, perhaps, that employed by Mr. Morgan. He has built a partition of tracing cloth extending from floor to ceiling, and about two feet from the front wall of his room. The flash lamp is placed in that narrow enclosure, and the smoke flows out of an ordinary window lowered at the top, a window, of course, situated in the wall behind the tracing cloth partition. A door at the end makes the placing of a new charge in position but the work of an instant. The light is used exactly the

same as a skylight, except that the raising or lowering of the standard supporting the powder pan, together with the moving of the lamp from side to side, does away with the necessity of using curtains or adjusting them for various effects.

The cut herewith shows a piece of apparatus used by a photographer in the Middle West. The swinging frame, six feet square, is backed with asbestos covered canvas, and the front is covered with semi-transparent cloth. It is open at the bottom, but closed at the top, except for the flexible canvas pipe which connects with a chimney, window, or other opening to the outer air. The smoke is driven out by means of a small electric fan located in the end of the pipe, and operated by a single battery cell. The flash lamp is supported on a frame just inside the small door shown open at the side. Exposure is made by pressing a bulb which explodes the powder and opens the shutter at the same time.

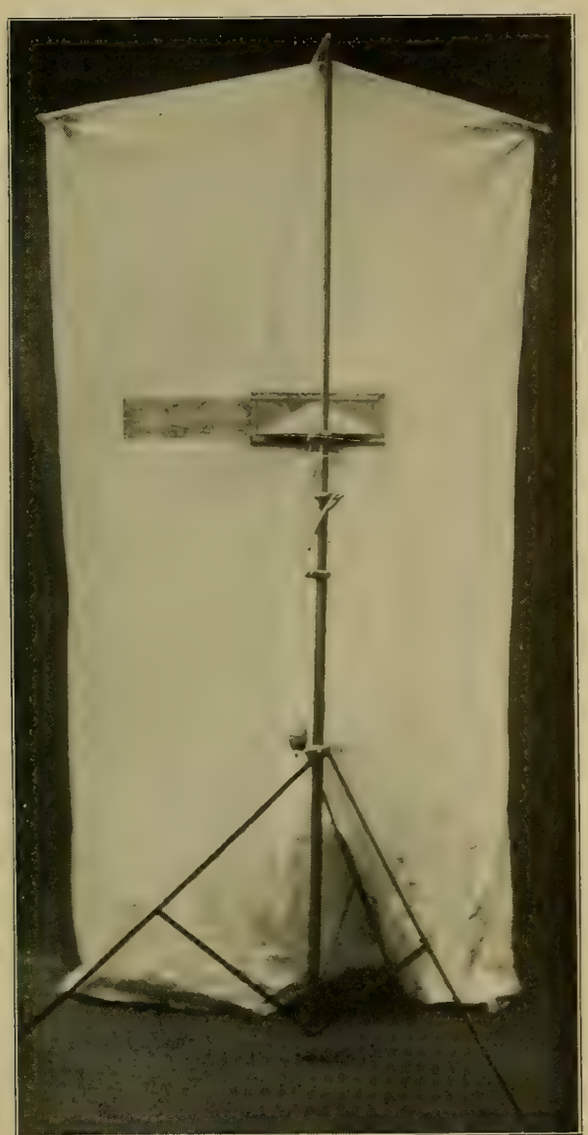
A third worker uses a light wooden box about three feet square, lined with asbestos paper, one side, the front, left open except for a covering of thin muslin. This is provided with a smoke outlet in the form of a flexible chimney and with a door for placing the powder on the pan within. This box is swung from the ceiling and can be moved about and inclined at any angle by means of a couple of cords. The powder is ignited by means of a push button.

By G. D. MORGAN, PHILADELPHIA
Using four grains Victor powder

FIRST WORK OF AN AMATEUR
With the portable apparatus shown on next page

which causes a weak current to pass through a short length of very fine wire on which the powder is placed. This short wire becomes red hot the instant the button is pressed and explodes the powder.

With this I am also showing a cut of the Victor portable flash lamp, particularly suited to the requirements of home portraiture. It is collapsible, and folds into very small space. The cut shows the rear, which is triangular in form. The front presents a large flat surface, some four by six feet in size, insuring that broad, soft lighting that rivals the effect of the most carefully handled daylight. It can be raised to a height of twelve feet, thus making it suitable for large groups or cases where the lamp must be placed at some distance from the subjects. All the smoke is retained within the bag-like enclosure, which can easily be detached and taken out doors and emptied, or, left standing the smoke will concentrate and fall to the bottom in the form of a white dust.



THE VICTOR PORTABLE FLASH LAMP
The above illustration gives a back view of the device. The opposite, or front side consists of the flat semi-transparent fabric 4 x 6 feet in size.

I have not given any diagrams showing position of lamp, sitter and camera, for the reason that this is intended mainly for the professional, and the light illuminated surface is used exactly as one would employ a like uncurtained portion of the ordinary skylight. I have, however, neglected one feature, and that is a means of focusing and also of studying the lighting before the exposure is made. This is easily secured by having an incandescent light or even a group of two or three, suspended by a cord in such a way that it can be hung directly in front of the intended flash. In the box-shaped apparatus I have described, two of these lights are a permanent fixture near the center of the bottom of the cloth-covered side, through which the flashlight reaches the sitter. A pliable cord connection of suitable length joins these to a nearby lamp socket. If such light as may be used is found hardly sufficient for critical focusing, the difficulty may be overcome by cementing, with a drop of Canada balsam, a microscopic cover glass to the inner side of the focusing screen. The balsam fills up the rough surface of the glass, giving a clear glass spot through which one may secure an aerial image by means of an ordinary focusing glass.

Should enough of my readers wish further information on the subject or desire an article covering the actual position of lamp, camera and sitter,

when making certain lightings, they have but to write the editor of this magazine, and an article covering the desired information, as far as lies in my power, will be prepared. I am a firm believer in the efficiency of flash powder when rightly used. Its convenience and its speed cannot be disputed, and cost can hardly be argued against it, for it is the cheapest of all forms of artificial actinic lighting.

It should be borne in mind that a concussion follows the explosion of all flash compounds, and if one uses a powder that requires more than a few grains to secure the desired amount of actinic light, it will be necessary to have an opening in the box or bag used, to allow of the expulsion of air attending the concussion. This can take the form of a flap that will swing outward and fall back into position before the smoke can escape. Another thing I would like to point out, and that is, the advisability of removing the cloth through which the light passes and washing it out from time to time. Tracing cloth, having a smooth surface, catches little in the way of dust from the repeated flashes, but other cloth is liable to become clogged up and prevent the light from passing through as it should. If the cloth be soaked for an hour in a gallon of warm water in which has been dissolved seven ounces of ammonium phosphate and two and one-half ounces of common soap, and then hung up to dry, it will be rendered practically fireproof.

KERN LAKE, SANTA CRUZ COUNTY By S. B. KISDON, WATSONVILLE, CALIFORNIA
Second Prize, January Competition

Getting the Camera Into Commission

By Preston E. Anderson

I am perhaps a little early, but we are all so accustomed to finding articles in some of the photographic magazines that are about two months too late to be timely, that I am asking the editor to print this in the February issue, if it be accepted. What I want to do is to urge such of my readers as have neglected their cameras for the last few weeks, or months, to spend a little time and thought in getting them into good working order; in other words, getting them into commission. It is so much better to do this at this season, when time is not so pressing, than it is to wait until a later date, when less leisure is available.

If the camera has been stored away in other than a dry atmosphere, it is well to dry it out thoroughly by bringing it into one of the living rooms for a few days, removing in that way any dampness which may have entered the woodwork or leather. If it has been in a warm, dry atmosphere, the leather of the bellows may have become so hard as to possibly crack or break on being extended. If this danger is suspected it is best to extend the bellows only as much as is absolutely necessary and then apply a very thin coating of castor oil from day to day until the leather resumes its original pliability. It is always best to anticipate this danger by first wiping off all dust and then applying with a soft rag a few drops of castor oil at the time the camera is put away.

To clean leather, nothing is better than what is called saddlers' soap, or the kind used by harness men on fine leather trappings. Wet the leather as little as possible, rub dry with a soft cloth, and finish off with a little of the castor oil. The bellows cleaned and in a good, pliable condition, the inner surface should be examined. With the shutter closed, the bellows fully extended, remove the camera back and take the camera out of doors into full sunlight. Using the focusing cloth in such a way that it does not cover any part of the bellows but simply engages itself with the back of the camera, or that part to which the bellows is attached, turn the camera about in the strong light, watching closely for any small ray of light that may enter through the bellows, particularly at the corner folds. Should holes be found, locate them on the outside of the bellows with a piece of chalk. When the examination is completed, these holes should be stopped by gluing on a piece of thin leather, preferably on the inside. These small pieces can be cut, shaving-wise, from the tops of old footwear or gloves of close texture. Your nearest shoemaker will supply you with the requisite small amount of leather cement; in fact, I have also asked him to use his sharp knife to shave me off a few pieces of fine-grained black leather from the pieces that are always lying about his feet. Should the inside of the camera need blackening, a little lamp black rubbed up in a little gold size, not enough of the latter to make it shiny, will put it right. If the camera is a large one, there will be a lining of black cloth inside of the bellows.

A SPRING COMEDY

When Pussy—willows doff their caps
And Old Sol smiles in glee.
They think that Spring's not far away
The Wind roars, "Wait and see!"

"It's much too early for you folks,
Besides, my fun's not o'er."
But Pussy—willows purr and wink,
"You've fooled us once before."

So off they throw their winter coats
And hold their heads up high
And coquette with Old Sol awhile,
Up in the clear, blue sky.

Old Sol looked wise and slyly winked.
The Pussies grew and grew,
Until their fussy coats of gray
Turned to a golden hue.

Then Boreas just frowned and blew
The snowflakes one spring day;
But Pussy—willows purred and said,
"You can't harm us this way!"

"So Mr. Wind, just rage and roar
And have things your own way,
The jolly, Mr. Sunshine man
Will soon have *all* the say!"

—*William S. Kerr*

This lining sometimes comes loose, and should it do so, glue down the portions that do not adhere properly.

If the inside of the camera is found in good shape, or after being made so, it should be well dusted out. For this purpose nothing is better than a soft rag previously prepared by placing on it a few drops of glycerine and hanging it up in a warm place for a day. This treatment results in the fiber of the cloth becoming permeated with the glycerine to an extent made possible in no other way and without using enough to cause damage to the blacking on the interior of the camera. So prepared, the cloth will take up and remove every particle of dust with which it comes in contact. If the cloth be a white one, showing the dirt collected, the result of wiping out the camera will prove a surprise.

The polished woodwork of the camera should respond readily to the application of ordinary furniture polish, such as one finds about every home, or easily procurable at twenty-five cents a bottle. Nickeled metal parts should be polished clean, and if the camera is a valuable one, any portion of this nickel plating that has worn away should be replaced by removing the part and sending it to a plating works, if such a shop be available. If this is not done, the exposed metal will be a constant source of annoyance through its marked tendency to rust. It will be well worth the small cost to have the nickel coating replaced. Brass work will tarnish only after the lacquer coating has worn away. Despite the fact that formulae for lacquers are quite common, the application of a serviceable coating of this kind is by no means an easy matter. The brass work well cleaned, I would advise that the camera be taken to some worker in brass, for his offices in the matter of a new coat of lacquer.

Sliding parts of the camera are best lubricated with a very little of the finest plumbago. Often the rubbing of the part with the side of a soft lead pencil point will suffice. A little hard soap will frequently work wonders with the sliding parts of a tripod that are inclined to give trouble. Wood screws that do not hold as tightly as they should, must be removed, the hole filled with a bit of soft wood dipped in thin glue, and the screw replaced. The ordinary soft match stick serves admirably for small screw holes. Such screws as are engaged by a metal plate or nut, may become loose through the wearing away of the thread. These should be replaced, new ones being ordered for the purpose. It may cost a little to have these specially turned up, or even to order them from the maker of the camera, but the satisfaction of having these small fittings perfectly dependable makes the item of cost of little moment. I have always figured that the neglect of any one of these small matters may easily cost me the loss of some much desired negative that would otherwise have been secured. My own cameras are not expensive ones, but they are at all times in perfect working order. Knowing that they are so, I can give my undivided attention to the subject, using the camera with the same lack of mental effort that one enjoys when using a knife and fork at table.

A camera that has been in use a season or two, owing to slight shrinking or twisting of the wood, may show rather wide openings where the

A COUNTRY LANE — By MRS. ALICE HARE, SANTA CLARA, CALIFORNIA

Third Prize, January Competition

LOOKING DOWN ON THE MIST — By A. H. GREEN, SARATOGA, CALIFORNIA

Fourth Prize, January Competition

back joins the camera, and at other like points that are supposed to be absolutely light tight. A yard or two of narrow, velvet ribbon and some good, thin glue will give these places added protection. It is well to glue on a strip if there be room, even if it has not yet been proven necessary by a fogged negative. The loss of a negative will be sure to come at some future time when the camera is used in a strong light, and that particular negative is bound to be the most prized exposure of a day's efforts at picture making.

The shutter I would not advise one to investigate too closely. If it works well, thank your stars, and keep it as far from dust and damp as you possibly can. If it gives you trouble, send it to a good repair man or to the original maker. And in doing so, do not expect him to put in permanently in good order for twenty-five cents. It is worth a dollar to have any skilled mechanic take one of the average shutters apart. By the time he does this, locates the trouble, makes the necessary repairs, re-assembles it two or three times in order to test it, he has spent two or three hours, perhaps. Counting the profit his employer must make on his work, the tools and skill employed, the right kind of a job is worth all the repair man dares to charge you.

If you are using plate holders, bear in mind that just inside the slit at the end, there is a long, narrow trap door edged with velvet, that wipes off every particle of dust as the slide is withdrawn. This trap is not put there to catch the dust, but to spring down the instant the slide is removed entirely and close the opening which would otherwise allow light to reach the plate. However, it does catch and hold all this dust. If you will insert the corner of the slide so as to raise this trap and blow through the opening with a pair of bellows or a large bulb, you will be surprised at the the cloud of dust that you can blow out. You will also discover the origin of many of the pin holes that have annoyed you in the past.

If the camera is a leather-covered one and needs only a little brightening up, rubbing on a little furniture cream will suffice. If scratched or torn, glue down any hanging bits of leather and then apply a thin coating of black varnish, made as follows: Beat up the white of an egg with about fifteen minims of ammonia. Rub this up with some aniline black by using a slab of glass and a palette knife. The bottom of a dinner plate and a thin kitchen knife will answer. Do not get the mixture too stiff, or it will be hard to get the coating on smoothly. Liquid shoe dressing is very good, but it has not the wearing quality of the above.

"Could we teach taste and genius by rules," wrote Reynolds, "they would no longer be taste and genius. But, though there neither are nor can be any precise invariable rules for the exercise or the acquisition of these great qualities, yet we may truly say that they always operate in proportion to our attention in observing the works of Nature, to our skill in selecting, and to our care in digesting, methodising, and comparing our observations."

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, MARCH, 1908. No. 3

Our Criticism of the Autochrome Process

Several of our correspondents have written to ask if we were not hasty in our condemnation in our last issue of the autochrome results. The query is hardly a justifiable one at this late date, particularly as we took the trouble to point out that samples of work produced under the supervision of the manufacturers of the plates had been examined by us. Our readers are no doubt aware of the high standing and reliability of the London "Times," and an extract from its pages anent the last exhibition of color photography in London may be more convincing. The clipping has been printed in the "British Journal of Photography" without comment, and can, therefore, be accepted as reflecting quite truthfully the opinion of capable critics abroad. We quote as follows:

"Passing from the pictorial section to the technical and scientific, one encounters an abundant exhibit of results on the Lumiere autochrome plates, and one may assume that these examples, about 100 in number, represent the process at its best. A walk round the gallery in which these examples are arranged brings us face to face with some of the best work by Mr. Comley, Mr. Klein, and Mr. Gill, all of whom employ the older three-plate method, and, after looking at these exhibits with their clean and unclouded brilliancy, the observer may well return to the autochrome department and ask himself whether the latest advance is an advance in reality or only an easy way of obtaining a second-rate or third-rate result. It may, of course, be urged that the three-plate heliochromes at the end of the gallery are all still-life subjects, whereas the Lumiere exhibit includes landscape and portraiture. Let us then descend to the court below and see what Mr. Sanger Shepherd has to show. Two as delightful studio portraits as one could wish may there be inspected; the flesh tints, which are the weak point of the Lumiere pictures, are almost ideal, one being taken with a total exposure of twenty-five seconds and the other with an exposure of fifteen seconds, these times including the time involved in shifting the camera back."

Mr. Mackness Visits the Coast

George W. Mackness, the able and efficient sales manager for Burke & James, Chicago, spent several days in San Francisco early in February. Mr Mackness expressed himself as more than surprised at the amount of business found awaiting his firm in the Pacific Northwest, from which territory he had just arrived, and the business in California was fully as gratifying. So encouraging was the outlook that he will urge his house to give this ter

ritory the best of attention in the future. The respect and esteem which Mr. Mackness has earned by his charming personality and business integrity during his short visit must prove most gratifying to both that gentleman and the enterprising firm which he so ably represents.

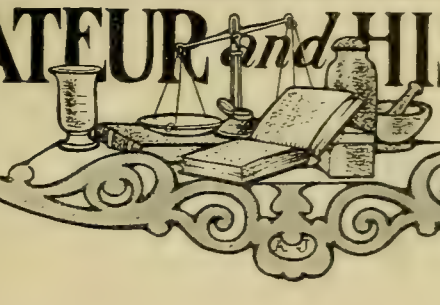
How to Sell Anastigmats at Half Price

Before the advent of the anastigmat lens, the largest lens makers in this country used to list their second grade rapid rectilinear lenses in their catalogues, and the 6½x8½ size was priced at about eight or nine dollars. Securing the rights in this country for the manufacture of a well known anastigmat, the series of lenses listed by them became so full and complete that this cheap lens was no longer quoted in their catalogue, but was only made to order in quantities for the benefit of dealers wishing to put out low priced outfits. These can be purchased in quantities at about five dollars each in plain barrels. They can then be engraved, "So-and-So's New Anastigmat," and sold at the remarkably low price of twenty-eight dollars. This is less than half price—for an anastigmat. And do not be afraid they will not give satisfaction in a good many cases. You will find that you can get testimonials, saying that these wonderful new anastigmats are better than Goerz, Zeiss and other anastigmats costing double the price. However, a word of caution: Do not make the mistake of engraving them with the name of the reputable firm that made them to order. They will immediately get out an injunction and compel you to withdraw them from sale, at least with their name thereon. They will also obtain judgment against you, and this will necessitate your placing everything in your wife's name and doing business under some other firm name. This all causes inconvenience, and is not worth the trouble, despite the fact that it helps sales to have the name of a reliable firm on the lenses.

How to Market Cheap Lenses

Secure an office and some stationery, proclaiming yourself as "Such-and-Such Lens Exchange." Insert a small advertisement in all the photographic magazines, announcing that you have three or four wonderful bargains in second-hand Zeiss, Goerz, Voigtlander or other standard anastigmat lenses; but do not neglect to advise possible buyers that they should send the money so as to insure first choice. Then write them that the particular lens ordered has just been sold, but that you will send another that is just as good. Do not pay any attention to requests to return the money. Send the victim the cheap lens by express, collect. If he returns this lens, refuse to accept it. You have the money, and the victim will soon get tired of the whole matter. Some of them will even accept the lens and write you that it is really an excellent instrument. These testimonials can be used in a circular sent out to a list of those that nibbled at the first bait—the advertisement in the reputable magazine. This advertising will cost a great deal of money—if it is paid for, but do not worry about that. The same magazines will not recognize you when you turn up under a different name a few months later, and they will accept your advertising without much question, if you will only word it carefully, so that there is no plain evidence of fraud.

The AMATEUR and HIS TROUBLES



Conducted by
FAYETTE J. CLUTE

SURPRISED AT THEIR OWN ASTONISHMENT.

Several times within the past few months I have had occasion to console quite a number of my less reckless amateur friends whose purses and desires do not correspond in their relation to the Autochrome plates. For the benefit of our foreign readers I would explain that four Autochromes of the popular plate size in this country cost here a little more than half the monthly salary of an "operator and retoucher of several years' experience," according to advertisements in their journals. But to return to our friends who do not happen to be in the millionaire class. Our consolation, of course, was always tendered in as guarded a manner as possible, taking mainly the form of a most sincere expression of our own lack of enthusiasm over the results. Thinking that possibly a few of my readers might be in danger of denying themselves the pleasure of a new automobile in favor of a potato starch and permanganate solution debauch, I will quote from an article on "Some Photographic Fallacies," by F. J. Mortimer, F. R. P. S., editor of the "Year Book of Photography" and the "Photographic News" (London). He goes on to say, speaking of the Autochrome: "That is, it has pleased because it has given a tiny reproduction or replica of Nature, and the pleasure has been analogous to that produced by the earliest photographs, or by the first photographs made by any one just taking up photography, largely a pleasure which is the outcome of wonder, or marvel, that in so simple a way such minute detail can be recorded."

The above quotation is exactly the explanation made in the editorial department of our February issue for the rather enthusiastic commendation that this new process has received from some quarters. Granting for the sake of argument that the Autochrome does give a fairly close rendition of most colors, let us give Mr. Mortimer's quotation, in the same article, from Ruskin: "Color added to a drawing if it be false will utterly and assuredly mar the whole work; if true proportionally, elevate it, according to its power and sweetness. But in no case ought the color to be added in order to increase the realization. . . . To paint the subject merely to make it more real is only to insult the imaginative power, and to vulgarize the whole."

I would advise my readers, should any of them be deploring the fact that they have not had the opportunity of inflicting an Autochrome positive of their own production upon their friends, to try and forget the unkindness of fate. There will be plenty of time to do this when the price becomes more reasonable and this or some other process becomes perfected. Could you compare some of the best Autochromes with examples of some of the three-plate processes such as the Pinatype, Sanger-Shepherd, or superimposed carbon, it would not be the lower price alone that would cause you to consider these last named as more worthy of your attention. To the fortunate ones who have produced real Autochromes, despite the cost, I would suggest all possible temperance in the expression of their wonder or marvel, as Mr. Mortimer calls it. Later, as this enthusiasm subsides, there will be left to them a few available adjectives with which to voice their surprise at their former astonishment.

NON-REVERSED CARBON PRINTS.

The above title is not fully explanatory because we can make our carbon prints from glass negatives, non-reversed by the double transfer process. If our negative is

a film we have only to print from the film side and use the single transfer method. However, I was shown some very fine, non-reversed prints the other day and was advised that they were made by the single transfer process and from glass plate negatives. All that was necessary was to place the printing frame in the bottom of a deep box painted a dead black inside. The results were slightly softened, but the effect was most pleasing, at least in the examples shown. I can well imagine that a wirey, sharp negative printed in this manner would produce results much more pleasing than could be secured in any other way, as the slight softening effect is one that is entirely different from that produced by enlarging. In a way, the results resemble those I once saw produced in the camera by making a part of the exposure with a small stop and then giving additional time with the lens racked a little in front of the focal point and then a little back of the same place.

COLOR SCREENS AND EXPOSURE.

The question of exposure acquires special importance when orthochromatic plates and screens are used in landscape work. It is very necessary in this case to guard against under-exposure, as green sensitive plates appear to have a tendency in themselves to give slightly harsh results. This tendency becomes specially noticeable if the plate is under-exposed, and, therefore, full exposures should be given. It may be taken as a safe rule that fully one-quarter more than the exposure required by the screen should be given. Thus, if with a four-times screen four-fifths of a second is considered correct, one second may safely be given. The latitude of the plate is increased in proportion to the intensity of the screen, that is to say, when using an orthochromatic plate with a five-times screen, we have five times the latitude given by the same plate without the screen.

TONING A SINGLE PRINT.

There is an amateur on the next block with whom I am quite intimate, and I sometimes have occasion to send a reporter to him for a print. The first time he was asked for one on Solio suitable for newspaper reproduction, it made him all kinds of trouble, as he does not employ that printing method in his own work. A large toning bath, one worth making up, cost a lot of time and chemicals and seemed to go bad after standing a few weeks awaiting another call for a Solio print. Now he has the matter simplified. He makes a solution of gold chloride, one grain to sixty minims of distilled water, and keeps that as a stock solution. When he wants to tone a single print he takes a clean egg-cup and puts in two drams of tepid water, adds as much powdered borax as he can pick up on the end of a pen-knife blade, and then pours in two drops of his gold chloride solution. The print is washed on a piece of glass, an old negative, and the contents of the egg-cup applied evenly with a soft brush kept for the purpose. The final fixing and washing is made very simple and consists of allowing a little hypo solution to flow around over the surface for a minute or so, and then rinsing under the tap. The prints only being wanted for reproduction and at once, final fixing and washing is not important.

WATER VARNISH.

Five ounces of white gum lac and one ounce of borax are boiled in a pint of water until the gum is thoroughly dissolved, when it is diluted until of the desired consistency. We have had no experience, either in its making or use, but supply the formula in response to a request.

GRADUATED BACKGROUNDS.

One of our correspondents writes asking how the professional photographer is able to turn out some prints with a beautiful, clouded background, and others from the same negative with a pure white background. The sample which he sends makes the matter quite clear. The portrait was taken with the sitter against a white ground. After the prints are made and dry, the photographer tears the rough outline of the dark side or edge of the clouded patch, out of a card. This is laid down in the right place and a momentary application of color spray from the air brush gives the result. Little or no experience is required for this simple and effective form of finishing. In fact, the air brush is becoming almost indispensable to the photographer who wishes to keep up with the leaders in his profession.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department Should be Addressed to its Editor.

Edited by
H. D'ARCY POWER, M. D.
Burlingame, California.

THE KRAYN PROCESS OF COLOR PHOTOGRAPHY.

In a previous number I gave an account of the "Omnicolor" plate. The following description of the Krayn plate (taken from the "British Journal of Photography" and "Photography") will enable the reader to see how actively the road blazed by the Lumieres is being followed, and extended:

The Krayn Screen-plate.

Attention has recently been directed to the latest claimant for favor in the field of color photography, viz., the Krayn screen-plate. With the Autochrome in full occupancy of the market, the "Omnicolore" of M. Jougla et Cie. promised "prochainement," the Warner-Powrie in course of evolution as a marketable commodity; it is, nevertheless, reasonable to suppose that large sums of money would not be expended on a process distinct from all these, were not the promoters looking to its successful appearance upon the market. Hence one may go so far as to record the semi-private demonstration of the Krayn screen-plate which has taken place in Berlin during the past month. The examples of the process were shown to a small company of photographic journalists, among whom were Dr. Neuhauss and Herr J. Gaedicke, both of acknowledged reputation in their profession. The Krayn process has been explained in our columns on previous occasions, but one may say once again that its essentially novel feature lies in the method of preparing the banded filters. That method is similar to the process by which the stratified sweetmeat known as Edinburgh rock and under other names is prepared. Thin films or coatings of celluloid, stained red, green and blue-violet, are laid one on the other in this order, and from the solid block thus built up are cut thin sections in which the three filter bands lie adjacent to each other, and of breadth equal to the thickness of the superimposed sheets. These sections are to be mounted on glass or other support, and coated with a panchromatic emulsion. Their employment will be on the lines of the Warner-Powrie plate. An offshoot to one of the large German companies has been formed under the title "Deutsche Raster Gesellschaft," and will manufacture and market the plates, which are expected to be obtainable in the early part of next year. According to the report in the "Deutsche Photographen-Zeitung," the screen-plates shown in Berlin were of a fineness corresponding to six and one-half bands per millimetre, equivalent to one hundred and seventy-five per inch. This is considered fine enough for plates of the largest sizes, and the process is described as capable of turning out filter-screens of any size. One measuring sixteen by twelve inches is commended for its freedom from linear structure when viewed at the customary distance. It is intended, however, to manufacture plates ten bands per millimetre (or two hundred and fifty-four per inch). Moreover, a feature of the process is stated to be the self-contained character of the plate; the latter is to be used without a supplementary yellow screen. The plate is to carry a rich negative emulsion for the making of a complementary color negative, and it is intended that transparencies from this latter be made by contact. Of other projected features of the Krayn process, we will not now write, as we have not the evidence that they were the subject of ocular demonstration to the meeting, but enough has been said to show that great activity prevails in the industrial production of the one plate or screen-plate processes.

Experiments, which Krayn himself is directing (writes Dr. S. E. Sheppard, in "Focus"), are in progress with a view to increasing the fineness. Filters of the Lumiere type can already be reached by cementing the original line screens so that the lines cross, and cutting the composite block perpendicularly, but line filters offer the advantage that copies can be readily produced. It is hoped to prepare a ma-

terial which shall supply not only a positive transparency by reversal after development, as in the Autochrome process, but a positive image by reflected light, as in paper images, the substratum being, however, a celluloid film, matt and opaque white. It is stated that the blue dye is so darkened that no compensating yellow filter is required in exposure, and that an emulsion capable of being worked in a deep red light will be used, of sufficient rapidity for use in the cinematograph. The most imposing feature of the process is the certainty with which large quantities of the material can be prepared. When one thousand kilogrammes of celluloid of each color has been prepared and spectroscopically tested, there is nothing to prevent the rapid production of some three thousand kilos of ready filters, a rate of production unequalled by any of the other processes, and permitting far greater sizes to be reached. It is expected that the plant will be ready to deliver commercially in February, next; the films will be supplied direct to plate-makers, to coat with their own emulsion, by the "Deutsche Raster Gesellschaft."

SCREEN-PLATE COLOR PHOTOGRAPHY.

The European journals, especially those of France and Germany, are still engaged in the discussion of the Lumiere Autochrome plate. I think I have read nearly everything that has so far been published, and the following summary epitomizes the main practical results.

Exposure.

The great stumbling block is the question of exposure. It seems now fairly well established that this not only varies with the actinism of the light as shown by a Wynne meter, but that with the obliquity of the rays as the position of the sun changes during the day or the season, or as it is modified by reflection in indoor exposures, there is an increasing loss of effect on the plate. Thus, though the light meter give the same tint, indoor and outdoor exposures are not the same; nor are those of summer and winter. The subject is still in the experimental stage, but the following findings will assist the worker: For outdoor exposures, the Lumiere plate may be considered to have a value of f-14, for indoor f-7, Wynn meter. Baron Von Hubl, quoting G. Winter, says: For small portrait heads, sunlight landscapes with dark foreground, and paintings in colors of medium tint, give an exposure equal to one tint (i. e., the time required for the paper to darken) of the Wynne meter. For landscapes with light foregrounds and for paintings in light colors, one-half a tint; for paintings in dark colors, from two to five tints. Von Hubl, speaking from his own experience, obtained correct exposure in the following times:

Portraits and groups in the open by good diffused light, in the month of September, with a lens working at f-8	20 to 40 seconds
Sunny landscapes, f-8	1 to 8 seconds
Faintings (copying), f-8 in sunlight	3 to 6 seconds
Paintings (copying), f-8, in shadow	30 to 45 seconds

My own experience, working in these winter months in California, has favored an exposure of about six to twelve seconds in direct sunlight.

First Development.

On this subject much has been written. Baron Von Hubl, Valenta, and the Lumieres (that is to say, the greatest living technicians of photographic science) have all dealt with it. Most writers advise a strict compliance with the printed directions, but Von Hubl says that to work in absolute darkness is an altogether uncalled-for precaution. The most important communication on this subject is by M. C. Simmen to "La Photographie des Coleurs," wherein he states that by substituting an acid or even neutral amidol developer for the pyro-ammonia, the plate, after an interval of two minutes, becomes insensitive to the light of an ordinary darkroom lamp; and from that point on, development may be watched as easily as in developing a bromide print. His results have been confirmed by R. Child Bayley, of "Photography," and are in accord with my own experience. I believe it is a great advantage when the exposure is uncertain, and, further, avoids many of the well-known inconveniences of pyro-ammonia.

The formula employed consists of:

Amidol	5 grains
Sodium sulphite (dried)	15 grains
Potassium bromide solution, 10 per cent	5 minims
Water	1 ounce

Development lasts five to fifteen minutes.

Second Development.

Dr. J. Husnik, in a long article in the "Photographische Korrespondenz," lays great emphasis on the importance of this procedure. He says that the time given in the directions is often insufficient, and that on dull, rainy days the light is often too weak to penetrate the film and reduce the silver near the plate, which then dissolves out in the fixing bath, weakening the whole effect. This latter statement is certainly true, as I can vouch for from personal experience. Furthermore, I find that eight inches of magnesium ribbon burned close to the plate failed to produce a full reduction, and I have relinquished the attempt to develop Autochromes made by artificial light.

Failures and Remedies.

The complaints concerning frilling have ceased and are not likely to recur. Several workers reported that landscapes taken by them showed excess of blue in the shadows. I had the same experience with emulsion No. 128. It was not due to deficient exposure, which also causes an excess of blue. I suspected a defective emulsion, and note that Dr. Husnik confirms the suspicion that the emulsions Francais," speaking of these excessive blues, suggests a rectification by immersion in a bath of orange dye [Orange II Poirier, he uses]. I tried this, using picric acid and eosin, with good results. Only I find it better to apply it locally than to bathe the whole plate. Obviously, when art considerations demand modification of the portrayal of the natural colors, this could be readily effected by similar methods in the case of other colors.

Over-exposure results, not only in excess of red color, but, if the development be full, to loss of much or all of the colors on reversal. Strong intensification, two or three times repeated, will often save such plates. I am experimenting on a better way, that I hope to publish next month.

Varnishing.

Some writers say this is quite unnecessary. I have varnished most of mine, but if the film be promptly protected by a cover glass, which should be done anyhow, there seems no special need of the varnish. One writer states that the use of the prescribed dammar varnish on plates intended for use in the lantern will cause their destruction, and he advises that such be given a slight bath of glycerine. Several writers offer substitute formula. G. Le Roy advises:

Dammar	7 parts
Mastie	7 parts
Tetrachloride of carbon	100 parts

Valenta's formula is as follows:

Dammar	2 parts
Mastie	5 parts
Tetrachloride of carbon	100 parts

Finely powder the mastie, boil the mixture and filter hot. Tetrachloride of carbon is a relative of chloroform, is in commercial use, is cheap and non-inflammable, but malodorous, and should be heated in a flask immersed in boiling water out of doors.

STRONG PRINTS FROM WEAK NEGATIVES.

We have not tried the method mentioned below, so cannot say how far it will work out in practice; it seems to have the merit of novelty. It is given in the photographic column of "The Belfast News Letter," the writer therein saying that he discovered it quite accidentally. Having taken a print from a very thin negative, and seeing that it was too weak to tone into a good print, he stuck it in a ledge on a desk, where it was exposed to the action of light from the back. On looking at the print a day or so later it was found that the action of the light through the back had so increased the body of the part on which it had played, as to make it possible to secure a good result in the toning bath. Hence, after a print from a weak negative has been carried as far as possible through the negative itself, it may be materially strengthened by placing it back outwards on a piece of clear glass and exposing it to the light again until there is enough depth for the toner to work on.—"Photography."

Our Competitions

The amount of correspondence which has resulted from our announcement of a proposed competition has surprised us greatly. We had no idea that so much interest could be aroused with a subject so hackneyed as a photographic competition by a photographic magazine. The variety of the suggestions made and the diversity of opinions as to the most suitable awards, convinced us that it would be impossible to do more than please a portion of our readers. However, it was plainly evident that our original plan proposed by Mr. Holmes, of Baltimore, would meet with the approval of the largest number, judging from the correspondence received. At the same time we were prompted to advise in one of the recent announcements that changes might be made as we proceeded, many of the suggestions being so good that they could not be ignored. In our last issue we refrained from giving further subjects in order to make a change that we believe meets with the approval of a large number of our readers. The suggestion comes from John Chislett of Crown Hill, Indianapolis, Indiana, a worker whose pictures are well known to many of our readers.

Mr. Chislett takes the ground that the average competition, in announcing such subjects as snow scenes, portrait of a child, interiors, and the like, starts the beginner on the wrong road. He, the beginner, bends his energies in securing a clear and sharp portrayal of the literal fact announced as a subject, and doing this, fails to understand why he does not score well near the top in the competition. He is justified in doing so, beyond question. In fact, it is the management of the competition that is in error. It announces as subjects a series of facts, submits the resultant prints to an artist who ignores "facts" and selects "effects" as the most worthy, making the awards accordingly. This is both unfair and unnecessary. How much more consistent to announce a series of "effects" as subjects. The average worker has plenty of feeling and imagination and it is only necessary that he be led to put it into his work, using his "facts" to that end, and finding himself enrolled with the pictorial workers as a result.

A second suggestion from the same gentleman, and one that has been made by several others, is: that the subjects be arranged in series of six or twelve, to the end that a certain one might recur at regular intervals of six months or a year. Jotting down a list of possible subjects it was found that, inasmuch as twelve would apparently leave many desirable subjects uncatalogued, there could be little harm in still further curtailing the list to six, at the same time broadening the scope of each subject as much as possible. This would have the advantage of again bringing around a particular subject before an entire year had elapsed. The recurring series of subjects is a plan that met with the most hearty approval of those taking part in the competitions of the old "Photo-Beacon."

In changing to a series of "effects" as subjects, it will be necessary for us to cancel the subject announced for the July competition in order to start with the same series of six subjects on January next. We will this month announce two subjects, one for July and one for August, the competitions closing the last day of these two months. The first will be Sunlight effects. This must be understood, as any picture in which sunlight, be it ever so small an amount, plays an important part, or better, dominates. A dim interior pierced by a single ray of sunlight that plays upon some portion in such a way as to create a picture, is just as available as a landscape flooded in sunlight. What is wanted is anything, be it portrait, marine, landscape, or what it may, that conveys the feeling of brilliancy, illumination, sparkle, vivacity, and the like.

The second subject, the one for the August competition, will be mist, or like effects. This will be as broad in scope as the first and the possibility of finding suitable material nearly as promising. It will include any effect of mist, haze, fog, veiling, sorrow, tears, and the like; in fact, while this subject is a little more difficult than the first, it is capable of a much broader interpretation and will no doubt be found more interesting.

CLUB NEWS and NOTES

Club Secretaries and others will oblige by giving us reports for this Department.

HARTFORD CITY CAMERA CLUB.

Hartford City, Indiana, now has a camera club, and from indications it will shortly become a very active and progressive body. Good quarters have been secured, and if enthusiam will do so, the present flattering membership will be rapidly increased. Every effort will be made to encourage the exchange of ideas for the benefit of the members and every possible assistance will be rendered those desirous of perfecting themselves in photographic work. Members of other clubs are invited to visit them whenever they are in that city.

THE CAMERA CLUB PRINT INTERCHANGE.

We are pleased to chronicle the complete success of the plan adopted by the Camera Club Print Interchange which was formed last Fall. Following is given a list of the clubs forming the Interchange, together with the local director of prints for each:

Photo Section Academy Science and Art, H. F. Walbridge, 6017 Penn Avenue, Pittsburg, Pennsylvania; Akron Camera Club, Wm. Spanton, American Hard Rubber Co., Akron, Ohio; Chicago Camera Club, F. M. Tuckerman, 1106 Railway Exchange, Chicago; Photo Pictorialists, W. H. Porterfield, 235 Hudson Street, Buffalo, New York; Portland Camera Club, S. S. Skolfield, 94 Commercial Street, Portland, Maine; Boston Camera Club, W. H. Wing, 307 Ford Building, Boston; Photographic Society of Philadelphia, Walter Zimmerman, 737 Walnut Street, Philadelphia; Photographic Club of Baltimore, Percy M Reese, 1201 Charles Street, North Baltimore, and Capital Camera Club, W. F Peabody, 918 L Street, Washington, D. C

Each club prepares an exhibit of from twenty-five to fifty prints and ships to the next club on the list. All clubs ship on the same day, and the nine exhibits pass from club to club in the order named above. The last mentioned club ships to the first to maintain the circuit. All shipments are made to the respective Directors of Prints, who are held responsible for them. This gives each club a print exhibition each month.

"CAMERA WORK" FOR APRIL.

Mr. Stieglitz advises us that the next or April issue of "Camera Work," that sumptuous publication so dear to the hearts of our pictorialists—although he does not say this last—will be devoted in the main to color photography. There will be a sixteen or eighteen page essay by Steichen, illustrated by three magnificent full-page color plates. Mr Steichen, above all others, is perhaps the best qualified in this country to give us authoritative instructions as to the working of the Autochrome process and advice as to the possibilities of the process. An article from his pen, particularly in connection with the illustrations which Mr Stieglitz's name can vouch for, cannot fail to be the most important contribution yet offered on the subject. These color plates have been produced in Munich, the home of the highest achievements in the art of reproductions in colors, and having the indorsement of Mr Stieglitz's critical taste, they cannot fail to be as near perfect as the present high state of the art permits. This special issue will be sold singly at the low price of two dollars, and as the edition of the plates is limited, it will be wise for all desirous of securing a copy to place their orders promptly, either directly with the publisher or with some firm ordering a supply. The address is "Camera Work," 1111 Madison Street, New York. Hirsch & Kaiser, of this city, have advised that they will have a limited supply. Their address is 218 Post Street, San Francisco

CHICAGO CAMERA CLUB.

The activities of this enterprising and progressive club would require entirely too much space to record in detail. From the monthly bulletins we condense the following: January 9th, lantern slides from New Britain and Syracuse clubs, with first set from the new Interchange. January 16th, special demonstration on enlarged paper negatives by George C. Elmberger. A week later a continuation of the same subject by Mr. Elmberger. January 30th there was an examination and criticism of the prints entered in the competition for the best picture of the Illinois Central depot.

Five events were provided the members in February. The 6th there was a "rummage sale," that proved very enjoyable. Two days later the board of governors of the American Federation held their annual meeting at the club. The 13th was again lantern night, and a week later was shown a fine set of animal slides in connection with a talk by Frank M. Woodruff, of the Academy of Science. The evening of the 27th was devoted to criticism of prints submitted in the January contest.

At the meeting of February 6th, the matter of moving to larger quarters was fully discussed, and the offer of space on the ground floor of the North Western University was accepted. This will afford about double the club's present facilities and accommodate the growing membership.

WISCONSIN CAMERA CLUB.

The Fourth American Salon was "featured" at the rooms of the Wisconsin Camera Club from February 12th to 26th, by having a "Press View" on the opening night and a critical talk, by an artist, on the last. Both were experiments, and both successful in bringing in large attendance. The lecture was a disappointment, because the speaker praised but little, although there was much to commend, and criticized severely, although in many cases the strictures were undeserved. The talk was, however, appreciated, since the camerist is glad to learn the "brush artist's" views.

Features promised the members for the near future by our program committee are: A demonstration of photography, C. L. Fortier; "Six Months in Europe," lecture and slides, by Dr. R. G. Washburn; exchange boxes of slides from the "Pictorial Interchange"; print contests and excursions.

In a recent contest for the best enlargement made on the club's apparatus, the prize, a roll of bromide paper offered by Eastman Kodak Company, was awarded to Frank B. Meyers. The prize-winning picture was unique, in that it was printed in two colors on Royal bromide. The subject was a portrait of a child, printed delicately, the face, hair and hands being redeveloped locally with a brush by the sulphide method. The effect is pleasing when not overdone. Improved facilities at the club quarters include developing stalls, a bromide room with easel enlarging apparatus, a lantern slide camera, and new lockers.

CALIFORNIA CAMERA CLUB.

This popular organization begins the new year well. At the January meeting of the Board of Directors, the following committee was appointed by President Le Breton, to undertake the selection of new and permanent quarters for the club: Dr. L. C. Deane, A. L. Coombs, Edward G. Eisen, Geo. Otis Mitchell and Paul Oesting. On January 17th, the usual monthly illustrated lecture was given by Supervisor Henry Payot, in Christian Science Hall, the subject being "Picturesque Japan." Mr. Payot, always bright and entertaining, surpassed himself, and the lecture was voted one of the very best ever given under the club's auspices.

On January 24th, Dr. H. D'Arcy Power drew the largest assemblage ever in the club rooms, to listen to his most interesting demonstration of the new "oil printing" process.

"IT WASN'T AN EASTMAN."

A careless young man out in No. Dak.
Bought what he supposed was a Kodak;
Though it looked like a "beaut,"
"'Twas a cheap substiteaut,"—
And the man wouldn't give him his Do
Bak!

The International Photographic Association

The old International Photographic Exchange has been revived under the name of the International Photographic Association. It has been found impossible to resume the publication of the "Exchange," which went to all the members of the I. P. E., and "Camera Craft" will therefore become the official organ of the society. Just as fast as the correct addresses of the members can be obtained through the various State secretaries or album directors, their names will be placed upon the mailing list of "Camera Craft" and their subscriptions to the "Exchange" filled with this magazine. So far, we have the complete and corrected list of members in Alabama, Colorado, Montana, and Ohio. Many of the other States are without either album directors or secretaries, and Mr. Hinman would be pleased to hear from former members desirous of taking up the work. Such will be supplied with a list of the old members in their respective States, and from such lists it will be only a matter of writing to these old members and ascertaining their present addresses. The lists can then be sent to Mr. Hinman, and he will in turn have them placed upon our mailing list.

The publication of exchange notices will be taken up in the next, or April, issue. As fast as State secretaries and album directors resume their duties, or begin them in the case of new appointees, their names will be given in this department. The stereoscopic division, under the able directorship of Dr. Gardner, has continued its activity except for a short interruption due to his duties calling him to Alaska for a few months.

Below is given the list of officers who will act in the capacities quoted until the next annual election

F. B. Hinman, President, room 4, Union Depot, Denver, Colorado

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco

Dr. C. H. Gardner, Stereoscopic Album Director, U. S. Marine Hospital, San Francisco

The State Secretaries who have reported upon the membership of their respective States are as follows:

Alabama—Richard Hines, Jr., 155 State Street, Mobile.

Colorado—F. B. Hinman, room 4, Union Depot, Denver.

Montana—Mrs. Ludovica Butler, 932 W. Broadway Street, Butte.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

We hope to increase this list by the addition of several new names in the next issue. These four States alone giving us a reported membership of over two hundred, it is but a matter of a few months before the society will be in as vigorous condition as heretofore. The first thing to be done is to secure the co-operation of former State Secretaries or members willing to act as such, to the end that the members in each State may be located and put in receipt of the official organ, "Camera Craft," as soon as possible. From that point progress will be very rapid

NEW QUARTERS FOR IVER JOHNSON CO., BOSTON.

The Iver Johnson Sporting Goods Company will move June 1st into their handsome new eight-story fireproof building at the corner of Cornhill and Washington Streets, facing Faneuil Hall, the Cradle of Liberty. Twelve years ago a modest store in Fitchburg marked the beginning of the Iver Johnson concern. A little later a store was opened in Worcester and later the same year a store in Boylston Street, Boston. In 1900 the John P. Lovell Arms Company, then the largest sporting goods store in New England, was acquired. The enormous increase in business during the last seven years necessitates larger quarters, hence the new building, which will be the largest exclusive sporting goods store in the world and a monument to the love of out-door sports, which is part of the makeup of every warm-blooded American. A large stock of photographic goods will be carried as at present

Photographic Post Card Exchange

C. Frederick Potter, Jr., Director, 620½ Nicollet Ave.,
Minneapolis, Minn.

As promised last month, we give below a list of new members of the Photographic Post Card Exchange, together with the names and addresses of some older members, sufficient to fill the space. More names will be added next month until the complete list is published, and thereafter the names of new members as they are accepted. Membership is granted only to subscribers of this magazine who are at present on our books, and in future will be granted only to those who may send the full subscription price to the director, or, having sent the full subscription price to our publishers, may apply to him for a membership card within a month after having received their first copy of this magazine. In making application to the director for membership, a sample of the applicant's work must be submitted. If this is found up to the standard required to maintain the high character of this society, membership will be granted provided the above conditions have been satisfied.

We are not quite sure that the proposed "Roster," to be printed in book form, will meet with the approval of all. As one member suggests, it would be much more convenient for each member to secure a small blank book and prepare his own "Roster," copying from our pages the lists of names as they are published, but giving blank spaces for record to only those names which he may desire to carry as exchanging with regularly. Our correspondent points out that no single member will want to do more than make one exchange with every other member. A few he will wish to exchange with regularly. These last will be the only ones opposite whose names he will wish to keep a record of cards sent and the like. Another objection to a printed "Roster" is the rapidity with which it will go out of date through the addition of new members not listed, the withdrawal of others, and the many changes of address which so large a society will have. Can we hear from a few of the members on these points?

We are pleased to be able to announce that Mr. Potter, the former editor of "Western Camera Notes" and the originator of the Photographic Post Card Exchange, has kindly consented to act as director. Owing to sickness in his family, Mr. Potter has not yet been able to remove to the coast, as he had expected. For that reason, those desirous of communicating with him will do so by using the address given above until such time as they are advised of a change. In future he will have full charge of this department, and matter appearing here will have originated with him or be in accordance with his wishes.

SOME OF THE MEMBERS.

Van P. Ault, Wilmerding, Pa.
C. A. Bangert, Mansfield, Ohio.
Harry M. Biggin, Kinsman, Ohio.
Percy D. Booth, Wellsboro, Ind.
W. J. Bundy, Aberdeen, Wash.
R. A. Knowles, Dodge, Ga.
C. N. Whittaker, Lawrence, Mich.
John J. Reilly, Harrisburg, Va.
E. E. McKinney, Box 149, Warsaw, Mo.
G. C. Flegel, Westville, Ind.
Rev. Geo. V. McAllister, Apalachin, N. Y.
G. E. Morris, Somerville, N. J.
George C. Flegel, Box 11, Westville, Ind.
C. G. Johnson, care Mr. Gibson, 483 Henry Ave., Winnipeg, Canada.
Charles W. Doutt, 310 Ainsworth St., W. E., Pittsburgh, Pa.
Frank Smith, care Y. M. C. A., Syracuse, N. Y.
J. W. Martine, M. D., 201 Palisade Ave., Jersey City, N. J.
Howard M. Putnam, 33 Day St., Fredonia, N. Y.
James H. Thorpe, 721 West Venango St., Philadelphia, Pa.
Charles G. Becht, 87 West Kinney St., Newark, N. J.
Nels. Carlson, 891 Bradford St., St. Anthony Pk., St. Paul, Minn.
Otis L. Clodfitter, 382 E. Chicago Ave., Chicago, Ill.
Mrs. H. E. Crickenberger, White Sulphur Springs, W. Va.

NOTES *and* COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

AN AUTHORITY SPEAKS.

R. Child Bayley, editor of "Photography" (London), and author of a number of the most popular books on photography, one of them being "The Practical Photographer," which we noticed some time ago as having run through several large editions, has something to say about Kodak film in an issue of his magazine not long ago. The article would fill several of our pages, but while we cannot give it all, there is so much of it that is new and interesting to our readers that we cannot refrain from making a number of extracts, particularly as they show in what high esteem an American production is held in a country so conservative in the matter of appreciation of foreign goods as is England.

"Few users of Kodak film realize the history of the commonplace looking spool with which they load the camera. Kodak Park, Rochester, U. S. A., where the film is made, is a factory of an altogether exceptional kind. Imagine a large and handsome park, with broad expanses of grass, dotted with trees, and containing here and there creeper-clad buildings, one of them with a lofty chimney, the highest in America. There are drives, flower beds, and a lake which serves as a swimming pool, within the borders of the park, which is four miles away from the flourishing city of Rochester, and is connected with it by an electric tram line, a branch of which runs right inside the park and up to the buildings. Such are the surroundings amidst which the Kodak film comes into existence; amidst fresh, pure air, in an equable climate, away from smoke and dust, and the other concomitants of a manufacturing city.

"The film has other advantages. Not only was it the first successful celluloid film, but it is immeasurably the most widely used. While it is easily first in Great Britain, in many other parts of the world it is the only film available. It is certainly not an exaggeration to say that nine-tenths of the roll film used in the world is Kodak film. Now, although the Kodak Company has many factories in various places, we believe we are correct in saying that it has concentrated its film that all Kodak film, whether used in China, or England, or Timbuctoo, is made at Kodak Park. The consequence is that the manufacture is conducted on so huge a scale that every avenue of trouble can be stopped up. A highly trained staff, skilful chemists, and the most perfect machinery are some of the advantages of working on such lines, but there are others. So extensive is the manufacture that the very materials themselves are profitably made, and so their suitability watched from the very start. Celluloid is the base, so that celluloid is made there. Pyroxyline is an important ingredient of celluloid, so that pyroxyline is manufactured there. The quality of the nitric acid used in making it is one of the most important factors in the manufacture of pyroxyline, so that nitric acid is manufactured there. In the same way, the silver nitrate used in the sensitive coating is made on the spot, and countless other examples could be given, which would serve to show the colossal nature of the industry. We pride ourselves in this country on some huge plate factories, but no one plate factory coats anything near the same area of glass per annum as is here done of celluloid.

"The remarkable uniformity of Kodak film is one of the results of manufacture on so large a scale. All possible sources of irregularity are, as it were, averaged up, and, as a result, one buys a spool of film in New York, another in London, and another in Moscow, or Madras knowing that the speed of all is practically identical, and that the same treatment that will make a good negative on one will make

it on the other. There is, at this day, no more uniform photographic product than Kodak film. But not only is it made on a large scale, but its manufacture has been carried on at Rochester from the very earliest days of celluloid film at all.

"Now we have not set all this down merely to glorify the Kodak Company. We want to show first the causes and then the results. The causes have been stated; the results are now to be considered. The early celluloid films were, comparatively speaking, insensitive; the Kodak film today may be treated as on all fours with the most rapid of glass plates. In the early days all kinds of strange marks and blemishes used to make their appearance; patches seemed as though they were insensitive, and others as if they were fogged. Kodak film today is as clean and flawless as the best dry plate. Then, again, the film has been made orthochromatic and non-curling, and, greatest advantage of all, it has been put up in cartridges and film packs, which allow it to be loaded into the camera, and taken out again for development, in full daylight. Thirdly, by the application of time development to roll film by means of the Kodak tank developer or developing machine, all necessity for a dark room has been dispensed with, while the making of perfect negatives has been simplified enormously.

"We have used many a spool of Kodak film, some sent us by the company, others purchased here or there, where the want arose, and can only say that its ubiquity, its high quality, and its freedom from minor defects are a source of constant admiration. In fact, when the extreme susceptibility of a sensitive photographic film to all extraneous influences is borne in mind—influences which beset it from the earliest stages of its manufacture—the uniform excellence of Kodak film makes it, without any exception, the most remarkable commercial product of the day."

SOME FINE SAMPLES.

Taprell, Loomis & Company are showing this Spring, some very handsome new folders, folios and mounts. You can find them at all the dealers, and the beauty of the matter is, they do not encourage you to get "loaded up," in fact, they advise you to the contrary, to the end that you may have a large variety for your customers to select from. Their new "Miniature" folio is made of the finest rag stock, with a surface like a platinum print, and the cover bearing a beautifully engraved lace effect. It comes in ivory white and golden brown; just the thing for unmounted cabinets on any sepia or black and white papers. The price is only two dollars a hundred. The "Parchment" folio is really a case for individual prints. It is neat and attractive, with an individuality that makes it decidedly different from the ordinary envelope form. It is made in two shades, cream white and sepia cream, and in six sizes. The price will surprise you after seeing a sample. The "Richmond" is the coming favorite for a large list of progressive photographers. It is very artistic; the cover is in the new shade of Naval grey with an embossed dragon seal on the front. The tissue protector is also embossed handsomely, and the insert card is the firm's new special "Royal" bristol, dove white on one side and Parisian grey on the other. This being left loose, either side can be used according to the tone of the print, and as it has no plate mark, odd sizes can be used. This gives one the advantage of being able to use a large variety of sizes, shapes and shades of prints. Four sizes are made, 7x10, 7x11, 8x11, and 8x12, boxes of fifty costing from two dollars to two dollars and fifty cents, according to size. In mounts, perhaps the finest value shown as new this Spring is the "Study" style. This is one of those happy effects that help to make large work look so attractive. It will encourage the demand for large work on account of its artistic qualities and tasteful appearance. It is made of the finest of heavy stock, crash linen finish, matched edges, and the center is a beautiful, half round, massive effect surrounding a plate sunk center. Two colors are supplied, cream white and olive brown, and there are some sixteen different sizes for both ovals and oblongs. Prices range from one dollar and ninety cents to three dollars and fifty cents per box of twenty-five.

A very few dollars put into a well selected series of these four new lines would prepare any photographer with the needed samples to take the best possible care of the new business that will come with the

opening of the season. Look these up at your dealers or write the manufacturers about them. You will have to use at least two of these styles during the coming season, and you might as well investigate them now. A delay simply means the loss of increased profits on your work.

AMATEUR PHOTOGRAPHIC PRIZE CONTEST.

The G. Cramer Dry Plate Company, of St. Louis, are offering some tempting prizes, the four largest in gold coin, for the best negatives on their well-known Isochromatic plates. They desire to secure negatives that will illustrate the great advantage of Cramer Isochromatic plates over others for flowers, portraits in colored costumes, interiors, views, clouds, or any colored objects. There are first, second, third and fourth prizes of one hundred, seventy-five, fifty, and twenty-five dollars respectively, in gold coin. In addition, there will be ten awards of five dollars' worth of the plates. The conditions are as follows: 1. Only amateur photographers are eligible. 2. All prints from negatives entered must be in our hands by January 1st, 1909, when this contest closes. 3. Prints only to be submitted from twin negatives 3¼x4¼ or over. One negative to be made on a Cramer Isochromatic Plate exposed with or without a ray filter, as contestant chooses. The other negative to be made on a Crown, Banner X, or any other regular plate. Both negatives to be of the same size, one made immediately after the other, of the same subject, and with the same lighting and with best results obtainable on each plate. Only contact prints will be considered. 4. Not more than one prize will be awarded any one contestant, but contestants can make as many entries as they desire. A pair of prints constitutes an entry. 5. Prints must be mounted, but not framed, and sent to us charges paid. Contestant's name and address must be plainly written on the outside of the package, and also inclosed in a plain sealed envelope in the package. Also inclosed in the envelope must be the unmutilated end labels from the Isochromatic and Crown, Banner X, or other plate boxes, from which the plates were used. There must be no name or distinguishing marks on the prints. 6. All pairs of negatives, and prints therefrom, for which prizes are awarded, to become the property of the G. Cramer Dry Plate Company. Prizes to be paid after the negatives are received by us in perfect condition. 7. Due care will be taken of all prints entered, but we will not be responsible for any loss of or damage to them. Prints not winning prizes will be returned, if desired, as soon as possible after the prizes are awarded, provided sufficient postage is sent. 8. If the nature of the subject winning a prize is such as to require a permit to use it for advertising purposes, a written permit granting such use, signed by the legally authorized parties, must accompany the prize negatives. 9. Three disinterested and competent judges will award the prizes. Names of judges and list of prize winners will be announced with awards. 10. Mark packages, "Advertising Department," and notify us of shipment, by letter. Send all packages to G. Cramer Dry Plate Company, St. Louis, Missouri.

FEBRUARY BUSINESS.

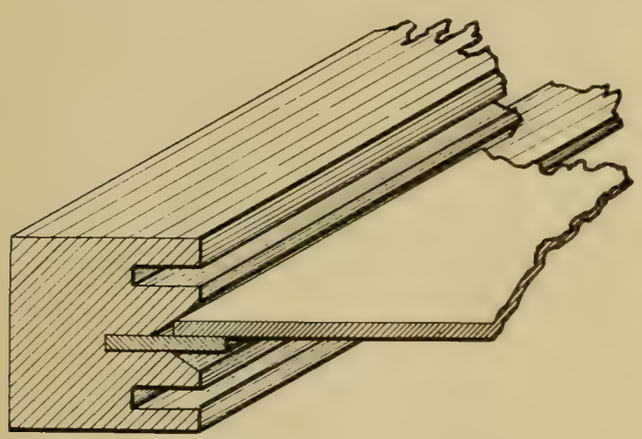
If your business was good in February you are to be congratulated. At least one man found business bad. George W. Woodward has recorded his doings for the past month and Leon Foster Jones has illustrated the matter. The little booklet is free and will interest you wonderfully. Write Sprague & Hathaway, West Somerville, Massachusetts, for a copy of the new "Diary of An Unsuccessful Photographer." The "bull pup" that has made Jones famous, is pictured in half a dozen charateristic poses, but Mr Woodward denies being the original of the artist's characterization of the photographer whose woes are so well described. Don't forget to get a copy before they are all gone.

AN IMPROVED PLATE-HOLDER.

We have all of us often wished we could replace a warped dividing partition in a plate-holder by inserting a new one that was flat and perfect. Again, we sometimes want to use an ordinary holder as a container for the negative in making enlargements, but on account of this dividing partition in the center, this could not be done without cutting it away and destroying the

value of the holder for regular use in the camera. At other times we have felt that a holder in which this septum or partition could be removed would allow us to insert a piece of ground glass and verify our focusing scale without the expense and trouble of making several exposures and developing them. Still other difficulties inherent in the old style holder will readily suggest themselves.

It seems that all these defects are to be remedied by a California inventor, John T. McKean, the popular photographer of Santa Cruz. He has just secured a patent on an improvement that is best explained by the cut herewith, which represents a



detail section of the plate-holder edge. The short section at the right of the center represents a fixed rim extending all around the inside of the holder and just deep enough to engage the removable partition. The longer section to the left represents a portion of this removable partition which is of such a size that it springs snugly into the groove by the side of the rim as shown, being inserted or removed through the side of the holder just as a plate is inserted or taken out. The cost of the holder is not increased to any appreciable extent, and as there is no opening made in either the sides or ends of the holder, there is no danger of light leakage. It is hoped that this new holder will be shortly placed on the market by some of our enterprising camera manufacturers.

A GLADIOLUS BOOK.

Arthur Cowee, Meadowvale Farm, Berlin, New York, has sent us a beautifully illustrated list of bulbs of what he calls "The Twentieth Century Flower," the gladiolus. The booklet is one of the handsomest we have seen for a long time, containing as it does some beautiful illustrations in colors and all in the best taste that characterizes the work of that able photographer and printer, J. Horace McFarland. We would advise all our readers to send for a copy and in the meanwhile prepare to become enthusiastic growers of the charming gladiolus.

A NEW COOKE LENS CATALOGUE.

There is a new catalogue of Cooke lenses just from the printer's hands and our readers should send at once for a copy. The several old series have been enlarged by the addition of new sizes but most important of all is the new Series 3A and the new Series VI Cooke portrait lens. The first works at f-6.5, and is recommended above all others for instantaneous work with hand-cameras. Light and compact, they are mounted with special regard to the construction of Kodaks, Graflex, Century, Premo and Hawkeye cameras. They are the latest development of the famous Series III, and are preferable to them for cameras like the above. The Cooke Portrait lens works at f-5.6. It is supplied in a special mount fitted with rotating rings that control the definition and operate the diaphragm. These rings in turn are operated from the back of the camera by means of cords and pulleys, as shown in the drawing which we reproduced last month. Every photographer should have a copy of this instructive new list, and it will be sent free on request by Taylor, Taylor & Hobson, Limited, 1135 Broadway, New York.

THE INGENTO FILM HOLDER.

The latest addition to the Burke & James line of specialties is a clever device called the Ingento Film Holder. It secures the film and holds it perfectly flat and straight during the process of developing, fixing, and washing, making it entirely practical and convenient for one to develop his exposures on film and film packs in the same way and using the same tank as for plates of a like size. Three sizes are made, 3¼x4¼, 4x5, and 3¼x5½. They are handsomely finished, and being made of aluminum, will not rust or corrode. They sell at fifteen cents, any size, and should be on the shelves of all the dealers by the time this reaches the reader.

IN THE EUCALYPTUS GROVE
By R. J. WATERS, SAN FRANCISCO, CALIFORNIA
First Prize, January Competition

Camera Craft

San Francisco, California

COMING FROM CHURCH
By C. CHRISTIANSEN, CHICAGO
First Prize February Competition

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, APRIL, 1908. No. 4

Parlor Photography

By Thomas H. Holmes

For the past year or more I have prided myself on the possession of a dark-room so well arranged and replete with every possible device for working in solid comfort, with a minimum of trouble, and with special accessories for all sorts of work and processes, that it could not possibly be excelled, but the other evening my satisfaction received a shock, and I lost a large chunk of conceit upon visiting a new acquaintance whose work I greatly admired. He had no dark-room, did not want one, and would not even be bothered with keeping one clean and in order! Yet he is a good photographer, does lots of fine work, and seems to have every requisite, the foremost being neatness in working.

MY "DARK ROOM"

He keeps his chemicals in a little cupboard under his mantel-piece, his few trays, fixing and washing boxes on the shelf of his closet, and works entirely upon the library table in the center of his sitting room. First, he covers the table with a piece of light-weight oil-cloth as a precaution, although, during an entire evening spent in developing plates and printing, I could not see that it was necessary. He uses amidol exclusively for plates and paper, this requiring only one bottle, a stock solution of sulphite. A two-solution developer would add but an extra bottle to his equipment. Onto the table, almost quicker than I can tell

it, he placed three trays, a grooved fixing box containing an acid fixing bath, a ruby lamp, one graduate with weak developer, another with normal developer, and a pitcher of water. On the floor was a slop bucket. One after another the plates were taken from the holders, started in weak solution, and when necessary, transferred to the stronger developer, rinsed in tray of water, and then placed in the hypo box. There was no hitch nor hesitation in the procession of plates. He evidently knew his exposures, and was thoroughly acquainted with his developer. The trays touched each other so that not a drop was spilled on the table.

Finally, all the plates were in the hypo, the cover on, and, during the next fifteen minutes, with the white light turned on, he brought out paper, dry negatives, a printing frame and cardboard shield for the protection of paper while filling the frame. During the development of the plates, it being night, he had merely pulled down the window shades, using two push pins to correct a too great bulge at one side. When the plates were fixed he carried fixing box into bathroom and transferred them to a washbox in the bathtub, and connected this later to the faucet by a rubber tube, and turned on the water.

Leaving plates to wash, he returned to his room, replaced fixing box in original position and proceeded with his printing, very much after the fashion of developing his plates. According to the nature of his negative, some prints went into weak and some into strong developer, and after a rinse in water, all went into the grooves of the fixing box, two in each, back to back. In less than an hour he had exposed, developed and fixed two dozen prints, and I was much interested in seeing how he would manage to wash them, for it was not yet time for the plates to go into the drying rack. I did not ask any questions, but I said to myself that right here is where I had him in an argument on dark-room vs. sitting-room, but he disappointed me completely.

Again carrying his fixing box containing prints, and also a small plate-box, into the bathroom, he proceeded to fill the tub to a depth of ten or twelve inches, first removing rubber tube from faucet, but not removing the plate washer. The small plate-box contained several dozen common bottle corks, about one inch long by three-quarter inch in diameter at their larger ends. These corks had been split lengthwise, after a V-shaped cut had been made in the top, and a common rubber band held the two halves firmly together. This formed a clip, and by pinching the top the V-shaped notch closed and the lower jaws opened to grasp a print on the white margin, when, upon releasing the pressure, the rubber band immediately caused the lower jaws to close firmly. One of these cork clips was snapped into each print as it was dropped into the water, where it floated near the surface, on edge, much like a plate in a grooved box. My friend was merely taking advantage of the well known fact that the hypo is removed from the prints by dissolution, and that hypo solution being much heavier than water would accumulate at bottom of the tub, while the prints remained suspended in clean water near the surface.

This method of washing prints has many advantages over any others I know of; the prints can not sink in a bunch on the bottom, nor is there any danger of the corners of one print injuring the face of others. There is no rapid motion of water, and the prints require no attention whatever until removed, other than to once or twice, at intervals, pull the plug and drain off the bottom inch of water containing the heavy hypo solution. Incidentally, he explained, while rinsing out the used trays, and putting things away, that his plate washer had a series of small holes around the bottom, through which the hypo solution was carried off from the plates, the plates being held an inch or more above the bottom of the box.

And this man had no dark-room, did not want one, nor need one, simply because he was neat and tidy in his working instead of unnecessarily sloppy and slovenly. It was a fine object lesson, and I now no longer wonder that such a man with such methods can turn out good work.

THE FLATIRON ON A RAINY DAY By HARRY A. BRODINE, NEW YORK
Second Prize February Competition

WHO WILL GET THE BEST NEGATIVE? By S. D. PATRICK

The above picture was taken on one of the outings of the Isochromatic Camera Club, of Trinidad, Colorado. The members represented, reading from left to right, are as follows: O. E. Aultman, E. E. Runge, Walter Dearden (President), A. R. Allen (Secretary and Treasurer), S. D. Patrick, Edward Carter, W. L. Crouch (Vice-President), and W. D. Strait. Two new members have been added since the picture was taken, thus filling out the club, which is limited to ten. We have had the pleasure of examining one of the club albums and the beautiful rendition of Colorado scenery which it contains, proves most conclusively that the club is composed of earnest workers who are satisfied only with the best results, both technically and pictorially.

Copying Photographs.

Why not take a little more pains and make a finished negative? Yes! We mean just what we say: A little more pains! Most members of the craft either think any old way will do or else they do not know how to secure good results. Very few really know how to make a good negative from a soiled, perhaps time-worn and crumpled, photograph.

Try this: Take one-half ounce of white wax and four ounces of alcohol, and dissolve the wax by gentle heat. Spread some on a soft pad of canton flannel and rub over the broken, creased photograph until dry. Then place the picture in a printing frame under a piece of plain, clear glass. Copy by placing it at an angle of forty-five degrees to the side light. You will be pleased and surprised at the results, and your customer likewise; this last being of more moment than the rest. You are welcome to this dodge of **"Old Forty's."**

Sea and Sky Effects

By Percy L. Day

Illustrated by the Author

In complying with a request from the Editor for an article on the above subject, I shall only endeavor to describe the methods I employ and give such few hints as I have found of value in my own work. I trust the reader will overlook the absence of technical description usually found in articles of this kind.

It is evident that a large majority of amateur photographers are either indifferent to, or not aware of the fact that one of the most fascinating, as well as instructive lines of photographic work is the making of negatives in which water and clouds form an important part.

No doubt this pleasure is denied to many earnest workers who live inland, except as they may be near rivers or lakes; a fairly large body of water being necessary for the proper effect. But even among those who live along the coast where opportunities are many, especially during the winter months, the securing of these effects seem to be almost entirely neglected.

My attention was first drawn to this character of work by the result of a haphazard snap made with a small box kodak, a reproduction of which is shown herewith. This so pleased me at the time, and realizing the possibilities along the same line, I decided to take up the matter more seriously. Since then my work has been done entirely with a 5x7 long focus plate camera of the portable type, equipped with a rapid rectilinear lens and automatic shutter. Add to this a ray-screen and the other usual accessories, and one has all the equipment necessary for actual work.

Now comes the first, and probably the most difficult part of the operation, the getting of the proper cloud setting, or one that will lend itself to the requirements; many cloud settings, although beautiful to the eye, being impossible of reproduction photographically. To be successful in this means many disappointing trips to bay, lake or ocean, as the case may be; for while the appearance may be promising at the start, by the time one has arrived at the point selected, and is ready to set up his camera, the elusive clouds may have moved from the field of view or disappeared entirely. At other times, with the same promising conditions at the start, say at three o'clock in the afternoon, an hour or less may bring disappointment, owing

THE CLOSE OF DAY

to some sudden change in the atmosphere. The sky, which was at first so full of light, fluffy clouds, may become a solid mass or bank, making it impossible to secure good effects.

During the past two years, my experience has taught me that the most favorable conditions for success in this class of work exist at the breaking, rather than at the gathering of a storm. This is for the reason that at such times the clearing winds break up the cloud masses into small sections, allowing the sun's rays to penetrate the edges, thereby giving more illumination or contrast to the scene, while yet retaining all the charm of softness. The desired cloud setting secured, one must next decide upon the best of the available points from which to work. Here the second important factor enters for consideration, the standpoint of the operator. Unless the clouds dominate the picture, this position should be such as to allow a small portion of the shore to appear in the foreground, thereby avoiding that feeling of something lacking, which results when the bottom of the picture cuts the water at a point some distance from the shore. Of course, this does not apply when exposures are made from the end of piers or like, or where the principal object in the scene is located at a considerable distance from the camera; in such views the attention is at once drawn to the main object, and the lack of interest in the foreground is not so objectionable.

Another point demanding consideration in this connection is the difficulty of finding a viewpoint, and at the same time securing a proper lighting. I have found, in my work along the bay front and from piers, that

AFTER THE STORM

objectionable features cannot always be excluded from the angle of view. In such cases the only remedy lies in throwing the offending objects as much out of focus as possible. As to focusing, that is a matter upon which each individual must decide to a great extent for himself. As a general rule, the foreground, or main foreground object should be sharp, the middle distance slightly out of focus, and the distance or horizon slightly "fuzzy." This will lend an appearance of distance and atmosphere, throwing back the horizon. However, in focusing, one must be governed largely by the results desired, and as there is considerable latitude in this respect, almost any effect can be secured.

As to time of exposure, no definite rule can be laid down. So many factors must enter into any calculation of the necessary time of exposure: such as time of day and season of the year, intensity of the light when filtered through certain cloud forms, value of the stop used and speed of the plate employed. I have found that during the winter months, with a fairly well lighted sky, an exposure of one-fiftieth second with stop U. S. 8, gives fully timed plates up to four-thirty in the afternoon. With the same light, an ordinary ray-screen, and the next smaller stop, one-fifth second will secure about the same density. After this hour and until sunset, the exposure will increase to approximately one-fifth second without the ray-screen and using U. S. 8 stop. This latter exposure of one-fifth second, I should advise, will usually give a slightly blurred effect to water having any considerable wave motion.

One now arrives at the most important point of the entire operation.

SUNSET ON THE PACIFIC

the selection of the proper moment in which to make the actual exposure. Too much importance cannot be placed upon this point, as an exposure made at the wrong moment will only result in disappointment, many an otherwise good plate being spoiled by neglecting this point.

In looking over my negatives of this class of subjects, made during the past two seasons, I find the best results to have been obtained with exposures made just as the sun emerged from the lower edge of the cloud, or shortly

ALONG THE SHORE

before; rather than as it entered at the upper edge. In the latter case, the light was reflected directly into the lens, causing extreme halation in the high lights; while with exposures made when the sun was just emerging from the lower edge, the light was reflected onto the water instead of into the lens. The worker should make several experiments along this line in order to be thoroughly satisfied as to the difference in results.

As to plates, I generally use the "Orthonon," as showing less halation, and at the same time allowing more latitude in exposure, although any plate with sufficient body will probably give as good results. In developing I use pyro-metol and tank development. I find this method allows the shadows to build up sufficiently before the high lights become too dense, a point to be considered in developing negatives of this kind, in which the shadows are nearly always undertimed.

Now I desire to make one suggestion before closing: Do not seek for too striking or theatrical results. The so-called moonlight effects are not satisfying to the educated or even critical eye. They fall far short of portraying any possible mood of nature, as one can easily satisfy himself by a little observation and comparison.

Having thus briefly covered the various points as they have occurred to me, I will only add that if this article be the means of inducing some other amateur to take up this class of work, I shall deem myself amply repaid, feeling certain that anyone giving this method a fair trial will be more than pleased with the result.

AN OFF DAY
Third Prize, February Competition

By F. J. L. PELLIER SAN JOSE, CAL.

An Amateur's First Experience With Autochrome Plates

By Dr. Edward Gray

To make, with a single exposure on one plate, a picture in natural colors! For how many years has this been the dream of every user of the camera! And now it is feasible, due to the genius of the Lumieres and other workers, two of whom will be referred to towards the end of this paper. In this article I shall attempt only to record my own experience with six "Autochrome" plates, believing that a detailed record may assist others, particularly in the matter of exposure, which last must very closely approximate correctness if the best results are desired.

A truce having at last been put to the rainy and foggy weather previously prevailing, I exposed two plates each on February 15th, 16th and 17th. The first was upon a long, red brick building with a broad lawn in front, bounded by a cement retaining wall. The hour was 9:30; stop, f-16; light a trifle dimmed by thin cirrus clouds over the sun. Watkin's exposure meter was used as a guide, and according to it the Autochrome plate has a speed of one, or one hundred and eighty times the exposure required for Eastman film, Seed's 27 plates and the like. This calculation gave twenty seconds as the requisite time of exposure, a time so long that I could not yield assent, and cut it down to seventeen seconds. The result, on development, was a somewhat thin plate showing over-exposure, and it was much improved by a second intensification.

A second plate was exposed at 3:30 of the same day; subject, a dwelling house with lawn and palm trees in front, one showing some yellow leaves. The house is painted a Venetian red, with a bright, yellowish-green roof; while passion-flower and other dark-foliaged vines clamber over the front porch. Only the northwest angle was in the sunlight, the front being in shade, owing to the northwestern exposure of the house. Stop f-16 was used; time of exposure, twenty-two seconds. Result pleasing, but still a trifle over-exposed. The third plate was exposed on a landscape, a brook scene with a bank of reddish ochre, with shrubbery upon the upper bank, and two or three bare-limbed trees upon the lower. The stream was flowing rather quietly, and its surface reflected some blue from the sky, in which were floating some white cumulus clouds. Hour, 2:00 P. M.; light, bright; stop, f-16. Time indicated by exposure meters (two were compared), six seconds; seven seconds was the actual duration of the exposure given. Result, charming; only to have been improved by resolutely adhering to the meter time of six seconds. The next plate was exposed at 3:30 the same afternoon. Subject, a portrait taken in an ordinary sitting-room. Diaphragm, f-8; time, four minutes. The sitter wore an ecru waist and a dark blue skirt. Upon the table at her side were placed, as accessories, some roses, violets,

narcissus and abutilons. Back of her were two dark-green sofa pillows, and at her feet a dark red footstool. The tint of the walls, of the lace curtains, of the furnishings, of the sitter and her attire, were, every one, rendered most faithfully. An additional one-third or one-half minute exposure might probably have been even better.

The next two were exposed February 17th; the first on an interior in my cottage; hour, 2 P. M. Here I was puzzled as to the use of an exposure meter; the stop selected was f-16, and the exposure given, by guess-work, was twenty minutes. It should have had thirty or thirty-five minutes; the stop was too small, unnecessarily so. The colors of the books, sofa, sofa pillows, and the like, came out well, but the plate was muddy and lacking in the transparency belonging to a properly exposed Autochrome. The last was exposed about 3:45 P. M. on a landscape that included a roadway with two live-oak trees in the foreground, a barn having the lower part rubble and the upper part wood, a bare-limbed oak tree in the middle distance, and the blue mountains against the sky with light clouds above. Twenty-two seconds' exposure was given, with stop f-16 and factor one hundred. Result, very pleasing; a real picture.

The instructions of the Lumieres were strictly adhered to, except as follows: In making up the pyro solution A, two-thirds of water and one-third alcohol were used instead of all alcohol; one plate, the last, was not intensified at all, because it did not require such treatment; and one plate received a re-development with a stronger solution of amidol that that recommended by the makers of the plates—five grains per fluid ounce, as against two and one-half, with a corresponding decrease in the time of action. Also, four plates were treated with dianol and two with amidol. I promised myself, moreover, to make one other change in a future development, namely, to replace the water of ammonia by the carbonate thereof in one-sixth less quantity; this in the interest of stability. Also to dispense with solution A altogether, using instead two grains of dry pyro per fluid-ounce of solution, adding it at the last moment. My brother, Arthur Gray, aided me in the tests here narrated.

From this experience I have formulated certain deductions for my own future guidance, and certain hints that will be of value to one who is about to use these plates for the first time. First in importance is accuracy of exposure. Do not guess at it, but use an actinometer or exposure-tables. Count in every factor which will influence the outcome and then stand by your result; do not add for good measure unless it be late in the day towards sunset. The combined action of the layer of colored starch grains and the deep yellow ray-filter makes the plates comparatively slow. Out of doors it is safe to adopt a Watkins speed of two or Wynne fourteen; but indoors adopt Watkins one or Wynne eight. In more familiar reckoning this means to take as multiplying factor ninety or ninety-six as compared with plates and films of highest sensitiveness. For example: by an exposure meter or tables, the proper time for the very rapid plates at the date and hour for your latitude is indicated as one-fifteenth second. Multiplying one-fifteenth by

ninety gives six seconds, and that will be found the proper exposure for the Autochrome plate with the filter in place. The Autochrome plate appears to respond best to a bright illumination with shorter exposure rather than to a weak light with prolonged exposure.

Before attempting to develop one of these plates it is well to outline all the various steps in their order, together with the time each requires. Write this out and mount it on a piece of card-board. When you come out of the dark-room with solution C covering the plate, you have only to glance at the card to make sure of every succeeding step. So doing saves possible confusion of mind. The tenderness and tenuity of the film makes it advisable to varnish the plate as soon as possible after it becomes dry.

The merits of the Autochromes speak for themselves, especially their great faithfulness in rendering all the gradations and tints of color. The disadvantages lie in the prolonged exposure required, and in the visible graininess of the film especially evident in over-exposed high-lights. A great deterrent to the popularity that these plates might enjoy is the very high price which the manufacturers or their agents in this country compel the dealers to pay for their product. Is it not an error of judgment on their part to show so unmistakably a desire for gain?

Two other processes however are close to commercial realization which will give the Autochromes a keen rivalry. One is the Krayn celluloid process which Dr. Power has described in his "Digest" department, and the other, an American invention, promises to yield the highest success of any, because either negatives or positives can be produced at will. This is the Warner-Powrie process which was described in a special article in the last issue. As we are promised that the ruled plates prepared by this process will be marketable at reasonable prices, may the day of their appearance be speeded!

To Acquire Knowledge of the Beautiful

As applied to the whole range of artistic effects, the relation of taste to the aesthetic nature seems to be precisely that of conscience to the moral nature, and of judgment to the intellectual.

Enlighten a man's soul, his conscience will prompt to better actions; increase his wisdom, his judgment will give decisions. According to the same analogy, cultivate his aesthetic nature, i. e., improve the accuracies of his ear or eye, his knowledge of the different appearances of life or of modes of life, and his taste will be cultivated and improved.

He may never reach a position where he can know what is absolutely beautiful any more than what is absolutely right or wise, but he may be constantly approaching nearer such a knowledge.—George Lansing Raymond.

Pictorial Photography at Night

By Will H. Walker

Illustrated by the Author

The pictorial possibilities of night photography, together with the field presented for exceptional work when using artificial light should invite more attention than it receives from earnest workers. By artificial light, I do not mean flash light, but one by which the exposure can be prolonged for many seconds if necessary.

THE WATCH AT THE STILL

Several years ago, being moved by the laudable ambition to produce something different for the annual Club Exhibit, night photography seemed a promising field, having also the advantage, to a busy man, of occupying a time when the cares and troubles of the day were laid aside. Experiments were made with every known method of flash light, and the road to success was well marked with flash sheets, flash cartridges, magnesium powder, several kinds of flash lamps and any number of spoiled plates, to say nothing of lost effort and patience of my model. It was at my model's suggestion, that we try something that would be slow burning and at the same time produce a strong, steady light, that finally led to success. A large reflector was made of a full sheet of ordinary tin plate. This was bent around two pieces of board, so shaped as to make a concave and rather long reflector, the edges of the tin being tacked fast to the boards, which formed the top and bottom. A small spring clip was fastened to the under side of the top board and a screw eye placed in the board on top. This gave us a reflector that could be suspended by a rope or string to a pole or the limb of a tree. A clothes line prop, about eight feet long, smuggled from the house in the dark, completed this important piece of apparatus.

Now for the light; nothing more or less than that from a strip of the narrow magnesium ribbon that can be obtained by the roll from any sup-

ply house. A length of this, which must be clean and bright, we attached to the spring clip in the reflector top; the lens, a Zeiss VIIa, was stopped down to U. S. 8 and focus obtained on a lighted candle held by the model. Everything being ready, the ribbon was lighted and the reflector was raised and lowered with the pole while the light lasted. The picture, "The Watch at the Still," was the result. This picture is not put forward on account of its great pictorial value, but as the first succes after many failures, in an entirely new field for the writer, at that time. It invited much comment as to the method of its production, and as I have been asked to give the snap away by the Editor of "Camera Craft," now do so for the first time.

The light must not be too near the subject, or the lighting will be harsh. In this instance it was about fifteen feet away and to the left of camera, care being taken to have it out of the field of the lens. A rapid plate, without backing, was used, but later experience would lead me to advise a rapid plate backed with some kind of non-halation backing. The advantage of raising and lowering the light is shown in the softening of the high lights and the rounding out of the shadows. The length of ribbon is immaterial if attention is given to the distance between the light and the subject. About fifteen inches of ribbon was used, hour 10 P. M., and night was pitch dark.

The picture, "The Burial of a Viking," cost me a week's work at night and about a dozen 8x10 plates, also a badly smoked-up son. I have used this picture because it illustrates, more than any other that I have on hand, the beautiful possibilities of the night work. The model was posed upon a bear skin, straw being piled around the bier, then fired, and afterward sprinkled with a watering pot in order to make it smoke and reflect light. Some of the burning straw was hastily kicked under the platform, and in spite of the cries from the "Viking" that he was being smoked to death, the exposure was made, light being reflected from the burning magnesium ribbon on top of a step ladder about ten feet away. Many plates were wasted on this subject, and the result is, after all, not what it should be; but it shows what could be done. Investigation along this line was limited to this one subject, as my model refused to be smoked up further, after these few nights. Wishing to branch out a little in my investigations and do more experimenting, I had a friend, a chemist, make me some white fire. This is easily obtained, so I will not describe its composition; suffice it to say that it was ordered compounded as slow burning as possible. With this, good firelight pictures were made by laying a train of the powder in a long piece of paper, then wrapping it into a roll, which was placed well back in the fire-place on the wood. The camera having been focused from a position out of range of the light, exposure was made by ignition of the roll in the fire-place and continued sometimes many seconds. A few successes amply repay one for the many discouragements. A week's work on "The Witches of Endor," a very ambitious and difficult subject, was a failure, yet success was in sight when the ill-advised showing of a proof of a previous night's

THE BURIAL OF A VIKING

exposure stopped all further attempts in this direction. The models all struck, said it was too ugly—they would not pose again. Do not show proofs. Draperies should not be of white material; anything in shades of pink produces good white effect when used for draping the subject. I have often wondered if the same result could not be obtained with red fire and white draperies, but have not tried it. Do not expect to have a large proportion of good pictures; it will be the reverse. Keep the light well away from the subject, depending upon the amount of ribbon used. Do not expect to penetrate the darkness, rather undertake the lighting of the model, if you introduce figures into composition of the picture. Small twigs, blades of grass and the like in the foreground, will all pick up enough light to prevent entire lack of detail in this part of your picture. If you want night effects, do not expect to go much beyond this.

Now the writer does not intend to say that magnesium ribbon is the only method by which night effects can be obtained. Probably there are others who might succeed with the same materials that were discarded by me in favor of an article that is easy to handle and one that will give a continuous exposure of any length of time desired, providing the ribbon is kept bright. This work is full of beautiful possibilities, and the results, good or bad, will be due to the experience of the pictorialist, and to his ability in arranging or posing his subject.

The object of this article is to draw attention to a field for pictorial work in which the writer is only an indifferent worker himself, and in which others more able might accomplish better results. If in thus pointing out the path, a fascinating one, others should be induced to venture upon it, this article will have accomplished all that the writer could desire.

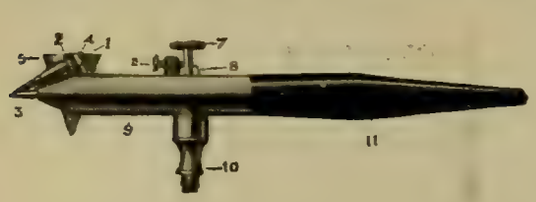
Art and the Air Brush

By Paul A. Randall

Today, commercialism dominates; even art is not free from its influence. Commercialism early recognized the fact that art could be made a powerful ally; but to be made such, increased efficiency would have to be secured, secured without loss of quality, with an improvement in the quality, if possible. Inventive genius turned its attention to the production of mechanical devices capable of producing artistic effects, and enabling the artist to more rapidly multiply examples of his skill. Enthusiasm was aroused by the possibilities of commercial art, and hundreds of men who had already made a name for themselves, Lyendecker Brothers, Howard Chandler Christy, Charles Dana Gibson, Maxfield Parish, A. B. Frost, Harrison Fisher, just to name a few, turned their attention in that direction. The photographer, perhaps of all others, has played the larger part in the commercializing of art, and to his productions the inventor naturally turned his attention.

As a result, and a most successful result, we have the air brush in its present perfected form. With it a spray of color can be thrown upon a photograph or drawing, varying at the will of the artist from a delicate tinting to a decided color, and from a wide spread of tint to a hair line of the color being used. With it the colors may be blended into beautiful effects; clouds introduced into the skies of photographs, beautiful background effects secured on portraits, faultless shading added to fancy lettering on signs, and the finest tints and shadings produced on the finest of hand-painted chinaware.

One who has never seen an air brush in operation will have difficulty in realizing what wonderful work can be accomplished in the simple process of spraying delicate tints upon the face of a portrait such as the ordinary photograph or enlargement. Delicate tints of red can be blown onto the cheeks, blending off into pinks, and again into flesh color. The background can be blown in in pleasing shades of same colder color, giving to the portrait a charm that seems almost impossible, transforming it, in a very short space of time, into a beautiful work of art. The same effect cannot so successfully be obtained in any other way than with the air brush. Within the last few years, this invention has become an indispensable tool to the artist. The cut herewith shows a typical air brush, this particular one the latest production of O. C. Wold, of Chicago; the one which I have found the most satisfactory in actual use on account of its mechanical perfection and simplicity of working.



The stem "10" is connected with a few feet of light, quarter-inch, rubber tubing, this, in turn, connected with a tank containing compressed air or liquid carbonic gas with from ten to sixty pounds pressure. The color, in a thin, liquid condition, is placed in cup "5." Any well ground color or dye may be used. By pressing on the button "7," the air is released, drawing the color from the cup "5" through the point "2." By a very light pressure on

the button "7," a line can be drawn as fine as a hair; in fact, I have often signed my name to drawings in this way, and except for the slight softness of the lines, one could not detect the fact that it was not done with a pen or brush.

Increased pressure brings forth a spray of color that can be made finer or coarser by a lesser or greater pressure, and it is this control of the spray that makes possible the softness of texture and beauty of effects so easily obtainable with the air brush; effects well nigh impossible by any other means, even after years of practice. With the air brush, one requires but a few hours' practice to accustom his hand to the control of the air pressure, the manipulation then becoming so natural that the hand seems to instinctively regulate the amount of color as it is desired for the effect to be secured. The tool is one that is indispensable to the artist and hardly less so to the photographer, be he either a portrait maker or commercial worker. Herewith I am sending an ordinary cabinet photograph as it came from the printing room, and another showing the improvement made by two or three minutes' work with the air brush. When color is used the improvement is, of course, much more marked, but even this example of one of the most simple uses of the air brush should convince the portrait photographer of its value to him in his work. Employed as I am with a great deal of work that any photographer could easily do for himself if he but knew of the advantages and simplicity of the air brush, I trust I am justified in making this rather laudatory, although fully justified, plea in favor of this useful tool.

CARMEL RIVER WHEN LAGOON IS CLOSED — BY E. A. COHEN

Coating Gum-Bichromate Paper

By H. E. Blackburn

Casting about for some means of applying the pigmented gum solution so that the coating would not show brush marks, I was prompted to try the Walkup Sprayer Air Brush. Writing Mr. Walkup and explaining the use to which I wished to put the brush, he sent me one with the tip slightly altered to accommodate the rather glutenous nature of the solution. The experiment was an unqualified success. The pigmented gum solution falls upon the paper in the form of a fine spray and dries almost instantly. There is no waiting, the paper is ready immediately, and the less exposed portions of the print wash out easily without any scrubbing, and to their proportional depth, something which does not always happen when the coating has been applied with an ordinary brush and been given an opportunity of soaking into the paper.

My own way of working is to first sensitize the paper in a solution of potassium bichromate for three minutes, and then drying, using a yellow light. The solution is made by dissolving two hundred and fifty grains of potassium bichromate in every six ounces of water needed for the bath. This bath keeps well in the dark. After becoming bone dry it is ready for the coating which is prepared by using equal parts of gum and pigment solutions. The gum solution is made by allowing ninety-one grains of powdered gum arabic to every ounce of water, and giving it two days to dissolve. If kept longer add a few drops of formalin. The pigment solution is made of approximately the same strength, but some colors will require weak ammonia instead of water as a solvent. As it will tend to destroy any acid in the pigment, it is almost impossible to give exact amounts of color required. Too much pigment is inclined to stain the paper and fail to wash out clear in the whites. Too little, on the other hand, has a tendency to wash away too easily in the darker parts of the print.

Working in this way the sensitiveness is greatly increased; being equal to that of carbon tissue; possibly greater. The bichromated pigment dissolves perfectly from the unexposed portions protected by the rebate of the printing frame, leaving the paper pure white. The high lights of the picture are also more amenable to control, as the inclination to stain the paper, particularly with the black pigment, is much reduced by this method of sensitizing the paper first and applying the gum and pigment afterwards.

To Produce the Beautiful

To produce beautiful works, the sole condition necessary is that which the great Goethe indicated; fill your mind and heart, however large, with the ideas and sentiments of your age, and the work will follow.—H. Taine.

Improving Poor Negatives

By W. Rob. Whyte

A Demonstration Given Before the California Camera Club on Friday Evening, February 7th, 1908

Ladies and Gentlemen:

It is not because I consider myself, or because I am considered, to know more about the processes of photography than my fellow members of the California Camera Club that I have been asked to give this demonstration of "Simplex" intensifier, but rather, as I suspect, for the very opposite reason, as thus it can be more distinctly proved that it is everything that its name implies.

Errors in exposure and development may, I suppose we are all willing to admit, occur to the most skillful of us, and when those infrequent occurrences do take place it is usually in connection with some negative, difficult or impossible to replace. The processes of intensification are mostly complicated and unsatisfactory in their results, and the busy business man or woman has not the time nor the inclination to study elaborate formulae or perform intricate manipulations upon a plate or film.

As regards intensification I may say that "Simplex" is the very antithesis of complex—there could be nothing simpler. What is very simple and plain is often under suspicion of being ineffective; but this is by no means the case with this intensifier—its simplicity and effectiveness are equally apparent. I will also mention two very easy methods of reduction, because by the use of one or both of them in connection with intensification, many defective negatives may be given a printing quality equal to perfectly timed and correctly developed exposures. One of these two methods of reduction is by means of what is commonly called Farmer's reducer, that is, ferricyanide of potassium and hypo, used for the reduction of fog or degraded shadows—chemical fog from protracted development, unsafe light, stale plate, or over-exposure. The other is by means of ammonium persulphate, used for the reduction of over-density on the highlights or thick portions of a negative, apparent in some cases of under-exposure and in most cases of over-development. I am not actually demonstrating these reducers, because "Simplex" is better used upon a perfectly dry negative, which must be free from any trace of hypo or other chemical. So, most of the negatives upon which I am about to demonstrate have already been reduced to that stage in which intensification is required to bring them to a proper printing value.

I believe, though, there are some who hold the opposite opinion, that under-exposure is an error of the most frequent occurrence in the experience of the average amateur. Our first experiment will, therefore, be with a negative of Fruitvale Station, a snap-shot, taken in the early morning. You will observe that it is an under-exposure properly developed. It is extremely thin and flat, but full of detail. This is the class of negative to which this intensifier is most applicable. We place it in the dilute solution, two parts of "Simplex" to one of water, without any previous preparation, and allow

it to remain there till it has obtained a proper printing density. No particular care is required in this process, except to cover all parts of the negative immediately and keep them covered to prevent irregular action of the intensifier. We will use the same solution for all the negatives, and pour it back into a bottle for subsequent use when we have done. It will keep indefinitely. I have never thrown any away, although I have been using it for twelve months. I simply add some more of the dilute solution so as to keep up the quantity sufficient to cover a negative completely. When sufficient density is obtained, remove the negative from the intensifier, and place it in running water till the negative has assumed a dirty, yellow appearance, which may be somewhat irregular. You need not have any anxiety on this account. Place the negative in a weak solution of hypo, one ounce in a pint of water, and the yellowness will quickly disappear, leaving the negative with a good, plucky printing quality. As the deposit from "Simplex" is of a non-actinic color, the highlights need not be so visually dense as would be the case with the blue-black deposit of a metol-developed negative.

The next two negatives, of vessels on San Francisco Bay, were also taken in the early morning, and the same description and treatment will apply to them. No. 4, like the three previous negatives, is on film. It was taken on a hazy day with a somewhat strong sun, the exposure being too short, with the result that the high-lights were far too dense and the detail in the trees very weak and flat. This has been reduced with ammonium persulphate to thin down the high-lights, this chemical having the property of leaving the shadow and other weak detail almost untouched. The high-lights, as you will observe, have been thinned down into due proportion to the detail, so that the application of this intensifier, acting as it does in exact proportion to the deposit already in the negative, will in this case give us a normal printer.

Care is needed in the use of ammonium persulphate. The negative must not remain in the solution more than about five minutes, and the same solution must not be used for another negative, as in either case its action is liable to be irregular. Ammonium persulphate ten grains to water one ounce is the best proportion. When the negative is sufficiently reduced, rinse quickly and place in a solution of sodium sulphite ten grains to water one ounce for five or ten minutes, and then thoroughly wash in running water.

No. 5, of an hotel just constructed, was a correct exposure, but over-developed, causing all the high-lights to be far too dense to be printable. Reduced in ammonium persulphate, but no intensification required, as the shadow detail is in full evidence. No. 6. This negative, of a lumber yard, will be the very best test of the utility of this method in restoring to a good printing quality a negative which has been previously reduced in order to correct defects of exposure, lighting, or development, or all of them. This negative was taken on a hazy morning, over-exposed and fully developed, consequently thick, and a very slow printer. Reduction with persulphate overcame the density. The detail was full, but flat and lifeless. After a good wash, subsequent to the reduction with persulphate, it was reduced with Farmer's reducer, which acts primarily upon the thinnest parts of a

ALONG THE QUAY
By R. E. WEEKS

negative, and, therefore, first upon fog or veiling. The best formula for Farmer's reducer that I have become acquainted with is: Hypo, ten per cent solution, one ounce; ferricyanide of potassium, ten per cent solution, ten to fifty minims. Use the ferricyanide in proportion to the density of the fog or veiling that is to be got rid of; but remember that the stronger solution is very liable to carry away your detail, which, when once gone, is gone forever. Do not go too near the danger line, as the action of this reducer is progressive; take the negative out of the solution before the reduction has quite reached the point you require.

Well, this negative of the lumber yard, after having undergone two methods of reduction, is, as you see, so thin as to be almost unprintable; but the proportion would be all right if intensified in exact ratio to the present remaining density. As you will see in a few minutes, the intensifier will make it a bright, plucky negative with the appearance of having been originally correctly exposed in a clear light and properly developed. No. 7 is a copy of a photograph of a big catch of fish. It was chemically fogged in development and reduced with Farmer's reducer, which, as you see, has weakened the detail too much. We will remedy this in about three minutes. No. 8 is a picture of Lake Chabot, very much over-exposed, and, consequently, extremely flat. The shadows have been reduced with Farmer's reducer, and will now proceed to give it all the plucky appearance of a proper exposure by means of five minutes' bath in our intensifier.

As these negatives are being handed round you will see for yourselves that they fully bear out all I have said about them. This test has been a very severe one, for the reason that the negatives previously reduced were, as you saw, brought down very close to the danger point, and No. 6, of the lumber yard, was reduced at both ends of the scale. You have seen that I have exercised no special care in the handling of these negatives; they were passed round and handled freely by you and then placed in the intensifier without any special cleansing from the finger marks gathered on their journey round the room. But the result in every case has been exactly as anticipated.

I am very much obliged to you for the attention you have given my necessarily disjointed remarks, and trust that you will be able in future to save many at present valueless negatives by the very simple means I have endeavored to describe.

Study

Whoever earnestly desires to cultivate himself, studies assiduously the lives and works of those who have excelled in the things in which he too would excel.—J. L. Spalding.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, APRIL, 1908. No. 4

The Worcester Exhibition

As in the past few years, we will again collect a few prints, the work of Pacific Coast workers, to be sent to the Fifth Annual Exhibition of Photographs at the Worcester Art Museum. The committee will, as heretofore, pay transportation charges both ways, and as they have always shown our contributions the greatest allowable favor, the editor hopes for an even better showing than in the past. Those desirous of being represented will please send a few samples of their best exhibition work to this office in time to go forward about September 15th. Do not overlook the matter, should another notice not appear. Mark the package "Worcester Exhibition," and send them as soon as you may desire.

Photography Without a Camera

Professor Lippman, of interferential color-photography fame, is reported from Paris as having invented a process of making photographs showing perfect relief and practically unlimited depth of focus, without the use of a camera or lens. The technical difficulties of manufacture overcome, the invention of this eminent French savant promises us the ability to secure these remarkable realistic photographs by simply exposing one of these new plates upon the desired subject in an ordinary holder, without the intervention of either camera or lens. We will describe this new system in detail in our next issue.

Hirsch & Kaiser's New Store

Not least among the events of interest to photographers the past month, has been the opening of Hirsch & Kaiser's new store at 218 Post Street, adjoining the Shreve Building. This enterprising firm was the first in their line to resume after the fire, and are again the first to locate in the old district. The store is certainly the finest occupied by any photographic stock house in the West, the sales rooms being fitted in Jenisero, a Mexican wood of beautiful grain and finish. The store is equipped with an electro-pneumatic tube system, private exchange telephones, and every modern convenience for the comfort of patrons and employees. The store is fast becoming a point of interest for that large portion of the public that is interested in photography.

Free Cameras at the A-Y-P. Exposition

The announcement made in one or two of the photographic magazines that cameras up to and including those using a 6½x8½ plate would be admitted free to the Alaska-Yukon-Pacific Exposition, seems to be a little premature. Taking up the matter with the Director-General, Ira A. Nordeau, through the kind and enthusiastic efforts of Oliver P. Anderson, of the Anderson Supply Company, we are advised by Mr. Nordeau, writing under date of April 13th, that: "in connection with the letting of several concessions in which this question cut an important figure, it was found necessary to reduce the size." A letter from Mr. Anderson advises that: "the decision is against anything larger than the 3¼x5½ and probably 4x5." While Mr. Anderson and others are still putting forth their best efforts, it is doubtful if anything more can be secured, as concessions already made no doubt embody this restriction.

How to Obtain Cheap Advertising Space

The photographic magazine is at a disadvantage. It has a circulation of only a few thousand. Its original cost of issue, the cost that maintains no matter whether it prints ten thousand or ten hundred thousand, as do the large magazines of general circulation, forms a large proportion of the total cost, necessitating a high advertising rate that limits its business to the very small field of photographic manufacturers. Being at this disadvantage, it can hardly afford to investigate all the advertising offered. Therefore, all a dishonest firm has to do is to pay for a few insertions; then use some large space, and refuse to honor the bills. The most the poor publisher can do is to turn the account over to a collection agency. Their agent calls, you send him to your lawyer, and that is the end of it. It all hinges on this lawyer. If he is selected with care, the collecting agency writes the publisher of the photographic magazine, letting him down as easily as possible, with the statement that action has been begun, but they would advise a compromise, as "the defendant has secured a political attorney who is in a position to ask favors of extension of time, etc." That settles the publisher, who is in no position to make a long legal fight. This can be repeated as often as found desirable, by adopting the very simple expedient of changing the name under which business is done—but retain the same lawyer.

Pacific Coast Branch, C. P. Goerz American Optical Co.

Otto Goerz, Secretary of the C. P. Goerz American Optical Company is now in San Francisco, for the purpose of organizing and establishing a branch house, beginning May 1st. This will be under the management of Mr. Torka of the firm of Telgmann & Torka, so well known to the trade on this Coast. Business will be conducted exactly as from the New York house and under the same name: C. P. Goerz American Optical Company, the address remaining as heretofore, 703 Call Building, San Francisco.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department Should be Addressed to its Editor.

Edited by
H. D'ARCY POWER, M. D.
Burlingame, California.

STAINS IN CHROMIUM INTENSIFICATION.

"We frequently receive complaints of brown stains produced during the process of intensification with chromium. Such stains are somewhat troublesome to remove, and sometimes they will not submit to treatment, but they are very easily avoided. One form of stain is due to development in too strong a light. As developers are mostly employed in the dark, very few people seem to be aware that some of them stain most violently when used in very strong light. This is especially the case with hydroquinone, but some of the others are nearly as bad. Seeing that no light is really necessary during the intensification process, nothing whatever is gained by developing in sunlight, and there is no risk of stain in soft diffused daylight, or in artificial light, provided the developer is fresh. Another source of stain is too much exposure during the washing between bleaching and development. If one film in a dish is partly covered by another, the more exposed part will become a darker tint, owing to the action of light on the bichromated gelatine, and this irregular action will probably be visible after development. Sometimes, however, the gelatine becomes tanned or hardened by the exposure, while at the same time the silver image becomes solarized, in which case the image refuses to re-develop. Here, again, safety lies in operating in a weak light. Another source of stain is insufficient washing between bleaching and re-development. Such stains are, however, very slight and generally unnoticeable. If the image is bleached before all the hypo is washed out of the film, there is no danger of stain if the bleaching solution acts long enough, for it is a most effective hypo eliminator; but if the original image was imperfectly fixed, a stain of a quite fatal character may be produced. Such a stain cannot be remedied, but the others can generally be removed by putting the plate or film through the process again and allowing the bleaching solution to act for a considerable time. A very useful bleach for this purpose is one containing ten grains bichromate and twenty minims hydrochloric acid in every ounce. This is of little use for intensification, but an excellent cleanser."—British Journal of Photography.

Notwithstanding the above difficulties, the chromium intensifier is the best and safest available. For general use, dissolve half an ounce of potassium bichromate in a pint of water and add a drachm of strong hydrochloric acid. This bath can be used repeatedly. Bleach the negative or print it, wash as above, and re-develop.

PREPARING ROUGH PAPER FOR CARBON TRANSFERS.

The following method is applicable to all classes of paper: Take of Nelson No. 1 gelatine four ounces, and let it soak for two hours in twenty-five ounces of warm water; then melt over a slow fire, in a water pan. Put the gelatine into a jar, and set it in a pan of water over the fire, and thoroughly dissolve, stirring it all the time; when dissolved, add, very slowly, sixty grains of chrome alum, previously dissolved in four ounces of water. Stir all the time it is being added; this will solidify the gelatine. Collect, and restore it to fluidity with as much glacial acid as is necessary. Now take the sheet of paper to be coated ready for receiving the carbon tissue, and pin it at all four corners on a board, and into the center pour a good supply of the mixture; for an imperial sheet, say, two ounces. Take a brush and roughly go all over the paper with it; then take a flat squeegee and press it all over the paper, now backwards, then crossways, so that all the paper receivers a good coating, but leaving as little on the paper as possible, except in the case of rough

papers, which require a more liberal treatment. All that is squeegeed off the paper may be gathered up and returned to the pot for further use. Two ounces will leave plenty to return to the pot, but it is better to be liberal with it at the start. Hang up the paper to dry, and it is then ready for use.—Amateur Photography (Eng.).

NON-SCREEN ORTHOCHROMATIC AND PANCHROMATIC PLATES BY BATHING.

It is well known that in all orthochromatic and panchromatic plates the blue-sensitiveness peculiar to silver bromide is always much greater than that for the less refrangible rays produced by the color-sensitizer, so that it is necessary to use a yellow filter during exposure to reduce the action of the blue rays. Since the use of the yellow screen is always somewhat inconvenient, many manufacturers have, during the last few years, placed on the market orthochromatic plates which contain the screening yellow dye in the film, and have thus enabled the user to dispense with the yellow screen during exposure. These plates are not always satisfactory, and I have therefore endeavored to find a method of making such plates by bathing ordinary plates. The results can be seen from the accompanying illustration.

There are not many yellow dyes which are suitable for this purpose, as there are several conditions to be fulfilled. The dye must be easily soluble in water, it must stain the gelatine, but must be easily washed out; it must not react with the sensitizer, nor be prejudicial to the keeping powers of the film. All these conditions are perfectly fulfilled by "filter yellow K," which is already well known in England.

To make the sensitizer, five grammes of filter yellow K and one-tenth gramme of erythrosin should be dissolved in 600 cubic centimeters of distilled water, and 300 cubic centimeters of alcohol added. Methylated spirit may be used. In this solution, which will keep indefinitely, the plates should be bathed for two or three minutes and dried without washing. The bath may be used over and over again, and only needs filtering from time to time. The plates are always clean, free from streaks or spots, and will keep for three months unchanged.

I should not omit to mention it is not every plate that can be sensitized with erythrosin, and, unfortunately, I am not in a position to name any English plates that are suitable, though doubtless many are.

In developing, some of the yellow dye remains in the developer, whilst some in the fixing-bath. After a short washing the plate is quite free from stain. Neither the developer nor fixing-bath is spoilt by the yellow dye.

My attempts to make a panchromatic plate with pinachrome and "filter yellow K" were not satisfactory. The sensitizing with pinachrome is strongly reduced by the yellow. On the other hand, I succeeded in making a bath with pinacyanol for panchromatizing by adding to 300 cubic centimeters of the above-named bath two cubic centimeters of a one in one thousand pinacyanol solution. Plates thus prepared show an extraordinary action in the yellow, orange, and red; only the green sensitiveness left something to be desired.

The sensitiveness of the plates, sensitized with erythrosin, to daylight is about 0.4 times less than the sensitiveness of the unbathed plates.—Dr. E. König in "Apollo."

ENLARGED NEGATIVES DIRECT.

Some three months ago "Photography" published, in an article by Mr. Child Bayley bearing this title, an account of certain experiments that were made with the idea of making enlarged negatives direct from negatives without the need of making a transparency as an intermediate stage. M. Balagny, in a communication made to the Caen (France) Photographic Society, states that he has succeeded in doing this, and finds that the method described below presents no difficulties.

The process is not limited to the making of enlarged negatives direct. It can be used for making duplicate negatives of the same size as the original, reversed if need be, for single transfer carbon printing. Reductions may be made in the same way, and positives can be made from positives. When the copy is to be the same size as the original, it may be made by contact, if it is to be reversed, otherwise it must be made in the camera. Enlargements and reductions must always be made in the camera, of course. There seems to be no

particular kind of plate required; any dry plate, provided it is not too fast, may be employed, and the exposure on it calls for no particular remark.

The first stage is the development of the ordinary plate. The developer recommended by M. Balagny for this purpose is as follows:

Water . . . . . 175 cubic centimeters
Di-amido-phenol (amidol)...1 gramme
Sodium sulphite (anhydrous).....
. . . . . 3 grammes
Ammonium bromide (ten per cent solution . . . . . 10 cubic centimeters
Liquid sodium bisulphite.....
. . . . . 5 cubic centimeters

In case any of our readers may wish to repeat these experiments, and might find a difficulty in making up a developer strictly on these lines, we give what would, we imagine, be a sufficiently close British equivalent:

Water . . . . . 5 ounces
Amidol . . . . . 15 grains
Sodium sulphite (crystals) . . 80 grains
Ammonium bromide ten per cent solution) . . . . . 2 drams
Potassium metabisulphite . . . . 5 grains

With such a developer, a good positive should be obtained—not a hard one, but a positive which develops up just as a good bromide print would develop. The action is stopped as soon as the image appears on the back of the plate, or before the highest lights appear to be strongly grayed over.

The next stage is a thorough washing of the plate for three or four minutes, after which a piece of black paper is wetted and laid down on its glass side, and the plate, film upwards, is then taken out into the light of day, and exposed at a window to good diffused light for from thirty to forty-five seconds. If the black paper is omitted, or is not in optical contact with the glass, trouble will arise from halation effects. Returning to the dark room, which may now be lit with yellow or bright red light, the plate is immersed in—

Water . . . . . 5 ounces
Potassium bichromate . . . . . 75 grains
Nitric Acid . . . . . 30 minims

In this the positive soon turns into a negative, by the conversion of the black silver image into silver chromate, and when the action appears to have gone as far as it will, the plate is immersed in the following bath, which dissolves out the silver chromate, leaving a negative image of silver bromide:

Water . . . . . 5 ounces
Sodium sulphite (crystals) . . 1 ounce
Potassium metabisulphate . . . 15 grains

Five minutes in this bath should be sufficient to dissolve out the silver chromate, as can be seen by the complete disappearance of the reddish-yellow tint, which first showed in the bichromate solution, and the plate is then rinsed under the tap for two or three minutes to get rid of the sulphite.

The final stage is a second development in amidol, by which the pale cream-colored negative image is darkened till it possesses the desired intensity. The developer recommended for this purpose is made of—

Water . . . . . 5 ounces
Amidol . . . . . 15 grains
Sodium sulphite (crystals) . . 80 grains
Potassium metabisulphite . . 15 grains

M. Balagny says nothing about fixing, but after this development it would certainly be desirable to fix and wash the negative in the usual way. As the fixing deprives the image of a good deal of its apparent vigor, it would be necessary to carry the final development further than seems correct to the eye.

We have not yet had an opportunity of trying this ingenious plan, but it seems very promising. It would appear to be very suitable for making enlarged negatives direct on bromide paper.—"Photography."

COLD TONE PLATINUM PRINTS.

We often hear of methods of getting warm-toned or sepia-platinum prints, but I think a great many of those who use this beautiful process would be puzzled if they were asked offhand, to give a formula which should give as cold a tone as possible, and one with the most contrast. The following is, therefore, not by any means so well known as it ought to be. It was originally put forward, I believe, but am not sure, in America:

Neutral potassium oxalate.. 4 ounces
Potassium phosphate ..... 1 ounce
Potassium sulphate ..... 1 dram
Water to .....25 ounces

Water may be boiling to facilitate solution, but the developer must be used cold. The image appears very slowly, and plenty of time must be given for development; there is no fear of overdoing it. The acid baths and wash'ng are those usually employed and call for no remark.—St. Aubyn Hope.—"Photography."

A SUGGESTED SYSTEM OF DEVELOPMENT.

Herr Königlicher Ungarrische Sektionsrat Paul von Joanovich, of Budapest, in the current number of the "Photographische Korrespondenz," makes the following statement as to his particular system of development. If borne out in practice, his suggestions should certainly revolutionize our present methods of working.

Among other advantages claimed for the process are its rapidity and cheapness. Two tanks are used. One is filled with a solution of

I. Metol ..... 5 grammes
Hydroquinone .. .. 5 grammes
Sodium sulphite . ....100 grammes
Water . ....1,000 cubic centimeters

The other with

II. Potassium carbonate..100 grammes
Water . . ....1,000 cubic centimeters

Twelve plates, placed in a metal rack, are lowered into the tank containing Solution I., are moved up and down to dislodge any air-bells, and then left for thirty seconds. The rack is then removed and placed in the potash (II.) solution for thirty seconds, then instantly rinsed and fixed. Single plates may be treated in flat dishes in the same way.

As the plates are removed from the Solution I. after half a minute, only just the amount of the reducing solution which can be taken up by the gelatine in that time is used. This quantity is so small that when the plates are placed in II. solution, overdevelopment cannot occur, and the silver bromide is reduced in proportion to the exposure. If the exposed particles of silver bromide are reduced, and the small quantity of absorbed developing agent used up, the action stops, since there is no longer any reducing solution present. The unexposed parts are not affected in the presence of the minimum quantity of the reducing solution absorbed in the first tank. Fog cannot form, hard negatives are extremely rare, as this defect is mostly caused by prolonged treatment of the plate in the hope of developing the unexposed portions. As the developing solution is allowed to act equally over the whole plate, the more fully exposed parts are over-developed, or fog is caused. By the new method this danger is as good as excluded.

The cheapness of the process is due to the fact that the Solution I. can be repeatedly used, as the quantity of solution absorbed by the plates is very small.

Solution II. is the only one which suffers. After every fifth or sixth dozen plates a fresh solution must be made up.

Another advantage, according to the author, is that the process is purely mechanical. Control of the plates during development is not required, is, indeed, useless.

What is exposed is promptly reduced. Thus the process is simple. Everyone able to follow the very simple directions can immediately develop with excellent results. The process should therefore appeal to beginners.

Another advantage claimed by the author is that on his system development can be carried out in total darkness.

It should be added that every developing agent, with the exception of amidol, which requires no alkali, can be used for th's method. All alkalis, either carbonate or caustic, may be used.

THE CAMERA CLUB OF MT. VERNON.

Mt. Vernon, New York, now has a very progressive and wide-awake camera club, with over forty members, and the number rapidly growing. It was organized last November by Joseph Jessup, the first president of the club, with about a dozen members. A number of demonstrations, exhibitions, contests, lectures and the like have been given, and in each case well patronized and interest developed that was most gratifying. They are working to double the membership by July 4th next.

The AMATEUR and HIS TROUBLES

Conducted by
FAYETTE J. CLUTE

OLD BOOKS ON PHOTOGRAPHY.

I was talking with an amateur recently who had just returned from a business trip to a nearby city, and he let fall a hint that I believe worthy of recording. It seems that certain evenings needed some means of occupation, and the city library being near at hand he wandered in. It occurred to him that he might find something pertaining to photography, and so that part of the card index was investigated. He was surprised to find that the library contained a number of excellent works and many of them of surprising interest. The older ones, particularly those published about the time the dry plate was introduced. These last were instructive as well as interesting, showing as they did the rather empirical directions then given for the manipulation of the plate, directions that to-day seem strangely lacking in a proper estimation of the relative importance of different details of the process. My friend asserted that a little reading of such easily-available matter, even if only its historical value was considered, well justified one in spending the time. Another point he made was this: as one's use of language is benefited by a study of its history, one can hardly fail to increase his capabilities as a photographer by an investigation of the history of photography, and the advantage of contemporaneous history over that which is post-contemporaneous is well understood. In addition to this, my friend was surprised to find that the library contained several valuable works on photography of rather recent date, but of which he had never heard. Inquiry made of dealers revealed the fact that the first small editions had not been large enough to warrant extensive advertising outside the catalogues of the publishers, and the demand had consequently not justified the second edition when the first went out of print. My friend has promised himself that he will investigate every available public library in the future, and I am quite sure that my readers who have not already done so will find it well worth their while to follow his example.

A DUMMY CAMERA.

I was given a rather strange story by a recent visitor. It appears that a certain photographer in another city has considerable work making photographs showing the advance, from week to week, in building and construction work. Only one or two prints were wanted from each negative, and these must be 8x10, or 6½x8½ at least. A large camera necessitated a large lens, and this made a small stop necessary. The small stop in turn made the exposures too long; some of the workmen were sure to move or passing pedestrians cause even a more pronounced blur. He tried using a kodak and turning out enlargements, but here another difficulty presented. One of his customers would not listen to any explanation, but insisted that if nothing more was necessary he could get a kodak and make his own negatives. What does our hero do but get an old 11x14 camera, throw away the back, replace the lens with a piece of brass tube with a roller blind shutter on the end, and otherwise make it as light as possible. In the interior he has erected a couple of stout wire struts that hold a 3¼x4¼ kodak firmly in place, with its lens just within the brass tube doing duty in place of the dummy lens on the outside. An extra large focusing cloth, in which the back part of the large dummy camera was kept concealed, completed the equipment. The small lens in the kodak enables him to get great depth of focus with relatively large openings and consequent short exposures. In addition to this, the saving in cost of plates was enormous. Still another advantage lies in the fact that there

is no trouble about a swing back or rising front. If the negative should show any of the characteristic faults due to pointing the camera upwards, he remedies the matter quite easily by inclining the negative holder or paper easel, or both, in making the enlargement. My visitor explained that the photographer's methods might have remained his own secret had he not been called upon to produce a certain series of negatives as evidence in a suit at law. Of course there is an element of fraud in the plan, but it is perhaps made justifiable by the fact that he supplies his customers with good work that gives entire satisfaction, and does it with more certainty and at less cost of time, material, and trouble than he could otherwise

THE BEST CAMERA MADE.

Just about so often some one will write and ask me what particular camera is the best, rarely giving any hint as to the class of work in which he is interested. Ask an engineer which is the best engine, and he will inquire as to the purpose for which it is intended. Even after getting this information, he will no doubt want much in addition before indorsing any particular type. It is exactly the same with a camera. If there was any such thing as a "best" camera, or even something approaching it, there would be so many of that particular type in evidence that one would have but to look about him in order to decide. The truth of the matter is that the tastes and requirements of different camera users are so varied that even the large variety now on the market seems hardly adequate for all requirements. A local repair man has fitted several small kodaks with large lenses recently, lenses so large that an entirely new front had to be constructed. Many like reconstruction jobs fall to his lot constantly on account of the special requirements of individuals. If there was one certain type of camera that was the best of all for even a majority of camera users, you can be sure all the dealers would carry little else. Ask any dealer, and he will tell you that he would be only too glad to find there were not more than a dozen likely to prove the best under the trying requirements of the varying tastes of his customers.

METOL POISONING.

A local worker wants a remedy for metol poisoning that has for the first time made itself felt after years of work with that admirable developer, which he does not desire to relinquish. We can do no more than repeat a formula which we published some time ago. It reads as follows:

Ichthyol	1 drachm
Boric acid	4 drachms
Lanoline or wool fat	2 drachms
Vaseline	3 drachms

This, used as an ointment, proves very beneficial in most cases. The bowels should be regulated, any tendency to dyspepsia or constipation being avoided. The "Medical Record" gives a formula for a skin varnish that can be used without any inconvenience while working with the solution and afterwards removed from the fingers with soap and hot water. It is made as follows:

Copal gum	30 grains
Venice turpentine	60 grains
Ether	3 ounces
Collodion	3 ounces
Acetone	120 grains

We would add that this varnish would be an excellent application for users of pyro who desire to avoid staining their hands and nails.

"PHOTO-SECESSION" EXHIBITION.

An exhibition of drawings by Miss Pamela Colman Smith, of New York and London; etchings and book-plates by Herr Willi Geiger, of Munich; and etchings by Mr. D. S. McLaughlan, of Boston and Paris, will be held at the little galleries of the Photo-Secession, 291 Fifth Avenue (between Thirtieth and Thirty-first Streets), New York, opening on February 26th and closing March 11th. The galleries are open from 10 A. M. till 6 P. M. daily, Sundays excepted.

Announcements: The next exhibition, March 12th to 31st, will be devoted to the work, color and monochrome, of Mr. Eduard J. Steichen. April 1st to 20th, drawings by Matisse (Paris).

In Professional Fields

PHOTOGRAPHERS' ASSOCIATION OF IOWA.

The eighteenth annual convention of the Photographers' Association of Iowa will be held at Davenport, Iowa, May 12th, 13th, 14th, and 15th, 1908. Turners' Hall has been secured, thus insuring ample space. An attractive and instructive program is being prepared, and details will be given in a handsome annual to be issued a few weeks before the opening of the convention. Prizes, and handsome ones at that, will be awarded in seven classes; write T. Will Runkle, secretary, Cedar Rapids, and find out about them. He will be only too pleased to send you a circular telling about all the good things being prepared. The officers are as follows: President, G. E. Fahr, Bonaparte; first vice-president, W. J. Fritz, Waterloo; second vice-president, Charles Voiland, Albia; treasurer, W. W. Ferguson, Dennison, and secretary, T. Will Runkle, Grand Rapids. The photographers of Davenport are all enthusiastic and have been resolved into reception and entertainment committees that will assure the members a cordial and hearty welcome.

P. A. OF A. TWENTY-EIGHTH ANNUAL CONVENTION.

The next P. A. of A. convention, to be held at Detroit, July 14th, 15th, 16th, and 17th, will, I believe, be a memorable meeting in many ways, your board having outlined several new departures in convention work which will be tried out, and will for the first time be placed before you in a practical, educational way.

The main feature, competitive class work, at the Detroit meeting has not as yet been fully matured, but you may rest assured that full publicity of this, with all details made clear, will soon be made. Suffice to say at this time that the able leaders we propose to gather for this work will be men of highest executive ability, not alone as organizers, but as leaders of progressive photography.

Our meeting, coming as it does somewhat earlier in the season than usual, should spur you to the point of "doing now" that part of your work which you have been in the habit of leaving until the last moment—the making of convention negatives. This can better be done now than in the heat of early summer, when at least half of your energy is expended in keeping the temperature of your minds and bodies at a normal point. I wish to urge upon every member of this association the necessity of immediate action on this line, as it is worth your while this year, and believe the awards offered will bring out the best there is in you. Color photography, which has made so notable an advance in the past few months, will be represented by all known processes. This in itself will form an exhibit of unusual value, one which you must see to fully appreciate.

I do not believe I will be found very far wide of the mark in predicting that at the Detroit convention this year will be found more new features in convention work and exhibits than have been shown in any single exhibit or convention in years. Make your plans now, as it will be you who will be the loser in case you fail to meet with us this year at Detroit.

Very truly,
FRANK W. MEDLAR,
Pres. P. A. of. A.

NEW SECRETARY FOR THE P. C. L. OF A.

The Photographers' Copyright League of America has been unfortunate in losing the services of Chas. E. Bolles, who has been the secretary-treasurer for a number of years. Mr. Bolles has practically retired from photography, and finds it impossible to devote the time necessary, and the president of the league has appointed, to fill out the unexpired term, F. A. Strohmyer, of Underwood & Underwood, Arlington, New Jersey. Mr. Strohmyer is eminently adapted to the position, being thoroughly conversant with the topic, and it would be difficult to imagine a better man for the position.

Our Competitions

In the last issue we announced that the subject for our monthly competition closing July 31st would be Sunlight Effects, and the one closing August 31st would be for effects of mist, haze, fog, and the like. Intending competitors should consult our March issue for more particulars as to just what is wanted. The subject for the September competition will be some effect depicting the sentiment of dreariness, desolation, depression, departed life or activity. This subject, like the two previous ones, is capable of a wide interpretation. Landscapes, marines, figure studies, architectural studies, even the most unpromising corner of an ordinary field or garden, will suffice if rightly handled. Winter or summer, indoors or out, material is at hand. All that is needed is the capability of appreciating the possibilities of the right material, and then securing the effect desired.

In this connection the editor must ask the friends who have and who will enter these competitions to have patience with him in the matter of sending out the prints. Hundreds of prints were sent in for the first competition and large numbers for the following ones. By adopting this idea of "effects" in place of "facts" as subjects, it is hoped that the work will average higher in pictorial quality and by so doing bring the submitted prints down to a number that can be handled promptly,

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Club Notes

CHICAGO CAMERA CLUB.

The Bulletin of this enterprising club for April reads as follows: April 2d—Set of Lantern Slides, members bringing any slides they may have to test. April 9th—Demonstration of Gum Printing, by R. E. Weeks. This is a subject of unusual interest and the club is fortunate in getting Mr. Weeks to show its members how. April 16th—Manipulation of Velox, by one of our expert members. April 23d — Short Discussion on First Principles of Art, by Mr. Tuckerman, whose known familiarity with this subject should make this meeting most interesting to all members. April 30th—Special Set of Japanese Slides. Ladies' night.

The club desires to have the Annual Exhibit of Members' Work on its walls on opening of the new quarters. All members are urged to prepare and leave at the club rooms, addressed to D. H. Brookins, at least one sample of their work. The club cannot assist you to improve unless it can see your work. We should have at least one hundred prints. Get busy.

CLARENCE B. HALE,
Secretary.

RACINE CAMERA CLUB.

This club was organized in October, 1907, with thirty-five members. One meeting a month was held until February, when the club decided to hold two each month. The first of March the club moved into neatly furnished rooms at 500 Monument Square, where the members are equipped with dark rooms for developing and printing, and all the necessary apparatus for the production of lantern slides, bromide enlargements, and the like. The club hopes to become a member of the American Federation during the year, as most of the members are connected with the Federation through their connection with the Wisconsin Camera Club. About fifteen of the members attended the Fourth American Salon held recently in the rooms of the Wisconsin Camera Club, of Milwaukee. They all reported themselves as highly pleased with the exhibition and well repaid for their trip to visit the salon. The secretary of the club, F. W. Freitag, 500 Monument Square, Racine, Wisconsin, wishes to extend to all members of other camera clubs who may visit their city a hearty invitation to call.

The International Photographic Association

This issue following upon the March number so closely, there is little to report further than that all the members of the Stereoscopic Division have been placed upon the subscription list and will receive both the March and the current issue. Dr. C. H. Gardner, U. S. Marine Hospital, San Francisco, is the director, and in future we will have an occasional notice from him covering the activity of that division.

We trust that former members will report to us as soon as possible to the end that we may again resume activities in those States in which we have not yet been able to list the members. Former album directors will kindly report to J. H. Winchell, chief album director, R. F. D. No. 2, Painesville, Ohio. In several States a new album director will have to be appointed. State secretaries will report to Fayette J. Clute, Call Building, San Francisco, and by him be supplied with a list of all members in their respective States. These lists will also be placed at the disposal of State album directors.

Mrs. A. Leonora Kellogg, 338 McGregor Street, Manchester, has kindly consented to resume her efforts in behalf of the association, continuing her duties as secretary and album director for New Hampshire.

We print this month a number of exchange notices by the Ohio members. As soon as possible, we will resume the publication of these notices in their proper numerical order. These given below will serve as examples to new members, and we trust all joining will furnish us with such a brief notice in order that they may be listed regularly.

EXCHANGE NOTICES

489—J. G. Grant, M. D., Central Saving & Trust Building, Akron, Ohio. 4x5 and stereo on developing and printing-out paper. Class 1 with stereo workers who submit samples first and 4x5 views with foreign workers only. Wants only good work.

510—George Steck, 1327 West 11th Street, Cleveland, Ohio. Stereo, 4x5 and 5x7 on developing paper. For stereos, Class 1; in Class 2 for other prints. Wants only good work.

947—Harry M. Biggin, Kinsman, Ohio. 5x7 and smaller on bromide and developing paper. Views and post cards. With all good workers, Class 1.

1373—E. E. Strock, 590 State Street, Conneaut, Ohio. 6½x8½ and smaller on developing paper. With all members doing good work, Class 1.

1458—C. H. R. Pockrandt, 2426 East 83rd Street, Cleveland, Ohio. 4x5 and 5x7 on printing-out and developing paper, of general views. For good work is Class 1.

1519—Charles H. Jones, 109 Marshall Street, Conneaut, Ohio. 4x5 on developing paper. Class 1.

1557—Ernest Blacet, Painesville, Ohio. Stereo and 6½x8½ on developing paper. Views of general interest. With all good workers, Class 1.

1676—A. A. Viers, Box 103, Conneaut Harbor, Ohio. 4x5 to 6½x8½ on developing paper, of marine subjects. For first class work of general interest is in Class 1.

1678—B. E. Chesney, Painsville, Ohio. 3¼x4¼ to 8x10, general views on all papers. Class 2.

1679—H. E. Brown, 188 Gale Street, Akron, Ohio. 5x7 on developing paper, mostly summer camp views. For general views, Class 2.

1981—C. E. Guffin, 503 East 117th Street, Cleveland, Ohio. 5x7 and smaller on developing paper. For good work of general interest is in Class 1.

1682—Ernest L. Wilder, Box 421, Painsville, Ohio. 2½x3¼ and 4x5 on developing paper. General views, post cards and lantern slides. Class 1.

1684—Earl J. Houser, R. F. D. No. 8, Wooster, Ohio. 5x7 on developing paper. General views. For good work is in Class 1.

1686—Madison Oemer, R. F. D. No. 7, Eaton, Ohio. 2¼x3¼ on Aristo and printing-out paper of general views. Class 2.

1688—O. Whitman, New Philadelphia, Ohio. Stereo and 5x7. General views on developing paper. For members doing good work, Class 1.

1691—William A. Haller, 706 Mt. Hope Avenue, Cincinnati, Ohio. 8x10 and smaller on platinum and developing paper. Class 3.

1694—Anna Kypke, 208 West 12th Street, Cincinnati, Ohio. 3¼x5½ of general views on Velox paper. Class 2.

Photographic Post Card Exchange

C. Frederick Potter, Jr., Director, 620½ Nicollet Ave.,
Minneapolis, Minn.

PHOTOGRAPHIC POSTCARD EXCHANGE.

As announced last month, I have accepted the directorship of this Postcard Exchange, which was formerly such a popular feature of the old "Western Camera Notes." Mr. Clute has sent me a large number of cards which have reached him from applicants for membership and others are arriving almost daily. This month I am printing the names and addresses of some of the older members and next month I will do the same with these new applicants whose work has been adjudged of a sufficiently high standard. In future, all applicants will kindly send their specimen card with request for enrollment directly to my address as given above. Membership is granted only to those who are either already upon the subscription list of "Camera Craft," or who may send their subscription directly to me or to "Camera Craft," at the same time applying for membership and sending me a sample of their work, providing this specimen is up to the required standard.

One of our members calls attention to the fact that the post office regulations governing the mailing of post cards is not fully understood, with the result that the recipient is often put to some cost and inconvenience in the matter of paying postage due.

A post card containing any written matter enclosed in an envelope requires two cents postage on the envelope, regardless of the postage that may be on the card enclosed. A card containing no written matter also requires two cents postage on the envelope if the envelope be sealed. The fact that the envelope is transparent or that an aperture be cut in it to show the stamp on the enclosed card does not alter the matter in the least. When a card has no writing upon it and is sent in an unsealed envelope, it becomes simply a picture, so packed that its contents may be easily inspected, and can therefore be mailed for one cent, but this, however, must be on the envelope enclosing it instead of on the card.

I am calling the attention of the members to this matter, as we have had a number of complaints covering this subject.

WITHDRAWALS

E. H. Wilson, 304 South Sixteenth St., Omaha, Neb.

MEMBERS

Chas. W. Davies, Box 148, Lake Charles, La.

Chas. W. Faulkner, 217 Walnut St., Athol, Mass.

Chas. E. Fralick, Grand Island, Neb.

Burdett Harrison, Tarentum, Pa.

Howard Heimerdinger, 19 Irwin St., Toledo, Ohio.

H. Hodkisson, 116 Langside St., Winnipeg, Man., Can.

E. G. Hooper, Baltimore, Md.

Wm. P. Jacoby, 219 Fifth Ave., San Francisco, Cal.

John H. Johnson, Box 62, Braddock, Pa.

W. H. Kelly, R. F. D. No. 1, Bruceton Mills, W. Va.

Anna Kypke, 208 W. 12th St., Cincinnati, Ohio.

Vercia Louck, Kalona, Iowa.

W. H. McKeen, Box 1059, Tacoma, Wash.

Hubert C. Mohr, De Graff, Ohio.

R. G. Munn, Ripley, Ont., Can.

W. F. Noa, 2354 Magnolia Ave., Chicago, Ill.

Julius B. Peterson, Box 56, Louise, Tex.

John W. Root, 422 W. 6th St., Grand Island, Neb.

Geo. A. Shepard, Lowville, N. Y.

Emily Smith, 68 N. Grove St., Orange, N. J.

A. B. Somerville, E. Main St., Lonaconing, Md.

H. E. Stout, 329 Washington St., New York.

G. E. Thompson, 226 N. Wentworth St., Hamilton, Ont., Can.

L. M. Vance, Strong City, Kan.

NOTES *and* COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

THE KODAK ADVERTISING COMPETITION.

We gave some information concerning this competition in a recent issue and advised all our readers to secure a circular covering the matter from their dealer or from the Eastman Kodak Company direct. We are just in receipt of a handsome sixteen-page "Portfolio of the 1907 Kodak Advertising Competition." Although the firm advises us that "It isn't a very pretentious portfolio," we are much pleased with it and would urge all who are interested in that class of pictures to accept the offer of the Eastman Kodak Company to send a copy postpaid on request. It is just what anvone who intends to compete in this year's competition wants, as showing the class of pictures that can be used to good advantage in advertising, and the kind that the company hopes to secure in this new Advertising Competition.

THE PREMO DEVELOPING TANK.

This month's issue contains a full page advertisement that will prove interesting to every reader of the magazine. It shows the new Premo developing tank, the latest addition to tank developing utilities. It provides for the easiest possible development of film pack films, with the assurance of absolutely uniform results and results of the highest possible quality. With it the veriest tyro in photography is on an equal plane with the oldest and most experienced worker, as far as the production of bright, clean, fine printing negatives is concerned. And it is not to this tyro alone that this perfect and new piece of equipment appeals. The advanced worker is none the less prone to avail himself of its time and trouble saving qualities simply, he is capable of producing good results in the old and more tedious method. Every one of our readers should look up this advertisement and then send to the Premo people for one of their new catalogues, if one cannot be obtained direct from their dealer. The catalogue is a handsome one, with many other new goods described, and a wealth of fine illustrations.

CYKO PAPER

The demand for Cyko paper, Ansco film and other Ansco products is now being met promptly. These goods are distributed at wholesale from factories at Binghamton, New York, and the following branch offices of the Ansco Company: New York City, 40 East Twenty-first Street; St. Louis, Missouri, 407 North Broadway; Cincinnati, Ohio, Andrews Building, Southeast corner Fifth and Race Streets; Boston, Massachusetts, Paddock Building, 101 Tremont Street; and also from the following wholesale agents: Burke & James, 118 Jackson Boulevard, Chicago, Illinois; Western Photo Supply Company, 780 Ellis Street, San Francisco; Schaeffer Photo Supplies, 1011 Capitol Avenue, Houston, Texas; Gailey Supply Company, 1302 Second Avenue, Seattle, Washington; Woodard, Clarke & Company, 230 Washington Street, Portland, Oregon; and Baltimore Photo Supply Company, 211 North Howard Street, Baltimore, Maryland.

PHOTOGRAPHS WANTED.

"System, The Magazine of Business," is desirous of securing photographs of suitable subjects to be used as decorative panels, headpieces and tailpieces, to replace the pen-and-ink drawings that have been used heretofore. As the editorial matter in "System" relates to business, particularly to manufacturing, wholesaling, retailing, banking and the like, the photographic panels should have pertinent reference to the spirit of the magazine. City skylines, wharf scenes, railroad scenes, foundries and other manufacturing plants, and details of offices or factories suggest themselves as some of the available subjects. These and like subjects may be treated

either in an artistic and decorative manner or be clearly illustrative. The pictures may be of any size, but proportionally shaped to produce a reproduction of horizontal panel form two by five and one-quarter inches in size. Unsuitable pictures will be returned, and one dollar paid for each print accepted. They should be submitted directly to the editor, Kendall Banning, 44-60 East Twenty-third Street, New York.

TRANSFERRING PHOTOGRAPHS.

In our advertising pages this month will be found a small announcement of the Kimo Chemical Company, of Philadelphia. We can recommend this firm to our readers without reservation, and would urge all photographers to give their Kimo Transfer Solution a trial. With it, photographs can be transferred to porcelain, plates, watch cases, plaques, and articles of that nature, with ease and certainty. Its use opens up, to both the amateur and the professional, a wide and hitherto unoccupied field that is most inviting. Look up their advertisement.

A NEW PACKARD-IDEAL LIST.

The Michigan Photo Shutter Company, 205 East Water Street, Kalamazoo, Michigan, have gotten out a new catalogue of their well-known and popular line of shutters, and we would advise all photographers, and particularly the professional ones to send for a copy. The merits of the Packard-Ideal shutters are so well known that it is needless to comment further than to say that not only has the high standard of workmanship been fully maintained as in the past, but a number of improvements have been made that add much to the efficiency of the shutters, and to their durability as well. One of these shutters was recently left in our office, to be handed to Telgmann & Torka, on the same floor, and the owner advised us that it had been in constant use for twelve years without any need of repairs whatever. He was having it attached to a front board carrying a new lens which he was ordering.

INTERNATIONAL EXHIBITION OF PHOTOGRAPHIC ART.

The Amateur Photographic Society of Amsterdam, Holland, will hold an International Salon August 1st to 31st, 1908, in the Municipal Museum at Amsterdam. The names of those forming the committee, the Municipal Museum being at their disposal, assures a large and representative exhibition. The announcement is too long for publication entire, but it is sufficient to say that pictures must reach there July 15th, and advice that they will be sent should go forward six weeks earlier. Carriage is to be paid both ways by the exhibitor. No awards will be made, but every exhibitor will be given a "remembrance-plaque." Every picture must be framed or glass-covered and bear on its back the usual title, maker's name, and the like. The address is: A. Van Dijk, Secretary A. P. S., Spui, corner Handboogstraat 2, Amsterdam, Holland. It is too late to secure advice in the matter, but we believe we can safely advise our readers who may wish to send a few pictures without the expense of express charges and framing, to submit them by mail to our good friend, the editor of "Lux," J. R. A. Schouten, Van Breestraat 185, Amsterdam, as early as possible, and ask him to supply simple frames for such as he thinks may pass the jury, notifying the sender of the expense. Mr. Schouten is a member of the executive committee, and the soul of kindness. I would advise that only inexpensive prints be sent in this manner, and ones that the sender feels will stand some chance of passing the jury. Mr. Schouten can then be advised that they need not be returned.

"CENTURY QUALITY."

The 1908 Century Catalogue, advance copy of which we have just received, is an excellent indication of "Century Quality." It is most artistically gotten up and printed, and is well in keeping with the high grade of cameras it describes. Copies will be mailed free by the Century Camera Division, Eastman Kodak Company, Rochester, N. Y.

A MOUNT "KATALOG."

Taprell, Loomis & Company of Chicago have gotten out a catalogue, something that prompts them to use a capital C when they mention it in their letters. The book is certainly worthy of some such distinction. Anybody who labors under the idea that Mr. Taprell and his partner set up nights to make the mounts and then put

in the next day selling them, is carrying around a wrong impression. This catalogue will dispel the idea. It lists something like a thousand and one styles—we have not counted them—but the photographer can find something in the list to suit anything he may want to turn out in the way of a print. If he can't, he is to be pitied. Possibly Mr. Taprell would stay up some night and work out something for him. The great advantage lies in the fact that the poor photographer is not asked to stock up on a carload or two. He can buy them of his dealer in as small or as large quantities as he may wish. Pictures are made to please the eye. The mount is a large factor. Pleasing the public eye means more photographs sold, and any photographer will try and stand a slight increase in his business just to help a poor mount maker along, if for nothing else. Send and get this new "katalog," addressing Taprell, Loomis & Company, 1727 Indiana Avenue, Chicago.

"AGFA" FORMULAE BOOK.

A most valuable little booklet with the above title has just been gotten out by the Berlin Aniline Works, 213-215 Water Street, New York. Your nearest dealer will most likely have a supply, but if not, a direct request from the firm will bring one. Every photographer should secure a copy as it gives reliable formulae for all the standard makes of plates, film and paper. It is a great convenience to have all these together in one booklet and particularly so when in such form that they can be carried in the vest pocket should one be traveling about.

GREAT LITTLE BOOK FOR BUSINESS MEN.

A book that goes down to first principles, helps to success, and nearly everyone can afford it at the price named here. This is a little book called "As a Man Thinketh," by James Allen, one that is winning its way into the hearts of more business men than nearly any book going just now.

The reason for the popularity of the little book among business men seems to be that it reveals some old and tried principles in a new and practical way. In short, it shows the commercial value of those principles — how to apply them to the problems of everyday business life.

The book is not an exhaustive treatise on the much-written-upon subject of the power of thought. It is suggestive rather than explanatory, which probably is a further reason why business men are especially enthusiastic over it.

George S. Parker who makes and sells the "Lucky Curve" fountain pen, in speaking of this book said: "'As a Man Thinketh' is one of the greatest little books for business men that I have ever read. I bought a great many copies of this book to give to my business friends and associates."

Heretofore "As a Man Thinketh" has been sold, but it is now being given away by the Sheldon School of Chicago. The Sheldon School teaches the Science of Salesmanship by correspondence. The success of the school is attested by the fact that thirty thousand men, representing every line of business, have taken the course.

You don't have to be actually engaged in selling goods in order to profit by the Sheldon Science. Salesmanship is a vital principle. Every man has something to sell, and the men who understand and apply the principles of scientific salesmanship realize success in life.

The Sheldon people say they are willing to give this little book away because there is so much good Sheldon doctrine in it, and anyone who reads it usually gets right in line for the work of the Sheldon School.

However, that may be, the fact remains that if you desire a copy of "As a Man Thinketh," and would also be interested in seeing some literature on the Science of Salesmanship Course, you can get the book without charge by simply sending your name and address with request to the Sheldon School, 1283 Republic Building, Chicago.

"DEFENDER PRODUCTS."

This is the title of a neat little folder carrying twelve prints made on as many different papers, the product of the Defender Photo Supply Company. These are sent out complimentary by the various branch offices of the manufacturers and the Sunset Photo Supply Company, 1125 Van Ness Avenue, San Francisco, and 1262 Broadway, Oakland, will be pleased to mail one on request. An opportunity like

this should not be neglected by our readers, as the twelve prints, although necessarily small, are most interesting, particularly as they are all different and allow of a comparison of the different grades and surfaces.

THE NEW FACTORY OF THE SCHOOLEY MFG. CO.

We were greatly pleased and surprised recently on visiting the factory of the Schooley Manufacturing Company, located on Battery Street, near Broadway, this city. The building is a handsome new structure of several stories, the front a most pleasing effect in pressed brick and plate glass. The offices of the firm are located on the ground floor, but the most interesting part is the floor above devoted to the manufacture of their popular lines of photographic mounts and folders. Here the word busy hardly expresses the scene of activity that presented itself. Machine after machine was turning out its particular part of the work at a rate that would seem capable of supplying the demand of the entire Coast. Massive cutters and embossing presses worked with the precision of a watch; ingenious beveling machines seemed to turn out finished mounts with an almost human facility. Long rows of deft-fingered girls attended to the packing and sorting with an automatic swiftness that indicated long practice and the necessity for dispatch. All in all, this new factory is one that inspires wonder at its completeness and adaptability to the work in hand. A visit will well repay anyone interested in the production of so important a part of the photographers' everyday output.

DEATH OF MR. LIEBER.

It is with great sorrow that we learn of the death of Mr. Herman Lieber, president of the H. Lieber Company, Indianapolis, Ind., of which he was also the founder as well as actively and uninterruptedly the guiding spirit and authority since 1854. His death occurred en route to California, near Flagstaff, Arizona, at 10 p. m., on March 22, 1908. We join the host that knew him but to honor his many sterling qualities of mind and heart in expressing our sorrow and in extending our sympathy to those left to mourn his loss.

"PROFITABLE ADVERTISING," The Journal of Publicity.

"Profitable Advertising," the Journal of Publicity, published at Boston, U. S. A., aims to keep its readers closely in touch with progressive advertising all over the world. Its principal contents consist of articles by the most competent writers, upon the theory and practice of advertising, usually illustrated with examples to explain the text; reports of the doings of leading advertisers, and associations and clubs; surveys of the advertising activities of sections of the United States and other countries; and the showing of reproductions of the best and most novel designs for catalogues, booklets, brochures, and other forms of commercial printing. Art, science, politics, history, and literature, are also liberally treated, in their relation to business and the promotion of business. There is a strong editorial department. It is a handsome monthly, printed in the highest style of the printer's art, upon high-grade coated paper.

Profitable advertising is strictly independent of all external influence, is wholly owned by its publisher, Miss Kate E. Griswold, who has built it up from an insignificant and purposeless periodical pamphlet to one of the more notable class journals of the world. It is edited by George French, who has won an international reputation as a forceful writer and critic in the field of advertising and the graphic arts. It is indispensable to all interested in advertising, all forms of publicity, printing, and all the allied arts and industries.

It is twenty cents a copy; two dollars a year. Address, "Profitable Advertising," 140 Boylston Street, Boston, U. S. A.

THORNTON-PICKARD SHUTTERS.

Burke & James, of Chicago, have recently been appointed the sole United States agents for the Thornton-Pickard Roller Blind Shutters. The manufacturers of these shutters are the originators and inventors of the roller blind shutter system, the most popular styles being the "Standard Time and Instantaneous" and the "Studio" shutters. Burke & James advise us that they have greatly reduced the list prices of these shutters. Write them direct for full particulars.

Our Book Shelf

A BOOK ON RETOUCHING.

Ida Lynch Hower, Instructor M. I. L. Retouching School, Chicago, is the author of an excellent new book, entitled "The Art of Retouching Systematized." The book is a handsome cloth-bound, 12-mo., on tinted plate paper. The cover inset is from a prize photograph by Melvin H. Sykes. There is a photographic frontispiece and other illustrations. It is a manual of practical instruction for either the professional or the amateur who desires to secure a knowledge of the art of retouching negatives. The price is one dollar; by mail, six cents extra. A. C. McClurg & Company, Chicago, Illinois.

SOME NEW "MINIATURES."

The "Photo-Miniature" has begun appearing regularly, and the new numbers are quite as good, if not better, than those which went before. We are particularly glad to note that the publishers are taking up some subjects dealt with earlier in the series and replacing the out-of-print numbers with new monographs on practically the same subjects, but wholly revised and re-written, bring the subject up to date. Among the new numbers received are: No. 84, Tank and Time Development; 85, Photography by Flashlight; and 86, Carbon Printing—all stored with useful information in plain language for the man who wants to know. Most dealers carry the "Photo-Miniature" series, the Pacific Coast agents being Hirsch & Kaiser, of this city.

A NEW BOOK OF THE MISSIONS.

A. H. McClurg & Company of Chicago have gotten out a handsome though inexpensive volume, album shape and bound in green cloth with the title: "The Missions of California and the Old Southwest." There are thirty-five excellent reproductions of photographs, nearly all of them full page size, together with over a hundred pages of text by Jesse S. Hildrup. Both the illustrations and the text are so far superior to that generally offered in books of this kind that it is hard to determine which should have the larger praise. We would advise our readers to look this up at their book store, or if not obtainable in that way, order it direct from the publishers. The price is $1.00 net, postpaid $1.15.

"CORRECT ENGLISH, HOW TO USE IT."

This is the title of a most instructive and interesting monthly magazine devoted to the use of English. It is edited by Josephine Turck Baker, and published at Evanston, Illinois. It is brimful of just the kind of matter that is wanted by those interested in the use of good English in speaking and writing. Quoting from a list of department and other titles, we have: Queries and Answers; The Art of Conversation; Shall and Will; Should and Would; How to Use Them; Pronunciation (Century Dictionary); Correct English in the Home; Correct English in the School; What to Say and What Not to Say; Course in Grammar; Course in Letter Writing and Punctuation; Business English for Business Men; Compound Words, How to Write Them; Studies in English Literature, and the like. The price is one dollar a year. We advise all our readers to send ten cents for a sample copy.

"THE BOOK OF PHOTOGRAPHY."

The full title is "The Book of Photography, Practical, Theoretical, and Applied," but it is a large book of some seven hundred and forty-four pages, and a shorter title would hardly suggest the mass of information that it contains. There are a thousand illustrations, forty-eight full-page plates, and twenty-four pages of index. It is ideal in its completeness; in fact, it closely approaches the line of over-elaborateness in its treatment of the various processes and methods of photography. Burke & James, Chicago, are selling agents, and it is carried in stock by Hirsch & Kaiser, of this city. The price is one dollar net. If ordered by mail, one should send thirty-five cents extra for postage.

"MEN WHO SELL THINGS."

The above is a title that should interest a large number of photographers, who, as a class, are the poorest kind of salesmen. Particularly is this the case when a book with the above for a title is credited to Walter D. Moody, as is this one. The book is, of course, primarily intended for men who make salesmanship their profession, but this does not in the least invalidate its claims upon any class that may in any way find the selling of some article a part of their work. It is a book of about three hundred pages, brisk and breezy in its style, and, furthermore, it has that satisfying quality of being convincing without being labored. $1.00, postage eight cents. A. C. McClurg & Company, Chicago.

"LES PRODUITS CHIMIQUES PURS EN PHOTOGRAPHIE."

The above is the title of a very complete work covering the composition, use, method of employing, and variations in control and adaptability of the chemicals used in photography, by Camille Pouleng, Docteur des Sciences. It is a paper-covered book of some one hundred and sixty pages, and should prove of the greatest value to any reader of French, the language in which it is written. The price is two and one-half francs from the publisher, Charles Mendel, 118 bis, rue d'Assas, Paris, France. Intending purchasers should remit, we would suggest, about sixty cents, foreign money order being advisable.

A VALUABLE BOOKLET.

A handsome piece of printing is the thirty-two page, "A Triple Alliance in Optics," which reaches us today. It is biographical in style, giving as it does an account of the life-work of the several men whose enterprise and industry has made Rochester the optical center of the world, the center of an industry that was born in this country but fifty-four years ago. The story is vital and informative to a degree that compels the interest throughout. Our readers should all send for a copy at once before the supply can become exhausted. Simply quote the title to the Bausch & Lomb Optical Company, Rochester, New York, and it will be sent.

"DEUTSCHER CAMERA-ALMANACH 1908."

This popular and instructive annual reaches us a little late this year, but comes fully up to our expectations that it would be, if possible, an advance upon previous issues. There are some twenty-five excellent articles, in German, of course, but the fine illustrations, over one hundred and fifty, require no knowledge of the German language to make them valuable to our readers. These last will prove a revelation to any worker, and as a source of inspiration and added incentive they are worth many times the cost of the book. There are nearly three hundred pages devoted to these handsome reproductions of the best work of the foreign masters, together with the text. One dollar will bring the paper-cover edition, and twenty cents additional, the cloth-covered, post paid from Der Verlag, Gustav Schmidt, Konigin-Augusta str. 28, Berlin W. 10, Germany. We can promise any of our readers that they will be pleased with their investment should they send for a copy.

"AMERICAN PHOTOGRAPHY" MOVES.

Beginning with the March issue of "American Photography," the publication office of the magazine will be removed to 6 Beacon Street, Boston, Massachusetts.

Frank R. Fraprie will have entire charge of the editorial and advertising departments of the magazine, and they will be conducted from the Boston office, and J. P. Chalmers, owing to the increasing pressure of his duties as business manager of the "Moving Picture World," retires from active connection with "American Photography."

SOME FINE WINTER SCENES.

The Yosemite in winter is a subject to which justice has not heretofore been done, photographically. J. T. Boysen has on exhibition at the local stock house of Hirsch & Kaiser a number of snow and winter scenes of the Yosemite which are the finest pictures of the kind that it has been our good fortune to see. Now that the valley is accessible in winter, we presume it will be a point of interest for many, Californians as well as visitors from the East, and particularly those interested in photography.

Vol. XV No. 5 MAY, 1908 Price, 10 Cents

Camera Craft

San Francisco, California

A PORTRAIT
By J. WILL PALMER
Second Prize, March Competition

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, MAY, 1908. No. 5

The Kallitype Process

By J. Will Palmer

The writer does not aim to give in this article anything especially new in the way of working this interesting and valuable process, but rather, to make each step so plain and easily understood that any one who has the desire to make "Kallitype prints" can do so without the least fear of failure.

To those unacquainted with Kallitypes suffice it to say that a set of three prints recently published in "Camera Craft" were sent to the editor without comment or data and were supposed by him to be platinum prints and were described as such in an article written by him and accompanying said prints. This incident should assure the most sceptical that the process about to be described is at least worthy of notice.

Now then, let us get busy by selecting a paper for our work. And as we are to make a simplified version of this article, we may as well commence right here. When you have mastered the process almost any paper will be found to fill the bill, if proper precautions are taken, but to make assurance doubly sure, in the beginning I wish to have you all confine yourselves to just one paper, "Whatman's." This paper can be obtained at any well-appointed stationery or artists' supply store, and we will know that if we have any trouble in making prints it will not be traceable to the paper. These papers need not be sized; in fact, we prefer that you do not use any size whatever upon them.

Next, let us turn our attention to the making up of the necessary solutions. And in this connection let me say: Be very careful in the selection of your chemicals. The ferric oxalate should be "Merk's." There may be other makes equally as good, but remember you are trying to learn to do something now; bye and bye, if you want to experiment, you can use what you like. But we know Merk's is all right. Buy only one ounce at a time.

The best method for making up the solution is to make up four separate stock solutions, which, if stored in amber-colored bottles, will keep in perfect working order for almost any length of time. I have used them after having been kept over two years and they were in perfect condition. This method of working with stock solutions allows of modifying the sensitizing bath to produce special effects if desired, although we are to treat

of only one combination in this article. We will designate these four solutions, for convenience, as solutions A, B, C and D.

Mix up the solutions according to the formulas given below, which should not be used for at least twelve hours after mixing; twenty-four will be safer.

A.

Ferric oxalate (Merk's).....1 ounce
Distilled water .....5 ounces
Gum arabic (tears).....48 grains

B.

Ferric oxalate and potassium.....¼ ounce
Water (distilled) .....4 ounces

C.

Oxalic acid .....½ ounce
Water (distilled) .....4 ounces
Ammonia (liquid concentrated).....100 minims

D.

Bichromate of potassium.....120 grains
Water (distilled) .....4 ounces

Sensitizing Solution for Use.

Solution A . . . .½ ounce
Solution B . . . .¼ ounce
Solution C . . . .15 minims
Solution D . . . .2 drops
Silver nitrate (crystals).....20 grains

Stir with a glass rod until the silver is entirely dissolved.

Coating the Paper.

On a drawing board place a sheet of nice, clean wrapping paper; a sheet of oilcloth is still better but is not necessary. This paper should be somewhat larger than the Whatman's which you are to coat. On this lay a sheet of the Whatman paper and secure with push pins or thumb tacks, one in each corner. For spreading the solution a piece of cotton flannel wrapped twice around a 4x5 glass plate and held in place with a rubber band is as good as anything perhaps, and will serve our purpose. The edge of this impromptu brush will do the coating very evenly and quickly, and this part of the process is not nearly the trouble some writers would have you think; in fact, it is simplicity itself. Just pour a little of the mixed solution in a little pool near one end of the sheet of paper, and with the brush spread it over that portion of the sheet, then pour out another little pool farther toward the opposite end of the sheet and proceed in like manner until the sheet is thoroughly coated. Now let it set for a few moments until surface looks dead, not wet, and then hang up in a dark room to dry thoroughly, which it will do in a very short time.

The coating can be done in a room moderately lighted by daylight, but when dry it is fully as sensitive to sunlight as platinum paper, which it very closely resembles. And it should be handled in the same manner

VISTA FROM MIDDLE TERRACE, CASTLE DEL CRESCENTA By EDGAR A. COHEN

from now on through the printing which should be a little less deep than with platinum paper.

A few words of caution before leaving the subject of coating. Do not fail to coat the paper thoroughly. Use enough of the solution and be sure to get every little indentation in the paper completely wetted with the solution. I know some writers have cautioned us to keep the solution on the surface to insure pure whites and for other reasons, but I have no trouble with impure whites, neither do I have bronzing in the shadows. Therefore I say, coat thoroughly.

Kallitype prints out but very little, similar to platinum paper, and those who are familiar with the latter named process will easily understand this. Nothing is better than a few trial prints to tell one the proper depth to print.

Development.

It is well to print the first trial print until the detail begins to appear in the middle tones and none at all in the high lights.

Now take from the frame, place face side up in a tray, and pour over it the developing solution, mixed according to the formula given below. Make it a point to flow the developing solution entirely across the print in an easy flowing manner that shall insure a thorough wetting of the surface of the print; and if air bubbles appear, as they are sure to do at times, quickly dispel them by use of the finger or a glass rod. The image flashes up very quickly, and if properly printed will reach full vigor within two

or three minutes. It is better to let the print remain in the developing solution for at least ten minutes. At the end of that time transfer it to a tray of clean water, where it should remain five minutes; more does no harm. Then remove to the clearing bath. The print should remain in the clearing bath for thirty minutes, then be placed in clear water and have a quite thorough washing, either by changing the water three or four times, or letting water run through them for five or ten minutes. Now transfer to the fixing bath, where it should remain ten minutes, and if there is more than one print they should be kept moving gently to make sure the bath gets a fair chance at every bit of the surface. At the end of the ten minutes transfer to water and wash very thoroughly the same as any other print, and dry in same manner as platinum.

E. Stock Developing Solution for Black Tones.

Acetate of soda.....3 ounces
Water .....24 ounces

For use take:

Stock solution as above.....8 ounces
Tartaric Acid .....12 grains
Solution D (bichromate of potassium).....8 drops

If more contrast is desired, add more of the solution D, but use caution as it takes but little to make considerable difference. On the other hand, if there is less contrast desired, use less of solution D or leave it out altogether if necessary. It has been found that with the average negative the proportion given is about right.

F. Clearing Solution.

Neutral oxalate of potassium.....3 ounces
Water. .....24 ounces

I. Fixing Bath.

For use with either black or sepia prints.

Hyposulphite of sodium.....1 ounce
Water .....20 ounces
Ammonia (liquid concentrated).....2 drams

G. Developing Solution.

For sepia and brown tones.

Neutral oxalate of potassium.....1½ ounces
Water. .....24 ounces
Solution D (bichromate) .....24 minims

H. Clearing Solution.

For use with developer G.

Solution G (oxalate developer as above).....4 ounces
Water. .....4 ounces
Solution D (bichromate) .....1 dram

The developing formula G is believed to be original with the writer, and it is hoped that it will give the reader as much pleasure as we have derived from its use. We find it the simplest, cleanest, as well as most dependable developer for warm tones that we have ever used. Every shade

of sepia from the very lightest down through to a dark brown can be obtained by varying the amount of bichromate (Solution D) and the depth of printing.

In washing, clearing, fixing, and the like, proceed identically the same as directed above, whether you are using solution E or G for developing, but the clearing bath intended for the given developer should be used.

There remains nothing more to say. Any questions will be cheerfully answered if addressed to me in care of the editor of this magazine.

ON THE OLD CAMP FIELD AGAIN By BELLE JOHNSON

Photography Without a Camera

By M. Ch. Mercier

Professor Lippmann's New Plate, That Requires Neither Camera Nor Lens, Yet Gives Pictures With Unlimited Depth of Field, and the Most Stereoscopic Effect of Relief

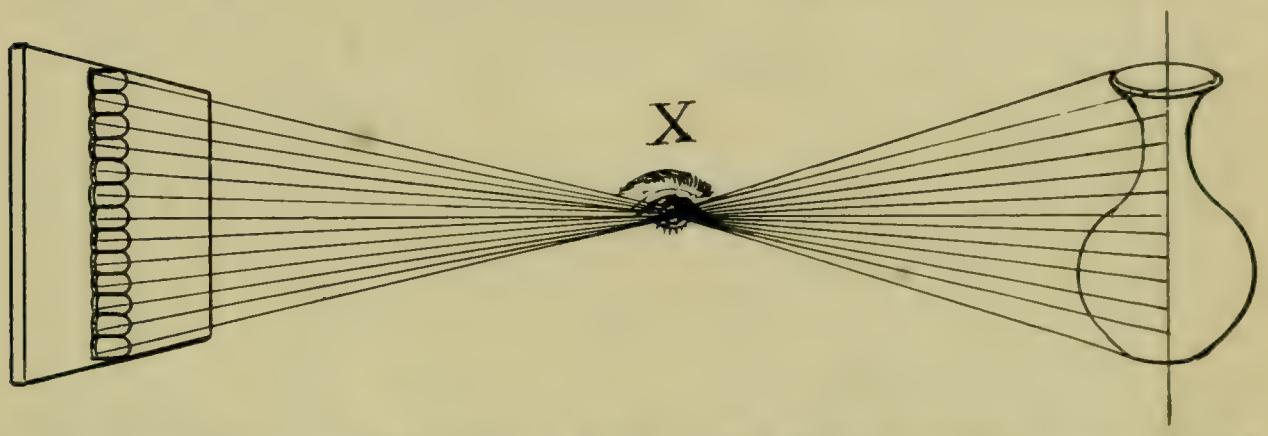
M. Lippmann, of Paris, he of interferential color-photography renown, has just made known, through the Institute of France, the details concerning his latest invention, the result of extended experiments carried on in the Research Laboratory of the Sorbonne, in Paris. There are, of course, technical difficulties in the process of manufacture, but these are not such as to appear insurmountable. However, it is the scientific principle which his invention utilizes, and not the practical results, that interests us at this early stage.

As we all know, the photographic camera is but a duplicate of the human eye, and, like the single eye, has the disadvantage that it sees from but one point of view and gives no evidence of relief. This is overcome when both eyes are used or two lenses are employed, as in the stereoscopic camera. The human eye, like the photographic lens, has little depth of field, and, like some forms of lenses, it has a very narrow angle. If we look at a distant object, another object much nearer the eye is not seen distinctly. By placing a card pierced with a small hole directly in front of the eye, this disadvantage is removed, but by sacrificing the light that is allowed to reach the retina. This is analogous to stopping down our photographic lens to secure depth of field. Many insects, however, are not thus hampered; their eyes are multiple, that is, they are made up of an assemblage of minute lenses, each forming its own independent image on its own minute retina. It is a principle somewhat analogous to this last that Professor Lippmann employs in a photographic way, just as the camera and lens of the present employ almost identically the principle upon which the human eye conveys to the brain the visual image of objects before it that are capable of reflecting light enough to form an image, either upon the retina of the eye or the sensitive photographic emulsion within the camera.

While M. Lippmann's results have been secured on "plates" that were given their "honeycombing" effect by hand, and the intervening walls of the cells made opaque with a fine brush, we can best investigate the invention by imagining that the difficulties of manufacture have been overcome. Doing this, we will suppose that a "plate" made up of microscopic cells, some ten thousand or more to the square inch, of a form as shown in the small illustration herewith. These are supposedly made up of collodion, and so formed that the relation between the radii of curvature of the front or lens forming surface and the back or image receiving surface of each cell be equal to $n-1$, n being the refractive index of the collodion. This relation of curvature insures perfect focus over the entire back surface of each cell; this surface carrying the photographically sensitive salts that will later form

the microscopic images at the back of each cell, under the action of the developer. The side walls of each cell are rendered opaque during our imaginary process of manufacture. As the focal length of each little cell or miniature camera is but the thickness of the film, all objects beyond a microscopical distance from the plate are in focus.

As we have shown, each of these cells is now capable of forming its own individual image of the entire object before it upon its own section of sensitive film, the image changing slightly as the incidental angle changes from point to point of the object being photographed. In this way, this new plate acts much as does the composite eye of the coleopterous insects, made up in some cases of hundreds of thousands of separate eyes, all acting together to give the insect the power of seeing with its immovable eye



much more than can the human being with his movable organ of sight. Supposing that our plate has been developed and the image made a positive one, it is evident that if we view slightly from the side, this aggregation of cells in close juxtaposition by transmitted light, as in the case of a transparency, which it of course is, we will not see the repeated array of images, for the reason that the accommodation of our eyes will give us but one part of each image; the assemblage of all these points giving a complete image with stereoscopic relief, the full size of the plate.

It is evident that, in viewing our transparency by transmitted light, the rays of light emerging from the lens side of each cell must be parallel rays, as they originate with the positive image at the back of each cell, such origin being at the focus of the cell's lens from which it emerges. As the direction of these emerging bundles of rays is exactly the same as that of the incident bundle that was concentrated upon the lens surface of the cell during the exposure of the plate, the eye perceives the photographic image formed by the combined images of the juxtaposed myriad of cells, just as it would were the eye turned directly upon the object photographed. Our illustration herewith may help to make this matter clear. The eye, X, is supposed to be viewing both the object and developed positive plate from the side. The cells are, of course, shown greatly enlarged, and only an imaginary row for the purpose of making the direction of the rays clear.

As can be seen, the eye, X, receives at its optical center, the photographic image of each cell in exactly the same manner as it does that of the object itself. The same holds good for any other portion of the object, and its corresponding image in the myriad of microscopic eyes. As the direc-

tions of the bundles of rays entering the optical center of the eye are preserved, the angle and apparent magnitude of the different component parts are also faithfully retained. The proper aspect of every part being maintained regardless of the position of the eye, the use of our two eyes insures the sensation of relief in the same way as in viewing the actual object which has been photographed.

As suggested above, the image is secured as a negative which can afterwards be made positive, as in the case of an autochrome plate. However, the copying of a negative upon another like plate, and in this way securing any number of positives, is simplicity itself, not even contact being required, as the procedure is but a repetition of the first one, with the exception that the negative is made the object to be photographed in place of the original subject. As to the angle of view obtained upon the plates, this, of course, depends upon the lateral aperture of the cells. If these be equal to one hundred and twenty degrees, there will be just that amount of the object included upon the plate.

Regarding the actual manufacture of the plates, it is suggested that this might be done by employing two films of collodion, each of which has been impressed with its own portion of the "honeycombed" or cellular pattern, and then secured together, with the depressions in one in absolute register with those in the other. This might make possible the formation of the innumerable lenses upon one sheet and the opaque walls with the corresponding sensitive posterior portion of each cell on the other, thus forming the summation. Minute spherules of glass, imbedded in collodion, have also been given consideration as a possible method of production. All in all, Professor Lippmann has earned our deepest gratitude for the decided advance which his invention marks in the onward path of photographic investigation and research, and we can only hope that manufacturing difficulties, which must necessarily hamper if not entirely prevent the realization of success with such microscopic requirements, may be overcome at no very distant date.

Doctor Early Loses His Right Hand

Dr. L. M. Early, of the Artura Paper Company, will have, ere this reaches our readers, sacrificed his right hand to the devotion which he has given his profession in the application of the X-ray to surgery and medicine. Pioneering in the use of the Rontgen ray research in central Ohio, and with a large and successful practice, Doctor Early has knowingly carried on a work that necessitated this sacrifice to the cause of suffering humanity; his own knowledge assuring him that only amputation could bring relief when the suffering entailed by the burns could no longer be endured without too great danger. His personal sacrifice, admirable as it is, is but another instance of the many of like kind which have distinguished so many members of the medical profession to their honor. We join his host of friends in wishing him an early recovery and continued years of usefulness in the profession which he has so unselfishly ennobled.

AUTUMN WOODS
By J. H. FIELD

A Take-Down Background Frame

By Tracy J. Storer

How many amateurs who desire to do portrait work at home have left the subject alone more for the want of a suitable background than for any other reason? A frame such as our professional brethren use is entirely out of the question in most homes, so the only course that remains is to employ the strictly amateur pinned-up sheet or blanket, or do without a background entirely. Dissatisfied with this method, I devised the frame described herewith. The chief advantage lies in the fact that when not in use it may be compactly tied together and stored away in some out-of-the-way corner or closet. Any background that will hang straight without need of being stretched may be hung on it, and even a sheet or blanket will behave itself better with this frame than when pinned on the wall. It is in the hope that it will help to solve the problem for others that I offer this description.

Almost any wood may be used in constructing this frame, but I would recommend the use of yellow pine, that being a wood easily obtained, and at the same time one very well suited for such a piece of work. A list of the

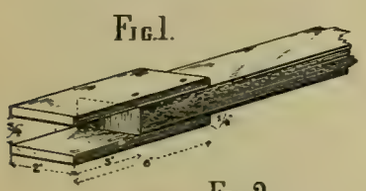


Fig. 1.


Fig. 2.

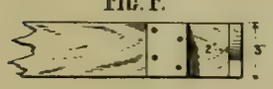


Fig. 4.

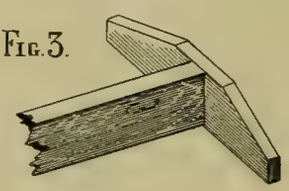


Fig. 3.


Fig. 5.


Fig. 6.

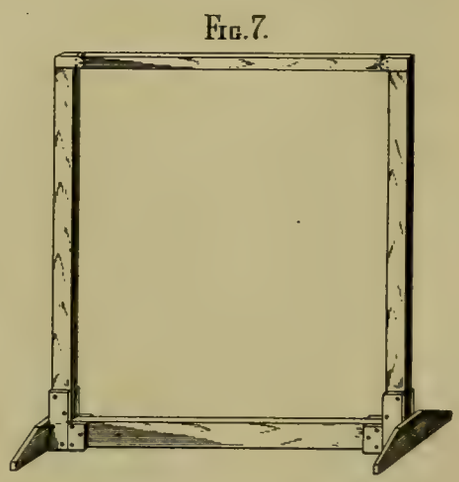


Fig. 7.

material required is given in the following memorandum. All pieces are to be dressed on all four sides to the dimensions given:

One piece, ¾x3 inches, 5 feet 4 inches long, for base.
Two pieces, ¾x3 inches, 12 inches long, for ends of base.
Two pieces, ¾x2 inches, 5 feet 9 inches long, for uprights.
One piece, ¾x1 inch, 5 feet long, for top piece.
Four pieces, ¼x2 inches, 6 inches long, for ends of uprights.
Four pieces, ¼x1 inch, 3 inches, for studs on base.

A little care will have to be exercised in nailing the frame together, as it is essential that all joints should be tight fitting to secure rigidity.

First, take two of the 2x6 pieces of quarter-inch stuff and nail them onto the end of one of the five-foot, nine-inch pieces, as shown in Fig. 1. Do the same with the other two small pieces on the other upright. Now take the two twelve-inch pieces, and after cutting them in the form shown in Fig. 2, fasten them to the end of the three-inch base piece in the manner shown in Fig. 3, using three-inch wood screws.

The four 1x3 pieces of quarter-inch stuff are now to be fastened to the sides of the base piece parallel with and at a distance of two inches from the end of the same. This forms a slot to receive the pieces previously nailed to the ends of the uprights and to secure a rigid frame it is essential that this joint be accurately put together.

Now procure a piece of tolerably thick tin or brass, and cut out two pieces of the pattern and dimensions shown in Fig. 5. These are to be bent as shown and nailed to the ends of the five-foot piece forming two pockets that will fit over the tops of the uprights. The frame is now complete so far as construction work is concerned, and may be fitted together as shown in the sketch of the completed figure. A coat of paint will materially improve its appearance and durability.

A Suggestion to the Really Serious Pictorial Students and Workers

By Thomas H. Holmes

In every large city and in even many of the smaller communities there are to be found a few photographic workers who have an intense desire to improve and progress into the ranks of the Salon exhibitors and prize winners in the numerous competitions. Alone and unaided, their progress is slow and uncertain, while if they would but combine for mutual aid and encouragement, their individual advancement would be much more definite and much more rapid, because their interest in pictorial work would be kept continually and keenly alive.

In one of our smaller cities a plan has been worked out and started which promises to accomplish a very considerable amount of benefit to the members with little or no trouble and annoyance to anyone, and others might be glad to have the details in order to do likewise.

The large postal clubs which circulate albums or portfolios of prints are imitated in a measure, yet the local object is quite different. In the larger clubs the members insert a single print, the best possible to produce from a choice negative, while the local idea is aid in the perfection of a print from a promising negative prior to its insertion in an album or portfolio of one of the large clubs or before entry into any competition. In other words, the local idea is confined to purely preparatory work.

The working plan is to circulate continually among a limited few kindred spirits a portfolio and notebook. The notebook is for the route list, for questions and answers and discussions on subjects of general interest and for full data concerning all competition of which any member can in any way learn the condition and details.

Into the portfolio each member may insert, with blank sheet for criticisms and suggestions, as many prints, mounted or unmounted, as he may desire. They may be single prints from different negatives or they may be different prints all from the same negative. The latter is particularly applicable to enlargements wherein there is almost no limit to the possible

composition and spacing within the picture space and to the placing and size of the object of principal interest.

On the other hand, members need not insert any prints till they want to do so, but each member is under obligation to criticise and advise regarding each print or set of prints found in the portfolio when it reaches him.

Unlike the larger clubs where a time limit for retaining the prints is a most important factor, there is no particular time for the local portfolio to be retained. This is to avoid the work becoming a burden and a nuisance. Often a member will be able to criticise and pass it along by the day following that upon which it was received and upon another round it will be several days before he will have a chance to even look at it. However, with only a half dozen members all in the same city, it travels rapidly enough for all practical purposes and the work is a real pleasure.

At the end of a second round each member takes out his prints with the criticism sheet and profits more or less according to the criticism and suggestions which he may accept or reject, but at any rate he has the very candid and frank opinions of his club mates.

The standard for each criticism or suggestion is this: "Is it true, is it helpful, and is it possible?" In addition to individual improvement and aid there is the mutual desire to improve the reputation of the members as pictorial workers and to bring to this particular city a larger proportion of the many prizes and honors that are being continually offered for meritorious work.

This little band is in real earnest. They are out after the goods and sooner or later will be heard of and known by their work from one end of the country to the other. There seems no possibility for jealousy or competition among the members because their negatives are not duplicates. Members are very carefully selected and membership is by invitation only after the club has voted upon a name suggested by some member, and pictorial ambition and earnest desire to advance along these lines are considered of far more importance than mere technical ability as a craftsman.

Occasionally the members get together of an evening for a heart-to-heart talk and these meetings are pleasant memories to cherish. There are no dues nor expenses, except for the first cost of notebook and portfolio. As the business section of this city is comparatively small, the members have no difficulty in passing the portfolio from one member to the next, so there is neither postage nor expressage.

This little club, with its peculiar, simple methods, is accomplishing more for its members than any of them have ever gotten by years of membership in the large photographic club of the city with its one hundred members and well-equipped clubhouse, and is doing more for pictorial photography than the big club will ever be able to do, simply because these few earnest workers are real workers, striving along the same lines and for a common object. The plan is so good, so cheap, so easy, so pleasant and helpful that it will be taken up and followed out in many cities and towns wherever there are a few amateurs who really desire to help themselves to a higher standard and a better knowledge of artistic effort.

Lantern Slides of Autochrome Plates

By R. Child Bayley

Editor of "Photography"

Some few months ago I was confronted with the task of making fifty or sixty lantern slides to illustrate the capabilities of the autochrome plate. The experience gained in steady work day after day with the new medium of expression was very valuable in more ways than one.

To begin with, there was the question of exposure. The exposure for a lantern slide requires to be fuller than when the plate is going to be examined in the hand. A color result which looks very brilliant in the latter case might be altogether too dense for the lantern. One has to remember that what is wanted for projection is as intense a coloring with as little opacity as possible. This is secured by giving a full exposure and a full development. The kind of result at which to aim is one which will want only a very slight momentary immersion in the intensifier. If the plate needs much intensification, it is likely to prove dull and heavy on the screen.

The most brilliant effects are obtained when the background is kept dark in tones. A light background helps to make the colors look less brilliant, and a white background, if there is any extensive area of it, not only makes them look feeble, but is almost sure to have the pinkish tinge due to the absence of any real photographic image on the starch grain at all. By the way, this is a sign of overexposure. If, on glancing along the surface of the finished autochrome, any large area of the high lights looks glossy and black, that plate has been overexposed. In other words, when the C solution had done its work there was no silver bromide left there to be redeveloped to form the positive image. When this is the case, these high lights are not white or whatever color they should be, but are of the nondescript pinkish tint of the bare starch grain film itself.

The best way of working I find to be to have outside the window of the dark room, which should be a very small one, say about six inches wide by ten inches high, a sloping piece of opal glass, or, failing that, a sheet of fine white card. When the plate is taken out of the C solution, the window is slid to one side or raised, and the rest of the work done in the dark room by the little light that comes through this opening. The density of the slide can be judged very well by holding it up to the white reflector just mentioned, provided the room is otherwise dark. As soon as light is admitted elsewhere, one's estimate of the correct density is uncertain.

The intensification process is the one which needs this watching most. If the action is carried too far the high lights will be choked up, while almost every plate needs a little intensification to give it just that intangible quality that is sometimes but vaguely spoken of as "snap." It is said that if the first intensification does not go far enough, a second may be applied, but I have certainly never experienced any need for a repetition of the operation. Any caution I have to give would be all the other way.

The best slides, when seen on the screen, will be found to be those which, while pure in color, always seem to be just a little too weak when examined in the hand.

One of the greatest troubles I experienced when making the fifty slides referred to arose suddenly when a dozen or more had been made quite satisfactorily. The slides looked perfect until placed in the hypo bath, and then their color went and only weak, washy images were left. The instructions gave a number of reasons, any or all of which might lead to this result. I will set them down, so that the reader may see that none of them are allowed to arise to trouble him.

1. Insufficient exposure of the plate to light after the application of the C solution and before or during the redevelopment.

2. Insufficient redevelopment (with the D solution).

3. Insufficient washing (a) between intensification and the H solution, or (b) between the H solution and the acid fixing bath.

Forewarned is forearmed. I was fully cognizant of the importance of these and took great care to make quite sure that none of them was responsible for the trouble. Yet plate after plate faded in the fixing bath to a mere ghost. When everything possible seemed to have failed a suggestion from Professor Namias came to the rescue. There is no need to go into the chemical explanation of the phenomenon. Suffice it to say, that by placing the plate in a two per cent solution of oxalic acid for one minute between the use of the H solution and the fixing bath, no further trouble was experienced. The plate, it should be pointed out, needs washing in running water for at least a minute both before and after the oxalic acid treatment.

Although not limited to lantern slide work, it should be worth while pointing out that by the use of an amidol developer for the first development, as suggested by M. Simmen, it becomes possible to watch the progress of development in quite a bright red light. The actual developer I have found most satisfactory is the following:

Amidol	25 grains
Sodium sulphite (cryst.)	150 grains
Potassium bromide (10 per cent sol.)	25 minims
Liquid sodium bisulphite	1 dram
Water	5 ounces

(Liquid sodium bisulphite is a commercial product in France. Here in England a saturated solution of sodium bisulphite or of potassium metabisulphite, diluted with its own bulk of water, is generally found to answer the same purpose.)

Two minutes is the time that should be given the developer to exercise to the full its power of depriving the plate of color sensitiveness. For that time then the plate is developed in darkness, but after two minutes it may be exposed to the red light, holding it close to the lamp from time to time

AND THE STATELY SHIPS GO ON
By H. FLORENCE OLIVER

just as would be done quite freely with an ordinary (non-orthochromatic) plate. Development is complete in about eight minutes. The plates in no way suffer by this treatment. They will be found as clean and free from fog in the unexposed parts as anyone could wish. Development is carried on until the highest lights are decidedly black on the surface. Nothing much can be ascertained by transmitted light, but the appearance of the surface seems a reliable guide. When it is judged to be complete, the plate is rinsed and immersed in the C solution, the subsequent operation being the same as in the published instructions.

Autochromes should not be put in the lantern until they have been varnished, as the heat of the lantern may speedily ruin them. It causes long, thin cracks to appear going through first of all the photographic coating and finally through both it and the starch grain. But when varnished and provided with a cover glass, and particularly when mounted up with a cover glass on each side, they will stand a great deal of heat with impunity. I left one in an oxy-hydrogen lantern with a mixed jet full on for twenty minutes without the slightest injury, although on taking the slide out it was very hot to the touch. When autochrome pictures were shown at a London music hall recently with a 30-ampere arc lamp, however, the operator told me that he found eight seconds as long as he dare leave one in the lantern.

The best way of projecting them, to my thinking, is to use a small screen eighteen inches in diameter or thereabouts, made of very white smooth card, and to use a mixed jet and a rapid lens. The reason for keeping the projected image very small is not that the starch grain becomes troublesome, but simply that light absorbed by the film on the plate, three-fourths at the very least of the total light that reaches it, is so great that with a large image the picture looks very dark. Although under such conditions they cannot be shown to a large audience, they are at least seen more brilliantly and effectively than in any other.

A PORTRAIT By A. B. HARGETT, BALTIMORE, MD.
First Prize March Competition

An Amateur Photographer's Den

Here is my refuge. It shall be immune
From the dribbling mop and skurrying broom,
From useless efforts to make things look neat,
And none shall raise the question, "Have you wiped your feet?"

Sheathed in matched spruce from top to toe,
Reflecting a richly russet glow
From windows facing on the western sky,
Where splendors of countless sunsets die.

The furnace, uplifting its straggling pipes,
Sheds grateful warmth on winter nights;
Here in summer my snowshoes, in winter my wheel
Are stabled at rest from long journeys afield.

In yon darkened corner a litter-strewn bench,
From which may arise the occasional stench
Of acid (acetic) and hypo, which means
Hellbroth dear to the heart of a camera fiend.

A small lonely gaspipe the lantern supplies,
Whose polished condensers, like magical eyes,
Shine forth with an image of some wondrous vision
Brought home in the Kodak—a pocket edition.

A jar for tobacco, an old cracked stein,
A portrait of some good friend of mine,
My old wading boots, and a gun on the rack
Comprise the visible bric-a-brac.

And here, with my bromides and sulphites and pyro
(Put up ready to use, for the veriest tyro)
When the night winds of winter howl loud on the hills,
I defy "ennui" and its kindred of ills.

Only wishing the long winter evening was longer,
As the grip of the craft holds me ever the stronger;
Comparing results with a record of data
And vowing to beat my "best yet" somewhat later.

E. R. Plaisted.

Montpelier, Vt., Dec. 3, 1907.

Photographic Advertising

We all of us take a little flyer at advertising schemes from time to time, but we are liable to neglect the ordinary business precautions that the large regular advertisers take as a matter of course. A good plan is to keep a book in which every advertisement is written out as it is placed, together with date, terms, space, name of publication, and the like; all signed by the party who takes the advertisement. Following this plan for many years

UNCLE BEN By MRS. C. S. HAYDEN, CATONSVILLE, MD.
Third Prize, March Competition.

gave me many laughable experiences that would have been much more serious had it not been for the book. In one case, a religious publication, I was sent a bill for twenty-four months' advertising amounting to $120.00. Turning to our advertising book, we located and photographed the original contract with receipted bill. The words, plainly written, "discontinue after one month," saved me, and brought a full and complete apology from the publisher. Try it, fellow craftsmen, and you will never be without your "Ad Book," any more than would yours truly—"Old Forty."

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, MAY, 1908. No. 5

Autochrome Plates for Lantern Slides

On another page of this issue we give an article on this subject from the pen of R. Child Bayley, editor of our British contemporary, "Photography." Mr. Bayley is exceptionally well qualified to give instruction covering this particular application of the autochrome plate, and the article embodies his experience in making some two hundred such slides, of which number a selected set of fifty is now touring the various photographic societies of England, and receiving the highest praise for their technical and artistic qualities. Doctor Power has been busy making a set of autochrome lantern slides, which will shortly be shown before the California Camera Club. Those that we have seen are very fine examples, and assure us that our readers will profit by working along the lines laid down in Mr. Bayley's article.

Back Numbers Wanted

We will give a year's subscription for every copy of the May, June, July or August issue of 1900 sent to us with the reading matter and frontispiece intact suitable for binding. Several of our subscribers want one or more of these issues to complete their files, and you will oblige both them and ourselves by looking up one or more of these numbers and sending them in.

Recent Visitors

Our office has been honored recently with visits from a large number of photographers from the East as well as from other parts of the Coast. Several visited the city in order to enjoy the festivities in connection with the arrival of the fleet, while others were on more serious errands. J. A. Haran, who won the Judd cup at the last exhibition of the Oregon Camera Club, spent two days here. R. L. Sleeth, Jr., Wilkensburg, Pennsylvania, well known in connection with his work as president of the American Federation, was here, and, we believe succeeded in interesting several prominent members of the Camera Club in the coming American Salon. John K. Smiley, for two terms the secretary of the Illinois Association, was here, looking over the field for a possible location. Otto Goerz, secretary of the C. P.

Goerz American Optical Company, as we mentioned recently, is in the city, in connection with the establishment of a Coast branch. Space does not permit a longer list, and we trust the many friends not mentioned will forgive the omission under the circumstances.

Anent Fake Lens Bargains

In an editorial last month we explained the method employed to secure cheap advertising by one who is supposed to be a manufacturer of photographic lenses. The month before, we explained a few of his other business methods. That there is no danger of our readers connecting any of the reputable firms now advertising in our pages with these methods is conclusively shown by the large number of bargain price circulars and letters commenting thereon, which we have received. Below are given a few extracts from these letters, showing that the methods which we have exposed are not the best calculated to retain the good will of customers.

"I then sent on my camera and the $20.00. The camera was returned with a lens marked with the name of some other company, and the old shutter. I wrote to the concern and stated that it was worthless, and they replied that my letter showed that I knew nothing about it; whereat, I was properly squelched. They are evidently the kind of people to get after, and you will have my blessing should you do so."

"After threatening suit and waiting three months, found upon receipt of goods that they were very inferior. Following their instructions I returned one lens for exchange by registered mail, and have thus far been unable to get even a reply. The only thing to show for the transaction is Uncle Sam's registry receipt for the lens."

"I contributed about one hundred and twenty dollars towards their bank account and received in return lenses that were entirely worthless. Their business is conducted on a fraudulent basis, as they do not live up to their agreements."

"I was attracted by some of his wonderful 'bargains,' and after several exchanges and re-exchanges found myself in possession of a fairly good specimen of wide-angle rapid-rectilinear lens, and minus a few dollars. The lens did not fulfil his claims, but I felt lucky not to be any more out of pocket than I was."

"In February I wrote these people in reference to one of their lenses. I received their acknowledgment of same, stating they would send the lens by next express packet. In the meantime I had been advised that the affair was a fake, and consequently wrote to them to cancel the order. I was unable to obtain any reply, and wrote our agents, sending them the account for collection. In reply I received a letter stating that they would do their best for me, but that they had had considerable trouble with this man and that they had had occasion to prosecute him for similar methods, or words to that effect. I was stuck, and it was my own fault."

"We have had a number of complaints against ....., but have never been able to furnish conclusive legal evidence. There is not the slightest doubt that he uses all along the sharpest kind of sharp practice, and is thoroughly unreliable."

A Grand Canyon Trip

Photographers will be interested in the Grand Canyon Special Excursion leaving San Francisco, Oakland and Berkeley, June 20th, thirty dollars round trip. Mr. Prince, the popular city ticket agent of the Santa Fe will be in charge and the local photographers who have enjoyed his fine lectures before the Camera Club need no assurance that both themselves and their picture taking proclivities will be taken care of to their entire satisfaction. Ask him about it.

The AMATEUR and HIS TROUBLES

Conducted by
FAYETTE J. CLUTE

INCREASE OF EXPOSURE WITH COLOR SCREEN.

A correspondent writes to ask how he may determine the increase of exposure necessary with some color screens of different depth which he has made for his own use. There are several ways of determining this matter, but perhaps the most direct and satisfactory method is as follows: Load a plate holder with the kind of plates that are to be used. Set the camera up before such a subject as is most generally photographed, focus using a fairly small stop, cap the lens, and then insert the holder. Supposing the subject to be one requiring four seconds with the stop used; pull the slide out of the holder and uncap the lens for one-fourth the estimated correct exposure, or for one second. Then push the slide in a little distance and give another exposure of like duration; push in a little more and give an exposure twice as long, or two seconds. Push in again, doubling the last exposure, and so on until the slide is pushed completely home. The plate will then have been exposed in strips, having in rotation exposures of one, two, four, eight, sixteen, and thirty-two seconds or more respectively. Then do the same with the other plate, but with the color screen in position and starting with an original exposure about four times as long as that given in the case of the first plate. This will give a series of strips having respectively four, eight, sixteen, and so on, seconds. Next mark the two plates and develop together for the same length of time. It will be found that two or three strips on one of the plates are about right and that they correspond very closely to a like number upon the other. Supposing that the sixteen-second exposure strip on the first plate corresponds with the one-hundred and twenty-eight second exposure strip made with the screen in position. Then one has but to divide the latter figure by the former (128÷16) to find that the screen is an eight-time one. It must be remembered, however, that while this particular screen may increase the exposure eight times in the case of this particular subject, another greater or smaller increase may be required by the same plate used under different conditions. The light often contains considerable yellow, particularly near sunset at certain seasons of the year, and the subject itself may contain some particular color in a predominating amount. In the former case the increase of exposure necessitated by the screen will be less than under ordinary conditions. Where the subject contains a preponderance of blue, a color that makes a short exposure sufficient, the employment of a screen cutting out the too active blues, will increase the exposure made necessary much more than would be the case were yellow or red the predominating color.

DILUTE YOUR DEVELOPER.

We do not publish our criticisms of pictures sent for that purpose, although we are constantly giving our readers such criticism by mail. Criticism printed in our pages can only interest the makers of the individual prints, except as we should reproduce each picture. If this last were done and the criticisms printed, a large number of our readers would at once discover that we were inconsistent in our criticisms, and so write us. We have tried it in the past, securing the services of the head instructor at the School of Design, in order that the criticisms might be above question. We were told that Brown's picture was condemned as under-exposed, while praise was bestowed upon a picture by Jones that was evidently as faulty, at least in the matter of correct exposure. The whole trouble is due to the fact that our criticisms must

vary according to the stage of advancement of the worker producing the particular print under consideration. Under-exposure in the case of a beginner is almost always a serious fault. In the case of an advanced worker, it is often a means to an end, or, at most, it indicates an unavoidable sacrifice justified by other resultant advantages. Granting this, the query naturally arises: How are we able to judge of the status of the maker of any individual print? The matter is a very simple one. There are a number of ear-marks that at once proclaim the maker of certain prints as unquestionably a beginner. The most common, as well as most pronounced, is the representation of well-lighted sky, water, rocks, roadways, even flesh and clothing, by white paper. There is no excuse for such perpetrations; they are a libel upon nature and photography, as well as upon the worker's own good judgment and powers of observation. The advanced worker may cut some of his exposures rather short, but he does not block up his high-lights in the process of development, and then add to the ill effect by printing on a paper that is unsuited. Try the experiment of exposing two plates exactly the same, but with a shutter speed that will insure slight under-exposure. Develop one in your normal developer and the other in a solution of the same composition but d'luted with an equal bulk of water. When completed and dried, make prints from them both and you will be surprised at the difference. While the one produced with the dilute developer may not have the artistic quality of the work turned out by the masters in photography, the print will have much the same technical quality. It will at least be minus the soot-and-whitewash effect of your own amateurish shortcomings.

DEVELOPING WITHOUT DISHES.

About two years ago I mentioned the fact that an acquaintance was in the habit of developing his plates by holding them in the hand and applying the developer with a tuft of cotton. I explained that the plate should be well wetted under the tap before beginning. This serves a double purpose; first, the developing solution can be swabbed on more quickly and uniformly, and second, the water contained in the film of the well-wetted plate prevents, or at least lessens, the danger of uneven results, as the first action of the developing solution is somewhat delayed by the water contained in the film. Working in this way with an abundance of safe light, it is surprising the good results one can secure after a little dexterity has been acquired. Portions can be held back and parts forced out in a much more convincing and convenient way than by after reduction and intensification. I am referring to this matter again because I have just found another very skillful worker going about his developing in this way. He was commissioned to make a number of views showing the construction of basement alcoves below the street surface and lighted by sidewalk lights. These situations were almost invariably lighted in the most trying manner, and yet it was desired that no part of the sidewalk light be lost in halation in one place or lacking through insufficient exposure in another. While the effect secured was not always perfectly true to the conditions, the photographer, working as suggested, was able to produce, in almost every case, a clear and even portrayal of the source of light, the vital part to the maker who commissioned the work.

THE LARGEST CAMERA.

One of our subscribers writes for some particulars concerning a large camera used by Lawrence of Chicago in photographing a railroad train some years ago. Writing Mr. Suttle of the Simplimeter Company, that gentleman kindly furnished us with the following information:

"A few years ago one of the great railroads centering in Chicago desired a large photograph of a new passenger train which had then but recently been put into service. A picture eight feet long was wanted. The George R. Lawrence Company at once began the construction of what was to prove to be the largest camera in the world, the plate used being four by eight feet. The lens used was made especially for the camera and cost several thousand dollars. To prepare for the actual taking of the picture, a workman entered the camera through the

opening for the lens board and closed the space behind him with a ruby glass. The curtain slide of the plate holder was then drawn and a film made especially for the camera was fastened to the back of the plate holder by means of ordinary thumb tacks such as are used by artists and architects. When this was fastened in place the slide was returned to its original position and the operator crawled out. Focusing was done with the operator inside the camera, the image being thrown on a white cardboard backing in the plate holder. This cardboard backing was removed before putting the film in place, and the adjusting of the focal length, or the focusing, was done by a man on the outside working under the direction of the workman inside. When everything was ready the train rolled along at full speed, perhaps sixty miles an hour, set an electric switch which had been placed on the track in the right place, and this in turn opened the shutter. The train practically took its own picture. This great camera is not often used as the expense of making a photograph with it is considerable.

FOGGED NEGATIVES AND FOG EFFECTS.

Talking with an amateur, and one of a more than a few months' experience, the other evening, I was surprised to find that he supposed a good effect of fog or mist could be secured in a landscape print by employing a fogged negative. Wondering if this idea was held by others, I put the question to several, and was surprised to find that the supposition was by no means a rare one and that not a few who answered in the negative did so only after giving the matter some thought. One worker contended that one of the many ways of securing "fuzziness" should be employed in order to secure a rendition portraying a foggy scene in nature. A little observation would correct this misapprehension. The effect secured from a fogged negative, from a negative made with a pinhole, by printing on very rough paper, by the use of bolting cloth, or any such means, is entirely different from the result secured by actually exposing a plate upon a scene enveloped in fog or mist. In reality, good fog or mist pictures are best secured by working for all or nearly all the sharpness obtainable. The heavy atmosphere in the form of mist or fog screens off, with increased effectiveness, the receding planes, giving to the nearest objects the appearance of added sharpness. In other words, the eye has but little choice and therefore focuses upon the near objects in viewing the scene. This is the effect we should strive to secure in our pictures of foggy scenes. When the view is well selected and the effect of the fog or mist secured with some measure of success, such pictures are worthy of some effort and should have our attention whenever possible.

TITLES ON BROMIDE PRINTS.

One of our old subscribers, Herbert C. Mohr, sends the following good suggestion. He says: Many photographers no doubt desire to title their bromide prints and post cards so that the resultant lettering will appear white upon some dark portion of the picture. Yet they do not care to deface their negatives by writing upon them; realizing also that it is almost impossible to write neatly on the film of a negative and backwards at that. By the following method, possibly unknown to some, a person may write white letters directly upon some dark portion of the print, with pen and ink. Dissolve five or six grains of cyanide of potassium in half an ounce of water, and write with this as ink, using a fine pen. The writing will turn entirely white in a very short time. The same solution will remove stains caused by hypo and other chemicals that may have made their appearance on the edge of the print. It should be diluted and applied to the edge of the print with a tuft of cotton, working near a tap so that a rinse in water will prevent the solution from spreading and attacking the image of the picture itself.

CARDS ACCIDENTALLY EXPOSED.

The average worker is not aware of the fact that the ordinary gas light or developing paper post card need never be thrown away because it has accidentally been exposed to light or allowed to become too old to give good prints in the ordinary way, by brief exposure and development. I use all such stock by print-

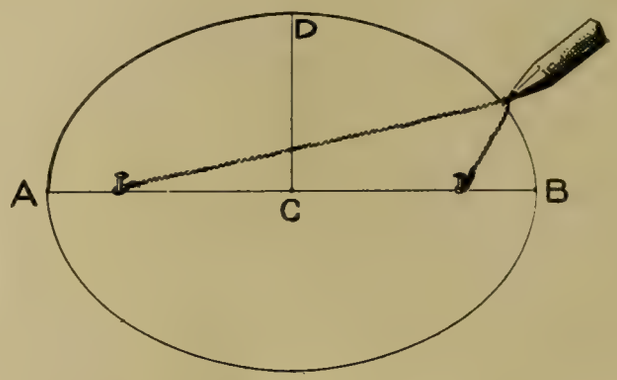
ing it under contrasty negatives, printing the image right out in strong sunlight. If printed right out in this manner and then simply fixed in a hypo bath of about half strength, some brands of paper give a very pleasing tone, something between a sepia and a red chalk. Printed out and toned in an ordinary Solio toning bath, another range of tones are secured, running more in the direction of reddish purples and the like, depending upon the brand of paper used. A little experimenting will well repay one, apart from the saving of otherwise worthless stock. The tones I secure please me better than those given by the various methods of redevelopment, and they add a variety to my work that is most gratifying.—C. D. Wilson, Chitwood, Oregon.

REDUCER STAINS.

The ferricyanide-hypo will sometimes leave stains in the negative. At least, one of our readers has been troubled in this way and writes that even the hydrochloric acid and alum clearing bath is not always effective. We would advise that the negative be well washed and then placed in a ten per cent solution of sodium sulphide. This is nearly always effective; in fact, it has never failed in our own hands. We have used it quite often on stains due to too prolonged action of the reducer in applying it locally. The negative should be again well washed on being removed from the sulphide of soda bath.

SUCCESS WITH CHILDREN.

Miss Mary C. Hubbard, of Los Angeles, gives a few excellent suggestions in a recent letter commenting upon some articles that had pleased her in our pages. She says: "Children enter heartily into the spirit of the work if asked to assist in securing good poses in their animal friends. They rarely realize that their own picture will be taken at the same time. Pets of all kinds can be made use of; even the inanimate creations in the form of cats, dogs and bears, will cause them to forget themselves. I always ask if I can make a few pictures of the pet, and if the little owner will mind seeing that the right position is secured. My good tempered Collie has been very useful along these lines with children who love dogs, but who have no pets of their own. By making six or seven pictures, one pleases the children, and is sure to get several that will please the parents; particularly if a little care is taken to see that the cat or dog is in a good position, and that there is a bond of interest between it and the child at the time of exposure."



TO DRAW A PERFECT OVAL.

L. Walkup, the pioneer air brush manufacturer, of Rockford, Illinois, seeing the little article in our October issue under the above caption, writes to say that, while Mr. Mann's method is much like his, he likes his own the best. His method, which he published about twenty-five years ago, is as follows:

Draw a horizontal line the length of the oval desired, making ends with a dot at "A" and "B." Bisect this line and mark point "C." From "C" erect a vertical line half the width of the desired oval, marking end of this line at "D." Next, measure from this point "D" back to the horizontal line between "A" and "C," a distance equal to half the length of the oval or the distance between "A" and "C," marking the point as at "E." Do likewise again from "D" to the line between "C" and "B," marking the point "F." Drive stout pins at points "E" and "F." Tie a loop in each end of a piece of thread, which must then be the exact length of the oval, placing a loop over each pin. Keep the thread tight on both pins with the point of the pencil, as shown in sketch, draw outline of oval from "A" through "D" to "B," using pencil and thread in the same way on the other side to complete the oval.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department Should be Addressed to its Editor.

Edited by
H. D'ARCY POWER, M. D.
Burlingame, California.

A NEW METHOD OF DEVELOPMENT.

A method of obtaining rapid development with great equality in density was recently described by Paul von Joanovich, in "Photographische Correspondenz." By this method the writer claims that he can develop twelve plates in one minute. He recommends a mixture of hydroquinone and metol as the best developer, but says that any formula containing an alkali can be used.

He places the twelve plates in a metal rack, and moves them up and down in a tank filled with the reducing agent for thirty seconds, then lifts out and places in a tank containing the alkali for another thirty seconds, then washes and fixes as usual. This looks rather quick work, but the first trial was sufficient to prove the statements to be correct in every detail. The formula used was:

No. 1—Pyro	¼ ounce
Water	20 ounces
No. 2—Sodium carbonate (crystals)	2 ounces
Sodium sulphite	2 ounces
Water	20 ounces

The negatives are thin and full of detail. The high lights are necessarily thin, as no more silver can be reduced at a given point than the quantity of developer absorbed by the film at that point will permit. The density can either be increased by increasing the strength of the No. 1 bath, or by intensification.

NEGATIVES OF LINE SUBJECTS.

W. B. White, writing in "Photography" (England), gives some good advice on the above subject, from which I condense the following:

A good line negative cannot have too much contrast, whereas we know that it is very easy for an ordinary negative to have too much, and to be consequently almost unprintable. But with a line negative all we want is to get our black lines as near clear glass as we possibly can, and to have the intervening white paper represented by as opaque a deposit as possible, so that, when we come to print, the lines will print out a fine black before the white paper has begun to tint. Provided we can get the picture like this, and have the image quite sharp, there is little or nothing more to be desired. But to get such a negative a certain definite procedure must be followed.

The sharpness of the lines the photographer may well suppose to be a mere matter of lens and focussing; but it is more than this, as will be seen later on. He must focus sharply, of course. If the lines are very fine, as they will be if he is making a lantern slide, say, and reducing from the original very much, a magnifying or focussing glass will be almost a necessity. The focussing must be done very carefully, paying particular attention to the corners, which are often overlooked, and the lens must be well stopped down if it seems to need it. The focussing should be examined after stopping down, as well as before, to make quite sure that the altering of the stop has not altered it.

The kind of plate used is often important. If the negative is to be much the same size as the original, that is to say, if the lines may be fairly coarse, any plate to which the photographer is accustomed may be used. Even a fast orthochromatic plate, employed with care, will give passable line negatives. But if we want the best results, and especially if we want the negative to use as a lantern slide, a "process" or "photo-mechanical plate" is an essential. In any case, it must be backed

This is a *sine qua non* in all line work. The correct exposure must be found, preferably by expending a plate on a series of trials, and giving the fullest exposure which does not seem to err on the side of

over-exposure. If this is not done, it will be difficult to get enough contrast. A little darkening over of the lines does not matter very much.

Development is best carried out by means of the particular developer recommended by the plate-maker for the photo-mechanical plates, because this is one generally designed for line work in particular. If the lines are at all fine it is quite possible that they will be almost, if not quite, invisible in the dark room, unless the plate is held very near to the lamp, indeed. Here, again, the great thing is to give plenty of development, so as to have ample density, ignoring to some extent the clouding over of the lines. When development is complete the plate should be fixed in the dark, only exposing it to actinic light when it is ready for washing. It is then well washed in the usual way.

It has been said that sharpness of the image is not altogether a matter of the lens in line work. This is so, because, when dealing with very fine lines especially, a photographic negative always has a tendency for the lines or edges of the picture to soften off, both from the action of the developer itself and from the reflection of light in the film—"irradiation" as it is called. In the ordinary way this does not matter, as the softening down of the edges only bears a very minute proportion to the total area of the gradation of which it is the edge; but when we are dealing with fine lines the softening may extend over their whole width. To reduce it as much as possible the plate is backed, and to get rid of it altogether the image is "cut," as the process worker would call it.

This means that a powerful reducer is applied to it for a very short time, followed by intensification. This clears up the lines, and leaves them almost, if not quite, clear glass, while it does not reduce the other parts too much. There is no need to wait until the negative has finished washing, as it does not matter, for this purpose, whether it contains hypo or not.

The reducer is the well-known one of ferricyanide and hypo. A solution of fifty grains of potassium ferricyanide in an ounce of water is prepared. Two ounces of the ordinary hypo fixing bath have added to it two drams of this ferricyanide solution, and the mixture is swirled round and poured quickly and evenly over the negative. It should only be allowed to act for two or three seconds, and then be poured off and the plate washed at once. If then the action has not gone far enough, it may be repeated; but with so strong a reducer a few seconds too long will reduce the plate beyond hope of recovery; consequently, it is important to have running water handy. When the lines are seen to be quite clear, even under a magnifying glass, the negative may be well washed.

The lines will now be satisfactory, but the density of the rest will be insufficient. It may be increased by intensifying with any of the ordinary intensifiers. Mercury and ammonia or mercury and ferrous oxalate answer very well; but better than any, for work of this sort, is the lead intensifier of Eder and Toth.

The density given by this intensifier is so great that, except for line work, it is of no use, as it would make the negative too opaque. The following solution should be prepared:

Lead nitrate	1 dram
Potassium ferricyanide	90 grains
Acetic acid	½ dram
Water	3 ounces

The acetic acid should be added to the water first, and the potassium ferricyanide should be rinsed quickly in a couple of changes of water before dissolving. The washed negative is put for five minutes in—

Water	5 ounces
Acetic acid	1 dram

and is then transferred to the above solution and left therein until the image is bleached right through. It must next be very thoroughly washed—half an hour under the tap will be found sufficient—the surface of the film being gently rubbed over once or twice with cotton-wool. Finally, the bleached image is darkened in the sodium sulphide solution used for toning bromide prints:

Sodium sulphide	5 grains
Water	1 ounce

In this it is left until quite darkened through, when it is washed and dried in the usual way.

If all has gone well the result should be a negative of the most intense blackness, with bright, clean, sharp lines, no matter how fine they may be. Its contrasts will be a source of amazement to any one who has only attempted to do line work by the ordinary methods.

FLOWERS AND THE CAMERA.

The art and to some extent the methods of E. Seymour are well known to frequenters of photographic exhibitions, but there was something delightfully fresh about his lecture on flower photography at the first lantern evening of the Royal Photographic Society during the present season, and in it he disclosed some of the secrets of his art —secrets which account for his success in the exhibitions.

Mr. Seymour softens the light in his little studio by means of art muslin placed over the windows. He uses picture-framers' cards, variously tinted, as backgrounds for his studies. Upon these the flowers are pinned. He is quite ruthless in his use of pins, and does not mind whether they are seen in the photograph or not. If they should be seen, he says, they will be taken for dewdrops, while a three-inch nail in a chrysanthemum study will simulate the appearance of a bit of rugged bark. Pansies he wires, instead of using pins; and with harebells, which do not lend themselves to either pins or wires, he even goes so far as to use seccotine. He does not favor vases, which, he says, give a top-heavy appearance to the study. He picks his flowers over-night, keeps them in a cool place, and photographs them the next morning, when they show up quite fresh and in better condition than immediately after being picked. Dandelions, however, are an exception, and Mr. Seymour is very partial to dandelions, as to all yellow flowers. Dandelions will not keep, and must be photographed at once. In many cases he allows the light only to catch the tips of the flowers, turning them forty five degrees away from the source of light It is the absence of side lighting which accounts for lack of texture in many flower photographs. In photographing leaves, he finds it useful, just before exposing, to wet them with a sponge of cotton wool, the greens appearing much lighter when wet The arrangement, he says, must always be judged through the camera. Many compositions appear beautiful to the eye, but when seen through the camera they are too crowded.

It is, however, in matters of exposure and development that Mr. Seymour's dexterity is seen at its best. The secrets of success in flower photography is to give very full exposure and very careful development. He exposes for the shadows, and in case of yellow flowers he consistently over-exposes. In a case in which ten seconds would be sufficient for white, he gives twenty or forty seconds for yellow of various depths to orange. He uses the "Imperial pyro soda" formula for development, minus the bromide, which he finds clogs the shadows. He is careful never to over-develop, and he does not mind at all if he under-develops. Directly the highest light in the picture becomes fairly dense, he exchanges the developing bath for the hypo. It is always possible, he says, to build up the under-developed image with mercuric iodide; but prolonged development, while it gives contrast, masses together the high lights and destroys texture where it is, above all things, needed in a flower photograph. He does not mind how flat a negative is; he can always build it up as much as he pleases by intensification. —"Amateur Photography" (England).

TRIAL EXPOSURES FOR ENLARGEMENTS.

It is usual when making big enlargements to first make a series of trial exposures on a slip of paper, and so obviate the risk of spoiling a large sheet. There is, however, a right way and a wrong way of making the trial, and for some reason or another nearly everyone selects the wrong way, while nearly every book on enlarging recommends it When making a series of test exposures for contact printing there is only one simple practical method The printing frame must be covered with a piece of card, which is slid over the frame for definite distances at fixed intervals of time The slip of test paper is thus exposed in steps, so that if five-second intervals are used a series of exposures in the order of five, ten, fifteen, twenty, and twenty-five seconds, etc., is secured As a general rule a precisely similar method is adopted with en-

largements, but, though this method is the only practical one available for contact printing, it is not necessarily the best, and there is a very much better one that can be just as easily applied when enlarging. The objection to the method described is that each step represents a different part of the image, and the result gives only an uncertain clue to the exposure required in the densest part unless the particular step that proves to be correctly exposed happens to include that part. Obviously the best method is to select the part that presents the greatest difficulties in the way of exposure and make a test series on that part alone. This is very easily done by cutting an aperture in a sheet of card or opaque paper and pinning this shield upon the easel in such a way that the strip of bromide paper can be slipped between easel and shield and drawn past the aperture. The light should be screened off at each movement of the slip, but this is easily done by interposing oneself between lens and easel while changing.—British Journal of Photography.

CONTROL IN OZOBROME.

The Rev. A. H. Blake, writing in "Photography" (Eng.) on the above: "I am not at all sure that the amount of control which it allows is at present sufficiently recognized. I do not remember to have seen any account of the working of the print from this point of view—at least none with detailed instructions what to do and what to avoid in trying to use it for pictorial expression."

I am afraid that Mr. Blake is not an attentive reader of "Camera Craft," or he would have read a report of a demonstration that I gave at the California Camera Club, to enforce this very point. Mr. Blake's technique differs in some points from my own, but doubtless gives good results. Some of his directions, as the following, are worth careful observation:

"Workers in ozobrome will remember that there is a time, as in carbon printing, when, under the influence of the warm bath, all the superfluous pigment has been washed away, and the print stands clear and complete, and, if no control were intended, ready for the immersion in cold clearing water and the drying. This is the time when the first efforts for control are to be made, on the parts where the high lights are to be considerably lightened. It is as well to slip a sheet of glass under the print, so that it can be lifted flat right up to the surface of the water, for, if the brush be used too much under the water, the strength of the brush stroke is not so easily ascertainable. It is not felt so easily by the finger tips, and, owing to the discoloration of the water by pigment, one cannot so easily see its effect. It will easily be understood that a little too much force soon removes the tissue altogether.

"It will be found in actual practice that it is easier to transfer the print rapidly to a shallow dish of clean water of the same temperature as the developing tank. The clean, shallow water will give great advantage. The brush must be used tentatively, increasing in force and power as the color is removed with impunity. Great differences will be met with even in the same batch of tissue at this stage, differences for which it is not easy to account. Why should the first print be so soft and pliable that the slightest brush mark pulls the tissue off from its support, leaving spots of bare bromide print beneath, while the next print, in which all the operations have been identical, takes hand work easily? Very delicate detail work is best not attempted at this stage; it will come later.

"Great care must be taken not to keep lifting the print in and out of the hot water, or reticulation will soon set in. It will result even from a cold draught blowing in on the warm print from an open window, when the print will get reticulated and 'tacky.' Then, good-bye to control, for, drag as we will with the brush, we shall never really get much alteration, and vigor is decidedly lost.

"Having done all that seems possible in the warm water (and one must not delay over this portion of the work, but get it done as rapidly as possible), we plunge the print into cold water, and allow it to remain under the surface for a minute or two, until the tissue is cold, or nearly so. The print is then taken out on the sheet of glass, and control can then be attempted on the more delicate portions, with very subtle movement. Reticulation need not be feared much now, and as the amount of control possible is not great, we only deal with the delicate tender parts of the prints."

CLUB NEWS and NOTES

Club Secretaries and others will oblige by giving us reports for this Department.

THE BROOKLYN INSTITUTE EXHIBITION.

The Eighteenth Annual Exhibition of pictorial photographs made by the members of the Department of Photography of the Brooklyn Institute, opened at the Art Building, April 25th, in a reception, for which galleries, halls and stairways had received beautiful floral decorations. Refreshments were served in the small gallery, and a stringed orchestra was located behind a screen at the former entrance to the old Academy of Music. Guests were received by the committee: James W. Kent, chairman; W. E. Macnaughton, James E. Underhill, Robert B. Montgomery, Samuel Holden, Percy G. Farquharson, W. T. Knox, Landon Gurlitz, R. N. Coit, and N. T. Beers, M.D., who formed the exhibition committee.

Press view was afforded after the judges had made their awards. This task was performed by Henry A. Poore, A.N.A.; George R. Havelke, the artist, and F. Benedict Herzog. It was a difficult one, because the one hundred and sixty pictures present a high average of merit that is an advance over even the previous excellent exhibits. The pictures are mainly landscapes. Therefore any other subject gains added prominence. Four mediums have been used—platinum, bromide, carbon and the gum process; so there is variety in tone.

Awards were made as follows: For individual exhibit, first, William T. Knox; second, James W. Kent; third, W. E. Macnaughton; honorable mention, Samuel Holden, James E. Underhill. Honorable mention for best individual picture went first to James W. Kent, "At the Close of Day"; others receiving this being Herbert W. Congdon, "A Haunted House"; P. G. Farquharson, "Entrance to a Japanese Garden"; Arthur H. Flint, "A Study"; J. Arthur H. Hatt, "The Pose"; Meyers R. Jones, "The Gossips"; William H. Zerbe, "The House on the Hill."

Possession of the first award for individual exhibit brought to Mr. Knox a handsome silver cup, presented by the executive committee, and marked: "Department of Photography, Brooklyn Institute of Arts and Sciences, 1908. Awarded to William T. Knox."

There are twenty-seven exhibitors in all. Mr. Schieren has the only examples of still life. J. E. Underhill's "Gloucester Dock," Landon Gurlitz's "Curve on the River Verona," Mr. Flint's "Early Morning," Mr. Farquharson's study of a baby, called "A Ray of Sunshine"; Dr. Beer's "Child Study," Mr. Coit's "The Meadow," Mr. Holden's "Marblehead," Mr. Knox's "Homeward Bound," Mr. Macnaughton's "Dusty Road," Mr. Montgomery's "The Dunes," H. L. Underhill's "Fog—East River," and Mr. Zerbe's "Willows," are a few of the most noticeable of the many excellent pictures.

WISCONSIN CAMERA CLUB.

At the last annual meeting of the Wisconsin Camera Club, the following officers were elected for the ensuing year: A. Doerflinger, President; Dr. F. H. Berry, Vice-President; Dr. R. G. Washburn, Treasurer; H. F. Dehn, Corresponding Secretary; Robt. Vernon, Financial Secretary; and Miss L. Koehler, Librarian.

The issuing of monthly programs was adopted, but it was made optional with the new officers whether they should or should not be printed. The club voted not to adopt a club badge. It was proposed that Article IV of the Constitution be changed, to give professional photographers active membership in the club, and a vote will be taken thereon May 13th. The next club run will take place June 7th, to Cedarburg, Dr Weisler acting as director.

W. D HORNING, Secretary

Our Competitions

The subject for our monthly competition, ending July 31st, is sunlight effects. This does not mean that the picture is necessarily one that is taken in a broad flood of sunlight; in fact, quite a dim interior in which a single beam of sunlight emphasizes the motif of the picture, may be more desirable. The subject selected can also assist by being itself such as to suggest the joy and gladness associated with sunlight and warmth. For the competition ending August 31st, we want pictures that portray mist, haze, fog, and kindred effect; suggesting in turn an interpretation of sorrow, tears, veiled emotions, and the like. The next, or September, competition requires some effect depicting the sentiment of dreariness, desolation, depression, departed activity, or kindred idea. For the competition closing a month later, or October 31st, we wish to have pictures in which the feeling of twilight, quietude, peace, and calmness, predominate. This last subject is full of suggestions and possibilities. The portrait of a fitting subject suggests the evening of life, and doubly so, if the right accessories and treatment are employed. A landscape of the simplest kind will suffice if rightly handled. Marine and river scenes are particularly well adapted. Material is at hand at all times, and success means only that the worker must realize the necessity of picturing a sentiment, a feeling, a mood, as it were, rather than producing with his camera a mechanical reproduction of a fact in nature.

In Professional Fields

P. A. of A. AT DETROIT.

This announcement, and this only, should draw every photographer in the land to Detroit, in July, to attend the best convention that has ever been held. No detail has been overlooked. The officers have searched for every available novelty that could be offered as an attraction. Theoretical talks will give place to practical demonstrations by masters in our art, and they will be given under a light particularly adapted to the purpose. If you miss this opportunity of finding out how the leaders handle their light, you will regret it later. There will be a feast of good things to gladden both the eye and the ear, and, in addition, one of the most beautiful cities and a delightful climate will combine to increase your enjoyment. While greeting old friends and making new ones you will be entertained in royal style at this ideal summer home on the Great Lakes. Boat riding, dancing every evening, and a number of special features have been arranged for your pleasure and comfort.

You will see the finest exhibition of modern portraiture yet gotten together. Examples of every known process of color photography will be shown and a prize offered for the best. These alone will repay one for a trip across the United States. There will be prizes and certificates, and for those who do not wish them, the complimentary class. Try for one of the three sterling silver cups or a Salon prize. The committee has tried to provide a class for everyone who may wish to enter. If you wish to make the best possible investment in either time or money, prepare now to make a trip to Detroit July 14th to 17th, inclusive.

A. T. PROCTOR,
First Vice-President Photographers' Association of America.

P. A. of I. EIGHTEENTH ANNUAL CONVENTION.

The Photographers' Association of Iowa, one of the most successful State associations in the West, will be holding their Eighteenth Annual Convention at Davenport while this issue is on the press. The dates are May 12th, 13th, 14th, and 15th. The active part which the secretary, T. Will Runkle, has taken in many conventions in the past, coupled with the experience and enthusiasm of President Geo. E. Fahr, supported by the other efficient officers, makes it perfectly safe for us to predict a most successful and enjoyable convention.

The International Photographic Exchange

We are again hampered by want of space. The exchange notices printed last month will serve as examples for those desirous of becoming members. In order that matters may be made clearer, we reprint this month a revised copy of the prospectus used, and trust that it will give the information wanted by many correspondents. Exchange notices will be resumed in the July issue; this month we will print but a few, as examples from the many that are coming in. As soon as matters get well under way, we will publish a list each month; all having an opportunity of making their wants known.

Below is given the list of officers who will act in the capacities quoted until the next annual election:

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

Dr. C. H. Gardner, Stereoscopic Album Director, U. S. Marine Hospital, San Francisco.

The State Secretaries who have reported upon the membership of their respective States are as follows:

Alabama—Richard Hines, Jr., 155 State St., Mobile.

Colorado—F. B. Hinman, Room 4, Union Depot, Denver.

Montana—Mrs. Ludovica Butler, 932 W. Broadway St., Butte.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Nebraska—Miss Lou P. Tillotson, 1305 South Thirty-second St., Omaha.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

THE CIRCULATING ALBUMS.

The "Clearing House," in charge of the Interstate Album Director, is now in good working order with eleven State albums on hand, ready to be sent out to State album directors, who may send their albums for exchange. State album directors are requested to send any album they may have circulated in their States to the "Clearing House," and one will be sent them to circulate in its place. Every effort will be made to send out an album as good, if not a little better, than the one received. Advise what you are sending, and address: J. H. Winchell, R. F. D. No. 2, Painesville, Ohio.

OHIO DIVISION.

The Ohio membership now numbers one hundred and one. As quite a number of memberships expire with the May issue, I would ask that renewals be made promptly, so that the June issue of the magazine can be sent promptly without interruption of the subscription. Ohio albums Nos. 9 and 10 are being circulated, and as both contain criticisms of the pictures, they are greatly appreciated. Members should keep me supplied with prints, and if enough interest is shown, a competition will be held later in the year. Three classes will be named, and a prize offered for the best picture in each. I would like to hear from members interested.

J. W. WINCHELL, Director,
R. F. D. No. 2, Painesville, Ohio.

STEREOSCOPIC DIVISION.

Our division, which has never ceased its activity, may truthfully be said to be in a flourishing condition. Over forty members are on the rolls as contributors to the circulating sets. The new plan meets with the approval of all the members, and promises to make even a greater success of this branch. Three albums are now on the road, and the first one under the new plan will start on the first of June. This will include views made at the sea level, on the summit of a lofty mountain; views from Alaska, California, Nova Scotia, England, Germany, Pompeii, and South Africa. In our next we expect to visit India. We shall be glad to welcome to our ranks all stereo workers who are subscribers to "Camera Craft," and I will cheerfully and promptly furnish further particulars. All members desiring to engage actively in exchange of stereos will do well to send me

their names, with particulars of what is desired and offered, as I am frequently in receipt of requests for names and addresses for the purpose of offering exchange.

C. H. GARDNER, Director.

EXCHANGE NOTICES.

1032—F. E. Schwab, R. F. D., No. 1, Port Washington, Ohio. Stereoscopic views on printing-out paper of scenery and historical subjects. Wants only stereos. and desires to make a sample exchange first. Class 1.

1600—E. J. Edwards, care Wimbridge & Co., Queen's Road, Bombay, India. Stereo and regular prints on printing-out and bromide papers of street scenes, tropical scenery, and historical buildings of India. Wants untrimmed glossy Velox, bromide, or carbon prints of historical subjects or views. Commonplace subjects not wanted. For first-class stereo work only; is in Class 1.

1553—George P. Morgan, 5 Purbeck St., Cardiff, Wales. Stereo (on printing-out paper), 3¼x4¼, 4¾x6½, and postcard sizes on printing-out and developing paper. Class 1.

1702—Jacob W. Rees, 1138 West Eleventh St., Cleveland, Ohio. 5x7 of general views on developing paper. Class 1.

1706—Herman Schnurr, 1443 West 107 St., Cleveland, Ohio. 4x5 of general views on developing paper. Class 1.

ITS OBJECT.

To afford its members an opportunity of exchanging, through correspondence, photographs, stereoscopic views, and lantern slides. To circulate albums of photographs among such of its members as may contribute prints for that purpose. To encourage and assist its members to the better enjoyment of photography, by affording that stimulus which association and example always provide. In enabling its members to form collections either of miscellaneous photographs or of some particular kind, such as historical, typical, or artistic, this society stands unrivalled. It is admitted by all that more useful photographic information may be secured by the exchange of prints and the attending correspondence than by any other method.

CLASS I.

Regular members or those desiring a general exchange. Such members may limit their exchange or specify a certain class or kind of work desired, in their exchange notice. Class I members are expected to answer promptly all letters in which stamp is inclosed for reply

CLASS II.

Members who, from lack of time or uncertainty as to address, might find it inconvenient to always reply promptly to inquiries concerning exchange. Class II members will receive few if any unsolicited exchanges, as they are expected to acknowledge only such correspondence as they may themselves invite.

CLASS III.

Members desiring to enjoy only the benefits of the Circulating Albums. All members, regardless of the Class to which they belong, in order to receive the albums must send prints to the Director of their State or the General Circulating Albums for insertion therein. In no case are Class III members to be asked to exchange.

WHO ARE ELIGIBLE.

Any one interested in photography and willing to conform with the rules of the Association; amateur or professional, tyro or Salon medallist. All can find congenial correspondents and each can derive, as his individual taste may suggest as desirable, benefits from his membership in this Society.

METHODS.

On joining, each new member is given an exchange notice in "Camera Craft," setting forth his number and designating the Class in which he wishes to be placed. Mention is also made of the kind of work offered and desired in exchange, if any, together with such other detail as he may furnish. All members, irrespective of the Class in which they are enrolled, are privileged to send prints to the Album Directors for the Circulating Albums, entitling them to a place on the route list of all such as contain one of their prints, as well as on that of such other albums as it may be found convenient to so route. The most liberal contributors to the albums are understood to be the most deeply interested, and of course are given the preference when routing foreign or other special albums. A numerical correspondence system, translations of which are furnished all foreign members, permits the exchanging of prints between those using different languages, with the greatest facility and satisfaction. All exchanging is done by direct correspondence, on any agreed basis.

DUES.

The subscription price of the official organ, "Camera Craft," is one dollar a year for residents of the United States and its colonies and Mexico. All other countries, a sum equal to one dollar and fifty cents in U. S. money. This amount remitted to any of the Secretaries or Directors, together with a request for enrollment or application for membership, entitles to all the benefits of the Society.

THE CAPE TOWN PHOTOGRAPHIC SOCIETY.

The "Cape Times," (South Africa) gives much space in a recent issue to what must have been a very interesting and instructive demonstration of "Carbograph" by the editor of the "South African Photographic Journal," Mudie Thomson. This progressive society is to be congratulated upon possessing as a member a worker like Mr. Thomson, who is not only a pictorialist but a scientific investigator and experimentalist, able and willing to give his fellow members the advantage of his large store of photographic knowledge.

Photographic Post Card Exchange

C. Frederick Potter, Jr., Director, 620½ Nicollet Ave.,
Minneapolis, Minn.

One or two members have advised that they are in receipt of poor cards from parties unknown to them, and ask if they are to consider the senders as members of this exchange to whom they are obligated. All members are advised that they are under no obligation to send cards in exchange unless the person from whom the card is received has had his or her name published in one of our lists as a member of this exchange. Every member whose name has been published has submitted good samples to the Director, and for that reason one can feel quite sure that an unknown sender of poor cards is not a member and not entitled to the courtesy of an exchange. We must insist that those not members will refrain from sending cards to those whose names are printed in this department.

MEMBERS.

Harvey Adamson, Cascade, Iowa.

Albert E. Andrews, Somersworth, N. H.

A. E. Babcock, Maniton Beach, Mich.

A. H. Bailes, 45 S. 8th St., Kansas City, Kan.

G. H. Baxter, P. O. Dept., Washington, D. C.

C. B. Bell, Ontario, Cal.

H. E. Bishop, 1704 College Ave., Indianapolis, Ind.

W. S. Bonney, 14 Atlantic St., Hartford, Conn.

Harrison Brown, 505 Marion St., Elkhart, Ind.

Ira N. Bullis, Grindstone, S. D.

Willie Calkins, Chambers, Holt Co., Neb.

R. W. Canfield, University Sta., 116 14th St., Charlottesville, Ia.

Howard G. Cleaveland, Box 105, Normal, Neb.

W. H. Cleveland, Manomet, Mass.

Arthur C. Cloetingh, 266 Pine St., Muskegon, Mich.

W. J. Cooley, 1816 Frick Bldg., Pittsburg, Pa.

T. D. P. Cummins, 1620 Grace St., Lynchburg, Va.

G. W. Damon, Fulton, Ill.

W. S. Dickinson, Tecumseh, Mich.

Henry Enz, 126 S. W. 3rd St., Newton, Kan.

Furman Fenn, 369 Chene St., Detroit, Mich.

Lewis J. Fitler, Sayre, Pa.

G. C. Flegel, Westville, Ind.

J. M. Fleming, Hastings, Neb.

Carl G. Fraham, Grand Island, Neb.

H. M. Gillet, Lebanon Springs, N. Y.

Don H. Goodrich, Placerville, Cal.

Mrs. F. D. Hathorne, Cushing, Me.

A. P. Haury, Moundridge, Kan.

John Hilfiker, Jr., 2186 Tydd St., Eureka, Cal.

Richard Hines, Jr., Mobile, Ala.

Ernest G. Hoff, Lordsburg, Cal.

E. P. Holmberg, Casper, Wyo.

Jos. C. Huber, 1816 Frick Bldg., Pittsburg, Pa.

Wm. F. Hunt, Wanatah, Ind.

S. N. C. Joannidi, 217 Hargrave St., Winnipeg, Man., Can.

C. W. Johnson, 809 Bennett St., McKeesport, Pa.

R. R. Johnston, Superior, Neb.

O. R. Junkins, Deadwood, S. Dak.

E. Kintigh, West Newton, Pa.

ALWAYS GIVE FULL NAME AND ADDRESS.

One of the members of the Post Card Exchange suggests that there should be more care used in the matter of names and addresses on cards. He has several times been favored with cards for which he could not have sent an exchange had not the post mark been quite plain, and in a recent case the mark showed only the city, the State being undecipherable. Consulting a gazetteer he found several towns by that name in as many different States. Members will appreciate the fact that their own carelessness in this matter may place the recipient of their cards in a very bad light through no fault other than that of the postoffice clerk, who cannot be expected to see that every card is clearly marked with the dating stamp.

NOTES and COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

A NEW "CENTURY" CATALOGUE.

The new "Century" catalogue is out, and our readers should not fail to secure one. If the dealer does not seem able to keep a supply on hand—and it will be hard for him to do so—write direct to the Century Camera Division, Eastman Kodak Company, Rochester, New York, and secure one. Coming just at the last moment, we have not the space to do it justice. The reader can imagine a lot of superlative adjectives in connection with the book, and the Century cameras, and knowing both in the past, as he must, the rest will be easy.

THE NEW "SIMPLIMETER."

Our readers are well aware of the high esteem in which we hold the "Simplimeter" exposure-determining device. One of the new ones has just come to hand, and it bears out all the claims of the maker as to its improved convenience and better wearing quality. The new form gives one a practically indestructible case with a transparent front, through which latter the indicated exposures may be read at a glance without the necessity of moving any markers or like devices. The plan adopted, as in the original form, is simplicity itself. One simply determines what exposure he will give, and then by consulting the device he can see at a glance just what stop will be required at that particular hour and day and under the conditions prevailing. If the indicated stop seems too large, the user has but to use the next smaller and double the time he had previously decided upon, if such a course is admissible. The convenience of this plan over one in which a number of calculations are made simply to find that the indicated speed is one that the shutter does not give or the subject permit, is at once apparent. Write the Simplimeter Company, 611 Granville Avenue, Chicago, if you cannot find one at your dealers.

THE WOLLENSAK LENSES.

Louis W. Weil, the genial representative of the Wollensak Optical Company, Rochester, N. Y., has been in the city this week, the last of April. We had the pleasure of inspecting a full line of this firm's fine lenses. Particularly noteworthy is their new Velostigmat lens, working at f-6.8; both in optical qualities and finish it compares favorably with other anastigmat lenses. The barrel is finished in black enamel with white letters, and the appearance is very attractive. The Royal Portrait lens, working at f-3.8, with diffusing attachment, is now in its second season, and has been adopted by many of the high-class photographers throughout the country. The other new lens is the Versar, Series IV, f-6, made to meet the demand for a general-purpose lens. It is a symmetrical combination of somewhat shorter focus than the Rapid Symmetrical, although larger in diameter. The combinations can be used separately, giving about double the focal length. All in all, the Wollensak line is an excellent one, and one that should not be overlooked by intending purchasers of photographic lenses.

WORTH LOOKING INTO.

Our readers should not overlook the advertisement of the Kimo Chemical Company that they will find in this and the last issue. It is a small notice, but you can not expect a firm to use large space to advertise free instructions. The firm is perfectly reliable, and we can recommend them to our readers without any reservation whatever. At least give them a chance to tell you about their proposition. Write the Kimo Chemical Company, (Department F) 1226 Arch Street, Philadelphia, and ask them for free Kimo instructions.

SOME FINE PICTURES.

Spring-time, the beginning of amateur campaign, makes it advisable for those aiming at perfection of their photographic work to thoroughly examine their photographic outfits. The lenses, the most important part of a camera, require the greatest attention, being chiefly the cause of unsatisfactory pictures as regards their sharpness of definition, depth, brilliancy, and the like. We desire, therefore, to act in the interest of our subscribers by pointing them to some of the pictures published on this and the following pages of this number, showing the remarkable and beautiful results secured with high-grade lenses. The lenses used, called the Heliar, Dynar, and Collinear, are made by the well-known firm of Voigtlander & Sohn, New York, who will send you, free of charge, their latest catalogue, on request.

"BOOK ABOUT SAWS."

John Royle & Sons, the makers of the celebrated Royle line of machinery for the engraving trade, have gotten out another of their valuable booklets, as usual, brim full of information, entitled: "A Book About Saws." We believe we mentioned it last month, but it is worthy of several mentions. It is sent on request, and we wish to advise that copies can also be obtained of the Pacific Coast agents, George Russell Reed Company, 645 Battery Street, San Francisco.

WEDDING BELLS.

The announcement has reached us of the marriage of Edward E. Pollock and Emma G. Curieux, on Saturday, April 11th, at Sacramento, California. Mr. Pollock is one of our popular young professional photographers, and an operator of more than usual ability. He is at present conducting the Bushnell Studio, at Sacramento, and will make that city his home. We join the host of friends of both the young people in wishing them all joy and prosperity.

THE LAST "CAMERA WORK."

The last issue of this sumptuous magazine is particularly attractive and interesting, as it contains three large, full-page reproductions of Autochrome plates and an excellent article on the process, by Eduard J. Steichen. The reproductions are the finest we have yet seen, and we understand were produced by these masters of four color process work, the firm of Bruckmann, of Munich, Germany. The article by Mr. Steichen is not only exhaustive, but it makes for much simplification of the process, along much the same lines as those recommended by Dr. Power. All in all, this particular issue is one that every photographer should make it a point to secure if possible before the supply is exhausted. Most of the large dealers, including Hirsch & Kaiser of this city, have a supply, and copies can be ordered direct from the publishers, Alfred Stieglitz, 1111 Madison Avenue, New York. The price is, as usual, two dollars.

THE SHEEP PASTURE — Made with a Dynar Lens

THE ANCORAGE — Made with a Collinear Lens

SOUTHERN SCHOOL OF PHOTOGRAPHY.

The opening of the fifth annual term of the Southern School of Photography was an interesting event, on Monday, April 6th. The class, with a number of visitors and the pastors of the churches, assembled in the lecture room. The meeting was presided over by the president, W. S. Lively.

Rev. R. W. Binkley offered a prayer, after which addresses were delivered, as follows: Rev. B. A. Pendleton—"The Subject and Not the Setting." Elder John Cowden—"The Value and the Progress of Photography." Elder E. E. Growden—"Photography and Face Study." Rev. R. W. Binkley—"A Message of Welcome."

The exercises were full of interest, and much attention was paid the speakers. The session opens with fine prospects, the personnel of the larger class is above the average, and President Lively was especially happy in his remarks, and looks forward to a most successful term. The prospects for the school were never brighter, and the city is justly proud of the institution.

Following is a list of the students enrolled:

Miss Frances J. Rowe, Cincinnati, Ohio; Mrs. M. L. B. Winslow, Sanders, Ky.; Miss Cora Myers, Morristown, Tenn.; P. M. White, N. Vernon, Ind.; Jos. A. Adams, Athens, Ga.; C. L. Lockie, Sioux City, Ia.; Jesse W. Smith, Opelika, Ala.; J. O. Mason, Rock Rapids, Ia.; D. A. Penn, Logansport, Ind.; D. H. Ramsey, Wren, Va.; E. L. Fahrney, Dixon, Ill.; J. Fred Bubeck, Punxsutawney, Pa.; H. F. Clark, Sturgeon Bay, Wis.; Claude P. Graven, Willow Shade, Ky.; H. S. Sheffler, Greensburg, Pa.; Paul Broderson, Maquoketa, Ia.; Henry Wood, Alton, Mo.; W. M. Howard, Albertville, Ala.; I. H. Dale, Buchanan, Tenn.; W. W. Still, Mobile, Ala.; W. H. Ratcliff, Toronto, Can.; Glenn E. Lee, Wellville, N. Y.; M. D. Angle, Centre, Ala.—"Southern Standard," Apr. 11th, 1908.

PICTORIAL ADVERTISING CALENDARS.

The pictorial advertising calendars recently placed on the market by Taprell, Loomis & Company, offer the photographer a wonderful opportunity to go after and get a lot of advertising business, which lithographing houses and advertising companies have been getting. About all the photographer ever got out of it was to make the negative, the concerns above referred to getting all the velvet. The line of pictorial advertising calendars are all gotten out ready for the photographer to put his prints on, with the exception that he has to make arrangements with a local printer to print in the names of the different concerns that he does work for. The photographer gets his line of samples, makes up his specimen prints, goes out himself or sends out one of his assistants, who makes a thorough canvass of the trade in general. Sometimes the merchant wants a photograph of his store, sometimes a photograph of his baby, his favorite horse or dog, or some local popular scene. The field is extremely wide, and the photographer has a wonderful advantage in being able to give original matter to each and every one of the people that he takes orders from.

Taprell, Loomis & Company have placed these calendars on the market, and are also supplying a regular contract form with the samples, so that the photographer can close up his contracts with each order that he takes, allowing the buyer one per cent a month with everything due net the 15th of January, 1909. It virtually puts business on a cash basis; in fact, even more so than regular professional work.

Pictorial advertising calendars offer the photographer an opportunity of working every day in the week, of extending his efforts to other towns. The manufacturers, we understand, offer a full set of samples at a very small cost, and any photographer who is at all interested in advertising or commercial work should not fail to write at once and get all particulars in regard to pictorial advertising calendars.

OXEN Made with a Heliar Lens

THOSE VACATION PICTURES.

The season is near at hand when the amateur will make no small use of his camera in recording the doings of his friends upon their outings; even the picnic of only one day's duration will call for a number of exposures showing various other members of the party in more or less full enjoyment of the relaxation which the outing affords. The one great drawback has always been the fact that it was almost impossible for the photographer of the party to himself be represented in such pictures, desirable as his so doing might be both to himself and the others. This is all overcome by the clever little "Autopoze" that is manufactured by the Fairies Manufacturing Company, of Decatur, Illinois. Write them for their booklet showing examples of work done with this admirable little invention. The worker afield without a companion need not bemoan the lack of a figure in the landscape that seems to need some touch of life. The worker who wishes to produce examples of his own skill at self-portraiture can do so with every expectation of success. All in all, the "Autopoze" is a well made and ingenious device that we are pleased to recommend to our readers.

I. C. OF P. GRADUATING CLASS.

We are pleased to be able to reproduce herewith a sample of the work of the Bissell College of Photo-engraving. This halftone was made by one of the students, as was also the original photograph. The group represents the May graduating class of the College, and in the picture are representatives from thirteen different States and three foreign countries. This speaks well for the school, and for the wide extent to which its advantages are known and appreciated.

THE "SENECA" LINE FOR 1908.

Fred K. Townsend, secretary and treasurer of the Seneca Camera Manufacturing Company, was in San Francisco recently, combining business with a pleasure trip, a procedure that so enthusiastic a member of the firm could hardly avoid. Their popular representative, Mr. Weil, was also in evidence. While here, we had the pleasure of examining their fine line, and particularly the new and improved models for this season.

A new camera has been added to the pocket series, the 3A, taking a 3¼x5½ plate. It is in the same handsome ebony finish that characterizes their other popular cameras. The new "Number Nine" is fitted with a double extension that is a model of rigidity. At a small additional cost, either the Seneca View or the Camera City View is fitted with the new sliding front, a device that adds greatly to the utility of a view camera. Patents have been applied for and full particulars are given in the new catalogue. This catalogue is now ready for delivery, and is sent free on application to the Seneca Manufacturing Company, Rochester, N. Y. It is even handsomer than the one for last year, and contains sixteen more pages, or sixty-four.

We must not neglect to notice the long list of special equipments that are listed with each of the popular cameras. The buyer is assured a wide choice in lenses and the like. The new Autic dust-proof shutter is another interesting line. The valves being inside the case, it is much less liable to damage from dust and the like. An improved plate-holder with a wooden retaining bar must not be overlooked, and their new Special Combination Tripod should interest everybody desiring a compact, rapidly-adjusted support for the camera. Space forbids further mention, but we would advise the securing of one of these handsome catalogues at once.

TO THE TRADE.

We take this method of announcing to the trade that after May 1st we will not sell anything but our own products. Our large stock of photographic sundries has been purchased by Mr. G. Gennert of New York. This action on our part is caused, primarily, by the steadily increasing demand for our goods, which makes the handling of other lines inexpedient.

We regret leaving a pleasant and lucrative field, even if we cannot repress the thrill of pride when we stop to think that it is the financial appreciation which has been accorded the goods of our own manufacture which makes this action necessary.

We sincerely thank you for your support in the past, and hope that it may be extended to us now, that we have blossomed forth as full-fledged manufacturers. If you do not happen to have our catalogue, let us send you one.

Very truly yours,
DEFENDER PHOTO SUPPLY CO.

THE MITTINEAGUE COVERS.

We are glad to have on file the sample books issued by the Mittineague Paper Company, of Mittineague, Massachusetts, showing the various cover papers they manufacture. We have spent considerable time looking these books through, and the more one sees and handles the papers, the more pleasing and delightful do they become. Such a fine collection of so beautiful and useful papers we do not believe could be made by any other manufacturer; at least, we have never had the pleasure of seeing their equal. We all naturally like good quality in anything, and when added to good quality is an unusually attractive and distinctive line of colors, finishes, textures and styles, of course, the goods are the more interesting and valuable. These are the kinds of stock that should be sought for by the photographer whether professional or amateur, for they enable him to enhance the value of his prints as no other papers can.

Since our January issue we have been using each month for the cover of this magazine some one of the different papers, although, of course, we have been obliged to make our selection more in accord with the utilitarian purposes, yet the different colors have shown in a limited way what can be furnished in the Rhododendron Covers in particular. In addition is the Old Stratford, Old Cloister, and Rhododendron Folding Bristols, including other colors, finishes and textures.

Any of our subscribers will be well rewarded to make inquiries about these different stocks at the photographic supply stores or wholesale paper houses. The different lines are sold by many of these, or if you are not successful at first in locating the paper, write direct to the company for the sample books, which will be sent, as well as the addresses where the different covers are on hand.

BEN PELGRIFT LOCATED.

Ben Pelgrift—and who does not know and love the genial Ben?—is now with the popular firm of G. Gennert, New York. He will cover the New England States, and the trade in that section is to be congratulated accordingly. A popular house and a popular salesman is a combination that is pretty sure to result in satisfaction all around. And those who know Ben Pelgrift know what a promoter of satisfaction he can make himself when he really tries. The only trouble with Mr. Pelgrift is the handicap which his retiring and modest nature imposes upon him. It is hoped that he will outgrow this as he becomes older; he is as yet but a glad, free-hearted child, if we may believe what we are told by a mutual friend who met him in Syracuse not long ago.

PROFESSIONAL CYKO

There seems to be a lack of understanding regarding the names by which the different surfaces of Professional Cyko are distinguished. Many photographers in ordering or purchasing from a dealer ask for Studio Cyko when they really refer to Professional Cyko. It will be well to bear in mind that Professional is a grade intended for studio portrait work and that this grade is made in four different surfaces designated as follows: Glossy, glossy surface, with surface similar to gelatine printing out paper. Studio, matte collodion surface, or, as some designate it, velvet surface. Semi-Matte, smooth platinum surface, and Rough, rough platinum surface. All of the foregoing surfaces are also furnished

on double-weight stock which does not require mounting.

There is another matter in connection with Professional Cyko that should be thoroughly understood, and that relates to sepia prints, now so popular with the photographer and with the public at large. No re-developer should be used other than the Cyko Re-Developer, or a re-developer compounded according to the formula recommended by the manufacturers, which formula is as follows:

Re-Developer—Stock Solution.

Solution A, Bleacher.

Water . . ..½ gallon
Potassium ferricyanide .....1 ounce
Potassium bromide .....1 ounce

For use, take one part of stock solution to two parts of water, then add one drop of aqua ammonia to each two ounces of dilute solution.

Solution B, Re-Developer.

Water . . ..16 ounces
Sodium sulphide (not sulphite) . ..... 1 ounce

For use, take one part of stock solution to fifteen parts of water.

Too much stress cannot be laid on the fact that for re-development the prints should be of a rich blue-black tone, a shade darker than necessary when the print is to remain black and white. All traces of hypo must be removed from the black print before placing it in the bleaching bath; otherwise the image will disappear entirely and will not return in the re-developing bath. Insufficient washing will also produce white spots in the re-developed print. If the print is allowed to remain in the re-developing bath longer than one minute, it is liable to blister.

THE NEW STYLE C TANK.

Burke & James's advertisement this month is devoted to their new style C tank. As a perusal of the announcement will show, the tank possesses exceptional merit and the vast army of workers who are fast becoming converts to the tank method will appreciate its advantages. It is entirely new and the finish and workmanship is such that it will gladden the heart of anyone who is interested in mechanical development. We will use one of these tanks in our own work shortly and will have still more to say concerning its merits. Circulars can be obtained of the makers, Burke & James, Chicago, Illinois. As soon as they can be supplied, all dealers will have them on their shelves.

A TIP ON NEW BUSINESS.

If things are a little dull, and if conditions in your city are such that you are not getting sufficient work to occupy your entire time, pictorial advertising calendars offer you a wonderful opportunity to go out among the people in your town and other towns and clean up a nice little bunch of money with but very little extra work. Remember that every merchant, manufacturer and banker is looking after new business, and don't forget one thing: photographs stand higher to-day than any tri-color or lithograph picture made. Look up Taprell, Loomis & Company's special matter in regard to pictorial advertising calendars. It will certainly pay you, for they will enable you to get your share of the advertising business, which you are not getting to-day.

A NEW ANNUAL.

"The Photographic Annual," to be published by Tennant & Ward, New York, early in May, is a new venture in the field of photographic year books, but actually the book is an old friend in new form, to-wit: "The Figures, Facts and Formulae of Photography," edited by H. Snowden Ward. "F. F. F.," as it is familiarly known, has made a world-wide reputation because of the immense amount of well-digested and "boiled down" information, formulae, tables and "short cuts" contained within its covers, gathered from a thousand reputable sources and covering the whole field of applied photography. In its new form it will hereafter be published yearly, in May, as "The Photographic Annual," giving twice the number of pages and double the information offered in "F. F. F.," at the same price, viz., fifty cents.

"The Photographic Annual," as the most complete reference book of photography in the language, will undoubtedly sell out as soon as ready. The wise worker will order his copy reserved at his dealer's.

Camera Craft

San Francisco, California

THE KODAK
A DECORATIVE STUDY
BY ANNIE W. BRIGMAN
A prize picture used on the cover
of the new Kodak Catalogue

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, JUNE, 1908. No. 6

Photography Against the Sun

By Geo. F. Howell, Jr.

With Illustrations by the Author

There are too many amateur photographers who, feeling that they are still novices, admire the "Sunsets," "Evening Lights," "Approaching Storms," and the like that they find reproduced and offered for sale, which have been made by the professional or, perhaps, by one of their more advanced brother amateurs. But to openly defy what they have been taught

SUNSET—COAST OF MOROCCO

as one of the cardinal principles in lighting and boldly point their kodak at the sun appears to them to be a piece of audacity not to be given so much as a thought. They have a hazy notion that the production of such work implies the use of ray-filters, orthochromatic or non-halation plates, special development, and other special facilities, and of course they must have a much more elaborate camera than the small hand affair which they possess. And so they continue on with the same old subjects with never even an attempt at this most fascinating branch of the camera work.

SHEPHERD AND HIS FLOCK—PALESTINE

It is not difficult. In fact, nothing could be more simple. Go out some evening a half hour or more before the sun will set, on an evening when there are clouds enough to make a fine effect; wait until the sun has hidden itself for a moment, and then with about a small diaphragm, f-32 or U. S. 64, take a snapshot. If the camera is a small one with only three stops, use the smallest. As to development, treat the plate or film just as you would any other exposure and the chances are that the result will be good. Practically the only skill required is in selecting the right sort of a sky or light effect to make a good photograph.

Charming little pictures can be made at the seaside; the silhouette of a yacht or other vessel against the bright clouds; or, in the country, the cows or sheep being driven home at evening. In winter, the plain expanse of snow with the sun setting behind some leafless trees. And so on, ad infinitum. Hackneyed subjects perhaps, but yet the results will never be quite alike, and the novice at this sort of work will find quite as much pleasure and gratification in his first artistic effects along this line as if nothing similar had yet been produced.

Then I would add a few words about the printing. The ordinary black tone may be used for any subject with a result more or less satisfactory, and the gaslight papers are excellent in many ways, but if the amateur will venture another new step—I am taking for granted that he has been using nothing but Velox or similar paper—and try the platinum process, he will find a new pleasure in this part of his work. And here a great many will say: "But platinum is too difficult to work!" The origin of this popular belief I have never been able to discover; certainly there is no foundation for it, as platinum ranks next to the blue print for simplicity. I have nothing to say against the bromide papers, but the platinum process gives a beautiful soft-

A SUNSET SKY—GREECE

ness hardly to be equaled by any other print. It also allows of a great variety of tones, any of which can be easily produced.

Consistency in tone and subject is something that should not be ignored. A beautiful snow scene may be almost ruined by giving it a warm sepia tone, or a sunset by a blue black. Study your picture and select a tone to suit the subject. Wonderfully natural moonlight effects can be made from a much under-exposed negative taken in the early morning or late afternoon; a sea scene is especially good, and printing it on platinum, using the regular developer with the addition of a few drops of a saturated solution of ferri-cyanide of potassium. This will give pure blacks in the dense shadows and blue black to blue in the half tones and high lights. This same process, but with less blue by using less ferri-cyanide, gives a fine tone for snow scenes.

For sepia prints a special sepia platinum paper may be employed or the regular paper used and a developer employed to which has been added a little bichloride of mercury. Some platinum papers will give a fine brown by developing in a weak solution of caustic potash and then clearing in the ordinary acid bath. Such prints take on a black and orange tone, changing to brown while in the acid bath. The first tone is quite desirable for some few subjects and can be retained in the print by simply washing at that stage without giving it the usual clearing bath. The results are absolutely permanent.

These are only a few random hints, but they may, perhaps, be helpful to some new member of the fraternity. They may be instrumental in causing some brother to wander a little from the beaten track and enter a field where the possibilities are almost limitless and where he will take an unlooked-for delight.

The few examples given herewith were taken by the writer with an ordinary hand camera and the films developed in strips, so one can see that they had no especial care.

A Mountain Vacation With a Premoette

By Louis J. Stellman

When the doctor advised a trip to the Santa Cruz Mountains as the best cure for city-worn nerves, the first thing I did was to look over my photographic equipment. As the medico's orders included the limit of outdoor ex-

OVER THE TOPS OF THE REDWOODS
AN ORCHARD BORDERED ROADWAY

"DISTREEK" SCHOOL ON THE MOUNTAIN TOP
A LITTLE FARM HOUSE PERCHED ON THE EDGE

ercise and daily uphill walks for as magnificent distances as my feet would carry me, the 6½x8½ view camera was, naturally, out of the question. I discarded it with a sigh and continued my process of elimination. When I finally got to the station, there remained to me naught but a 3¼x5½ film-plate and the little Premoette, which I had at the last moment shoved into my overcoat pocket. Thus I started on my vacation.

Every city man who goes to the mountains to be toned up knows how the inspiration of the high, clear atmosphere, and the call of Nature in Springtime makes him walk, and walk, and walk. He also knows, when the inevitable reaction sets in, how abysmally, completely and infernally tired he is toward the end. As usual, I had not remembered that the farther I went, the farther I would have to walk back. In town one always takes the street car or train, and in the Santa Cruz Mountains there are none of the former, and mighty few of the latter. Also, when I started out, the light was not right on most of the views I wanted, and I promised myself a photographic saturnalia on my way home. But, when my pedometer registered nine miles from the little mountain hotel and I realized there was nothing but Shank's mare to carry

me for the last end of my round trip ticket, I decided at first just to lie down and die. After a time, however, the desire of life—and dinner—returned, and I limped into the hotel nearly three hours later without a single exposure to my credit, ate everything on the table and fell asleep with my clothes on as soon as I reached my room.

Now, maybe you want to know what I'm driving at. Perhaps there is too much circumlocution in all this unphotographic detail—but I want to explain how I came to leave one of the most picturesque regions in the world,

A BROOK NEAR THE BIG TREES
AN ORCHARD IN FULL BLOOM

A STREAM THAT WINDS THROUGH THE CANYON
THE LONE FISHERMAN'S HAVEN OF DELIGHT

a fortnight later, with nothing larger in the way of negatives than 2¼x3¼ films, made with a $5 camera. It was largely due to the fact that the 3¼x5½ camera, which is really very light and portable, weighed about a ton on that memorable return hike of mine, and I foolishly swore not to take it out again during the remainder of my stay. I kept that agreement with myself, silly as it was, and I am now tickled almost to extinction that I did. My little Premoette films, enlarged to 5x7 and 6½x8½, gave me results which I could never have got from contact prints. Some of them, indeed, I enlarged to 11x14, and they are among the gems of my collection. But I am getting ahead of myself.

The next morning I was so stiff I could hardly crawl down to breakfast, but a rancher offered to take me along for a drive to Mountain View, and I jumped at the chance.

"Better get your camera," he said as we started. "There are some mighty fine views along the road."

"I've got it," I said.

He looked me over, carefully. The Premoette scarcely made a good bulge in the capacious pocket of my shooting coat.

"Where in thunder is it?" he said, in the tone of one who doesn't like to call you a liar outright.

I pulled out Mr. Premoette and introduced him.

"Don't mean to say that dinky little affair will take **real** pictures!" he exclaimed.

I showed him some ruin prints I happened to have in my pocket, and he apologized.

"Well, well!" he remarked. "Times do change, don't they? Forty years ago I packed a wet-plate outfit over these mountains. I guess it weighed thirty pounds, including the portable dark room. And now you come along with a little thing the size of an undergrown pill-box that takes pictures ten times as fast and twice as good as I used to. Get up, Sam!"

I found that the old rancher spoke truly regarding the beauty of the views en route. The road was a constant spiral, winding around and around the mountain, disclosing new beauties at every turn and testing my self-control to the utmost to keep from popping right and left in a constant fusillade of snapshots which would have exhausted my film-pack long before the summit, with its loveliest views, was reached. At the first turn we came upon a little ranch house perched so dangerously near the edge of a steep slope that one would have been afraid a high wind would send it rolling over and over, into the valley below. On all sides but one were great live oaks and acacias, forming at once a bower and grove over and about the little dwelling, nearly hiding it from sight. I snapped it from the buckboard with my lens wide open and got, as you see, pretty good detail in the shadows. It was an ideal day, clear as crystal, with a sun which cast only a light shadow and seemed to go clear around the corner of things in the matter of illumination. A little further up we passed a prune orchard in full bloom. The road ran straight through it and I took another snap with a 16 stop, for the sun came out a little stronger just then. My next try was a snap with a 32 stop at a beautiful cloud effect and an orchard-bordered road leading into it, with two pedestrians in the middle-ground. This was one of my best negatives, when one considers the terrible contrast between earth and sky and the fact that no ray screen was used. Ten minutes later we reached a mountain village, and a charming rural prospect of the district schoolhouse, on an eminence near one of the finest trees I have ever seen, presented itself. I was a little too far away to get just the right composition, but this I knew I could correct in enlarging, so I blazed away, still with my 32 stop.

Just before reaching the summit we came to a turn where the trees formed a perfect bower over the road. A girl stood in graceful pose, leaning against a tree, and I took a snapshot hurriedly, fearing she might change her position, which she did as soon as she saw the camera. Soon we reached

A MOUNTAIN STREAM A SYLVAN GLEN A ROADWAY BOWER

the summit and secured a magnificent view which I called "Over the Tops of the Redwoods" in my mind, even before I made the exposure. It was, perhaps, the least satisfactory of that day's negatives because the light conditions were unfavorable and I had to point my lens almost against the sun. However, it is good enough to show, though it doesn't begin to do the subject justice.

The old rancher came that night on purpose to see me develop these films and exclaimed at every stage of the game anent the wonderful simplicity of latter-day photography as compared to that of his first experiments. He was delighted with the folding candle lamp of photo-fabric instead of glass, the possibility of developing half a dozen negatives simultaneously in one 4x5 tray and fixing them in an ice-water pitcher full of hypo. When the chloride was finally out of them and he beheld the negatives by the light of a kerosene lamp, his admiration of the little Premoette knew no bounds. He proclaimed his intention of driving to Los Gatos for one the next day. This he did, and every once in a while he sends me some exquisite negative —for he is a real artist—with the request that I enlarge it for him.

The other pictures shown here were taken mostly on the lower levels, except for the mountain stream and swinging bridge, which are close to the Santa Cruz big trees, near Felton, and pretty high as to altitude. The lone fisherman and the sylvan dell were obtained near Wright's Station, the present terminus (since the earthquake shattered the tunnel there) of the old narrow-gauge railway to Santa Cruz. The dell picture is the only time exposure and was made in about a second's exposure with a 32 stop on a cloudy day. I never took a better picture with the best lens and camera in my possession. The canyon stream was taken near Los Gatos, where I secured a number of other beautiful views and made the acquaintance of some very hospitable people, including a photographer who would not let me pay a cent for the use of his dark room while there and who also became a convert to the Premoette proposition. In a recent letter he says: "There is something about that little machine which gets hold of a fellow. It isn't as big as a minute, but, oh, my! Come up and see some of my bromides!"

From Out A Clear Sky

Portland, Oregon, May 27, '08.

Friend Clute:

I have a large, rotund problem gnawing at my photographic vitals; perhaps you can solve it, and then perhaps you cannot. In the latter case, if you think the question worth publicity, you may turn loose upon it your army of readers.

The problem is this: Why are clouds necessary? Why should every picture of a sun-kissed landscape have a lot of clouds strewn over its upper edges? Why must desert-scene, mid-summer at the beach, mountain views, all have clouds, clouds, clouds? Clouds grabbed from any old spare negative, heedless of what those clouds once matched. Clouds of all sizes, shapes and tones, slapped on all sorts of landscapes. Why clouds?

The only answer I have ever connected with, said that without clouds the sky looked "bare." It may be that skies, being modest things and of the feminine gender, should not be displayed without clothes, but I know of no canon of art that compels the artist to lie about what Nature has seen fit to bestow.

I cannot understand why a scene on the Arizona desert should have clouds in the sky, when the merest kid knows that clouds do not belong there—could not live there, in fact, if the desert is taken at its best, which means its most characteristic barest. Are clear, cloudless days unpictorial? Do artists consider them so? Did you never see a sunny Italy landscape without a shred of cloud? Of course, there is atmosphere, but that is somewhat different from a top-heavy cloud-piece loaded onto a weak landscape.

In short, I imagine that artistic photography must be essentially true to what it depicts, and that a photograph can never be artistic when mid-summer skies are tacked to autumn or spring landscapes. To be veracious, cloud negatives would have to be taken at the same season of the year, under the same atmospheric conditions, from the same angle of view, and at the same hour of day as were the landscapes they adorn. Who does all that?

No properly-rendered sky is bare; you can't find one that way if exposure plates and filter are right; and, properly rendered, a clear, smiling day in mid-summer is as true and pleasing, if not as spectacular, as the most top-heavy abortion ever doctored up.

Clouds by all means if they are there, but by no means if they are not. If you must have cloud collections in your skies, choose your day and your hour and your bit of sky for your favorite landscape. Which simple solution appears never to occur to the voluble gentlemen who write things for the photographic monthlies.

All this is doubtless anarchy, high treason and rubbish, but I would be d-e-lighted to receive some satisfying proof that it is.

Pardon this intrusion into your classic calm, but I have been reading dopy articles about cloud concoctions until I revolted, and I simply had to ease my inner works.

And, again, please let me know, why clouds? Why not "bare" skies, if Nature gave them and the tone of the landscape and the atmosphere of the sky is given?

Is not photography essentially the truthful—perhaps even the microscopic—rendition of Nature, of man, and of his works? Is this not its primary function, and is it not as much of a sin against the wonderful craft, to make a lie of your picture, as it is to endeavor to draw a charcoal sketch with a lens? And does art consist of lack of detail and life and half-tones? We think it does, perhaps, because the brush and the pencil cannot easily discover all the camera so easily portrays, but are we right?

Atmospheric pictures, rightly-composed pictures, pictures truly exposed and with the delicate half-tones rendered; simple pictures with a single thought and the rest subordinated—all that makes for art because it makes for simple truth. But dopy clouds slammed on—never.

And I have made clouds with charcoal, and match smoke, and pigment, and a warm thumb, and stolen them from other negatives, and cut them out with a chisel, but have I aided art?

Perplexedly yours,

DANA SLEETH.

Simplified Development of Autochromes

By H. D'Arcy Power, M. D.

The following technique for autochromes is what I have finally settled down to, after an experience running over some two hundred developments, with very few failures. I use an ordinary dull-red light, but remove the plate from the holder at some distance from it and behind a protecting shelf. It is immediately covered with two ounces of Rodinal solution, one in eight, or in Amidol developer:

Amidol	5	grains
Sodium sulphite	15	grains
Potassium bromide	1½	grains
Water	1	ounce

Since using the Rodinal, I like its simplicity, and get the same results. The dish is immediately covered and rocked thirty seconds, when a rapid glance is taken, to note the progress of development and estimate its probable duration. A plate requiring five minutes or less will show full detail in thirty seconds. The plate is not examined again for two minutes, by which time its sensitiveness to red light is but slight, and development can be safely watched from time to time. It is complete when the high lights (shadows) begin to grey over, usually from four to ten minutes. The developer is poured back in the measure, the plate is washed by carefully flowing water over, but not on to it, for one minute; it is then transferred to the reversing bath—made of permanganate of potassium, one grain to the ounce,

to which is added, just before using, a drachm of ten per cent sulphuric acid. Now comes an important point not hitherto mentioned: the plate should be immersed in the reversing bath, **face downwards,** without contact with the bottom. I use a tray just large enough for the plate, with a piece of glass rod at one end whereon the edge of the plate may rest. The reason therefor this is: the gelatine of the Autochrome plate is excessively soft, and catches and holds every floating particle. Such particles rapidly appear in the reversing bath, but with the plate face downwards they are not caught by it. At the end of three minutes the plate is removed, washed (again face downwards) for two minutes, and put back in the original developer (first filtered through absorbent cotton), and exposed to light for five minutes. This is again followed by five minutes' washing, and the plate is ready to dry and varnish. Occasionally it is too dense or dull. If so, it is immersed for as long as necessary in a bath made by adding one drachm of the reversing solution to an ounce of water. Be careful to examine every ten seconds, to see the reduction does not go too far. On the other hand, if the colors are too weak, intensify in the manner described by the manufacturers. Other methods of intensification answer, even the chromium method, which I employed in fear and trembling, but with excellent results. It will be noted that I do not use a fixing bath.

Finally, let me summarize the results of my experience:

1st—The plate is in no way excessively sensitive to light.

2nd—It is very sensitive to contact, and nothing should come in touch with its surface.

3rd—The gelatine is soft and sticky, and easily injured. Keep the plate face downward in every operation possible.

4th—Keep your wash water cold, and if above fifty degrees, use ice; then frilling will be unknown.

5th—Do not leave your plates too long in the dark slides before using; they increase in sensitiveness, but irregularly.

6th—In all other particulars, look on the Autochrome as an ordinary panchromatic plate.

The Finished Work

In a very deep and true sense an artist faces his own soul when he looks at his finished work. He sees a bit of himself in every book, painting, statue, or other product of his energy and skill. What was once concealed in the mystery of his own nature is set in clear light in the work of his hands; the reality or unreality of his aspirations is finally settled; the question of the possession or original power or of mere facility is answered. The worker is no longer an unknown force; he has been developed, revealed, measured, and tested.—Hamilton Wright Mabie.

The Demonstrator Talks

By Charles R. Ogilvie

Some Fogged Negatives.

A STUDY IN BLACK AND WHITE
By BELLE JOHNSTON

VER in Oakland, I was talking with a dealer the other day, when a man came in and explained that there was something wrong with a new anastigmat lens which he had purchased. His first few exposures had given him negatives with many of the characteristics of over-exposures. The negatives were full of detail, but thin and veiled. He talked this over with my friend, the dealer, and they decided that he was giving too long exposures for such a rapid lens. The exposures were made somewhat shorter without much improvement. Finally, they decided that the camera must leak light in such a way as to fog the plates. Examination, however, failed to show any leaks, and using the old, cheap lens, the difficulty was avoided. Asked for an expression of my opinion on the subject, I suggested that possibly the trouble was due to the inside of the camera not being black enough to take care of the large amount of unused light rays which the modern wide-angle anastigmats introduced. It is evident that a good anastigmat that will cut a plate two or three sizes larger than the one upon which it is used, will introduce a much larger circle of light into a camera than is required to cover the plate. This added illumination, striking the sides of the interior of the camera, will reflect and re-reflect until it strikes the plate and causes degration of the image unless these inner sides of the camera are so coated as to reflect the smallest possible amount of light. A hood extending in front of the lens will prevent this trouble, and proved effective in this case. Such a hood, and one having an opening in its front in the form of a parallelogram proportional in size to the plate used, will give remarkable improvement in the brilliancy of negatives secured by new lenses used on old cameras, as in the case described above.

Those Eastman Formulas.

I ran across a fellow the other day who had a most pronounced grouch against the Eastman Kodak Company. He said they withheld the formula of many of their toners, developers and the like, in order that they could make an added profit on the ready-prepared article. His particular bone of contention was the Velox Re-developer for Sepia tones. To make matters still more criminal on the part of the Eastman people, he explained that he used about four portions of the bleach to every one of the developer, but had to buy them in sets and throw away three-fourths of the developing chemicals to get the amount of bleach he needed. I first showed him that he was not

YOSEMITE ROADWAY IN WINTER — By WALTER A. SCOTT, SAN FRANCISCO
First Prize, April Competition

using the process rightly or the two chemicals would come out very nearly in the right proportion. I then handed him a formula sheet that the Eastman people had gotten out about a year ago, giving the formula. On this he found a formula for the Non-Abrasion developer. He said he had been trying for over a year to devise a developer that would give the same results, never dreaming that all he had to do was to write and ask for the formula. However, he thought he still had me, because he could not find a formula for the Royal Redeveloper. I opened a small package of the new Nepera paper and handed him the formula sheet therefrom. This settled him. He made a few remarks that would not appear well in print; one reason being because they were not very complimentary to himself.

The truth of the whole matter is this: A firm trying to introduce a new product, cannot afford to risk its success upon the uncertainty of chemicals that may vary greatly in different parts of the country, to say nothing about the degree of care used in compounding solutions. A toning bath may work to perfection after being compounded in the factory laboratory. The same formula placed in the hands of photographers generally throughout the country may fail entirely, or at least in a majority of cases. The product is condemned and the work and expense of introducing the product greatly discounted. There is only one way to void this risk: the product is put out and the ready-prepared solutions supplied. The risk, even then, is great if the manipulation of the product is not of the most simple kind. While the goods are being introduced, a few workers in widely-separated sections are

SNOW DRIFTS By EDWARD H. WESTON, TROPICO, CAL.
Second Prize, April Competition

given an opportunity of trying the formula for the solutions. Results are compared and possibly the formula modified slightly. Later, the formula is given out for the benefit of large users who cannot be expected to pay the cost of bottling and labeling small portions at the factory. If everything goes well and the firm is well satisfied that the formula cannot be improved upon for general use, it is given out for the benefit of all.

To cite an example of the wisdom of this course, I need only call attention to the original formulae sheet of the old Nepera Company, that first put out Velox paper. They gave a formula for amidol developer that by many of the best workers to-day is considered the best. Only until this formula was withdrawn and the less exacting metol-hydroquinone one substituted, did Velox papers give universal satisfaction. Photographers generally could not be depended upon to realize that the amidol should be used freshly mixed, and that the sulphite had to be of a good quality and unchanged by exposure to air or long keeping in solution.

The New Tank for the Film Pack.

The users of the film pack have been the last to have their wants supplied in the matter of a developing tank, but it looks as if they had come out ahead by having to wait. The new Premo Film Pack tank is a beauty, and as a model of convenience it leaves little to be desired. The dealers all report an increased demand for film pack adapters, and, of course, the sale of film packs is increasing in an enlarged ratio. The film pack films were never hard to handle, but this new convenience makes the work simplicity

itself. And the results will surprise one who has not yet gotten over the idea that separate tray development is the only way. On my last trip I made over a gross of exposures, using no special care; in fact, I purposely over-exposed a few duplicates, in order to be prepared to give a customer at the end of the route a demonstration on printing from a thin and over-exposed negative. These exposures were duplicates, and were given just double, and in some cases triple, what was considered correct time. I came very nearly not having any satisfactory material for my demonstration. One negative that had three times the correct exposure came out thin and flat, because the subject was a flat one, and because the estimated correct exposure was itself much too long. Counting out two double exposures and one blank, the dozen film packs gave me one hundred and forty good negatives and one that was intensified and made good a few days later.

Showing the Amateur How.

There is a town, that I visit about twice a year, where a couple of stock houses divide the business between them. The proprietors were always complaining of poor business in the amateur lines. On my last but one visit, the hotel proprietor's son asked me for some advice about exposures. I told him all I could, and added: "Why don't you ask Brown or Smith, whichever one you deal with, to help you out? They are both good photographers." "Oh!" he replied, "they both tell me all about it, but I wish I could go out with some one and have actual in-the-field instruction." So I put up a job on Brown by telling the young man that all he had to do was to advise Brown that he was going out in the country the next Sunday and he would like to have him go along and help dispose of the lunch. Brown was only too glad to spend a Sunday in the country, particularly as a rig and good lunch were supplied. The next Sunday two others were invited, and sometimes they have to hire a much larger rig. Smith, in self-defense, started a regular Sunday outing of his own, and now there is talk of a camera club with well-equipped quarters. Business has just about doubled, and this fact, coupled with the regular out-door relaxation which Brown and Smith are getting, at least makes it a much more pleasant duty to call upon them.

Dust Scenes.

This, or a little later, is the time of year when the country roads are inclined to be rather dusty in some places. There isn't one worker in a thousand who recognizes the value of this same dust as a picture-making element. Take a group of care-free children coming down a country road, and there is little to commend the view, except as the children may be particularly well grouped and the lines of the composition exceptionally good. Even then, the children will have a meaningless stare as they watch the camera. Ask them to come through a few inches of dust and kick up a good cloud, and see what a difference will result. They have something to do and in doing it are engaged in a most natural pursuit. If children are not at hand, try some sheep or cows; even a farm wagon will form a good dust-raiser. The effect is a most pleasing one, that can be secured very easily with anything approximating a correct exposure—something that cannot be said of other more elusive "effects," such as those depending upon mist, fog and the like.

How to Advertise a Photograph Gallery

A talk delivered before the Photographers' Association of California at their last convention by Samuel P. Johnston, President Johnston-Dienstag Company, advertising agents, 34 Kearny Street, San Francisco.

SAMUEL P. JOHNSTON

The direct command, in advertising, is recognized as a powerful factor in getting results. Were you to use the direct command in your advertising, it would appear something like this:

"GET YOUR PICTURE TAKEN AT MAHONEY'S"

or

"HAVE MAHONEY MAKE YOUR PHOTOGRAPH"

These suggest the thought of the photograph and at the same time tell the place to have it made.

Then there is the law of suggestion, which is very strong, as applied to advertising.

Suggest the advisability or desirability of having a good photograph to send to loved ones at a distance; or to preserve the features of children or dear ones, that thoughts of them may continue as one knew them.

Children change in expression as well as in stature, and it is well to have records made at frequent intervals, to the end that their varying casts of countenance, or plays of feature may be preserved.

How should the photographer utilize these facts—reduce them to workable assets for his business? They are raw materials, as are papers, plates and chemicals—they must needs be handled with skill if you would develop profit out of them. How may it be done to the best advantage?

To concentrate your advertising efforts within a close radius of your place of business, cause to be made a list of all the names of the residents therein. If you go about it in the right way, you can learn the names of the members of the family, as well as the address.

A clothier in San Francisco, some years ago, offered to give something for nothing to every boy and girl who came into the store. They made a card record of names, addresses, ages and sex.

These then were arranged according to sex, and also chronologically

Each day thereafter they wrote a certain number of letters to as many parents, jogging their memories to the effect that Johnnie or Mamie was to

have a birthday next Wednesday, and suggesting the purchase of a coat or suit on the Saturday previous.

It worked like a charm—the expense was slight.

You may do the same thing, and it seems to me a thing very applicable to your business.

These cards should have a printed form, and a record should be kept on each by which it may be shown whether a picture has been taken, and the date. Those showing that photographs were taken, should be retired but not destroyed. In a couple of years, revive them and write again, suggesting that it's time to have another photograph taken.

If you have only the names of heads of families, try a series of post cards on them, say, one a week for ten weeks. Use the photographs of fine-looking people of different ages. Have the finest possible half-tones made of them. Use the best quality of card-board; print the half-tones over two or three times, using a different tint of ink each time, giving the effect of a photograph.

Print the text-matter in suitable type, and say something—yes, say something worth while. It may require a deal of thinking to find the right thing to say, but the result will pay.

The next week, use a different photograph and different-colored ink—and again say something worth while. If you can't think of anything better, use the direct command, and say:

GET A PHOTOGRAPH
taken at
MAHONEY'S.

It would be best to have all these cards prepared in advance, so the follow-up effect may be maintained.

In a community where there is a newspaper reaching the folks you want for customers, you can develop business through its columns, if you use the right kind of copy and type for display.

It is a ticklish thing to get a half-tone printed in a newspaper, good enough to advertise a photographer. Better use plain type and depend upon the words and display, rather than on a picture.

Those are the things to use to get folks into your place of business. After that is accomplished, the work is only begun. Then your personality counts—your character as a man will attract or repel—will hold or lose customers.

Good treatment goes a long way and counts for success or failure, almost as much as good work. Your name on the card should be plain and legible. Some photographers are either ashamed of their names, or desire to keep them secret—at least it would seem so from the style of printing the name on the card.

I am familiar with the amount of money business men may spend for advertising, in proportion to the sales in several lines, but not so with photographers. Five hundred dollars wouldn't go very far in a large city, while in a small city that amount would cause a stir.

To advertise anything with success, there must be a definite subject—you must not generalize. A. T. Stewart, the famous New York merchant, said: "First get something to advertise, and then make a fuss about it."

"GOOD BYE."
By J. H. FIELD

So with photographers. Confine your advertising to some one thing—something novel or unique or rare or exceptional, to be found only at the advertiser's.

I am a firm believer in contests, as they have proven valuable time and again for almost every line of business.

Why not have the photographer offer a prize for the best-looking baby entered in a contest at his gallery, the judges to be some prominent artists of the community? Also prizes for the second and third best. Have cash prizes, and photographs also. Say, fifty dollars to the first, two dozen photographs to the second, and one dozen to the third.

All sittings to be made free. Thus will he get a lot of negatives from which the parents will later order pictures, even if baby was not a prize winner.

Same scheme might be worked with beautiful women, but it surely would not be so successful as with children.

Might have children of different ages entered, say, from four months to a year in Class A; one year to two years, Class B; two to three years, Class C, and so on.

The photographer could get up other contests. For example, he could offer a prize for the best theatrical picture posed by some young lady. That is, the young ladies must appear in costume and be photographed, and the one having the best photo, in the eyes of the judges, would be entitled to first prize.

In all of these cases, make a card record of age and sex of the subject, if possible, as, of course, it would be in case of children, get the birthday, and then make different sets of cards from the original records.

Make one set to be arranged chronologically, and the other to be arranged alphabetically.

One of the best means of advertising is a display in a prominent place, in front of the place of business, or elsewhere.

Very likely the end would justify the means, if you got up very neat little booklets, and left blank pages on which you tipped in actual photographs, and sent copies to a selected list. These then should be written to and followed up with letters.

Newspaper advertisements used frequently, say, three times a week, should be available in many cases. In these advertisements all the varied factors of advertising may be used, as: the direct command, the suggestion, argument in favor of good work or of low prices, as the case may be.

These are, of course, but general suggestions. Individual circumstances must determine the method.

The personal letter is a great power in advertising, when it is a personal letter and not a circular. Tell the story of your business in a natural way, just as you talk, and keep on telling it from week to week, from month to month. The only medium which approaches the pulling power of the personal letter in advertising, is a personal call.

In many instances, your personal letter will get an audience when your personal call would not.

The Sinop Colotype Process for Tri-Chromatic Printing

By H. E. Blackburn

The advantage of colotype lies in the ability which the process has of giving, and with the minimum of trouble when rightly worked, reproductions of photographic fidelity and practically grainless halftones. For this reason it is admirably adapted to tri-chromatic work. Until the advent of the popular color post card, colotype was not used to a great extent in this country; such as was produced originating mainly with one or two firms that by long experience and consequent skill, were enabled to produce fine work in the face of the great difficulties attending the older methods, when subjected to the least change in either the temperature or humidity of the atmosphere. Success, in the case of at least one of the successful firms being secured by the added advantage of a specially constructed building, equipped with engineering devices for controlling the atmospheric conditions within.

New methods have recently been employed, and these do away with much, if not all, of the difficulty and uncertainty of the older process. The new emulsion contains a substance that assures even working, and as an additional advantage, a white ground that facilitates the inking up correctly of the plates in printing. Another improvement is the facility afforded of drying the plates rapidly by heat; this removing the old difficulty attending any process based upon the varying amount of ink absorbing power conferred upon the bichromatized gelatine printing plate, according to the amount of moisture which it might absorb.

Briefly, the routine of the process is as follows: Three pieces of heavy glass are made level, and then flowed with a gelatinous solution made by dissolving in water a powder supplied by Penrose & Company, of England. The same firm supply the plates ready coated, needing only sensitizing in a bichromate bath, as in carbon printing. Drying requires only twenty-five minutes, in a box heated to one hundred and thirty degrees Fahrenheit. The plates are then exposed under the selected set of three-color negatives, washed free from bichromate, then soaked in glycerine preparatory to being inked up while still wet, and then printed from an ordinary flat bed letter press or engraver's proof press.

The solution with which the plates are coated being white, the image is visible during printing under the negative, and it also gives a clearly defined image in inking up for the printing of the different colors forming the final results. Of course a single plate from an ordinary negative will produce finished prints in monochrome, and these will have the same fine quality, as the best colotype prints from the three three-color plates, except that color will be lacking.

The process is simple and inexpensive. It is particularly suitable for small prints, such as post cards, views, and the like. The prints can be made upon paper, cloth, leather, celluloid and other surfaces. The most delicate colors are well rendered, and there is an entire absence of that degraded, sunk-in effect so often found in prints on gelatine paper that have been produced by the imbibition of dyes. The color of the ink, the strength of the image, the nature of the paper or other surface employed, can all be varied within wide limits, giving the operator a power of control and an opportunity of artistic expression not secured with other processes.

The process will shortly be placed upon the market in this country, and these brief notes will then be enlarged upon with further information as to the requisite material and where it can be obtained. A few American workers are using it with the best of success, but of course are under the disadvantage of having to order supplies from abroad.

SNOW RIFTS By A. B. HARGETT, BALTIMORE, MD.
Third Prize April Competition

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, JUNE, 1908. No. 6

The Pacific Northwest Convention

The Photographers' Association of the Pacific Northwest will hold its next annual convention at Vancouver, Washington, August 18th to 22nd, inclusive. W. G. Emery is Secretary-Treasurer, with office at 601½ Main Street, Vancouver, Washington. Everybody knows what an enthusiastic, progressive set of men compose the fraternity in the Northwest, and just about all of them belong to the Association. President Pautzke, Vice-President Wills, and Secretary-Treasurer Emery have all had experience with successful conventions, and with half the effort they are already putting forth, this coming one would be another to their credit. But this one is going to be more; it is going to be the most successful one ever held by the Association, and no photographer in the Pacific Northwest should fail to attend.

And Even Some Paintings are Bad

"The Pittsburg Gazette" of May 13th contained a report from which we make a few extracts, hoping that our so doing may furnish photographers who have suffered at the hands of art critics with some slight measure of consolation. To quote from this article:

"I cannot imagine what your art committee, or whoever it was hung the pictures in Gallery M was doing," declared Charles E. Caffin, the noted art critic and author of New York, before the Art Society of Pittsburg, in Carnegie Music Hall last evening. He continued:

"You leave the elevator, enter the door, and there, in one group, you are forced to swallow the yellow-scare-head debased journalism of art, the ginger and suggestiveness of the French school."

The audience fidgeted and murmured, apparently protesting in an undertone, so that the eminent critic was forced to stop a minute, or go unheard.

"The only portrait which excites any interest on my part is Olga De Noznanska's 'Portrait of the Artist Hirzenberg,' and I discover in Emil Carlsen's picture, 'Still Life,' elements of quality and beauty.

"In the portrait of the Artist Hirzenberg we see the face of a man whose life is keenly interested in something, the pursuit of beauty. It is rendered

by an artist who expresses the atmosphere of spiritual suggestion, the experience of life, and it is done so that it heightens our appreciation of reality and of life, which is the only excuse for a realistic picture of things visible.

"What a contrast with La Touche's 'Siamese Twin' picture, 'Entr'acte in a Theater,' which he sends this year. 'Siamese Twin' is the name I have given it. It is a mere representation of life. It is no better than his abominably common picture, 'The Bath,' which that ridiculous jury awarded the first prize last year. It was an imitation of the work of artists of fifty years ago, who were working out the kindergarten principles of art.

"In the 'Portrait of Mrs. Divine,' by Cecelia Beaux, that eminent painter, we see cleverness personified. There is no picture so tiresome as that which forces the artist's cleverness upon you. It is nothing more than a clever picture. That sofa would gladden a furniture dealer's heart; she has put as much love and psychology in it as into the woman. Robert Henri's picture, 'Miss Edith Reynolds,' is a pity, a base calumny. The picture speaks, but it only says this: 'I am Henri. This is my way of painting.'"

M. Caffin summed up with, "Photography has knocked out realistic painting."

Imagination

It is impossible to do a great piece of work unless one be able to form an image of it in advance, unless one can see it as it will finally appear. If one were limited in vision to the detail actually in hand, the whole world would never be completed; that which makes the perfection of the whole possible is the ability of the worker to keep that whole before him while he deals with the detached parts. Without that power the worker is a mechanical drudge, whose work has no quality save that of dogged fidelity to the task. Now, this power of keeping the whole before the mind while dealing with the parts, of seeing the completed machine while shaping a pin or a cog, of getting the complete effect of the argument while elaborating a minor point, resides in the imagination. It is the light which must shine upon all toil that has in it intelligence, prevision and freshness; and its glow is as essential in mechanical as in purely artistic work. Whenever, in any kind of work dealing with any kind of material, there is constructive quality, any fitting of part with part, any adjustment of means to ends, there must be imagination.—Hamilton Wright Mabie.

A Correction

In justice to Hirsch & Kaiser, the local dealers, and Burke & James of Chicago, the selling agents, we wish to correct a mistake made in mentioning "The Book of Photography" in our April issue. Through a mistake the price was quoted as one dollar, whereas it should have been three dollars. The book is well worth three dollars, and we trust this explanation will absolve either of the two firms mentioned from all blame due to our mistake.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department Should be Addressed to its Editor.

Edited by
H. D'ARCY POWER, M. D.
Burlingame, California.

PROGRESS IN AUTOCHROME COLOR WORK.

The advent of summer and the stimulus of closer acquaintance with the qualities of Lumiere's plates is leading to many developments. Among the most important of these is the very general employment of a simplified technique. Thus, immediately after the publication of M. Simmen's method of development with acid amidol, I commenced to use the modified formula of a strong simple amidol developer. Shortly afterwards Mr. Steichen published his method of using strong rodinal (one in eight), and this I have repeatedly used with equally good results. It would appear as though any developer would do equally well as long as the precautions usual with a slow panchromatic emulsion are followed. Under another caption I give the exact technique I am now employing. The difficulty of correct exposure for subjects of greatly contrasting light intensity is still exercising the skill of autochrome workers. In Gaedicke's "Wochenblatt" J. Joe points out that increase of the intensity of the color screen will not effect the correction as in black and white pictures, and recommends a sky screen or some mode of giving a shorter exposure to the sky. Such an instrument is now made by the firm of Emil Busch. The subject of lantern slides is dealt with by R. Childe Bayley who speaks with the authority of experience. I have made more than a hundred slides myself, many of which project excellently. As to their power to withstand heat I cannot speak, as I will not allow them to be used without the intervention of a water cell. However, I tried to burn up one or two spoiled slides by two minutes' exposure and did not succeed.

The reproduction of autochromes on paper by the pinatype process is very fully described by M. Leon Didier, the author thereof, in the May number of "La Photographie des Couleurs," translated in the "British Journal of Photography," and offers good results with little trouble. The same number of the latter publication contains a most interesting and hopeful paper from E. Stenger and F. Leiber, laying down the principles underlying the probable solution of a direct printing method on paper. It appears that there are a series of bodies known as the lenco-analine bases, which are themselves colorless, but capable of producing vivid and pure colors on exposure to light; but—and here is the important point—the colors so produced are only developed by the light rays of a color complementary to themselves. For example, a red-producing lenco base could only produce its color in response to the stimulus of green rays. If, therefore, a mixture of these bases, so selected in kind and quantity as to cover the spectrum, were spread on paper in the dark and the dried surface printed under an unreversed autochrome (in which the true colors are represented by their complementaries), the result would be a color positive on the paper, which would only require fixing to solve the color print problem. The practical realization of this method has yet to be perfected, but it does not appear to present nearly so many difficulties as did the perfection of the autochrome plate itself.

A NEW COLOR PLATE.

While we are waiting the arrival of the Powrie-Warner and the Krayn plates, an English rival bids fair to be first on the scene, and by the time this goes to print the "Thames color plate" of Mr Finlay's should already be on the market. At a recent meeting of the London and Provincial Photographic Association (reported by the English "Amateur Photographer"), the following description of the newcomer was given

"The construction of the plate is based upon the now familiar screen plate prin-

ciple, but it diverges from existing processes in certain respects, particularly in the arrangement of the patches of green, red and blue-violet, corresponding to the Lumiere starch grains, which are placed in front of the panchromatic emulsion. These patches have to be minute, in exact proportion, and each a true primary, but their shape and distribution are also important. In process work it is found that the jarring effect of isolated grains is to a large extent lost if the lines of dots are arranged at an angle of forty-five degrees. The structure of Mr. Finlay's plate therefore consists of a series of minute circular dots obtained from a half-tone screen and arranged obliquely instead of vertically. It is thus possible to use larger patches of color than usual without offending the eye. The red and green circles are placed alternately, and together occupy exactly two-thirds of the entire space, while the interstices between them are filled with the blue. The size of the circles is about one-three-hundredth of an inch, or double the size of the largest Lumiere starch grains. Mr. Finlay claims that the panchromatic emulsion which he employs has a very even sensitiveness right through the spectrum, and a compensating filter, if necessary at all, need only be of a very pale yellow. This, of course, accelerates the speed of working. The dyes, which are mordanted by a photographic process and are under a waterproof varnish, while passing a great amount of light, cut out that portion of the spectrum which has a tendency to be too active in ordinary emulsions. This, together with the fact that his emulsion is so sensitive to the red and green portions of the spectrum that these are catching up in activity with the blue, makes the compensating filter almost negligible.

"Will this plate enable color prints to be made on paper? Mr. Finlay has been working to that end, and says that the relatively considerable width of dot combined with the extreme thinness of the film will be a means of bringing about some very good results on bleach-out paper simply by contact printing. Mr. Finlay's colleague in the production of the plate, O. S. Dawson, said that their hopes were based upon what had been done with regard to 'Uto' paper. Although Dr. Smith, who brought out this paper and is now spending all his time in improving it, has doubts as to whether the Lumiere plate can ever be printed in this way, and in spite of the fact that 'Uto' has drawbacks, particularly in the mother-of-pearl rendering of the whites, Mr. Dawson was able to show passable prints from Lumiere plates. They were made, he said, in an ordinary printing frame, printed out just like P. O. P., and only needed fixing with a little benzole."

CITRATE RESTRAINER.

A Washington subscriber has been reading about the advantages of a citrate added to the developer in cases of over-exposure, but he fears he is not getting the right chemical from his local druggist. He also asks for further instructions. There is really very little to offer further than the citrate should be of the alkali used in the developer and added as required, say from thirty to sixty drops to the ounce, or the same way bromide is when used for the same purpose. As the salt is quite deliquescent and not always obtainable, it is advisable to make it up in the form of a twenty-five per cent solution, by neutralizing carbonate of soda with citric acid, as follows:

Citric acid	½ ounce
Carbonate of soda.....	1¼ ounces
Water	4 ounces

The amount of soda may have to be increased as the solution should be neutral to litmus paper test.

FINE FOCUSSING.

The need of very fine focussing is of great importance in two common and somewhat difficult classes of photographic work; namely, the reproduction of line subjects, and in photomicrography. I have drawn attention, from time to time in these columns, to various methods for securing accuracy, and to those I would now add the following suggestions of Douglass Carnegie for the pages of the "British Journal of Photography":

"For some time I have made use, with good results, of a novel screen of this class, prepared by the following procedure: A plate which has been exposed in the

camera to a uniformly-lighted sheet of paper is developed, fixed, and then placed in a bath of hydrogen peroxide acidulated with sulphuric acid. The bath is warmed to a temperature of about twenty degrees Centigrade. In a short time the hydrogen peroxide removes the developed silver and concomitantly some of the gelatine in which the silver was embedded, leaving the remaining gelatine in a very faintly opalescent condition. The plate is now washed, treated with Farmer's reducer if it still looks brown, and dried. A screen so made has just enough optical irregularity to prevent the image being viewed through it, but not enough to militate against the presentation of very fine detail in the focussed image. I must confess that I sometimes failed to get a good screen by this process, even when observing, so far as I was aware, the same conditions that in previous trials had led to satisfactory results. This uncertainty or 'trickiness' in manufacture is to be regretted, for of all the many screens I have experimented with, none seemed to give such perfect detail rendering in the image as these gelatine screens."

Another suggestion, is to replace the old method of using a magnifier applied over a transparent path in the focussing screen by the device here given:

"The screen used is a plate of glass fairly heavily ground all over (with a view to a bright general image) with the exception of a small circular central spot, which is left transparent. Such a screen is made in a few minutes by sticking a small washer on the center of the plate and grinding round this with carborundum powder, using as a muller a small piece of flat glass to which a slab of wood has been stuck, to act as a handle. A small strip of tinfoil, cut with a razor, is stuck across the transparent portion of the screen. On the unground surface of the glass, just over the region of the transparent disc, a small adjustable magnifier of about half-inch focal length, is permanently fixed. (The magnifier actually used was constructed from a cheap linen tester.) The magnifier is focussed on the edge of the tinfoil slip, and set. It is not necessary to bestow any especial care on this adjustment. The screen is now racked until there is no apparent relative movement (parallax) between the edge of the slip and any selected portion of the image seen through the magnifier when the eye is moved laterally across the field of view of the magnifier. This being the case, the lens image must of necessity lie precisely in the plane of the front surface of the screen. The function of the magnifier here, it will be noticed, is not to aid the attainment of that very uncertain condition, the exact position of clearest visualization of the fine detail in the image, but simply to magnify a displacement. Hence there can be no complications arising from unavoidable accommodative changes in the eye.

"The delicacy of this method of focussing—virtually a 'null method'—is quite surprising; the most insignificant rotation of the focussing pinion from the position of zero parallax produces an easily perceptible relative displacement of the fiducial mark and any selected image detail. I can confidently recommend those who have met with difficulties in fine focussing to give the parallactic method a trial."

EXPOSING THROUGH THE GLASS OF THE PLATE.

In the current issue of the "Bulletin" of the Belgian Photographic Association, M. Coustet puts forward a general plea for turning the glass side of the plate towards the lens, as is the practice in autochrome work, when making the exposure, one advantage which is urged being that the developing solution can act with greater freedom and uniformity on the latent image when the whole outer surface of the sensitive film is unaffected. Further, he says there is less liability to superficial fog when the exposure is through the glass, these conclusions being partly based on experiments made by Liesegang some eight years ago. Again, the advantage of the avoidance of halation by exposure through the glass, when dealing with subjects involving great contrast, is sufficiently realized by photographic experimentalists generally. The fact of the result being a reversed negative when exposure is through the back of the plate may be a disadvantage or an advantage, according to the printing method to be adopted, but it may be remembered that stripping the film, so as to obtain a negative which may be printed from either side, is a remarkably easy operation.

The AMATEUR and HIS TROUBLES

Conducted by
FAYETTE J. CLUTE

LARGE HEADS AND FIXED FOCUS.

I saw some fairly good portraits the other day that were made with a cheap fixed focus camera. I asked the owner if he had used a supplementary lens, but found he had not. He drew a rough sketch to show how it was done. It appears that he had simply photographed the reflection of his sitters in a large mirror. He found that this way of working involved but a trifling amount of difficulty in arranging the mirror at the right angle, and this was easily offset by the advantage gained by not having the camera pointed directly into the sitters' face. He, this fixed focus portrait artist, was working on a device that would allow him to control the angle of the mirror so that child studies could be secured without the disconcerting effect of the usual method of procedure. This reminds me of an expedient that I saw used some years ago. A friend wished to photograph a pretty waterfall in a confined position, and with a number of small trees and rustic benches in the immediate foreground. A mirror was hung against one of these trees, and the image of the view photographed from a point within and to one side of the objectionable foreground objects.

THE ANGLE OF VIEW.

A few of us were together the other day when the subject of focal length best suited to landscape work came up. It is needless to repeat all the arguments put forth, but there seemed to be nothing further to offer, when one of the party told how he settled the matter for himself some few years ago. He found the landscape class of the Art Institute out sketching with the Professor, himself a landscape artist of more than local fame, in charge. Asking permission, he examined the work of the master, and made a mental note of the amount included upon his small sketch block, about 5½x7 inches in size. A day or two later he visited the spot, set up his camera where the artist had been working, and found that a twelve-inch focus lens gave him about the same amount of view on his 5x7 plate. The matter was decided then and there as far as this gentleman was concerned. A twelve-inch lens gave the right perspective on a 5x7 plate, and there was no argument that could be advanced against his decision. The instructor of a class in landscape painting must know what good perspective was, and the twelve-inch lens gave it on his plate.

A POWERFUL DEVELOPER.

A correspondent wants to know what is the most powerful developer of which we know, and asks that a formula be given. An authority in England, T. Thorne Baker, gave the following some years ago as being the most rapid, and one that would work wonders with under-exposed plates:

Metol	¼ ounce
Sodium carbonate	1¼ ounces
Sodium sulphite	1½ ounces
Water	20 ounces

This is to be used full strength, and without the addition of bromide.

LENS OF PETZVAL TYPE.

A correspondent in Ohio has a very old portrait lens that he knows has done very fine work in the past, but in his hands it will cut only a very small circle in the center of a 5x7 plate. Without seeing the lens we can only guess at the cause of the trouble. The lens has most likely been taken apart for cleaning and wrongly put together. The combination is no doubt a portrait lens of the Petzval type. The front combination can hardly be misplaced, but the back lenses are often confused. The convex lens should be outside and its flatter side outward. If this does not remedy matters, it will be advisable to seek the assistance of an optician.

AMIDOL FOR UNDER-EXPOSURE.

A correspondent in Nevada wants to know something about a developer made up by adding an alkali to the amidol developer for known under-exposed films and plates. I have never tried such a developer, but here is a formula that has been published as working well:

Sulphite of soda	100 grains
Amidol	50 grains
Caustic soda	10 grains
Water, distilled	20 ounces

If our correspondent or any other reader should give this a trial, I would like to be advised of the results.

A HOT WEATHER DEVELOPER.

It is almost time for me to receive a number of inquiries as to developing in warm weather, and the best means of overcoming the difficulties which attend the process when the mercury stands high in its little tube. About the best advice that I can offer is that the worker select a good amidol formula and become familiar with its behavior, so that he will have confidence in its use when warm weather makes frilling and softening of the film a real danger. There is no particular hardening quality inherent in the chemical, but the fact that it requires no alkali makes it particularly desirable as a developing agent. A little thought will convince one that the alkali in his developing solution is a good thing to avoid. Alum is not to be recommended. It has been shown that small particles of alum, that may have chanced to become crystalized in the film, are practically insoluble, despite any amount of soaking or washing. Formaline is a much better hardening agent, and one that has no ill effect. A good amidol formula is as follows: Add two ounces of the best recrystallized sulphite of soda to fifty ounces of water, and also add twenty grains of both bromide of potassium and citric acid. When ready to develop, add two and one-half grains of amidol to every ounce of this solution. A bath composed of one part of formaline to fifty of water, can be used after development. A fixing bath, the regular one of hypo to four of water, can also have an addition of one ounce of metabisulphite and a like amount of formaline to each gallon. Working in this way there should be little trouble, even in the warmest weather.

THE NEW LOS ANGELES CAMERA CLUB.

With "Better Pictures" as their motto, and artistic photography as their object, camera enthusiasts of Los Angeles organized the Los Angeles Camera Club in Mammoth Hall, Thursday evening, May 28th.

T. M. Jenkins, 123 South Flower Street, was elected President, and C. E. Smith, 2036 Echo Park Avenue, Secretary. It was decided to hold the next meeting in Mammoth Hall at 8 p. m., June 10th, when all who are interested in the artistic side of photography will be welcomed.

"Five or six men interested in 'Better Pictures' met two or three weeks ago," writes Mr. Jenkins, in telling of the new club, "and decided to associate themselves to further the artistic side of photography.

"We met last night and formed the club with ten charter members, and decided to limit the membership to one hundred and fifty. We are discussing the advisability of admitting women as members.

"We do not want the camera fiends to take a snapshot and rush to some establishment and have it developed. The members of our club must understand the technique and appreciate the art possibilities of photography in all its forms. Only those who believe it an art will be acceptable.

"It is our intention to establish club rooms, with studios, dark rooms, and all of the necessary equipment for camera enthusiasts. We shall hold salons three or four times a year, and at frequent intervals club members will deliver lectures to their fellow members.

"One of our charter members is Louis Fleckenstein, the director of the Western section of the Salon Club of America, who has a national reputation as a photographer and whose pictures have been hung in many salons. He came to Los Angeles from Minnesota about six months ago. Since his arrival he gave one salon and is now taking great interest in the new club."

Both Mr. Jenkins and Mr. Smith will be pleased to give any information in their power, and the co-operation of all earnest camera workers is desired

Photographic Post Card Exchange

C. Frederick Potter, Jr., Director, 620½ Nicollet Ave., Minneapolis, Minn.

We are giving this month a list of new members whose work has been approved, and I can say for the information of the older members that the new list contains the names of some crackerjack camera folks, and you will have to look to your laurels.

The list of the accepted members under the old "W. C. N." exchange is being printed piecemeal on this page as space allows, and I wish all the older members to consider themselves strictly "in it," even though their names may not have appeared yet. Just start right in exchanging with the new folks and introduce yourselves.

This new list covers all the accepted work received up to May 20th, and any who have applied for membership and do not find their names here, may know that their work is not quite up to the standard. Among the very few which had to be rejected, the main fault is lack of interest in the subjects chosen, rather than faults in technique, and I wish all who failed to score this time would try once more with some different card, or, better, send five or six of your best subjects and I can thus get a better idea of your work. I will return the cards and write you personally, and am sure we can locate the trouble and find a remedy, and you will also get a better idea of what is required of members as to quality of work, as I will send you some specimens of good work.

WITHDRAWALS.

Mrs. E. A. Davis, Leadville, Colo.

NEW MEMBERS.

A. C. Ames, Peninsula, Ohio.

F. F. Beck, 2251 Welton Street, Denver, Colo.

Herbert Belcher, Box 156, R. D. No. 2, Glastonbury, Conn.

Percy S. Benedict, 1202 Hibernia Bank Bldg., New Orleans, La.

Geo. R. Bosworth, Berlin, Vt.

Don Campbell, La Moine, Cal.

Oliver Clemetson, Orfordville, Wis.

Helen W. Clogston, Marietta, Ohio.

Elmo W. Edison, Orcutt, Cal.

J. F. Estes, Meredith, N. H.

Jos. C. Huber, 1816 Frick Bldg., Pittsburg, Pa.

Edith Kennedy, Frankford, Mo.

E. Kintigh, West Newton, Pa.

Ira Lamb, Hooper. Neb.

Lettie M. Loomis, Summerland, Cal.

Geo. V. McAllister, Apalachin, N. Y.

D. W. McClain, 909 Butler Street, Tarentum, Pa.

C. W. McPherson, 2943 Cherry Street, Kansas City, Mo.

B. H. O'Donnell, Box 416, Wilmington, Del.

Mrs. Maude Peterson, Sand Lake, Mich.

E. Deming Smith, Box 233, Niagara Falls, N. Y.

C. A. Townsend, Belfast, Maine.

W. C. Ward, Y. M. C. A., Alton, Ill.

E. S. Warner, 6 West 103d Street, New York, N. Y.

G. L. Waterbury, Pine Knot, Ky.

R. Weaser, R. D. No. 1, Chenango Forks, N. Y.

W. T. Whiteford, Spearfish, So. Dak.

C. D. Wilson, Chitwood, Ore.

E. A. Woodard, Fair Oaks, Cal.

OLD MEMBERS.

Edward O. Knight, 83 Union St., Athol, Mass.

Ira Lamb, Hooper, Neb.

Harry B. Lancaster, Lafayette, Ind.

W. S. Marion, Spangle, Wash.

Mrs. Geo. McCauley, Anoka, Minn.

Henry Melde, Eureka, Cal.

Margaret E. Menns, 19 Tremont St., Malden, Mass.

Vernon Moore, Lexington, N. Y.

C. S. Morgan, Littleton, N. H.

Stanley Mythaler, Washburn, Iowa.

D. W. Newhouse, Kingston, Ohio.

Carrie E. Page, Monticello, Ia.

W. L. Peterson, Mendon, Utah.

Geo. N. Potter, Placerville, Cal.

Chas. Preston, 631 Allegheny Ave., Philadelphia, Pa.

G. T. Schuur, 60 Da Costatade, Amsterdam, Holland.

Wm. H. Seward, Windsor, N. Y.

The International Photographic Association

As was advised in the last issue, the next or June number will, we trust, contain a good list of exchange notices. Want of blanks has delayed the sending in of such notices by the several State Secretaries. Through an oversight, the name and address of the New Hampshire State Secretary and Album Director, Mrs. A. Leonora Kellogg, has been omitted from the list. This was caused by having two lists, one for secretaries and the other for album directors, and failing to notice that they were not alike. A State Secretary for North Dakota is announced this month and next month we will give the name of a secretary for Indiana should Mr. Fullgraff not find it possible to resume his former duties.

We wish all who are interested in the plan outlined by the prospectus, which is reprinted again this month, to write the nearest officer of the Association for a blank application for membership. Those who may be at present subscribers to "Camera Craft" will be considered as eligible for membership upon payment of an amount sufficient to extend their subscription one year in advance of their date of application. Former members of the I. P. E. will be credited with a month's subscription to "Camera Craft" for every two months due them on the "Exchange," which has never been resumed. We are placing these former members on the mailing list as fast as we can secure the co-operation of a State Secretary in correcting the several lists. Mr. Hinman would be pleased to hear from former members or others who might be induced to accept the secretaryship of such States that have not at present such an officer.

Below is given the list of officers who will act in the capacities quoted until the next annual election:

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

Dr. C. H. Gardner, Stereoscopic Album Director, U. S. Marine Hospital, San Francisco.

The State Secretaries who have reported upon the membership of their respective States are as follows:

Alabama—Richard Hines, Jr., 155 State Street, Mobile.

Colorado—F. B. Hinman, Room 4, Union Depot, Denver.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South Thirty-second Street, Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor Street, Manchester.

North Dakota—Jas. A. Van Kleeck, 619 Second Avenue, North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

PROSPECTUS OF THE ASSOCIATION.

ITS OBJECT.

To afford its members an opportunity of exchanging, through correspondence, photographs, stereoscopic views, and lantern slides. To circulate albums of photographs among such of its members as may contribute prints for that purpose. To encourage and assist its members to the better enjoyment of photography, by affording that stimulus which association and example always provide. In enabling its members to form collections either of miscellaneous photographs or of some particular kind, such as historical, typical, or artistic, this society stands unrivalled. It is admitted by all that more useful photographic information may be secured by the exchange of prints and the attending correspondence than by any other method.

CLASS I

Regular members or those desiring a general exchange. Such members may limit their exchange or specify a certain class or kind of work desired, in their exchange notice. Class I members are expected to answer promptly all letters in which stamp is inclosed for reply.

CLASS II

Members who, from lack of time or uncertainty as to address, might find it inconvenient

to always reply promptly to inquiries concerning exchange. Class II members will receive few if any unsolicited exchanges, as they are expected to acknowledge only such correspondence as they may themselves invite.

CLASS III.

Members desiring to enjoy only the benefits of the Circulating Albums. All members, regardless of the Class to which they belong, in order to receive the albums must send prints to the Director of their State or the General Circulating Albums for insertion therein. In no case are Class III members to be asked to exchange.

WHO ARE ELIGIBLE.

Any one interested in photography and willing to conform with the rules of the Association; amateur or professional, tyro or Salon medallist. All can find congenial correspondents and each can derive, as his individual taste may suggest as desirable, benefits from his membership in this Society.

METHODS.

On joining, each new member is given an exchange notice in "Camera Craft," setting forth his number and designating the Class in which he wishes to be placed. Mention is also made of the kind of work offered and desired in exchange, if any, together with such other detail as he may furnish. All members, irrespective of the Class in which they are enrolled, are privileged to send prints to the Album Directors for the Circulating Albums, entitling them to a place on the route list of all such as contain one of their prints, as well as on that of such other albums as it may be found convenient to so route. The most liberal contributors to the albums are understood to be the most deeply interested, and, of course, are given the preference when routing foreign or other special albums. A numerical correspondence system, translations of which are furnished all foreign members, permits the exchanging of prints between those using different languages, with the greatest facility and satisfaction. All exchanging is done by direct correspondence, on any agreed basis.

DUES.

The subscription price of the official organ, "Camera Craft," is one dollar a year for residents of the United States and its colonies and Mexico. All other countries, a sum equal to one dollar and fifty cents in U. S. money. This amount remitted to any of the Secretaries or Directors, together with a request for enrollment or application for membership, entitles to all the benefits of the Society.

THE CIRCULATING ALBUMS.

The "Clearing House," in charge of the Interstate Album Director, is now in good working order with eleven State albums on hand, ready to be sent out to State album directors who may send their albums for exchange. State album directors are requested to send any album they may have circulated in their States to the "Clearing House," and one will be sent them to circulate in its place. Every effort will be made to send out an album as good, if not a little better, than the one received. Advise what you are sending, and address: J. H. Winchell, R. F. D. No. 2, Painesville, Ohio.

"WILSON'S" REMOVES.

"Wilson's Photographic Magazine," the old and faithful stand-by of the professional photographer, has moved into new offices at 122 East Twenty-fifth Street, New York. We join the host of friends of the popular monthly, and its popular editor, T. Dixon Tennant, in wishing both added success in their new home.

A "COLONIAL NUMBER."

"The British Journal of Photography" has brought out a special Colonial Number, so named from its contents in the way of articles and reviews of particular interest to readers abroad, and from the fact that it posts a copy of the issue to photographers and photographic dealers to an extra number of some thousands in British possessions and foreign countries.

The issue, which is that of March 27th, provides a lengthy review of the many new goods on the photographic market, and its numerous advertisement pages show the many independent sources of supply at the service of photographers purchasing in England.

A NEW YEAR BOOK.

Messrs. Tennant & Ward, publishers of "The Photo-Miniature," "The American Annual of Photography," and various other photographic publications, advise us that on and after April 10, 1908, their offices will be located at No. 122 East 25th Street, New York.

They also announce the publication of a new year book, "The Annual of Photography, 1908," which will incorporate a well-known reference book, "Figures, Facts and Formulae of Photography," heretofore published separately. The new year book will be ready early in May.

Our Competitions

We have not been able to give our competitions the attention that we should. Other matters have claimed our time; our jury has been separated, and varied by the absence of one of the three; pictures for the first few competitions came in such floods that we could not carry out our plan of returning all with an individual criticism; and taken together, we are reaping the fruits of our lack of experience in such matters. However, we will move as fast as we can, some prints having already been returned. We are simply letting matters drift along, as by so doing we are finding out what is wanted. A letter from Mr. Holmes, one of the first to assist us with his suggestions in the matter, is printed herewith. It is hoped that by setting before our readers as subjects for our competitions, ideas instead of bald facts, they will the more generally appreciate the necessity of securing something more than a maplike reproduction of some specified object, if pictorial work is their aim. Let us call the subject for a certain competition the portrait of a child. The lighting and chemical effect being equal in a number of entries we could only give the premier place to the picture of the prettiest child. If the subject were a tree or trees, the same would apply. The worker who wished to compete would naturally go in search of the finest tree or group of trees in his vicinity. Would not this be leading our readers astray? The results would be submitted to a competent jury that might decide that a particular picture of a few scrub oaks, a picture that told its tale of constant battle for existence in an unfriendly soil and amid uncongenial surroundings, was the most worthy. Would this not be unfair to our readers? Readers who had gone far afield to find the most pleasing tree.

The subject for our monthly competition, ending July 31st, is sunlight effects. This does not mean that the picture is necessarily one that is taken in a broad flood of sunlight; in fact, quite a dim interior in which a single beam of sunlight emphasizes the motif of the picture, may be more desirable. The subject selected can also assist by being itself such as to suggest the joy and gladness associated with sunlight and warmth. For the competition ending August 31st, we want pictures that portray mist, haze, fog, and kindred effect; suggesting in turn an interpretation of sorrow, tears, veiled emotions, and the like. The next, or September, competition requires some effect depicting the sentiment of dreariness, desolation, depression, departed activity, or kindred idea. For the competition closing a month later, or October 31st, we wish to have pictures in which the feeling of twilight, quietude, peace, and calmness, predominates. This last subject is full of suggestions and possibilities. The portrait of a fitting subject suggests the evening of life, and doubly so, if the right accessories and treatment are employed. A landscape of the simplest kind will suffice if rightly handled. Marine and river scenes are particularly well adapted. Material is at hand at all times, and success means only that the worker must realize the necessity of picturing a sentiment, a feeling, a mood, rather than producing with his camera a mechanical reproduction of a fact in nature.

The monthly competition closing November 30th will have for its subject the portrayal of an effect typical or characteristic of a certain season of the year, pictures to which the title of not only one of the four seasons is applicable, but such titles as Indian Summer, Harvest Time, and the like. And we might mention that a portrait can be used to portray what is wanted in this competition, if so doing more nearly falls in with the ideas of the worker. There are no conditions; all we want is pictures, the three best of which each month we can put before our readers as object lessons in what is good in pictorial photography. Some form of award or prize will be decided upon later should we not hold to our original plan. We shall certainly try to keep our friends satisfied; and, in the meanwhile, trust that they will find gratification in the knowledge that their pictures may be reproduced in our pages if not outclassed by some that our jury considers better.

When we asked our subscribers for suggestions relative to a monthly competition, the plan outlined by T. H. Holmes,

of Baltimore, appealed to us very strongly, and after first placing it before our readers for possible objections, was adopted. There were, of course, many dissenting opinions, but the large majority favored the plan as outlined. Writing Mr. Holmes and asking how he came to hit upon a plan so conducive to the greatest good to the greatest number, and at the same time so different from the usual plan, we received the following letter, which is believed worthy of publication:

MR. HOLMES' LETTER.

"My dear Mr. Clute:

"In reply to your inquiry as to the particular line of reasoning or train of thought that prompted my suggestion that the submitted prints themselves be utilized as prizes in your coming competitions, rather than the usual offerings of medals, books, or supplies, I will unhesitatingly answer—selfishness, selfishness pure and simple.

"Like the great majority of those I know, my work is sadly deficient in prize-winning qualities, and I have not felt equal to the work of sending out prints on a hopeless errand. Under the plan you have adopted I am sure to get something that is considered just a little better than I sent. The real return for my effort will come in the opportunity of trying to appreciate for myself just where and how the other fellow's work is better than my own. The judges will no doubt find the difference without much trouble, but if my own pictorial education is so meager that I cannot, right there is a definite problem, the solution of which, even with assistance that I may find necessary to invoke, will prove of the greatest value to me.

"On the other hand, should I recognize the superiority as a quality that I am not able to incorporate into my own work, I can then write to the maker of the prints I receive, and I feel sure that he would give me a few points on the technique by which his own work is made better. Such opportunities for real benefit to each and every competitor is not afforded by any other form of competition of which I have knowledge.

"By the results shown and the complaints that entries are much too few, I am led to believe that such average contests as the magazines can afford to run monthly are spasmodically supported by two classes: one represented by the beginner who has not yet discovered what a picture really is, and the other by the top-notch worker with some extra prints on hand and an inclination to go 'pot hunting,' reserving his best work for the salon or some like more desirable competition. The average serious worker, who knows something of pictures, also feels that his work will stand but a poor chance in competition with pictures by more able workers, and refrains from competing. It is to this last large and important class that your new competitions will no doubt appeal very strongly. A contestant need have nothing to fear from the competition of more advanced workers, and no matter what his position in the scale, he will be brought into touch with one whose work is just a little better, from month to month. In this way he will be enabled to make constant progress until he finds himself ranking with the best, and I believe that this opportunity, open alike to all, is the finest possible prize you could offer. There will be no blanks, there is no obligation, and the contestant will reap his reward in exact proportion to the effort and thought that he puts forth. At the start, entries may be few in number, but gradually, as the real value and helpfulness of the plan to each individual worker is better realized and appreciated, the number of entries must grow to enormous proportions and the department will be looked upon as indispensable by most of your subscribers.

"No minor part of the good accomplished will result from the correspondence that the plan will encourage between workers desirous of advancing along pictorial lines. I can possibly explain this better by citing my own case in another experience. Mention of the Postal Photographic Club in Camera Craft aroused my interest, particularly as I learned that criticisms of the members' prints were provided for. I had carried my technique to such a point that I felt I needed only a little insight into the mysteries of line and spacing before submitting whole bunches of prints to the salons. I applied to the secretary of the club, G. A. Brandt, Washington, for membership, submitting a half

dozen prints with my letter. This last must have contained something that touched a sympathetic chord in his charitable heart, for I was made welcome. I have since learned, through the criticism of the more advanced members, just how harsh and crude in every way and how devoid of tone values were my original six prints.

"Asking Mr. Brandt for an expression of opinion concerning the relative merits of my prints, lack of time compelled him to refer me to another of the older members. Out of pure goodness of heart, this gentleman took me in hand, at first gently, gradually and with great care becoming more severe, until at the present he is using what is evidently an ax or a very large hammer on my work. Yet along with it all comes much encouragement and a mass of detailed instruction that is helpful in the extreme; and some day these long, instructive letters will be bound in book form, as I value them most highly. To this brother member I owe a debt of gratitude for services that money could not have bought. I have never even seen him, but some day I shall take a journey of over four hundred miles just for the pleasure of shaking hands and telling him personally just how much I appreciate his kindness to me.

"This reference to the Postal Photographic Club is somewhat of a digression, but my finding a club of forty earnest workers, all in harmony and all striving to afford mutual aid and advancement, a united membership in which the advanced worker generously extended a helping hand to the beginner, inspired me to suggest a plan whereby Camera Craft could perhaps offer its readers similar benefits. I feel sure that each succeeding competition of the series which you have inaugurated will find a constantly increasing number who will have the same keen appreciation of the benefits derived as I have of those received from my membership in the Postal Photographic Club, and for the same reason. "Yours truly,

"T. H. HOLMES.

"Baltimore, Maryland, March 22d, 1907."

THE RIGHT COLOR SCREEN.

An Iowa correspondent writes that he believes he had read somewhere that a color screen would assist in the securing of good copies of yellowed pictures, documents and the like, but that he cannot find the article and does not know just what color of screen to use. The fact of the matter is this: A screen of a certain color will make complementary colors darker, and its own color lighter, in the resultant copy or print from the negative made through it. A yellow screen will increase the strength of violets and lighten the yellows; an orange screen will strengthen the blues and lighten the orange, and a red screen will darken the greens and lighten the reds. By taking advantage of these facts, one can secure results that are not obtainable in the ordinary way of working.

COUNTING SECONDS CORRECTLY

Every user of a camera should learn to count seconds correctly and it is the easiest thing in the world if it is gone about rightly. We ought to be able to count any number of seconds and I know several that can count the second hand of a watch around the circle several times without being more than a single second out of the way. One of our advertisers has just gotten out a neat card carrying a table that provides a very simple and practical method whereby anyone can become proficient in counting seconds after a few minutes practice. It is so simple and the facility it affords is so useful to the camera user that he should secure a copy at once. Do not guess at your exposures. If you are making an interior, know just how many seconds you give. If it is slightly over or under timed, the process of counting the seconds impresses the time upon your memory. When you next try a similar subject you unconsciously compare it with the previous one and your judgment tells you that a longer or shorter exposure is required and you profit accordingly. The same with any other class of subjects. Of course you can watch the second hand on a watch but often your eyes are wanted for other purposes. If you can count time just as accurately as the watch you would not bother to take it out of your pocket.

Write and ask for a time counting table and enclose a two-cent stamp.

Address Berlin Aniline Works, 213-215 Water Street, New York, N. Y.

In Professional Fields

SOME GOOD HINTS.

One of our local workers, M. L. Lemon, called in recently and in the course of a very interesting conversation gave me some good ideas for our readers. The average home-made toning tray, even when carefully finished and coated with a good paint like Probus, is inclined to contain irregularities that either protrude and endanger the surface of prints when face downwards or else contain minute depressions that retain old chemicals and possibly cause a spot. Mr. Lemon overcomes this difficulty, and also secures a more pleasant white surface on which to work, by keeping for the purpose a piece of white oilcloth that just fits the bottom of the tray. This is easily wiped clean and thrown over a line ready for the next batch of toning. This same Probus paint he finds most excellent for labeling bottles. A small brush permits of the lettering being done quite neatly, and the chemical-resisting nature of the paint makes the labels practically indestructible.

Returning to the toning tray, any large tray used about a sink or bench to which water may be carried is liable to stick unpleasantly, owing to the capillary attraction of the water between it and the surface upon which it stands. Mr. Lemon overcomes this difficulty by simply gouging out an occasional hole in the bottom of his sink and on the surface of his bench, using for the purpose a "half-round" gouge or chisel. Into these holes are placed ordinary marbles, several dozens of which can be purchased for five cents. A tray resting upon one of these moves about very easily and can be picked up without any danger of coming away with a jerk. And talking about the toning bath, that reminded him of another convenience that had been found very practical. In making up solutions, at least in most cases, it is perfectly satisfactory to do so by measuring the dry chemicals by bulk instead of weighing them out. Mr. Lemon so arranged matters that a mark on the bottle in which the stock solution is prepared indicated just how much water was required. He then weighed out the desired amount of each dry chemical and placed it on a piece of paper. Taking several pieces of wood of suitable size, a hole is bored in one end of each to a convenient depth and the bottom of the hole smoothed out with a small gouge chisel. The weighed-out chemical is placed in the hole without packing it too solid, and the surface of the wood whittled down until it is just level with the salt or powder used. The other end is then whittled to form a flat handle, inscribed with the name of the chemical and fitted with a hole for hanging it up on a nail. Similar "spoons" are prepared for the other chemicals in the same way. Where the necessary amount would necessitate too large a "spoon," the difficulty is overcome by so arranging the requisite one that a certain number of "spoonfuls" will give the desired amount, and the handle so marked. The "spoons" for any given stock solution all hang in their proper place, and using them in making up solutions greatly facilitates the work. The first spoon is taken down, dipped into the bottle and its edge drawn against the shoulder of the bottle as it is withdrawn, thus insuring that the hole is level full. The contents are dumped into the stock bottle, and so on through the list. The bottle is then filled to the mark on the outside and the solution is ready as soon as the chemicals are dissolved.

We would be pleased to have other workers jot down brief descriptions of such little conveniences as they may employ, and send them to us. In this way the pages of our magazine could be made very interesting, as it is just such little hints as Mr. Lemon furnishes that appeal most strongly to the average photographer.

"AGFA" FORMULA BOOK.

If any of our readers overlooked the full page "Agfa" advertisement in the last issue or neglected to send for a copy of the booklet offered, they should do the latter at once. The address is, Berlin Aniline Works, 213-215 Water Street, New York City. Ask your dealer if he has one left, or write direct to the address given and ask for a copy of the new "Agfa" booklet.

NOTES and COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

THE NEW GRAFLEX CATALOGUE.

The new Graflex catalogue is out, and that is about all that we need say. The pictures are fine, the printing the same, and all the details looked after in the usual careful manner. It goes into details concerning one of the finest lines of cameras ever put out, and it is really a crime to send it to other than those with a long purse, unless they really need a camera. The possibilities of photography with a Graflex camera are so alluringly and convincingly set forth that if a poor devil was short of money he would be tempted to borrow it or bunco his dealer into letting him have one on time. Then when he got the camera, its charms would be so irresistible that he would never get around to earning the wherewithal to discharge his just debts. That is, if he was making pictures for his own pleasure. There ought to be a good sale for the right kind of high speed work, and the Press Graflex is certainly a money making camera for the newspaper man. In addition, there is the Cirkut camera, and that is no doubt the best money making proposition for the photographer in the market to-day. All the dealers have a supply of the new catalogue, or it can be obtained direct of the Folmer & Schwing Division, Eastman Kodak Company, Rochester, N. Y.

CONCERNING ANASTIGMAT LENSES.

In "Anastigmatics" we are introduced to a new word, and also to a new photographic booklet issued by the Bausch & Lomb Optical Co. This publication is not only very attractive, but is full of reliable information, which will assist the photographer in selecting the lens best suited to his needs and his camera. Any of the dealers can supply you.

We find that, as the name implies, "Anastigmatics" is a treatise on the anastigmat lens, which is well worthy of your attention. There are still many amateurs who are uncertain as to the desirability of equipping themselves with a high grade outfit, and this publication of the Bausch & Lomb Optical Co. throws light upon many doubtful points. The list of lenses for various cameras is also a help to any prospective purchaser. You should obtain "Anastigmatics" from your dealer.

The photographic lens is worthy of careful attention, and although everyone desires to care for the lens properly, all do not know the proper procedure. "The Care of the Lens" is a publication sent free by the Bausch & Lomb Optical Co., or may be had at your dealers.

We have been interested in the exhibit of exceptionally good pictures now being loaned to dealers in some of the larger cities by the Bausch & Lomb Optical Co. The exhibit consists of ten enlargements, accompanied by contact prints, and a description of the pictures. Not only is this exhibit of interest because of its artistic value, but it shows many unusual settings, as well as the triumph of the modern anastigmat lens. Those who have an opportunity should visit this exhibit.

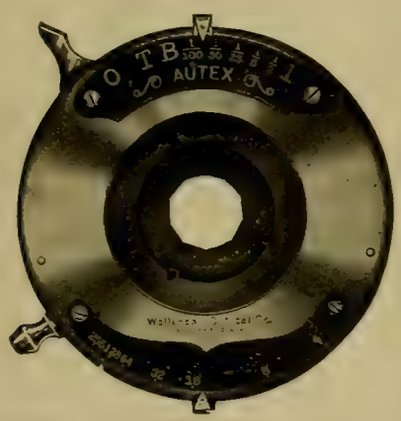
A LARGE FACTORY.

The manufacturing plant of the California Card Manufacturing Company is undoubtedly the largest photographic card factory in the West, and it is surprising what rapid strides they have made in rehabilitating their business. With new and improved machinery, the superior facilities enable them to fill all orders promptly. They are the successors to the old reliable house of The Stuparich Manufacturing Company, so long and favorably known, not only here on the Coast, but in all foreign countries tributary. The concern is the only one in the West making its own cardboard, and as only the finest raw products are used, their patrons are guaranteed the best possible in the way of card-stock. This is all the more easily assured

on account of the years of experience and technical knowledge which the members of the company and their employees are able to bring to bear in their efforts to maintain the premier position in their lines. Their handsome new catalogue is now ready for mailing, and we would advise the trade to get their names on the list and look up some of their new lines at dealers.

THE NEW AUTEX SHUTTER.

The Wollensak Optical Company, the maker of the well known and popular Wollensak shutters and lenses, has just put on the market a new and improved form of medium priced shutter to replace their Winner, Regular, and Automatic models. These new Autex shutters embody several decided improvements, chief of which is the enclosing of the valves within the case where they are not liable to be affected by dust or dampness. The new models will be called Victus, Regno and Autex, and in addition to the improvement noted, the Autex will be specially arranged so that it can be opened for focusing. They are now ready in two sizes, for 4x5 and 6½x8½ lenses, and other sizes are in preparation for early delivery. The user of lenses does not need to be told that a large portion of his shutter trouble is due to the exposed position of the operating valves, and this improvement in the Autex shutter should appeal to all. Other new goods offered by the Wollensak people this season are the Versar lenses for portraits, groups and landscapes, working at f-6, and the new Velostigmat, an anastigmat working at f-6.8, mention of which we made in our last issue.



THE AUTEX

A NEW REFLEX CAMERA.

Endeavoring to make our subscribers acquainted with the latest novelties in the trade, we would call their attention to the Voigtländer cameras in general, and to the new Voigtländer Heliar Reflex camera especially.

There are many kinds of Reflex cameras on the market, but not all of them can be used with such success as the Voigtländer Reflex in connection with the Voigtländer Heliar lens, F-4.5. The appearance of this camera shows at first sight that it represents workmanship of the highest perfection, and a thorough examination increases this first impression, owing to the fact that every part of the apparatus is made to work with the utmost accuracy. It is fitted with a focal plane shutter, giving time and also instantaneous exposures up to 1/1000th of a second, and is guaranteed to work without vibration. The camera is fitted with a reversible back.

The mirror is of optically worked glass, silvered on the surface, and coated with a colorless preparation for preservation. The image reflected is therefore identical with that obtained upon the plate. This arrangement permits the photographer to observe the image up to the moment of exposure. The new camera catalogue just out contains full information in regard to this Reflex camera, as well as to other kinds of the Voigtländer metal cameras. It will be sent free of charge on request by the Voigtländer & Sohn A. G. Optical Works, 225 Fifth Avenue, New York.

A FINE CATALOGUE.

Burke & James, of Chicago, advise that their No. 11 general catalogue is now on the press, and will be ready for distribution by June 15th. It will be by far the best they have ever issued, and will contain many new and meritorious specialties, which will interest all of our readers. The book will contain two hundred and eighty pages, fully illustrated and indexed; printed on fine paper, with strong, handsome cover. The firm's line of photographic specialties is now one of the most complete in this or any other country. This book should be in the hands of every professional and amateur photographer, and will be sent to anyone interested, free upon request. All of the goods listed in the catalogue can be obtained from dealers in photographic supplies. They also announce that they have been appointed sole Western agents for the Autotime Camera

Scales, a new device for automatically giving correct exposures by means of a scale fitted to the shutter front. We believe that this meritorious article will be very popular, as it is both practical and useful to hand camera workers.

"GRAFLEX RESULTS."

There has just reached us a handsome little booklet bearing the above title, and we would urge all our readers to secure a copy of their dealer or send a request direct to Folmer & Schwing Division, Eastman Kodak Company, Rochester, N. Y. It is written by a writer who thoroughly understands the subject, and who is at the same time capable of making his appreciation of "Graflex" photography both instructive and entertaining. The illustrations are convincing and satisfying in the manner in which they bring out the possibilities of picture making with this type of camera. All in all, the book should not be overlooked by either amateur or professional, particularly as it is supplied free of cost.

THE AIR BRUSH IN GERMANY.

Metz, November 23, 1907.

The "Air Brush," bought by me from the Air Brush Mfg. Co., Rockford, Ill., in 1892, has proven itself most profitable during this length of time. Every photographer ought to make himself acquainted with this instrument, in order to make, by the aid of it, real artistically executed pictures, and besides, with such speed and exactness as the human hand can attain only with the greatest expenditure of time.

The proverb, "Time is money," finds nowhere such a plain proof for its truth, as by the use of the "Air Brush" in the photographic line of work.

M. A. SPEYSER.

SOME WONDERFUL PHOTOGRAPHS.

There was shown at Hirsch & Kaiser's new store on Post Street, from June 2nd to 10th, an exhibit of remarkable photographs loaned by the Bausch & Lomb Optical Company, of California. This collection comprises many examples of successful pictures secured under the most trying conditions. High speed work, subjects requiring very short exposures with great depth, subjects demanding fine rendition of detail, in fact, the kind of work demanding the best quality in a lens. These pictures attracted large numbers to Hirsch & Kaiser's store, as announcements had been sent to all their friends, and the pictures were so good that visitors brought it to the attention of others. The pictures are large and handsomely framed, intended for the elegant new show-rooms of the Bausch & Lomb Optical Company, of California, at 154 Sutter Street, this city.

SOME NEW SPECIALTIES.

James H. Smith, 306 East Forty-first Street, Chicago, the maker of Victor flashlight powder and other admirable photographic specialties, has added several new articles to his list. An excellent low-priced head ground carrier, suitable for both amateur and professional use, is worthy of particular note. It can also be used as a carrier for a side reflector. A neat and convenient eye rest that sells for one dollar is another utility that will appeal to the portrait worker. A new universal developer in liquid form and a reducer of the same character are both remarkably cheap and at the same time most meritorious. Write Mr. Smith for particulars concerning these and his other popular specialties.

A NEW "CROWN" CATALOGUE.

We are advised that before this reaches our readers the Crown Optical Company, of Rochester, N. Y., will have ready for distribution their new 1908 catalogue. In this will be listed three new series of lenses and several new sizes of those listed in their former catalogues. We examined two of these new lenses some weeks ago and mentioned them in these pages, feeling sure that our readers would be much interested in anything new from this firm. The new catalogue should be sent for

"ROYLE'S BOOK ABOUT SAWS."

Every photo-engraver, electrotyper, printer and the like uses a saw table and the wise ones know the merits of the Royle line of saws. Whether they do or not, they should each and everyone

send for a copy of this new Royle booklet. It gives a world of valuable knowledge about saws, their uses, their variety and other information that the user can hardly afford to be without. It is a handsome book of about fifty pages and well illustrated. Drop a card to John Royle & Sons, Paterson, New Jersey, and a copy will be forthcoming.

SELTONA PAPERS.

We would advise all our readers to investigate the merits of Seltona paper which is imported and sold by J. L. Lewis, of 379 Sixth Avenue, New York. One of our staff has recently tried some samples and produced very fine prints with the minimum amount of trouble. It is a collodion printing-out paper that is rich in gold and needs only fixing in hypo for rich brown tones. A preliminary salt bath gives purple tones and in neither case is there any indication of double toning. A wide range of tones is obtainable and the manipulation of the paper is delightfully simple. It is made in four grades: matt white, glossy mauve, antique and cream crayon. The latter, we understand, is used extensively for exhibition work in England, where the advantages of self-toning papers are appreciated on account of the control so easily secured in a printing-out method as compared with those in which a visible image is not produced during printing. You will not have to prepare any baths or purchase any chemicals in order to give this excellent product a trial, and for that reason Mr. Lewis should be given an opportunity of securing your verdict as a reward for his enterprise in making this product available to workers on this side.

LETOL FLASH POWDER.

The editor of "Camera Craft" having placed in my hands a sample of Letol Flash Powder, with a request to see what it would do, after a careful test I have to report my first experiment, as follows:

I have used several kinds of flash light, their means of production all termed smokeless; but none of them lived up to this description by a very long way, open windows and a long wait being necessary before another exposure could be made, and most of the powders gave a loud report.

My first use of Letol Flash Powder brought with it a pleasant surprise. A few preliminary experiments convinced me that it would not ignite unless brought into actual contact with flame. A flame held within an eighth of an inch of the powder failed to light it. A few grains sprinkled through a flame also failed to burn. But ignition took place immediately upon proper contact.

My first surprise came with the total absence of report. "Puff" exactly expresses the sound.

The light I would describe as a violet-white.

The smoke is—invisible.

The general effect more nearly approaches daylight than that of any artificial light I have seen.

W. ROB WHYTE.

"LIVELY'S METHOD OF LIGHTINGS."

One of the most valuable books ever published for the professional photographer is "Lively's Method of Lightings," by W. S. Lively, president of the Southern School of Photography at McMinnville, Tennessee. It is the most complete and most practical book on photography ever published, on account of the very thorough diagrams and illustrations. There are seventeen diagrams showing as many different lightings and how to produce them; also a half-tone portrait showing the result of the lighting produced, and the like. There are illustrations describing the Aristo lamp lightings, flash lightings and results by daylight. There are no needless long talks or lectures; nothing but facts, and so plainly written that they cannot fail to be understood. There will be one actual photograph in each book, to show the loss of definition in the reproduction of the half-tone plate. The price is two dollars and fifty cents, postpaid. Can be ordered direct from the school, or through "Camera Craft."

THE QUIET LIFE
By WAYNE C. ALBEE

XV No. 7 JULY, 1908 Price, 10 Cents

Camera Craft

San Francisco, California

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, JULY, 1908. No. 7

A Flower Phantasie

By Lionel Hawies

With Illustrations by the Author

I remember coming to a full stop in front of a shop-window not far from Waterloo Terminus, in London, attracted by a show of carnations. I had no idea there were so many different varieties, and—then a strange thing happened.

Now, it is a matter of commonplace knowledge that fancy sometimes plays strange tricks, and—for an enchanted moment—we are permitted to

approach the most prosaic facts from a vantage-ground as far removed from actual surroundings as from choice. After all, the point of view is everything, and—to resume:

Almost at a glance I made the discovery that here were none of my friends. Instead of being attracted, I was actually repelled. Why? I say again, fancy plays strange tricks; you cannot argue about facts, and I am not

going to try and explain a fancy. It must suffice if I preface what follows by saying:

It seemed to me that—

Every virtue I had associated with the carnation, in these seemed lacking; every daintiness I had a right to expect had been sacrificed to novelty and invention; every color I had known among them was half-disguised; every suggestion of their natural surroundings of leaf and greenery had been obliterated; while even the plate-glass window robbed me of their perfume, and seemed to be doing it on purpose.

Absurd, of course; but—

Was there not also something charnel about the very premises? What of the little white wooden tag, named and dated in approved tombstone-style, set upright beside each specimen—the mummy-like bundles of dried roots and stems which lay littered around? Here were cuttings buried in charcoal; there bulbs set in narrow-necked tumblers; why, I asked myself, was even the mystery of the sprouting root made an object of mere curiosity? And yet none of these issues, philosophical and moral, however justified by what I saw, were intended nor even dreamed of by the fussy little man who, from the glazed hospital in the suburbs, stocked this mausoleum of sleeping plants and dying flowers.

But somehow there was an unusual air of bustle about this mausoleum. "Death," I had whispered, but surely here was also life? Would not each of these unpromising bulbs produce an astonishing crown of flowers? Would not these barren twigs—even as Tannhauser's staff budded at last into

forgiveness—after a year of travail, bloom into an hour of blessing? In short, were they not all angels to be wrestled with—to be cut and flaggellated into sweetness—to be dessicated, drowned, buried upside-down, to be fed on poisoned earths, perhaps, and impregnated with mineral dyes till every vestige of aroma, almost every similarity to their original form were lost in the practice of artificial regeneration? Mausoleum, said I? In truth, these poor roots and flowers had no peace after death; it was a charnel-house, purgatorial chamber, and resurrection office in one, wherein were committed every crime against them that Nature might rise again resplendent in beauty and audacity, and in strange new forms.

Here, then, was the grave of Proserpine; but when I spoke of these things to Pluto—I shudder to record the language of the little dry-as-dust seedsman.

I left him busy with the mysteries of resurrection.

* * * * * * *

Of course, this is all very whimsical, if, indeed, nothing worse. But it appears to me that there is more than something to be said for the point of view here suggested, especially with regard to photography, which may be an art or a science, according to the point of view and its issue in treatment.

Now, the treatment of flowers in photography may be scientific or artistic. The scientific treatment is concerned with nothing but facts. The artistic treatment is bounded only by fancies. Facts are conclusive, but fancies are inspiring; the most the photographer may squeeze from the former is a pattern, from the latter he may get an idea, and in the realms of philosophy and art "a new idea is worth a world of friends."

So it comes about—in my own estimation—that to capture something of the spirit of the flower is more satisfying than to discover some novel

fact of its anatomy. And for this reason the craft of the botanist attracts me not at all.

For another and different reason, the fashionable florist's window so often repels me, for here the flowers—so wonderfully beautiful otherwise—are so obviously wired into position, and therefore on their best behavior in spite of themselves. Their manners and breeding are irreproachable; but the temper of the wild woods, of the flowers and trees in them, is—to me, at least—infinitely more courtly and hospitable.

Flowers die—more's the pity! But sometimes it is given us, before they die, to capture some of their sweetness and poetry, and in so doing to share in part of that blessing it is theirs to administer through the ages. Sometimes, too, the photographer is the lucky man; but he will not surprise that blessing in the dissecting-room of the botanist, in the hospital of the nurseryman, in the mausoleum of the seedsman, nor in the theater of the florist.

"To the woods!"

HANGING MOSS By LIONEL HAWIES

Washing Boxes

By Julius A. Read

The subject of washing boxes, or the means usually employed to eliminate the last trace of hypo or other salts from plates, films and prints, is an interesting one; especially when we stop to consider, that in spite of the great advancement made in photographic apparatus, plates, papers, chemicals and the general improvement throughout the art, so little has been accomplished to make the thorough washing of a large batch of prints a less tedious operation than it was twenty years ago, for, practically throughout the land at this day, in the year A. D. 1908, the professional photographer is still busy picking up the day's prints out of one end of the sink and piling them up in the other, so as to drain off the water, rinse out the sink, fill up again with water and repeat, again and again.

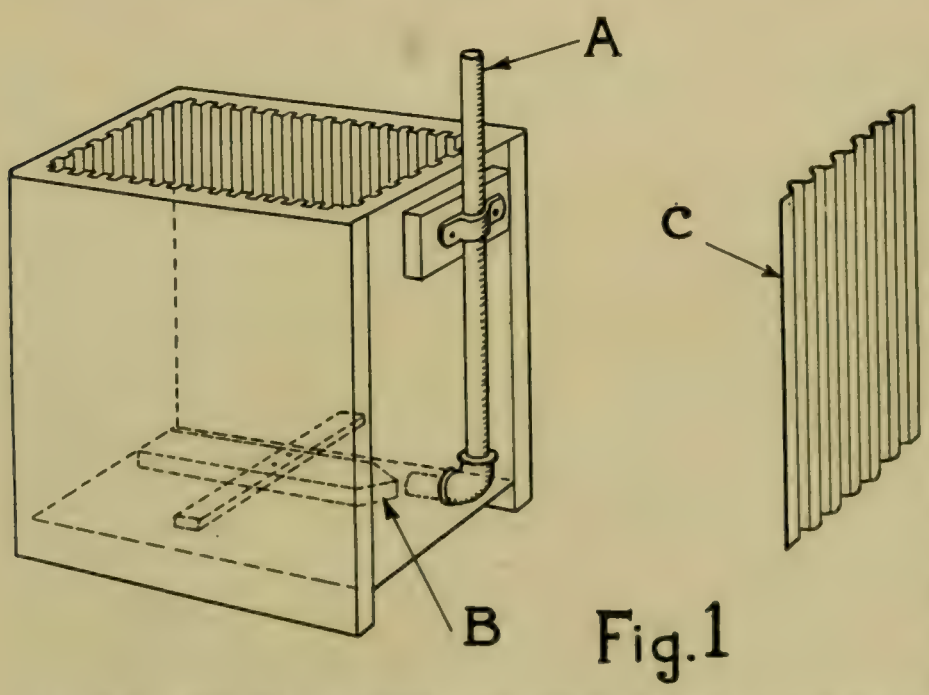


Fig.1

A: the upper end of inflow pipe which is to be connected to faucet by means of rubber tubing. B: a piece of wood fastened to bottom to support plates about an inch above bottom of box; the end of this piece of wood nearest inflow pipe is pointed to divide the entering stream of water, and on top of the lower piece of wood is another at right angles to it to support plates placed in end grooves. C: a metal partition to allow smaller plates to be washed. The box should be ten inches long to accommodate 8x10 plates, six and one-half inches wide for 6½x8½ and 4¼x6½ plates. Then, by placing the partition in the center the box will accommodate 5x7 and 4x5 plates. These dimensions give a useful size, although the exact size depends on individual requirements.

Of course there have been innumerable attempts to make adequate apparatus to meet the exigencies of the case and many have been the weird contrivances which the obvious necessity has fathered. Some of the devices are certainly ingenious, and some of them satisfactory, for small quantities of prints. Especially efficient are those of round form, wherein the prints are given a circular motion by means of the entering water, and if there is any emulsion left on the prints after they get through rubbing around the sides of the tank, they may safely be considered washed.

But—what can we do? A mechanical contrivance to wash a batch of prints must be more or less violent in its action, or the prints will mass together in bunches, into which the water will not penetrate, so it seems as if we must either adopt some form of washing machine constructed on the "meat chopper" principle or go "back to nature," as it were, and tediously

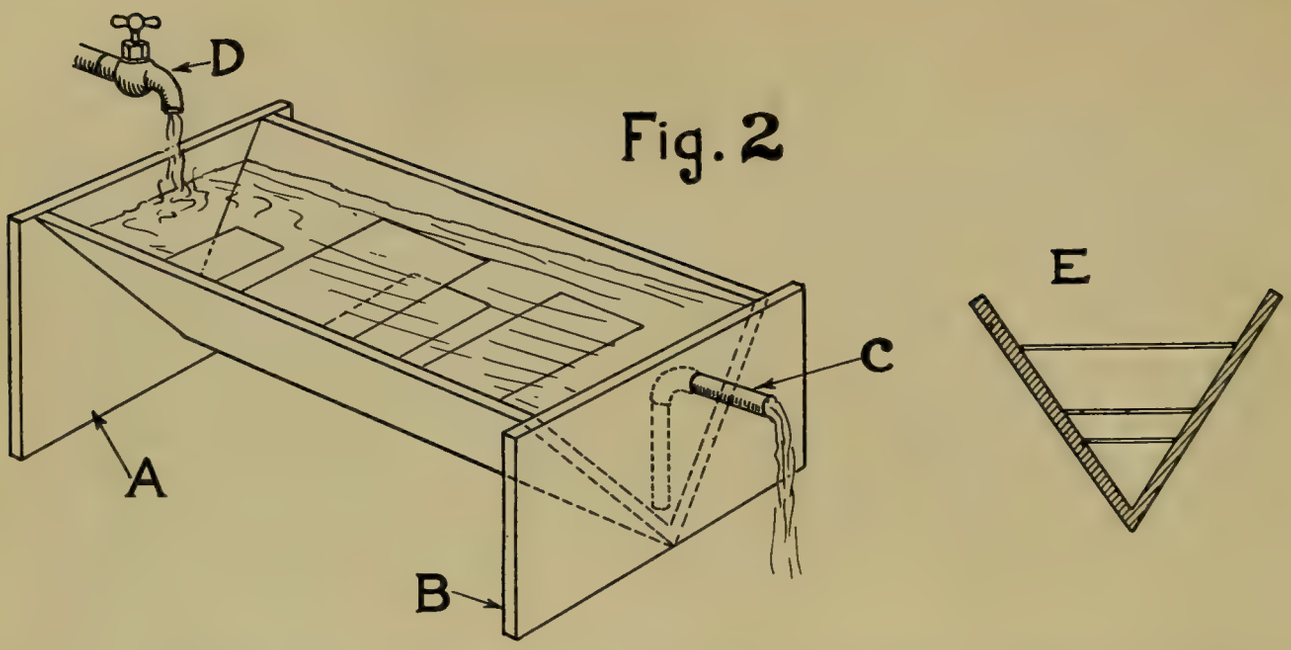


Fig. 2

Leg A is longer than B, so as to drain the trough toward the overflow pipe C. Water is admitted to the higher end of trough from faucet D. E is a section of trough showing several negatives in position, film side down.

pick up print after print as our grandfathers did, and as it now begins to look, perhaps our grandchildren will have the pleasure of doing.

For the washing of plates, the grooved washing box (see Fig. 1), made of zinc, or constructed of wood and painted with one of the several brands of asphalt varnish now on the market, will always be found simple and efficient. The inflow should be at the bottom, and sufficient to cause an overflow at all sides when tank is standing level. A grooved partition can be made, which will admit of dividing tank into smaller compartments, so that plates of all sizes can be used.

This box is practically the same as used by professionals everywhere, and the writer uses this form both for plates and paper, as he has found it more convenient to use nothing but double-weight papers, such as the extra heavy Velox, double weight Artura, and the like, any of which are stiff enough to be slid into the grooves like plates, and with a moderate supply of water will be found perfectly washed in less than half an hour.

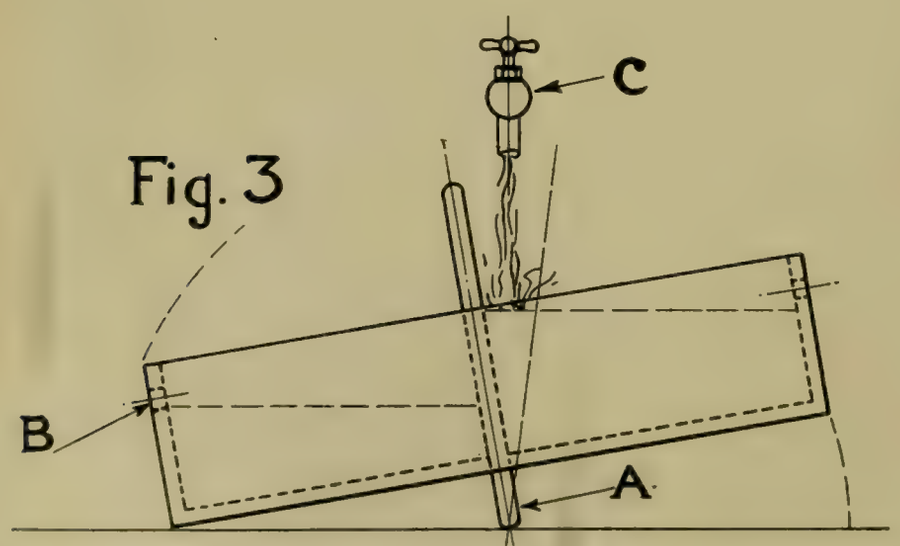


Fig. 3

Central partition A projects a few inches below the body of machine to form a leg on which the contrivance rocks. Water from faucet C will fill up one compartment until by its superior weight it falls, thus bringing the other side under the faucet. Some large holes at B allow escape of water, and prevent prints washing out over the top.

Another good washer for plates or very few prints is the superimposed tray form, where the water drips from the highest tray to the one beneath it, thence to the next lower, and so on until it flows out at the bottom. Each tray can contain a plate or a couple of prints, but for professional use, its capacity is too limited.

Where there is less water to waste and not many plates to wash at once, the old V washing trough is good, and is easily constructed (see Fig 2). Plates of various size can be placed face down in the position shown in the cut, a small stream of water is allowed to fall into the trough at one end, the chemicals will fall by gravity from the film, and after finding their way to the lowest part of tank will pass out of the overflow pipe.

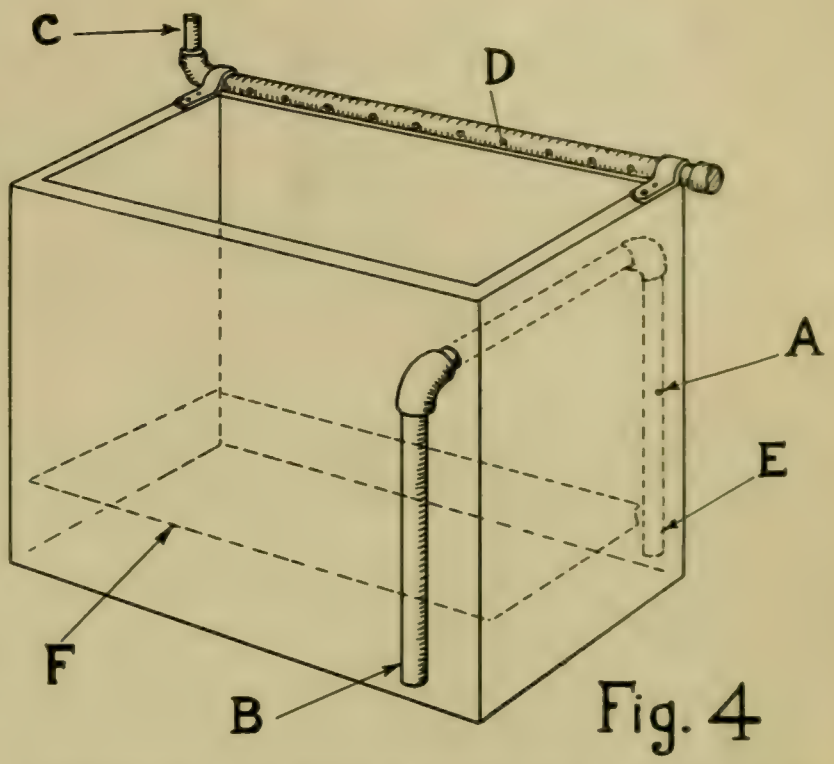


Fig. 4

Rubber hose from faucet is slipped over C. Holes "D" are turned to spray downward over the prints. Outer leg B of siphon should be as long as possible: can extend below the box to advantage. E: inner leg of siphon. A: air hole in same. F: false bottom, either a perforated zinc plate or a piece of galvanized wire netting, supported about three inches above bottom of tank.

If the water is turned in fast enough, the overflow will be over the sides of the tank as well as through the overflow pipe, but this is not necessary.

There are several styles of automatic tipping tanks made, which tip from side to side by the weight of the water; Fig. 3 shows a simple form, the construction explaining itself. Each time the machine tips it spills some of the water (and likewise a few of the prints unless it is carefully made) out of the compartments at either side, and thus gradually dilutes the solution of hypo until, when in the judgment of the owner of the contrivance, the hypo solution contained is sufficiently attenuated, the prints can be removed and dried.

There have been many attempts to use siphon to intermittently empty a washing tank, and the variety of arrangements possible are many. Fig. 4 shows a useful type; a hose from the faucet is connected to the pipe on top and the water is sprayed at the prints the full length of the tank, through the small holes shown in the pipe.

When the tank is full enough it will start the siphon B, which passes through the side of the tank, the inner leg projecting below the perforated, false bottom F. The siphon has a small air hole at A (this hole should be turned toward the side of the tank so that the prints will not obstruct it) which will stop the siphon when the water falls to this point.

This type of tank can be supplied with grooves for plates, or the plates may be placed in wire racks and lowered into the water; though it is not as good a tank for plates as the plain grooved box previously described (Fig. 1), as it allows plates to project from the water each time the siphon acts; but it is a very good box for films and prints.

In a siphon box it is essential that the siphon be large, so as to draw water from every part of the box and not form a small local current. But a very large siphon will not start unless the inflow of water into the tank is almost equal to the outflowing capacity of the siphon, which would result in too great a waste of water unless a simple float valve is used to open the end of siphon when the water reaches a certain height.

Supplementing Article on Shutter Testing

By W. C. Marley

Since the article on shutter tests appeared in the March "Camera Craft," several letters from readers have come to me. One of them, from Wm. H. Blacar, of Bangor, Maine, gives additional information on the subject, and suggests some easy methods of determining whether a lamp is being operated by continuous or alternating current. He says:

"I experimented along this line, and found that, by looking at the ground-glass, when swinging the camera across the light, I could see the line of dots plainly, owing to the fact that the retina retains the impressions of the light for some time. Further, I found that, when standing in front of the light in such a way that I could see the reflection of it in the concave lens of my spectacles, and then moving my head quickly, I got the same effect of a line of dots.

"Trying another plan, I found that by looking directly at the light a long distance away, and swinging my head rapidly, right and left, I got the same dotted-line result. I then found that if I took off my spectacles and moved them rapidly from side to side, or in a circle, keeping one lens between me and the light, I could see a line of dots."

He also notes that it is advisable, when making tests, not to fix the plates, but only to wash them well; the dots are better seen and counted against the opaque white background.

Some time ago, one of these stereo-slides, made by the electric-arc method, was circulated among the members of a stereoscopic club, and suggestions were invited as to what it represented, and how made. The guesses were very ingenious, and ranged from a "burning magnesium wire waved about in front of a camera," to a "powerful coil throwing out streams of sparks, in front of a camera." Only one man out of thirty struck the correct explanation.

The Photographic Novitiate

By George S. Smallwood

Illustrated by the Author

The purchaser of his first photographic outfit carries home his camera and the necessary paraphernalia with considerable pride in the thought that he is about to launch forth as the producer of pictures—pictures that will, no doubt, delight both himself and his friends. He fails to realize that there are a few pitfalls that will disclose themselves along his path to photographic success. Difficulties are liable to crop out at unexpected moments, and he

BROTHERS AND SISTERS

should understand that those who succeed are the ones that do not become discouraged at mistakes and failures, but turn them to advantage by learning a lesson from them. Even the advanced amateur and the skilled professional have their difficulties to overcome. It is all too common with the beginner to imagine that photography is so easy that all he has to do is to follow the instructions in the little book that goes with his camera. Excellent as are these little manuals, they must be made rather brief, and the best chosen words do not mean the same thing to all readers. The beginner should not feel above taking advice from an older worker. Much can be learned, and no little material saved, by making the first few exposures under the guidance of an experienced camera-user. Possibly you, my reader, have exposed a few films with poor success and lost interest in your camera.

POTTER—PALMER CASTLE

Perhaps your outfit has been stored away, despite your promise so confidently made to your best girl, that you would portray her with all her wealth of beauty and attractiveness. Try again, and I will see if I can help you with a few suggestions from my own experience.

Do not attempt to make a portrait with your subject in the open and the sun beating down upon her face. The best outdoor portraits are made in summertime, late in the day, say at 5 p. m. or later, on the east side of a house where there is enough shade so that the sun will not shine into the lens or on the sitter. If you are in the park or woods, adhere to the same rule and have your sitters in the shade and facing the north. In "Brothers and Sisters," which is reproduced herewith, you will notice that the light was screened out by the heavy foliage, the sun was low in the sky, and the top light was subdued by overhanging branches. The result is that good modeling was secured in the faces, although, of course, the arrangement of the group might have been improved upon. This was made four years ago with a 5x7 Bausch & Lomb rapid rectilinear lens, stop U. S. 32, one and one-half seconds exposure, on a Cramer Crown plate. Development was done with the pyro formula then recommended by the makers of the plate. The emulsion has since been changed and a smaller amount of alkali is now recommended.

Now, I would like to advise the beginner not to blame his lens, his plate, or any other part of his equipment, if results are not satisfactory.

THE SPEEDWAY

While some lenses are a little better than others, there are none that are bad. All of the plates on the market today will give good negatives if rightly used. Remember that it is the man behind the camera, and blame yourself when the pictures are not the desired kind. Use care and neatness in your work. To get good pictures the lighting must be right and the exposure fairly correct. Correct exposure will give density in the high lights of the negative that can be seen at the back of the plate when development is nearly completed. Under-exposure only skims the surface of the plate, and consequently there is almost clear glass in the less bright portions of the negative. If a negative turns out thin and lacking in detail in the shadows, throw it away and go to the same spot and make another exposure, giving about twice or three times as much time. You will then agree with me that it requires full time to secure detail in the shadows. Of course your developer must be about sixty-five or seventy degrees temperature and the room not more than seventy. Too warm a developer will give flatness as if the plate were over-exposed, and too cold a developer will give the characteristic hardness and lack of detail of under-exposure.

In making street views it is always best to use either the front or back combination of the lens alone if possible. The resultant pictures are much more pleasing on account of the longer focus employed and consequent less violent perspective. The two pictures herewith will illustrate the point. "Potter-Palmer Castle" was made with the back combination of a 5x7 lens, stop U. S. 32, two seconds exposure in good light. "The Speedway" was made with the full combination of only seven and one-half inches focus. The reader will notice the violent perspective of the last and also the apparent running together of the lines as they extend into the distance. In

IN JACKSON PARK

the first, the angle is less pronounced and the perspective correspondingly more pleasing.

"In Jackson Park" shows a type of subject that appeals very strongly to the beginner, and a view which he is almost certain to under-expose. Although this was made on a bright June day, an exposure of one second with stop 16, the shadows are not brought out as they should have been. A longer exposure could have been given and a better sky would have been secured. While a cloudless sky suits the subject, a little more color would have been better. The necessity for a longer exposure arises from the fact that the non-actinic green of the trees forms such an important part of the picture. The beginner fails to realize that most greens are the same as black to the photographic plate or film.

AT THE DERBY

WINNER OF THE DERBY

Just to show the reader that I am not a crank on long exposures, I introduce herewith a picture of a group of ladies at the American Derby. It was made with a Graflex camera, Plastigmat lens, one two-hundredth of a second exposure, light good but not strong. Here we did not require detail in the grass and trees, but only in the white dresses of the ladies. A longer exposure would have been better, but there was danger of motion showing. The companion picture is one that may interest some of my readers, as it is a portrait of Highball, the winner of the last American Derby at Chicago. It was made immediately after the finish, and shows Jockey Fuller in the saddle.

Welcome Visitors

A recent letter from H. Snowden Ward, editor of the "Photographic Monthly," of London, advises that he will visit this country, accompanied by Mrs. Ward, reaching here about the middle of December. The visit will combine business with pleasure, as they will give their several lectures, material for which they have spent over a dozen years in getting together. "The Land of Lorna Doone," "Chaucer and the Pilgrims' Ways," never having been delivered in this country. "Shakespeare at Home" and "The Real Dickens Land" we have had in the East, and appreciated fully. This time the trip will be extended to the Pacific Coast, as they desire to visit this section and enjoy the wonders which only the West can afford. We can bespeak for them a most hearty welcome and a full measure of appreciation, congratulating ourselves upon the opportunity that their visit will afford us to enjoy authoritative and conscientious productions, put forth by those who have a love for their work. Societies and the like writing us will be put in touch with either Mr. Ward or his agents here, as we will have full particulars about the time this comes before our readers.

Fifth American Salon

Just as we go to press the announcement of the Fifth American Photographic Salon comes to hand. As heretofore, entries from the Pacific Coast workers can be sent unframed to this office to be forwarded in one package. Our friends will attend to the framing of such as are accepted, and in this way a great deal of danger of damage to the prints will be avoided. Our sendings last year were well received, but we must do much better this time. Our shipment will go forward early in September, so that a further notice should not be depended upon to remind you of your obligations in the matter of helping the Coast to make a creditable showing.

Art in Portraiture

Read by Skene Lowe, at Seattle Convention, P. A. of P. N. W.

Mr. Chairman, Ladies and Gentlemen: At previous conventions that I have attended, there were among the younger members a number who, from the fact that they had no definite knowledge as to what constituted Art, found themselves unable to understand and properly apply the various remarks that they heard passed on the pictures there displayed. It is to aid these that this paper has been written; not to aid them to produce works of Art, but to help them to understand and appreciate Art when they see it. To this end I will give a definition of Art in general; apply it to portraiture, and finally by showing some prints, illustrate what I mean.

To begin with, let it be clearly understood that I have no wish to dogmatize. In Art, no person has that privilege, be he a Tolstoi, a Carlyle, or a Ruskin. You have a perfect right to believe anything you like, but in Art, as in every other field of applied knowledge that is not based on facts that can be demonstrated, you must ratiocinate from some fundamental idea or theory that is consistent with all that you do know of the subject. If you do that—that is, if you reason from some fundamental idea—something that appeals to your common sense, you will have no difficulty in giving an intelligible exposition of any beliefs that you may hold or express.

Art, like language, may be defined as a means of communication. By Art, we endeavor to communicate, or transfer, our feelings to others; by language, our thoughts. These are the purposes they serve. Each form of Art has its own medium of communication; that is, its own mode of attaining the end aimed at, viz., the transfer of feeling. The sculptor achieves this by means of carved or moulded masses; the painter, by lines and colors; and the photographer, by various degrees of light and dark.

Usually the feelings one wishes to communicate, or share with others, are pleasant ones, feelings that have been experienced as a result of something seen, or imagined, and usually connected with that which is beautiful or good. Such feelings as are stirred by a glorious sunset, the graceful outlines and delicate coloring of women and children, and the moral worth and intelligence of men and women of mature years. If by any means at your command you can produce something that will recall to yourself, and produce in the minds of others the feelings you have felt as a result of viewing any of these forms of beauty, the result will be Art. The appreciation of some forms of beauty is intuitive, while of others it is the result of life and its experience. The appreciation of a beautiful sunset is inborn, but admiration for character as shown in the face of an old man is the result of what we know, and therefore is intellectual.

In portraiture we deal with many different forms of beauty. A portrait possessing art value implies on the part of the artist, the "seeing eye," an eye to see and appreciate beauty, an art impulse—that is, a desire to share its enjoyment with others, combined with the technical knowledge and skill which enable him to produce that which will appeal to others and affect their

PORTRAIT STUDY
By R. S. KAUFMAN

sensibilities as his own feelings were appealed to and affected. Art in portraiture may then be defined as the production of an image, suggesting qualities, mental, moral or physical, qualities such as the world values and admires, to the end that others may experience and enjoy the same feelings that the artist has himself felt and enjoyed. That is the aim of Art in portraiture. All else is technique. Technique may be defined as the means by which we clearly, orderly and agreeably express what we want to say. Keep clearly and distinctly in mind the difference between the end and the means, between the transfer of feeling and the technics by which it is accomplished, and you will find no difficulty in understanding and placing a proper value on portraits, as far as your appreciation and knowledge of aesthetic beauty, and of life and character, will permit.

Do not fall into the error of supposing that Art is dependent upon technique, for if that were the case it would be but for the very few, a mere handful in each community, shutting out from its appreciation and enjoyment the great mass of what Lincoln called the "plain people." I warn you, because this error is a very common one, both in technical bodies such as this, amongst critics—so called—and with many picture lovers.

Good technique in Art is not different from good technique in business. It is merely the application of good means or methods in the achievement of the end aimed at; in Art, the transfer of feeling, and in business, success; they are judged by the same standards—by the measure of success achieved. There is no formula for Art, any more than there is a formula for business success. In each there are some more or less elastic rules for clearly, pleasantly or economically achieving the end, but admiration of the methods employed in an unprofitable business would be the same as admiration expended on the composition, lighting, and the like, of a portrait that conveyed no feeling to the beholder. I will illustrate the distinction between the end and the means, by a few words on criticism.

There are two kinds of criticism: constructive and destructive. Constructive, or true criticism, is appreciative. That is, it appreciates and values the feelings stirred by a work of Art, and often goes farther by showing how this or that technical quality, or accessory, contributes to the bringing out of such feeling. This form of criticism is silent when the feelings are not stirred, as it thoroughly realizes that Art is not technique. Destructive criticism is merely technical, and deals with Art as though it were a kind of play, or puzzle, that should be put together by a set of rules, while ignoring or overlooking the true end and aim of Art, the communication of feeling. I will now quote a great critic and thinker with regard to appreciation and criticism: "You will hear numberless expressions relating to the skill of the artist. Hundreds will be voluble for one that will be silent with delight. The skill of the artist and the perfection of his Art are never proven until both are forgotten. The feelings are but feebly touched if they permit us to reason on the methods employed." That paragraph contains an Art creed, and those to whom this paper is addressed can hardly do better than commit it to memory.

To further illustrate the difference between appreciation of the end aimed at and technical criticism, I will relate two incidents that came under my

INCENSE By A. W. RICE

notice. Their beauty consists in their unconsciousness. A girl of fourteen who was looking at a few pictures that had been selected for a special purpose, was asked which one she liked best. She pointed to the head of an old man, and said, "That one." Asked why, after a moment's hesitation, she replied, "Because he looks like a good man." That was true criticism because it was appreciative. Here is the limit in destructive and technical criticism: A boy who was employed in the mounting and spotting department of a large studio, was noticed by his employer, looking at the door display of a small gallery a few doors down the street. On his return he was chaffingly asked what he thought of the pictures. He promptly answered, "Gee! but you ought to see them; the spotting is something fierce!" There is also that other form of criticism that is swayed by some particular fad or fashion of the moment. At a previous convention, I drew the attention of a passing member to a portrait in low tone; one of the best it has ever been my good fortune to see. He glanced in the direction indicated and then passed on with the remark, "Oh! these low-toned portraits don't go any more." As I was not up in the fashions of the time, it left me with nothing to say, but it did not prevent me from continuing to admire the beautiful head, in spite of its low tone, nor did it prevent me from envying the skill of the man who had produced that beautiful work of Art.

I said that there is no formula for Art; but here is a quotation that almost amounts to such, for portraiture: "Out of Nature, one should always grasp and hold fast but one thing—the head—that this exponent of the soul must stand out in undisturbed unity; that accessories of whatever kind, whether of dress or form, must distract and weaken the effect that the head should produce; that a portrait, to attain its aim and significance, must look out from a background of nothingness, and must be shorn of every detail that interferes with the unity of purpose." You are not to think that I believe that this is the only method in portraiture; I hope it is not. But, it is an accurate description of all the very best photographic portraits that I have seen, and also, of many portraits by eminent painters.

Here is another quotation that bears on the same idea, and refers to Gainsborough as a portrait painter: "It is to the human countenance that he gives all his attention. He shows us not only the model, but the very soul of the model." I quote again, to show how a portrait should be viewed: "If a portrait, even of an unknown person, be really his living image, that is enough. The soul that looks out of the eyes arrests us as we pass—and that, unknown—to whom a few moments since we were absolutely indifferent, becomes an object of interest. Handsome, or ugly, that is not the question. That simple bust and motionless head commands our attention. We are captivated by a spectacle that always claims recognition—the spectacle of life."

I shall now read a few short quotations taken at random—to show the essential elements of a portrait.

"Expression; the vision we get of the heart, the soul and mind behind the mask of the features."

"The face, the mortal habitation of an immortal soul."

"As though we saw a living mind look out at us."

I could go on and give quotations without end, and all to the same effect; that the human element is what is aimed at. But enough has been given to show what these men held with regard to Art in portraiture. That it consists of the feelings associated with life and character as depicted on the human countenance, and that every means at command should be bent to the rendition of them in such a manner that others may be impressed by the same feelings as the artist, and share them with him.

I would remind you that this paper has nothing to do with "business" or with "bread-and-butter" photography. It is merely an endeavor to give you a slight idea of what constitutes Art in general, and portraiture in particular. And the object is that you may have an added pleasure in life through appreciation of life, beauty, and character, as depicted in Art.

In conclusion, a word of warning and advice. Be slow to condemn. You may not understand, may not "catch the spirit"; but if you do see and appreciate, do not be backward in expressing your appreciation. In Art, as in everything else, think for yourself, but be sure that you reason from fundamental facts or ideas. Take nothing on authority, whether it be the authority of a single person, or body of men, unless it appeals to your reason, and is consistent with your own life experience.

A Three Color Multiply-Gum Process

By H. E. Blackburn

This or a very similar process is patented under the name of Solgram. Patent No. 769,773 of September 13th, 1904. The Solgram Color Photo Company of Dowington, Pennsylvania, will be pleased to send information concerning their process.

In no other photographic process is there to be found the same wide field for experimenting in the utilization of color, both in the paper support and in the picture-forming image, as is found in the process based upon the use of bichromated coatings containing pigments. Few, if any, interested in color work would begrudge the time required for the carrying out of considerable experimental work; but not all of us are endowed with a length of purse that will permit of continued experiments in carbon and like expensive processes. In addition, many workers are somewhat skeptical as to the possibility of producing satisfactory results in colors. There are, for these reasons, many who can only be tempted to take up this most interesting line of work by being assured that they can use a process that is both simple and inexpensive. The writer hopes, by describing his own methods of working a simple process in which the necessary materials are within the reach of all, to interest others in a line of photographic work which he has found of absorbing interest.

Most of the instructions given concerning gum-bichromate work are rather misleading and complicated. One of the writer's friends had his first gum print hung in the second Chicago salon, and he made it after being told that all that was required was a teaspoonful of lampblack, another of mucilage, and a quarter of a teaspoonful of a saturated solution of bichromate of potassium, applied to the paper with a brush, working first in one direction and then crossing in another. The beginner is too often confused with an array of sensitizing baths, brushes, blenders, special actinometers and the like. Besides this, he has a well-grounded belief that the satisfactory coating of the paper is well-nigh impossible, except in a well-equipped factory. However, by the aid of a suitable air brush or sprayer, the worker can dispense with much of the equipment and skill demanded by the books, and, at the same time, produce even better results.

The many grades of sized but unruled heavy papers, that are sold in tablet form at a nominal price by the book and stationery stores, are very suitable, and they offer a wide choice in the matter of tints and surfaces. Much of the character of the print depends upon the paper used. A coarse grain is best suited for large work or for broad, sketchy effects, while smooth matt is better adapted to small prints or subjects in which fine detail plays an important part. The most generally useful paper is a good quality of heavy white, with a medium grain surface, such as will give about the effect of a fine halftone screen. The "Meteor" drawing paper, No. 3067, sold by F. Weber & Company, 1812 Chestnut Street, Philadelphia, at twenty-five cents a pound, is particularly well adapted to the work. If one desires to use

some particular paper that is unsuitable through lack of the proper sizing, a good size that is always ready for use can be made as follows:

Gelatine. . . . . 220 grains
Acetic acid. . . . . 70 drops
Wood alcohol . . . . . 26 ounces

The gelatine should be swelled in a little water, and, when it will take up no more, melted by applying gentle heat. The use of wood alcohol preserves the solution in a liquid form.

A set of three-color negatives will be required. These can be easily made with the ordinary camera and equipment, if a still subject is selected. Burke & James, of Chicago, supply an excellent set of three-color filters, and one will require a good panchromatic plate. As a guide to exposures: Working indoors by reflected sunlight with a good lens at f-16, it was found that an ordinary plate, without filter, required four seconds. Using panchromatic plates and filters, it was found that the same subject and light required, through the blue filter, twenty seconds; through the green filter, ninety seconds, and through the red filter, three hundred seconds. Including some small, white object in the view, its image will act as a guide during development, and it will only be necessary to secure the same amount of density in that particular portion of each negative. Without some such guide the beginner is inclined to try to get all three of the negatives of about the same strength. It is obvious that the three negatives may vary greatly, depending upon the proportion of the different colors shown in the view. As an example, if the subject be one in which the blues, greens and yellows predominate, the red negative made through the green filter will be much more dense than either of the other two.

The red printing is done from the negative made through the green filter, using Madder Lake R pigment, supplied by Chas. Helmuth, of New York. The blue print is from the red filter negative and is made by printing in ordinary ferro-prussiate solution. The yellow printing is done in chrome yellow pigment under the blue filter negative. Both pigments are supplied by Charles Helmuth, 154 West Eighteenth Street, New York City. Directions for making and applying the coatings will be given further along.

There are numerous air brushes and sprayers on the market, many of them requiring a large volume of air under a high pressure. The new Walkup sprayer air brush, made by the Air Brush Company, of Rockford, Illinois, I have found the best suited to the coating of paper with the necessary solutions of pigment and gum. It covers the largest amount of surface, using the smallest amount of air pressure; it is compact, uses no needle, and has no delicate parts to become disarranged. In fact, it is an all-around useful tool that the worker will not wish to part with after having once used it in his photographic work. Air pressure can be secured by pumping into a ten-gallon galvanized oil tank with a bicycle pump. If more pressure is needed, an automobile tire pump and a stronger tank, such as is employed for hot water boilers in bath rooms, may be employed. The tank should be fitted with pipe connections and valves for a small hose or rubber tubing, but this is easily done by any tinner. A pressure of twenty-five pounds is all that is required, and any ordinary can will stand that amount.

The air passes from this tank through a length of rubber hose or tubing to the spraying head which is screwed upon the bottle containing the color mixture. A finger lever, that works like a pistol grip, admits the air; and, as the color emerges from the nozzle of the sprayer, it is projected in the form of a wide stream of thin mist which dries as it strikes the surface of the paper. Extra bottles can be used if desired, so that one has only to change the sprayer top from one color to another.

The paper is first made light-sensitive by immersing it for three minutes in a solution composed of one ounce of C. P. bichromate of potassium dissolved in twenty ounces of water. If mixed in a jug and kept in a cool place, this solution does not deteriorate. This could, of course, be sprayed upon the paper, but there is some danger of irritation being caused by the inhalation of the chemical. As the sheets are immersed one by one, they should be turned over a few times to remove any possible air bubbles. Lift them out one by one, drain, and then pin up to dry in a well-ventilated room, using only a weak artificial light, such as that from an ordinary oil lamp. When dry, the sheets should be protected from any stronger light and kept under pressure until wanted for use. An ordinary printing frame, fitted with an old negative and a sheet of black paper, is good for this purpose.

It is almost impossible to give definite instructions for the mixing of the gum and pigments, as they vary somewhat in strength. The only safe rule is this: If the color washes out too freely in developing the print, it is a sign that too much gum has been used; and if the high lights do not wash out clear, too much color has been employed. This is, of course, providing the exposure has been correct.

To make the coating for the red print, grind one hundred and fifty grains of the Madder Lake R in one ounce of gum solution. This last is made by dissolving five hundred and forty grains of the best pure gum arabic in tears in six ounces of cool water. Allow to stand two days and label "stock gum solution." When the pigment and gum solutions are thoroughly mixed, strain through muslin, and put the mixed solutions in the sprayer bottle. With twenty or twenty-five pounds air pressure in the tank, screw the sprayer head on the bottle and connect up the tubing. Take a sheet of the paper that has already been sensitized in the bichromate bath, pin it to a clean board, and lay it on the table. Try the sprayer on a piece of waste paper to see that it is working properly, and then go over the surface of the sensitized sheet, remembering that it must not be exposed to strong light until being printed. Hold the sprayer or air brush at an angle of forty-five degrees and about fifteen inches from the paper. Apply the coating as evenly as possible until it is as dark as will be required in the darkest part of the print. If too much is applied the coating will come off in patches during development.

When dry, print under the green filter negative until the image is clearly defined. Then place in a tray of cool water, face downward, turning occasionally to avoid air bubbles. Never scrub or lave the print to hasten development, but let the color soak out unassisted. If the color at the margin where the paper was protected by the rebate of the printing frame does not wash out clear in fifteen minutes, the paper has been kept too

long or too much color in proportion to the gum solution was used. On the other hand, if the picture washes out too much all over, it indicates under-exposure. Beginners generally make the mistake of getting the red print too dark. A pink shade is about all that is required except in the case of subjects abounding in reds. When the image is well defined, drain the print and hang it up to dry.

This red print is next sensitized with a blue print solution made by mixing èqual parts of the two following:

A.

Red prussiate of potash	120	grains
Water, cool	1½	ounces

B.

Green citrate of iron and ammonia	150	grains
Water	1½	ounces

The red prussiate of potash crystals should be kept in a well-corked amber bottle, and the crystals washed clear before being used in making up the solution. The A solution should be kept in the same kind of a bottle. The green scale form only of the citrate should be used, and both the chemical and the solution kept in the dark and well stoppered. To each ounce of the mixed A and B solutions add about a drachm of the stock gum solution and apply to the red print. To do this use a brush made by bending a piece of heavy celluloid, as wide as the print, into U shape, cover it with a piece of satin and brush both ways until paper is well covered. Work in artificial light; and, when dry, which will be almost immediately, place print in printing frame in perfect register with the red filter negative, and print as for a strong blue print. Develop this blue print by washing in cool water for at least half an hour. If the print has been over-exposed and does not wash out properly, add a little bicarbonate of soda to the bath. If it proves to be under-exposed, dry and recoat with the blue solution for a second printing.

This resultant red-blue print must now be again sensitized in the bichromate bath and again dried with the same precautions against exposure to too strong light. It is then ready for the last or yellow coating, made by grinding two hundred grains of chrome yellow with one ounce of the gum solution. Well ground, it is then filtered into the sprayer bottle and the paper coated as before. When dry, it is printed in register under the last or blue filter negative, until the image is bronzed in the shadows. Development is the same as in the case of the first or red printing, except that it is followed by a few minutes' immersion in a five per cent solution of alum to remove all traces of bichromate and harden the print.

If everything has gone well, as it should even at the first trial, the result will be a print closely resembling a water color painting in its effect. This is the most simple and inexpensive process of three-color work in use today; and, with a set of three-color negatives, the production of pleasing color prints can be carried forward very rapidly and with very little waste of time or material.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, JULY, 1908. No. 7

The Convention at Vancouver Washington

The photographers of the Coast and the Pacific Northwest should spare no pains to visit Vancouver, Washington, at the time of the coming Eighth Annual Convention of the Photographers' Association of the Pacific Northwest. The dates selected are August 18th, 19th, 20th, 21st, and 22nd. It will be the crowning success of a series of successes, and all those who are in attendance will be well repaid for the small sacrifice of time and money. The trip is an ideal one from any part of the tributary territory; the officers have spared no pains in their preliminary work; the manufacturers are putting forth their best efforts, as they know this to be one of the most important Conventions of the year, and this "Eighth Annual" is simply bound to be a great success. Any desired information can be secured from the Secretary, W. G. Emery, 601½ Main Street, Vancouver, Washington.

The New Catalogues

This is the season of the year when the catalogue blossoms out in all its glory of new cuts and tasty typographical arrangement to set forth the merits of the new goods. Our readers should send for them, send for them at once, and send for every one mentioned that will stand any chance of interesting them. Many contain much that is of great educational value aside from information concerning the goods exploited. They will all be found extremely interesting and well worth the small trouble of asking for them. Put a few postage stamps to good use and find out what is being done to make the work of the photographer more certain and successful. You will thank us for the suggestion.

The Royal Exhibition

The prospectus of the fifty-third annual exhibition of the Royal Photographic Society of Great Britain is to hand. The exhibition opens September 17th and closes October 24th. All exhibits must be framed and delivered to the society's agents, Bradley & Company, 81 Charlotte Street, Fitzroy Square, West, London, before September 1st. As heretofore, we will be pleased to forward unframed pictures for any of our friends, and as in former cases, imposing upon the kindness of H. Snowden Ward in the matter of

having them framed simply, and submitted either to the Royal or the Linked Ring. This gives Mr. Ward an opportunity of selecting such of our work as he may desire to reproduce in his excellent annual, "Photograms of the Year."

The Genial T. W. Pattison is no more

It is with the deepest regret that we learn of the death of T. W. Pattison, General Manager of the American Aristotype Company, of Jamestown, New York. He passed away Sunday, June 21st, at the home of Don R. Almy, Riverside Drive, New York City; heart disease being the cause. He leaves a host of friends, as he was loved and respected by all who knew him. His circle of acquaintances was a very large one, and we join them, as well as those who through ties of blood held him even more dear, in expressing in our inadequate way the sorrow that his loss has brought upon us all.

From what we are "Hearing" we are "Nearing" our end

Our readers will kindly forgive us for neglecting our friend of bargain lens fame last month. The latest advice is to the effect that our job lot Uncle will start a photographic magazine that will put "Camera Craft" out of business. A recent enclosure to one of our subscribers says: "Mr. Clute is running a trust owned magazine, and those people do not stop at anything to wipe out an anti-trust manufacturer who is endeavoring to furnish an honest article at an honest price, and we trust that you will help us in our fight against the trust." This lens trust certainly should be looked into. Why place your trust in a name that is backed up by a well earned reputation? Why is not a piece of glass mounted in brass and stamped "Hens Earring" just as useful for taking photographs as a higher priced article bearing the name of some reputable lens manufacturer? Here is a letter from a man who thinks it is. He writes:

"Camera Craft," Gentlemen:

> I took your paper last year and was pleased with it, but was sory to hear you was in favor of Trusts. I have 2 of ..... lenses and they are good, i a nother made by a trust that is not so good If i had not found out you was in favor of trusts i wold have sent four your paper instead of a rebuque to you but we must part.
>
> Yours Truly,"

The gentleman's name and address is omitted for obvious reasons, but we believe such self-evident sincerity of belief should have the publicity that its rarity of diction merits. We of course regret the loss of one of our subscribers, but as we put over eight hundred new names on our subscription list last month, in addition to renewing a few of our old subscribers who had not yet heard of the promised new magazine, we have tried to bear up under the weight of this rather heavy and ponderous "rebuque."

PHOTOGRAPHIC DIGEST

Communications Concerning this Department
Should be Addressed to its Editor.

Edited by
H. D'ARCY POWER, M. D.
Burlingame, California.

COLOR PHOTOGRAPHY.

The past month shows little to report. There are rumors of more competitors to the autochrome plate, but like the Powrie-Warner, Krayn, and omnicolor plates, their success is still latent in the vivid imagination of their friends, but they seem to remain discretely out of the arena of commercial competition.

The Lumieres have published the results of a new set of investigations concerning the use of pyro-ammonia on a time basis, and give directions whereby the use of a diluted developer to determine the appearance of image time, a total development time can be ascertained and carried out by a developer specially modified in its proportions for the given case.

Exhibitions of autochrome plates are now becoming common and popular in Europe, and as these take place at night, the illumination of the transparencies becomes a matter of importance. It so happens that the most available illuminant, namely, the incandescent electric light, is extremely rich in red and yellow rays, and the coloring of a transparency so illuminated is greatly altered, and often spoiled. To obviate this it has been found advantageous to interpose a screen of light blue glass. Personally I make such a screen by dissolving the silver out of a dry plate, washing, drying, and then immersing it in a weak solution of methylene blue. Another method is to use acetylene as the illuminant.

Among modifications of technique, Mr. Rawlins, writing in the "British Journal of Photography," advocates the use of a five per cent solution of ammonium persulphate in place of the acid permanganate bath as a reverser. As this is sold in tabloid form, it is convenient for developing autochromes when on a tour.

Dr. W. Scheffer, writing in "Photographische Rundschau," points out that if an autochrome is soaked for several days in xytol, the glass will separate from the attached starch film and its superimposed emulsion; so that in this way the colored image may be obtained in film form.

The subject of exposure receives some help from the experiences of M. Courtellemont, who has had great success with sunsets. He says: "With the sun still visible above the horizon, an exposure of four seconds was sufficient; immediately after the disappearance of the disc of the sun twenty-five to thirty seconds was necessary; half an hour later the quite different aspect of the sunset required fifty to seventy-five seconds; and still later, when night had almost fallen, and there remained only the soft mauve light, an exposure of from four to five minutes gave an extremely good rendering." The aperture was not given, but is supposedly f-4.6.

TRI-COLOR HELIOCHROMY.

Two-color heliochromy, a simplification of Ducos du Hauron's three-color system, although many times studied and discussed from an experimental standpoint, has been almost entirely neglected by the every-day worker with the camera, but Mr. G. A. Smith's recent exhibition of two-color cinematograph subjects should serve to make the average amateur realize the possibilities of the method. A remarkably easy method of working the two-color process, whether for ordinary effect or for stereoscopic effect, is that recommended between three and four years ago by L'Abbé Graby. Two negatives of the subject are taken, one under a blue screen and the other under an orange screen, a stereoscopic camera being used if stereoscopic effect is desired. The negative taken under the orange screen is printed on ferro-prussiate paper, and the blue print thus obtained forms one element of the combination. The second color element is an orange print from the negative taken under the blue screen. This orange print may be

an impression in gum-bichromate made over or on the blue print, or it may be a film transparency made by any one of the many methods available, and laid or cemented in position. For stereoscopic effect the orange print may be a suitably toned silver print, and in this case the two prints are mounted side by side.—Photographic News.

A PAPER THAT GIVES GREEN PRINTS.

It is said that a paper which will give green prints may be made by coating ordinary paper with a two per cent solution of gelatine. The sensitive is:

Potassium bichromate.....15 grains
Magnesium sulphate.....25 grains
Water ..... 1 ounce

This mixture is spread over the paper in the usual way, and the paper dried in the dark. Printing is carried rather far. The print is washed, then surface dried or blotted off on a pad and laid film upwards on a sheet of glass, and the following developer is applied with a wad of cotton wool wrung out:

Pyrocatechin .....5 grains
Water .....1 ounce

The picture assumes a rich green color when developed, and is then washed for five or ten minutes and dried quickly by heat.—Photography.

AN IMPROVED SYSTEM OF MOUNTING.

That a mounted photograph should be flat, and without curl or cockle, writes Nelson K. Cherrill in "The Photographic Monthly," is an absolute desideratum. "Nothing is more destructive of pictorial illusion than unevenness of surface; so much so that the most distressing fate which can befall a really fine print is to get pasted in an album, where, in the general run of things, it will ruin itself and disfigure the book by giving a persistent warp or curl to the page on which it is stuck. Every kind of mountant in ordinary use is prepared with an aqueous solvent, the moisture from which is the cause of all the difficulty of flat mounting, as no means have yet been discovered of exactly balancing the expansion and contraction of the picture and its mount. The process I am about to describe is carried out with a non-aqueous solvent, so that it has no tendency to cockle even the thinnest mount. It requires no heat and only a moderate pressure, so that it is equally applicable to mounting in a book or on separate sheets. The manipulation is also exceedingly simple. It is as follows: Coat the back of the dry (and preferably untrimmed) print with shellac varnish, which is merely a solution of shellac in methylated spirits. When the varnish is dry, the print may be mounted at once or at any future time. To mount it, all that is necessary is to rub over the surface to which it is to adhere with a small quantity of a mixture of acetone and alcohol, and to apply the print at once with a firm pressure which extends all over the surface. In two minutes the solvents will be dissipated, and the mounting complete. Anything of its kind more simple or easy of execution it is difficult to imagine."

CONVERTING THE NEGATIVE INTO A STAINED POSITIVE TRANSPARENCY.

Dr. Niewenglowski, writing in "La Photografia Artistica," discusses the question of dissolving away the darkened portions of an ordinary gelatino-bromide negative so that a reverse or a relief of plain gelatine is left on the glass, and this relief when stained forms a positive transparency, there being, as in all staining methods, a wide choice of colors; at any rate, if questions of a high degree of stability, or great fastness against fading in the light, are not considered essential. The method is based, as Dr. Niewenglowski points out, on experiments made by Dr. Liesegang about eleven years ago. The negative is first immersed in a saturated aqueous solution of ammonium persulphate, which has been allowed to remain for a fortnight in an open bottle. In this strong solution the image bleaches out in a few minutes, after which the plate is removed, rinsed moderately under the tap, and the wet surface is then gently rubbed with the hand, a procedure which rapidly removes the gelatine from those portions of the film which were originally opaque, and soon a positive relief, consisting of colorless gelatine, is obtained. This may be stained in an aniline dye solution, or a pigment may be deposited in the gelatine by double decomposition. For example,

the plate may be soaked first in a five per cent solution of potassium ferrocyanide, and after blotting off, it is immersed in a five per cent solution of uranium nitrate, this giving a rich warm red tone. A Prussian blue color may be obtained by the use of a solution of ferric chloride after the saturation with potassium ferrocyanide. Negatives intended for treatment by the above described process ought not to be developed by pyrogallic acid, as this tends to make the gelatine somewhat insoluble. Hydroquinone and amidol are suitable.

FLAT OIL PRINTS.

I have recently been asked by a subscriber concerning flatness in oil and bromoil prints. Some time ago I spoke of the influence of rapid drying in this respect, but the "British Journal of Photography," in the following statement, shows how another factor is often present:

"Our own experience has convinced us that low temperature is a far more serious cause of flat results than too rapid drying of the pad, therefore we should like to impress upon our readers the importance of using only solutions and water of a normal temperature. We perhaps had better also caution them that the remedy must not be overdone. Solutions of seventy degrees Fahr. and over are too warm to be used with safety. A temperature of sixty-five degrees is a good average, but when the 'bromoil' process is attempted on very rough papers coated with a soft gelatine emulsion, a temperature of about sixty degrees is advisable. In fact, some of these papers require an even lower temperature as the gelatine readily becomes too soft. We have been informed that one brand of paper works well during this weather when treated with quite cold solutions, though in August last it was quite useless, as the gelatine came away under the brush. This is, however, a very exceptional case, and the papers in most general use work best when the temperature of the water is kept between the limits of sixty and sixty-five degrees.

"There is no trouble involved in the use of water of a proper temperature. In the oil process we can wash out the bichromate and soak the print in several changes of water supplied from a jug just as readily as we can in water drawn from the tap. In the 'bromoil' process we can mix the bleaching solution with warm water, and make the hypo bath by diluting a strong stock solution with warm water. The hypo can then be removed quite sufficiently by six changes of water at sixty-five degrees, if the print is allowed to soak for about three minutes in each change. The acid solution is naturally warm if freshly mixed, and generally has to be cooled down to sixty-five degrees by allowing it to stand in the dish. We also soak the pad in warm water before pigmenting, as there are reasons for suspecting that the non-image in a print in perfect condition for pigmenting loses a little of its power of repelling the pigment if cooled down by immersion in cold water or by contact with a cold pad."

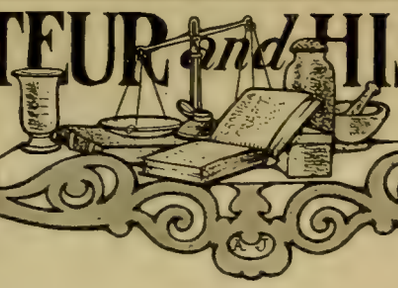
INCREASING THE KEEPING QUALITY OF SENSITIZED CARBON

Dr. Hauberrizer (in the "Photographische Welt") describes various experiments on the above subject. Among others of practical importance he states that sensitized tissue, if stored in a vessel containing moist ammonia vapor, will remain in good condition for weeks. Further, that if in place of ammonia vapor lumps of ammonium carbonate be used, the tissue, while remaining soluble in warm water, loses its sensitiveness to light and can not be printed. On the other hand, if it be exposed in the dark room for half a day, it will regain its sensitiveness and give good, easily developable prints.

PHOTOGRAPHING THE BABY.

Frederick Pohle, of Buffalo, has, in a large measure, solved the problem of making baby conform to all the requirements of the photographer. He has invented a peculiar mechanical device invisible to the eye, for holding babies in any desired position to assist in making perfectly natural postures. His invention is a decidedly interesting feature of the big exhibit in connection with the last convention of the Photographers' Association of America. Besides being an inventor of genius, and of whom a great deal is expected, Mr. Pohle is the proprietor of studios in Buffalo and West Seneca, New York. His simple device is for sale by all live dealers, or will be mailed direct by the Pohle-Werner Manufacturing Company, 9 West Chippewa Street, Buffalo, New York.

The AMATEUR and HIS TROUBLES



Conducted by
FAYETTE J. CLUTE

AN EXCELLENT TONING BATH.

One of our Canadian subscribers, David P. Kane, of Kaslo, in a recent letter in which he enclosed some excellent prints of a very rich, fine tone, writes as follows:

In a recent issue of "Camera Craft," I noticed an article, "Toning a Single Print," and note the formula given for it. I think I have a better one which I have used for some years. Make up two solutions:

No. 1.

Sulphocyanide of ammonium...	9 drachms
Hypo	3 pounds
Nitrate of lead	4 grains
Water	120 ounces

No. 2.

Chloride of gold.....	15 grains
Water, distilled	15 ounces

Gold and sodium can be substituted, but double the quantity must be used.

The chemicals in No. 1 solution should each be dissolved separately in hot water and then poured one into the other in the order named. The nitrate of lead solution should be poured into the combined hypo and sulphocyanide very slowly, stirring all the time. After all are together the solution should be allowed to stand for twenty-four hours, to settle, as it sometimes has a dark, lead-colored appearance after mixing; but not always, as it quite often mixes up clear. However, the dark color does no harm, as it will all settle in a sediment at the bottom where it should be left, pouring off the top as wanted for use.

To tone with this, take twenty ounces of No. 1, one ounce of No. 2 and twenty ounces of water, making forty ounces of bath. It can, of course, be made up in smaller proportions. After the first batch of prints have been toned, preserve the used bath in a separate bottle. It keeps indefinitely, and when another batch of prints is ready to tone, make up a new bath for half of what is wanted, and use the other half of the old, pouring off from the top and throw away the remainder which contains the silver settlings. You can keep on doing this for all time, as the bath improves with age. It will become a dirty mud color, resembling water in a road mud-puddle, but this does no harm in the least, as the tones will come out clear and brilliant. The temperature does not matter much, except that the bath works faster when warm. It never bleaches the prints at the edges or tones uneven. A child can do the toning without danger of spoiling prints from one being on top of another for a part of the time, and if a portion of the print does get toned a little ahead of the balance, it will all come out the same. One can regulate the shades of brown or purple by making stronger or weaker in gold. The stronger it is in gold, the more purple the print. The tones are as permanent as it is possible to get them. I have prints fifteen years old that are as brilliant as the day they were toned.

The advantage this bath would have over the one you printed lies in the fact that to tone a single print all that would be necessary would be to pour out enough of the old bath and use it just as it was, for there would always be enough gold in it to tone a print or two, and as it keeps, it would be always ready. I have used this bath in this way for years for all gelatine papers and for obtaining sepia tones on Aristo Platino. After prints are toned, they should be put into a bath of alum water for a few minutes, about one or two ounces saturated solution to thirty ounces water.

The reason for using half old and half new for large batches of prints is that by so doing one does not exhaust the hypo; but for a few prints the old can be used alone. The usual washing is required after the alum bath, as it is only used for hardening. I very often neglect its use if at all

in a hurry. The time for toning varies from ten minutes to half an hour, according to the strength of the gold and the temperature of the bath, but the gold should never be strong enough to tone in less than ten minutes, as the hypo would not have time to act, especially if it is an old used bath.

The principal advantage of this bath over any other, combined or separate for that matter, is that there is absolutely no danger of bleaching or uneven toning, and any reasonable variation of temperature does not have any injurious influence, thus doing away with the use of ice in warm weather. Care must be exercised in the original mixing of the chemicals, but after that, not much is necessary. I have actually employed used bath that was about a year old and of a dark brown color, and secured as good tones as from fresh.

THE DARK-ROOM LIGHT.

We hear so much talk about a safe dark-room light. There is practically no such thing as a safe light. Working, as too many beginners do, the light that the experienced worker finds safe for orthochromatic plates that are more or less sensitive to red and yellow, would be unsafe for them to use with the ordinary plate that is practically blind to reds and orange. The matter is all a question of treatment. If the plate is put into the tray and the tray covered while the worker's body or a screen is interposed between it and the light and the plate examined only after development has been given an opportunity to get well started, one can use almost any ordinary dark-room lamp. I found a friend developing some panchromatic plates the other day with a light that he acknowledged would quickly fog an ordinary plate if it was allowed to shine directly into the tray, much less allowing it to shine directly upon the glass side at short range as when the plate is held up close for examination. He simply interposed a large sheet of cardboard and worked in its shade. It was surprising what a large amount of light he had all around him and yet the plate was practically as safe as if developing was being done in total darkness. The moral is, use your light to light the rest of the sink, table or bench, but keep the plate in the shadow. Holding a plate up to the light, allowing the light to shine directly into the tray, and all that kind of foolishness, is not going to make your negatives any better under any circumstances. When the plate is nearly developed you can examine it with little or no fear of the light, as it is not nearly so sensitive at that point. Try to stop development at the right point, but do not look through the plate in the early stages, just to see how it is getting along.

TEMPORARY SUPPORT IN CARBON PRINTING.

An Iowa correspondent asks if the flexible temporary support can be used more than once, and if we can furnish a formula for the waxing solution. The support can be used over and over several times if a little care be taken. The waxing solution is made by dissolving three drachms of ordinary yellow resin and one drachm of pure beeswax in eight or ten ounces of turpentine.

TO REDUCE URANIUM INTENSIFICATION.

A correspondent in New York has some negatives that print too harshly through having been intensified with uranium. The intensification can be easily reduced or entirely removed by soaking the negatives in a weak alkali solution, say, a few drops of ammonia to each ounce of water. It is this easy method of reducing the effect of uranium intensification that gives it its great value in the eyes of many workers. With it, local intensification becomes quite simple in many cases. One has but to intensify the whole negative and then with a tuft of cotton dipped in the alkali solution, remove the added strength wherever it is not required. It seems strange our New York correspondent should have learned to use this method of strengthening his negatives without learning how easily it could be removed.

YELLOW STAINS IN BROMIDES.

Another New York correspondent wants to know how to remove some obstinate yellow stains in his bromide prints. Not knowing the exact nature of the stains it is hard to suggest a remedy, but I would advise trying a saturated

solution of oxalate of potash to which has been added one-half its bulk of acetic acid of the ordinary commercial quality. If this does not remove the stains in from one to two hours, write us again, and send a print showing the stains, with some hint, if possible, as to their cause.

AROUND THE DARK-ROOM.

Only the worker who has become used to the convenience can realize the convenience and comfort derived from having several large dusters made of soft cloth, a large sponge or two, and a good, generous piece of chamois skin handy about the dark-room. They should all be well washed out occasionally. And this reminds me of my own first efforts at washing out a chamois skin. I washed it out very thoroughly in a solution of carbonate of soda and then rinsed it out several times in clear water. When it became dry it was about as flexible as a piece of cardboard. I have since learned better. I now wash and rinse it exactly as before but while it is drying I use it as a whip on any convenient article that for the moment becomes an imaginary unruly animal. The leather, subjected to this treatment until nearly dry, will be found as soft as velvet when wanted for use.

A FEW RUBBER BANDS.

The photographer on a trip afield should always be provided with several fairly stout rubber bands. With one and three fairly straight sticks of the proper length, a fairly good tripod may be improvised. The three sticks joined together by placing around them one of the bands a few inches from one end and spreading the other ends apart, forms not only a good tripod, but one that requires no tripod screw. One may lose the cap off the lens or the shutter fail to work, yet wish to make an exposure. A fold or two of the corner of the focussing cloth can be held in position over the lens while the slide is removed and then the exposure made by taking off the rubber band, lifting the corner of the cloth for the desired exposure, and afterwards returning the cloth and rubber band while replacing the slide. I could name a dozen ways in which these simple utilities can be employed in emergency cases, but just carry two or three assorted sizes with you on your next trip afield with your camera and discover a few uses for them yourself.

THE NEW SIMPLIMETER.

The new 1908 Simplimeter has the tables printed on cards, which are then inserted in a fine, red, calf-grain leather folding case, similar to a fine card case. On the left side is a transparent window, which allows the exposure for the plate in use to be seen at a glance. The variation table is printed on the right-hand side. Papers, bills, money, or photographic information may be carried in the pockets of the case, just as in any ordinary pocket case. There is one pocket on the left and two on the right. Such a case commonly retails at the stores for one dollar to one dollar and a half. Much valuable information has been added to the Simplimeter this year. Indoor exposures is covered thoroughly, new tests were made of all the plates on the market and changes made. Much valuable information is given about photography in general, and a simple method of testing shutters and correcting them is included. Never before has there been offered anything in photography combining so many valuable features. The price is one dollar. Send for one, or at least write for descriptive circular. Address, The Simplimeter Company, 611 Granville Avenue, Chicago, Illinois.

THE O. V. S. CO'S EXPOSURE RECORD BOOK.

We have been favored with a copy of the exposure record book bearing the above title. It seems ideal in its arrangement of the pages for the recording of details concerning each exposure, and its shape, size, and well bound form are all above criticism. The low price, ten cents, should make it extremely popular with those who appreciate the value of a well kept record of their exposures. Such records, the simple act of jotting them down, even, soon gives one a facility at judging exposures that is of the greatest value. The little books are put out by one of our contributors, Ernest D. Blacet, of Painesville, Ohio.

Photographic Post Card Exchange

C. Frederick Potter, Jr., Director, 620½ Nicollet Ave.,
Minneapolis, Minn.

This month we publish a list of members whose names have not yet appeared in "Camera Craft." We would advise that all the names that have so far been printed herein, as well as those to be published in coming issues, are of workers who have submitted samples of their work that were up to the standard of good photography. Despite this fact, some of the members are guilty of sending out poor work. We had a complaint recently from a member who enclosed some of the cards he had received. Strange as it may seem, about the poorest card in the lot came from a worker whose pictures we have been pleased to reproduce in our pages, and whose work has been shown in several exhibitions of importance. We regret that any member should send out poor work, and particularly so when we know that he must be well aware of its poor quality. If the card you receive is poor or uninteresting to you, send it back if you do not wish to send one of your own. Do not accept the poor card as a justification for sending one of your own failures. Send out as good cards as you can make or send out none.

And as to this matter of finding good exchanges: trying each member is time-consuming and disappointing. Try but a few, select those that prove satisfactory, and in making a second exchange ask them for the names and addresses of others whom they have found satisfactory and whose work they can recommend. A new member can, going about it in this way, soon acquire a list of every member in the Exchange liable to prove a congenial exchanger to him. This desired situation will make itself known about the third round by the number of duplicates he will find on his several lists of recommended names. In addition to the lists, his exchanges will from time to time recommend others who may perhaps have joined since the first list of names was offered. Furthermore, the same method is applicable to the requirements of a worker whose cards may not be of the highest standard. His congenial exchanges will of course recommend to him only such members as they know will accept his work as being of about the same grade as their own, with possibly a few of the best workers who are considerate enough to encourage and assist their less advanced fellow workers.

Subscribers wishing to join this Exchange will please send one or more samples of their work to the Director, whose address is given at the top of this page. Their cards being of the desired quality, their names and addresses will be printed in the next following issue of "Camera Craft."

SOME OLD MEMBERS.

G. T. Simmons, Kathryn, N. D.

H. A. Simmons, Waterloo, Neb.

Wm. J. Smith, Osceola Mills, Pa.

C. R. Smith, Clear Water, Minn.

C. T. Stiles, Box 261, West Warren, Mass.

Ross W. Stockwell, Gilbertsville, N. Y.

J. H. Sweet, Nebraska City, Neb.

C. C. Taylor, 3236 Cambridge Ave., Toledo, Ohio.

Roger D. Thomson, 1517 Washington Ave., Columbia, S. C.

C. R. Tucker, New Dorpe, N. Y.

W. A. Van Wagner, 536 Tallman St., Syracuse, N. Y.

J. Enos Wait, Superior, Neb.

Daniel Ward, 78 Cedar St., Bridgeton,

H. L. Wait, Centralia, Kan.

D. E. Walt, 117 May St., Waukegan, Ill.

E. S. Warner, 6 West 103rd St., New York, N. Y.

G. L. Waterbury, Brodhead, Ky.

S. T. Welch, 536 Martin St., McKees-

Lester A. West, Tabour, Iowa.

port, Pa.

Alice A. Wiltse, Redvers, Sask., Can.

E. T. Wilson, 2 Blood St., Amsterdam,

J. Herman Wright, Lyons, N. Y.

N. Y.

J. H. Winchell, Painesville, Ohio.

V. A Wood, Waldwick, N. J.

Reed W. Hyde, 502 S. Eastern Ave., Joliet, Ill.

Our Competitions

While quite a number of examples of flashlight work were sent in for our competition closing May 31st, there were none submitted that were of enough pictorial merit to warrant us in reproducing them. Good technical results we had from several of the competitors, and in a few cases the pictures were such as would gladden the heart of a lens manufacturer or the maker of flash powder, particularly the one whose goods were used. On the other hand, the subjects selected were entirely lacking in pictorial merit, and in most cases devoid of any interest except to those whose rooms were so faithfully portrayed. Changing to our new series of subjects, substituting a series of ideas for a series of facts, we hope will change all this to something more helpful to not only those who compete, but to our readers who may study the winning prints with an eye to their own better understanding of the requirements of pictorial work.

For the competition ending August 31st, we want pictures that portray mist, haze, fog, and kindred effect; suggesting in turn an interpretation of sorrow, tears, veiled emotions, and the like. The next, or September, competition requires some effect depicting the sentiment of dreariness, desolation, depression, departed activity, or kindred idea. For the competition closing a month later, or October 31st, we wish to have pictures in which the feeling of twilight, quietude, peace, and calmness, predominates. This last subject is full of suggestions and possibilities. The portrait of a fitting subject suggests the evening of life, and doubly so, if the right accessories and treatment are employed. A landscape of the simplest kind will suffice if rightly handled. Marine and river scenes are particularly well adapted. Material is at hand at all times, and success means only that the worker must realize the necessity of picturing a sentiment, a feeling, a mood, rather than producing with his camera a mechanical reproduction of a fact in nature.

The monthly competition closing November 30th will have for its subject the portrayal of an effect typical or characteristic of a certain season of the year, pictures to which the title of not only one of the four seasons is applicable, but such titles as Indian Summer, Harvest Time, and the like. And we might mention that a portrait can be used to portray what is wanted in this competition, if so doing more nearly falls in with the ideas of the worker. For the one closing December 31st, the last competition of the series, we require pictures that portray or interpret some feeling associated with joy, kindness, and good will. We can include in this category a wide range of subjects, in fact the possibilities are without limit. The child with its pet, the oak that supports the clinging vine, the fields and flowers that profit by the sun and rains, the joyousness of sports, the happiness of living things, the good will that is displayed on every hand; these and a thousand other subjects suggest themselves.

With the January competition we will return to the subject for the present, or July competition, and so on through the series. This will give intended competitors an opportunity of studying the matter well in advance, and profiting by the examples shown in one period of six months so as to better understand the lines along which success in pictorial work may lie. There are no conditions; all we want is pictures, the three best of which each month we can put before our readers as object lessons in what is good in pictorial photography. Some form of award or prize will be decided upon later should we not hold to our original plan. We shall certainly try to keep our friends satisfied; and, in the meanwhile, trust that they will find gratification in the knowledge that their pictures may be reproduced in our pages if not outclassed by some that our jury considers better.

The International Photographic Association

During the last two weeks of June we sent out over a thousand return post cards to old members of the International Photographic Association asking them for their present address. To each one was also sent a sample copy of "Camera Craft." We trust that all will respond promptly, so that other issues due them may be sent as fast as published.

Five new State directors have been appointed, and their addresses given in the list below. This still leaves a large number of States without directors, and it is hoped that members will write us advising of their willingness to assume the duties of getting out the albums. The work is enjoyable where one has a little time that can be spared, and where there are several members in a city or town, it becomes even more of a pleasure through the congenial companionship which it invites, if shared.

Dr. Gardner was called to Washington on account of the death of his father, and being undecided as to his future location, has had to give up the Directorship of the Stereoscopic Division. A successor will be appointed as soon as possible; this probably being Mr. Marley, should he find it possible to give it the time. We all extend our sympathy to Dr. Gardner, his mother and others of the family in their loss, and trust that other business will not deprive us of his continued interest.

As we advised last month, we wish all who are interested in the plan upon which this Association is based, to write to the nearest officer and secure a blank application for membership. Those who may be at present subscribers to "Camera Craft" will be considered as eligible for membership upon payment of an amount sufficient to extend their subscription one year in advance of their date of application. Former members of the I. P. E. will be credited with a month's subscription to "Camera Craft" for every two months due them on the "Exchange," which has never been resumed. We are placing these former members on the mailing list as fast as we can secure the co-operation of a State Secretary in correcting the several lists. Mr. Hinman would be pleased to hear from former members or others who might be induced to accept the secretaryship of such States that have not at present such an officer.

Below is given the list of officers who will act in the capacities quoted until the next annual election:

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

STATE DIRECTORS.

Alabama—Richard Hines, Jr., 155 State Street, Mobile.

Colorado — F. B. Hinman, Room 4, Union Depot, Denver.

Illinois—Harry Gordon Wilson, 4950 Washington Avenue, Chicago.

Indiana—H. E. Bishop, 1704 College Avenue, Indianapolis.

Kansas—H. E. High, R. F. D. No. 1, Wilson.

Maryland—E. G. Hooper, 218 East 20th Street, Baltimore.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South 32nd Street, Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor Street, Manchester

North Dakota—Jas. A. Van Kleeck, 619 2nd Avenue, North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

South Dakota—C. B. Bolles, L. B 351, Aberdeen

Utah—John C. Swenson, A. B., Provo

EXCHANGE NOTICES.

Lack of space crowds out a large number of exchange notices this month, but in future we will make provision for all that may be received. We print a few that were

crowded out of the last issue, to the end that new members may have examples from which to make up their own desired notices when joining.

658—Jas. A. Van Kleeck, 619 Second Ave., North Fargo, N. D.
Is not ready to exchange at the present, but wants to hear from all members in North Dakota in regard to the State Albums and what they can do toward furnishing prints for them.

707—R. W. Worden, 1333 Columbus Ave., Sandusky, Ohio.
4x5 and smaller prints on developing paper, general views. Class II.

1707—Miss Maud Young, Box 344, Casselton, N. Dak.
Will have exchange notice later.

1708—N. C. Ward, care Y. M. C. A., Alton, Ill.
4x5 Velox and platinum prints, untrimmed, of sunset, sunrise, and cloud effects, and historical views. Class I.

Club News

THE SALON CLUB'S NEW OFFICERS.

The recent election held by the Salon Club resulted in the following officers being selected for the present term: Director, W. H. Zerbe, Jr., 345 Spruce Street, Richmond Hill, Long Island, New York; Secretaries, Misses W. and G. Parrish, 5607 Cabanne Place, St. Louis; Salon Committee, C. F. Potter, Jr., Minneapolis; John Chislett, Crown Hill, Indianapolis, and Sara W. Holm, Chicago. The club is particularly fortunate in its selection of Director, as Mr. Zerbe's undeniable high standing as a pictorial worker, combined with his untiring energy and his qualifications as an adviser and critic of the pictures circulated by the members, makes him eminently fitted for the highest office in the gift of the club. The Misses Parrish have served the club in the same capacity in the past, and done so in the most efficient and painstaking manner. Of the personnel of the Salon Committee there is need of but few words, as they are all well known for their unselfish devotion to the advancement of pictorial photography.

RIVERSIDE (CAL.) CAMERISTS.

Owing to the misplacement of some notes and materials, we failed to give publicity to the particulars of a most interesting and pictorial exhibition that was held in rooms of the Chamber of Commerce, Riverside, California, from March 4th to 7th, inclusive. One hundred and four prints were contributed by twenty local camerists and the hanging committee deserved great credit for their share of the work. The walls of the Directors' room were covered with a shade of green that most pleasingly set off the pictures, and rows of shaded electric lights added to the effectiveness of the display. The work was as varied in style and treatment, as well as in choice of subjects, as could have been expected from a national collection. The attendance was surprisingly large, and the local press made frequent, full and most flattering comment. W. K. Love showed the largest number of pictures, being represented with sixteen—J. Walter Collinge showing but one less. These two, with C. W. Derby, W. H. Backus, Theodore Hurd, Charles M. Foster, Ray H. Jessup, and Ethel L. Post, seemed to have won the most approval for their work. Ida Matlock, Mrs. Arthur Clarke, Franklin J. Hall, F. P. Clatworthy, Harry E. Scott, F. E. Wright, Vernon Freeman, G. W. Barney, Raymond Best, and Mr. Lemm, complete the list of exhibitors. It is to be hoped that the success achieved with this, their first exhibition, will inspire the camera workers of Riverside to give an exhibition along the same lines each year.

THE BUFFALO CAMERA CLUB.

The Buffalo Camera Club's "Year Book" has reached us, and it is a neat little booklet that could be imitated by any wide-awake camera club to advantage. Its sixteen pages are full of information concerning the activities of the club, a list of its officers and committees, a roster of the members, and the like. It should prove a valuable piece of literature to place in the hands of prospective members, despite the fact that the use of laudatory terms are avoided throughout.

NOTES and COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

HENRY LOMB PASSES AWAY.

It is with much regret that we announce the death of Henry Lomb, one who has long held a commanding position in photographic circles, one whose integrity and sincerity of character has won the love, admiration and esteem of all who have in any way come in contact with his personality or his work, as expressed through the large manufacturing concern of which he formed such an important element. He died June 13th, in his seventy-ninth year, closing a long life that has been nobly spent in the services of his fellow men. He was one of the founders of the Bausch & Lomb Optical Company, a concern that has placed this country in the front ranks as a producer of fine optical goods of every description.

JULY "CAMERA WORK."

Twenty-six large photogravures would in themselves prove an interesting and instructive source of artistic enjoyment; the high productive cost of the plates assuring the value in the originals; but when these originals are the best work of a master of our craft, the artistic and educative value of such a collection can only be measured by the capacity for appreciation possessed by the photographer into whose hands it may fall. "Camera Work" for July is assured a large portion of appreciation, not only for the undeniable merit of the work which it contains, but for the wealth of instruction that a study of the pictures will give. The work of Clarence H. White needs no praise from us. We only wish to call attention to the fact that this new series, besides containing several of his older and best known productions, shows a number of new pictures that have even more originality and daring than we have a right to expect from one who has given us so much that is good. An appreciation of Mr. White and his work by Charles H. Caffin forms a part of the text. The publication is issued quarterly by Alfred Stieglitz, 1111 Madison Ave., New York.

EASTMAN SCHOOL OF PHOTOGRAPHY.

The professional photographers of this section are well aware of the great educational value of the Aristo Schools that have been held in the past, and will welcome the news that another "school," only on larger and broader lines, will be held here shortly. Demonstrations will be given along a wide line of professional work; in fact, this explains why the name has been changed to that of "Eastman School." The dates selected for the holding of the school are September first, second, and third. It will be held at the handsome new store of Hirsch & Kaiser, 218 Post Street, San Francisco. Announcements will be mailed to all professionals on their list, but should you not receive one, drop Hirsch & Kaiser a card, asking that a program be sent you. As any who attended the last will testify, the school is worth making a long trip to attend.

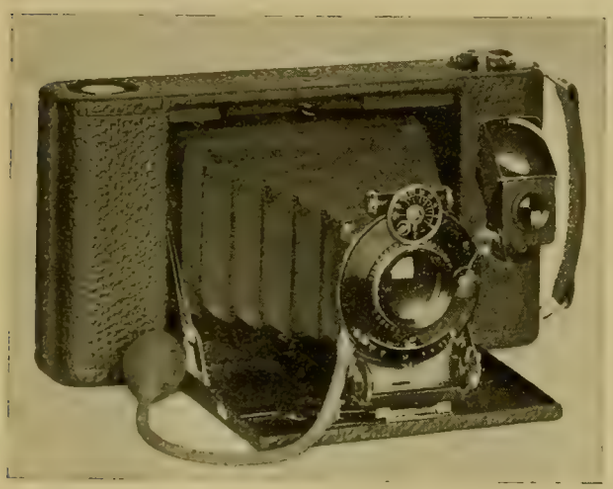
THE GRAFLEX CATALOGUE.

Reading over in cold type our remarks last month concerning the new Graflex catalogue, we can see very plainly where our own ever increasing paper bills served to color our description of the catalogue's charm. Our reference to a long purse was not intended as an implication that the Graflex is high priced. An ordinary camera, and the Graflex is no ordinary instrument, if fitted with a focal plane shutter of anything like the same good quality, will, with that improvement, closely approach in price the Graflex, leaving out of consideration entirely the principal Graflex feature, the focussing mirror. Considering its advan-

tages and its adaptability, the Graflex is really a low-priced camera. Anyway, send for the catalogue, and also their booklet, "Graflex Results." You will be pleased with both.

NEW HAWK-EYE EQUIPMENT.

By the time this reaches the eye of the reader, all the dealers will be showing the new I-A Folding Hawk-Eye equipment, which consists of a remarkably efficient shutter, the "Compound," working up to one-two-hundred-and-fiftieth of a second, fitted on a No. 3, Series II-B Zeiss Tessar lens. We have seen some remarkable work done with one of these cameras fitted with



the Compound shutter and Zeiss Tessar lens, and it hardly seems possible that the ordinary Hawk-Eye can be capable of such results, results that we have learned to credit to high-priced outfits in skilled hands; and yet, with such a lens and shutter almost anything should be possible to the user of the Hawk-Eye, a camera that has always been a favorite with discerning photographers.

THE HALL MIRROR CAMERA.

A new catalogue of the Hall Mirror Cameras has reached us, and we would advise all our readers to send for a copy. The makers claim several points of superiority, and these are explained and set forth in a convincing manner. The firm also manufacture the Hall Diamond Camera, which, unlike many of the box type of cameras, is fitted with a rapid rectilinear lens. So fitted and of the good workmanship indicated by the descriptive matter and the cuts, it is certainly exceptionally good value at the price, eight the tasty white margin that so effectively sets off the finished print. It can be used with any size of form and any ordinary dollars and a half. This new catalogue also lists the Hall Portable Dark Room and the Hall Portable Developing Tank and Washer, two well made utilities that will commend themselves to the worker. Drop a card to the manufacturers, Hall Camera Company, 14 and 18 Dunham Place, Brooklyn, New York.

A CATALOGUE WORTH WHILE.

The new George Murphy, Incorporated, Catalogue of Photographic Supplies is just out. It is a bulky book of nearly three hundred pages and over six hundred illustrations, so that one can easily understand that it is most complete. The truth of the matter is that it lists and shows illustrations of many conveniences and utilities that are never seen in the ordinary stock house, in fact, many articles that the worker does not know are on the market. As all goods can be ordered through the nearest stock house if one does not care to order direct, makes the list of value to every one of our readers. It is an encyclopaedia of all that is new and desirable in photographic supplies for both the professional and the amateur. It is sent postpaid for ten cents, the cost of postage, and one should not delay in sending for a copy. Send the dime at once, addressing, George Murphy, Incorporated, 57 East Ninth Street, New York.

VOIGTLANDER METAL CAMERAS AND PRISM BINOCULARS.

Voigtlander's new camera and binocular catalogue is just out, and this information will be welcomed by those amateurs who are interested in the novelties of the photographic line. Voigtlander Metal Cameras are indeed "the height of perfection," and they are particularly recommended to all painstaking amateurs who are endeavoring to get the best possible results. The perusal of the catalogue shows that several different kinds of metal cameras are manufactured, and as especially remarkable may be mentioned the Voigtlander Reflex camera fitted with the Heliar lens, the Voigt-

list are the lowest consistent with the superior quality of these instruments. Their exceedingly interesting catalogue, containing furthermore full description of Voigtlander Prism Binoculars and Field Glasses, will be sent free of charge, on request, by Voigtlander & Sohn A. G. Optical Works, 225 Fifth Avenue, New York, N. Y.

WINNING POPULARITY.

Artura Iris, the new paper that has been on the market less than two years, has, in that time, won a wonderful popularity for itself. Not a few professionals are using it exclusively for their best work, and in so doing enjoy the satisfaction which comes from pleasing customers with the minimum expenditure of time, trouble and annoyance. The amateur photographer is not slow in discovering the merits of Artura Iris, judging by the heavy demand for the popular sizes. Any of the distribution agencies will gladly send samples and a copy of "Artura Results," if asked, or application can be made direct to the factory. The advertisement appears upon another page of this issue.

NEW CROWN LENSES.

The new Crown catalogue which we mentioned last month has reached us just as we go to press. Of the three new lenses, the new Series II deserves the most particular notice. Much experimental work, extending over a long period, has resulted in this form of lens, which the makers believe will compare favorably with much higher priced ones now on the market. It is very modest in price and should be investigated. The next is a rapid rectilinear, suitable for portraiture, working at f-6. The third new lens is an extreme wide angle working at f-16, and like the other two, extremely low priced and of the best quality. Send for this new catalogue; it will prove most interesting. Write the Crown Optical Company, Rochester, New York.

LIBERTY MARGINAL RINGS.

The latest device intended to add to the comfort of the photographer is the Liberty Marginal Ring, advertised on another page. By its use, in connection with any ordinary revolving trimmer, one can trim oval and circular masks for marginal printing and then trim with the same form to produce trimmer; lasts a lifetime and costs but fifteen cents. Sent by mail postpaid. Address: Northern Photo Supply Company, 316-318 Fourth Avenue South, Minneapolis, Minnesota.

A NEW CONLEY CATALOGUE.

One of the most interesting of the new catalogues comes to hand just as we are going to press. It will interest both amateurs and professionals, as it lists a full line of the Queen City Cameras from the handsome little No. 1 at $3.00 to the Laboratory Camera, that has a weight of seven hundred pounds. A few special and patented features used are very interesting, and the line of shutters is very full, as it includes some excellent pneumatic between lens and the well known silent studio shutter that has been advertised in our pages for so long. Send for this catalogue and send at once. The address is: Conley Camera Company, Rochester, Minnesota.

COMPLETE SELF-INSTRUCTING LIBRARY OF PRACTICAL PHOTOGRAPHY.

Our last issue contained an announcement in the form of a colored insert, that we trust was investigated by all our readers. The set consists of eight large volumes, profusely illustrated and handsomely bound; the logical expression of the results of ten years' experience in teaching every branch of photography to students in all parts of the world. This experience has qualified the compilers to anticipate every difficulty that could possibly be experienced by the student desirous of perfecting his knowledge of photography. The special contributions of over two hundred of our representative professionals and expert amateur photographers are also included. The "Department of Difficulties," a copyrighted feature of the home study system of the American School of Art and Photography, is incorporated in the series, and makes it, indeed, a self-instructing library. Every subject is treated in an exhaustive manner, and yet so simple is the style that it is easily understood by any one who can read English. A glance at lander Alpine camera fitted with the Collinear lens, and the Voigtlander Folding camera fitted with the Collinear & Dynar lenses. The prices quoted in the

the list of titles will show how complete is the work.

Hundreds of formulas are provided, many of them heretofore unpublished, while an excellent index provides for instant reference. The books should prove of the greatest value to any person interested in photography. To the professional it is a work of reference; to the expert amateur it is an infallible guide and source of inspiration; to the beginner it is a veritable mine of photographic knowledge that requires only study and the employment of the knowledge furnished to perfect him in the practice of successful photography. We repeat, send for a prospectus concerning this library of photographic knowledge. Address, American School of Art and Photography, Scranton, Pennsylvania.

GOLSEN'S NEW LIST.

The Ralph J. Golsen Supply Company, 84 Wabash Avenue, Chicago, have just issued their new "List No. 25" of complete outfits and bargains in photographic goods. Mr. Golsen has been long and favorably known as "the lens man," and this catalogue contains such a long list of bargains in new and second-hand lenses that it would seem that he is ably maintaining his reputation. An enormous stock is carried, and bargain prices and fair treatment is assured. Larger and finer quarters have been secured, and the publication of 32,000 of these lists should create a heavy demand for the bargains offered. The list is free and should be sent for at once, before it is forgotten.

X-OL, THE NEW DEVELOPER FOR X-RAY PLATES.

We have received the following from Williams, Brown & Earle, of 918 Chestnut Street, Philadelphia, and as it contains much that will be news to our readers, we gladly give it space in its entirety:

"One of the very serious difficulties encountered by radiographers and X-ray photographers has been to obtain a suitable developer for X-ray plates. As is well known, plates exposed to the X-rays require a very different development from those exposed to sunlight. As a rule, such plates are very much under-exposed and the amount of silver deposited on the plate by the exposure, especially where thick portions of the body, or bony structure are to be reproduced, is extremely small and the results, therefore, are always lacking in detail, which is impossible to bring up to its full value with ordinary development. If the development is pushed, most developers produce either a chemical fog or a seriously stained plate. These difficulties seem to be entirely overcome, however, by the introduction of X-OL, the new developer especially designed for the treatment of X-ray exposures. X-OL produces a sharp, clear, snappy black and white negative with an amount of detail never before obtained. This is particularly true of the parts of the negative which are under-exposed and which are generally the parts most desired, namely, those representing the bony structure.

"X-OL does not produce chemical fog, nor will it stain the plate. It is extremely simple and easy to use and insures the best possible results, bringing out everything that is in the negative. A very large proportion of the failures in X-ray photography, come from poor work in the dark-room. The use of an improper developer will entirely defeat the best work of the most modern machine and of the best X-ray tube; in fact, without good photographic work, no good results can be obtained. We believe that the introduction, therefore, of X-OL will be the means of bringing about a great improvement in X-ray photography. It is already being largely used by experts and radiographers, both in this country and in Europe.

"The price is quite low, being no more than that asked for the ordinary commercial developers which in many cases are utterly unsuited for X-ray use."

"THE REAL BRYAN."

The above is the title of a book that has been compiled by Richard L. Metcalfe, containing the best things spoken or written by William Jennings Bryan. Mr. Metcalfe is associate editor of "The Commoner," of Des Moines, Iowa, and, of course, well acquainted with the subject of the compilation. The book is a cloth-bound one of over three hundred pages, published by the Personal Help Publishing Company, Des Moines. Price, one dollar and twenty-five cents.

Vol. XV No. 8 AUGUST, 1908 Price, 10 Cents

Camera Craft

San Francisco, California

MARIAN
By HENRY HALL

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, AUGUST, 1908. No. 8

Soft Lighting Effects in Portraits and Figure Studies

By Henry Hall

With Illustrations by the Author

About the first thing that the photographer learns is that the picture-image is formed in the negative by the action of light upon the silver salts in the sensitive coating of the plate. And then he soon hears much about the "correct" lighting and the "best" lighting, but, with longer experience, aided by the study of pictures, he learns that there is no "correct" lighting per se, and no "best" lighting, but that any lighting is correct which correctly reveals a given pictorial idea, and that lighting best which best expresses it.

And again, if he gives more than a passing thought to pictorial expression as revealed by the gradation and balance of light and shade in painting as well as in photography, he soon learns that the picture-maker has at his disposal only a limited scale of tones, ranging from the white of paper or pigment to carbon black, and that this scale is almost immeasurably shorter than the visible scale in nature. That is, while it is a comparatively simple matter to approximately render the darks of nature, it is an utter impossibility, by the use of the whitest paper or pigment, to even approximate the intensity of, let us say, a sunlit summer cloud.

On this basis, therefore, the painter, and, following him, the photographer, has preferred, as a rule, to start at the darker end of the scale, working up with as relatively true values as may be to the highest lights of his picture, and so filling two-thirds of his picture-space with the darker tones, and one-third or less with the lighter ones. And so nearly an absolute rule is this, that the larger part of the works of the masters follow closely this proportion of light and dark.

At the same time, however, an occasional painter has started at the lighter end of the scale, showing us pictures of great delicacy and beauty with nearly an entire absence of the darker tones; and occasionally the photographer, adopting the same scheme of lighting, has given us pictures of Children, or of Mother and Child, so delicately fine that one wonders why soft lighting effects in portraits and figure studies are not oftener employed, while the wonder deepens as one considers how logically this lighting scheme applies to the making of figure studies indoors, where the range of tones from light to dark is more nearly within the scope of our modern dry plates and printing processes.

ONLY A BOY

But perhaps this reason is not far to seek in the fact that the extreme delicacy and fineness of the tones, and the "rightness" of the whole, may give the impression that there is in this style something more difficult, something more "personal" than in the usual lightings, and so deter the average worker from trying what is in reality one of the simplest and most easily controlled, as it is one of the most pleasing, styles in photography.

We have all learned by experience that the making of portraits and figure studies in an ordinary room is attended by unnumbered difficulties, and those of us who have persisted, in spite of many failures, until we have at last managed to secure results that have passed the juries of the Salons, will not soon forget our wrestling with shades and reflectors and "angle of forty-five degrees," and "so many feet from the far edge of the window," and "camera so many feet from the wall," and the like.

Oh, no, we shall not soon forget! And perhaps, as we saw the newer lighting, we thought of our earlier troubles, and so decided to let well enough alone.

But, when we come to Soft Lighting in Portraits and Figure Studies, we just dodge all our earlier troubles.

Then we feared "flat lighting" as the plague; now our very mainstay is flat lighting!

Then we did a lot of thinking about the tone of our background; and many of us went rather deeply into the mysteries of stretching cotton sheeting on frames, because the roller backgrounds always wrinkled so abominably, or, perhaps, because we didn't know enough, or hadn't room enough to pose the sitter two or three feet in front of the background; and we picked up a lot of information about flat colors and the best way to apply them. But now we just run a strong cord across the room, and a spare sheet hung fairly straight makes an excellent background.

And then, with the studio lighting, we had to cover the lower half of the window with a blanket in order to get the light at the proper angle of forty-five degrees, thus cutting off so much light that we had to rig up a

reflector for the shadow side of the sitter, and the shadow of sitter's nose had to fall at just the right spot on the cheek, and — well, the Lord only knows how many other things we had to do to get the correct studio light.

But, with our Soft Lighting, all this is changed, and we just run up the shade to the top of the window, hang our sheet as far back as may be, and pose the sitter two feet or more in front of the background and directly opposite the window; or, if there are two windows fairly close together, place the sitter so that the light will fall evenly from each window, and then place the camera as near the wall as may be comfortably worked, and in line with the light, or nearly so.

MARIAN

Then, if the window is high enough, so that the head of sitter and the background in line with it receive approximately as much light as the lower part of figure and background, no further care need be given to the lighting, and our entire attention may be concentrated on pose and expression and the composition of our picture.

But, if we happen to be working in a room where the ceiling is only eight feet or so from the floor, we may find that the head of sitter and the upper portion of background are getting noticeably less light than the lower part of figure and background. This lack of light in the upper portion will show very plainly in the print; and, even though it may be helped by shading in printing, it will still lack much of the fineness and firmness of tone found in the lower portion of the print. But this unevenness in the lighting is easily remedied by spreading a sheet on the floor from window to sitter, and so reflecting upwards the strong light which comes from the brightest portion of the sky.

So much for the setting; and now a word about the sitter. The utmost fineness and delicacy of effect will be gained with a fair-haired sitter clothed completely in white, or in those lighter tints that we have found will photograph white; but we shall obtain very satisfactory results with dark-haired sitters in clothing of neutral tints, barring, of course, those tints bordering on red or yellow, which are apt to show very dark in the print.

And now, having arranged the setting and the sitter, we will work with greater ease and certainty of success if we have the fastest plates and a rapid lens. We can all get the rapid plates easily enough at any stock house; and, if we have for a lens nothing faster than the ordinary rapid rectilinear working at f.-8, we can get along very nicely, although, for preference, we might choose one of the modern anastigmats working at f.-6.8, or, better yet, f.-5 or f.-4.

In any event, we shall try for a rather full exposure, which means, if working in an ordinary room under the conditions indicated above, anywhere from one-half second to one second at f.-5; one to two seconds at f.-6; and from two to four seconds at f.-8. These exposures are, of course, only approximate, as the various and varying conditions of month and time of day, and size and height of window must be met in each instance; but, with the light background and surroundings, and the light clothing of sitter, a full exposure will at times be found to be surprisingly short.

And now, having arranged our sitting with as much care as may be, and having exposed a couple of plates at, let us say, one second and two seconds at f.-6, or two and four seconds at f.-8, we repair to the dark room to learn what manner of soft lighting we have secured.

And here a word of caution is in order. Remember, first of all, that we are aiming for delicacy and fineness of tone, which means that there must be in the negative no fog or reduction of silver except what has been caused by the action of light in forming the image on the plate. Incidentally, if we thought about this when filling the plateholder, we had a deep red and orange light and only a glance of that. Therefore, although we are apt to be a bit careless about our developing light, and, as a rule, can see to read a newspaper by it, in this particular case we are going to have a sheet of orange and a sheet of ruby glass, and we are going to pull down our red holland shade to within an inch or so of the bottom, besides having ready a piece of cardboard for covering the developing tray, because with these negatives we wish to make sure that the edges of the plate, where covered by the rebate of the holder, will come out clear glass, this being our proof that there is no chemical or accidental fog to interfere with the clearness of the image.

Of course, if this looks like too much trouble, you can cut it out and take your chances; but don't blame the lighting or the plates or the paper if your print reveals flatness instead of fineness, and fog in place of delicacy and clearness.

In developing our negatives, we, as a rule, eschew bromide; but in this instance, as we are trying for the utmost clearness consistent with delicate gradation, we are going to try two or three grains of Potassium Bromide in eight ounces of developer. And, as we wish the most delicate gradation consistent with clearness, we will try a soft working and rather dilute developer, which, in this case, happens to be Amidol, made up as follows:

Stock Solution.

Sulphite of soda (Mallinckrodt's C. P.)	1½ ounces
Water (preferably distilled)	32 ounces
Potassium metabisulphite	32 grains

RALPH
By HENRY HALL

SIESTA

To eight ounces of this stock solution we add five or six grains of amidol, which, you will notice, makes a rather weak developer compared with the maker's formula.

As a matter of fact, almost any of the modern developers will give good results if made up considerably weaker than normal; but we rather fancy this developer for two reasons: First, it is a very soft-working developer, giving full detail in the shadows without excessively building up the high lights, and, second, it is as simple and as easily mixed as can be had; it is practically non-staining, and the stock solution as given above keeps indefinitely, all these points being worth considering by the occasional worker.

But, returning to our plates, we lay them in the developing tray, first gently tapping against the table with film downward to dislodge any possible dust specks, as we also did when placing them in the holder; and, after flooding them with the developer, quickly cover with the cardboard and rock gently for about thirty seconds, when a quick glance will probably show the image just beginning to appear. We then cover the tray again and rock occasionally for five or six minutes, when another quick glance as the negative is held up with the film toward the light will probably show a fair amount of density, and, if so, the negative is then well rinsed and placed in the hypo.

As a general rule, it is probably safer to slightly under-develop rather than to carry development too far, as it will be found that, if the plate has received a rather full exposure, any slight under-development can be easily corrected by intensification with iodide of mercury: one part iodide, ten parts sodium sulphite, one hundred parts water; while, if the plate has been over-developed, it is not nearly as sure that the relative gradations will be preserved if the negative is reduced.

After remaining in the hypo for a few minutes, until the negatives are cleared (of course, we are too impatient to wait until the negatives are thoroughly fixed), we hold one of them up to the light and look first to see if the unexposed edges show perfectly clear glass, which will show whether there has been freedom from fog in development. If this proves to be the case, we next notice whether the high lights are of about the right printing density, and the shadows nowhere perfectly clear glass, which will assist us in determining as to whether the exposure has been about right for our purpose. We also note whether there seems to be plenty of gradation in the high lights, with no areas of ungradated dark, as we look through the negative toward the light.

And then we recall the fact that we have two negatives which have been exposed under identical conditions, except that one has received twice the exposure of the other, and that both have received the same development. We cannot here enter into an extended discussion of development, but, as most of us have developed a great many plates, a careful examination and comparison of these two negatives will probably enable us to arrive at a decision as to which of the two is nearer to the best exposure for our purpose, and also as to the "fitness" of our development, and we can then, in succeeding trials, modify our procedure as may seem advisable.

As to the printing process best adapted to this lighting, there really isn't any. Therefore, we'll use whatever process we are most familiar with; we'll avoid under-exposed and contrasty negatives; and then we'll give our best thought and skill and pictorial leaning to composition, pose, and expression, the things that, after all, have most to do with the making of a picture; and we will find an added inspiration and much joy in Soft Lighting Effects in Portraits and Figure Studies.

"HOME KEEPING HEARTS ARE HAPPIEST" By HELEN PLUMEL GATCH

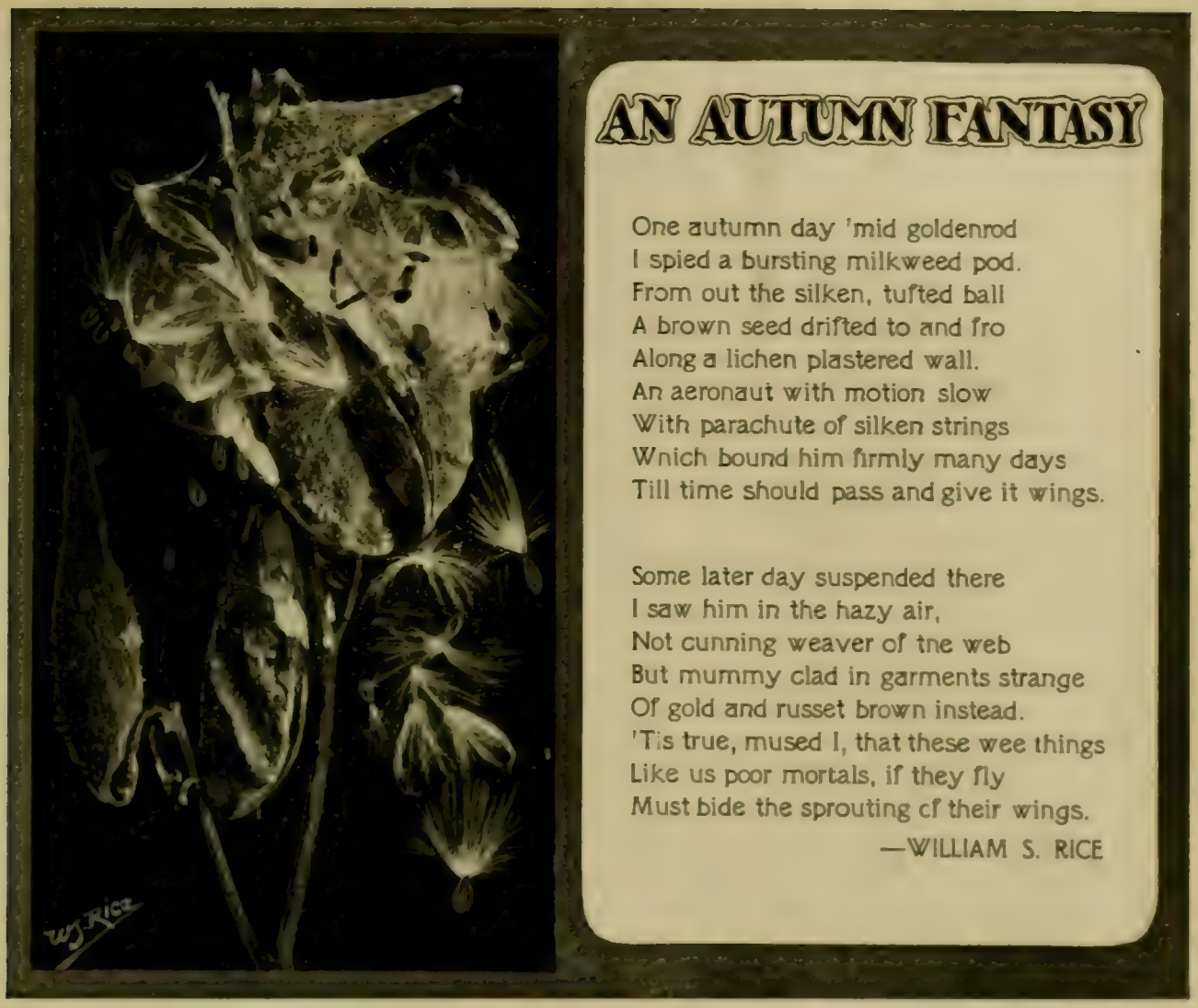
"TO SHOW THAT THE EARTH IS ROUND"

By A. H. RUEDY, M.D., PORTLAND, ORE.

The skeptics of Columbus' time
Had no such proof as this;
For photographic art was then
A tiny chrysalis.

Had they possessed this picture then,
Of water, sky, and ground;
What better proof could they have had
To show that the earth is round?

—OLGA VALERIA RUEDY



Inexpensive Carbon Tissue

By H. E. Blackburn

For various reasons carbon tissue has never been commercially manufactured in the United States, and in view of the fact that when one wishes to use the carbon process he runs a risk of securing old and insoluble tissue, it is no wonder that the few who do try the process are inclined to give it up in disgust.

In working out a method of filter making by the Pinatype process, it occurred to me that if one could so easily pour the warm colored gelatine solution on a piece of leveled glass and secure such a good result, why not first squeegee a piece of wet paper onto the glass, pour on a suitable coating for carbon tissue, and after it has set, lift if off to dry, either in a calcium box or by pinning it up by the edge?

One point I have never had explained to me, and that is, why do makers of carbon tissue use such a heavy, non-absorbent and rotten paper support for their tissue? In using small sizes the gelatine coating always becomes too wet before the paper has ceased to expand and before all the stretch has

been taken out. And they use the same weight of paper for all their sizes. A smooth, thin, tough paper is much better than the heavy quality ordinarily employed.

For our home production the gelatine should be of a good quality, such as Nelson's Photographic No. 1, in sheets. Too soft a gelatine gives weak prints, while a hard grade does not dissolve out properly in developing the finished print and leaves a heavy, veiled, and flat image. A gelatine containing impurities will give streaks and spots in the print. Any sheet gelatine that will absorb eighteen times its own weight of cold water in twenty-four hours, will make good carbon tissue. Avoid doctoring the tissue emulsion by such means as using soap, sugar, or glycerine. Use the proper grades of hard, soft, or medium gelatine, according to your requirements, and add nothing to it except the pigment.

The selection of the proper pigments is of great importance. The color, and the amount required, both depend upon the subject or class of subjects in hand. The most brilliant colors are not well suited to carbon work, and one is compelled to avoid dull, heavy, opaque pigments, especially in three-color work. Acid dyes are useless, as they do not behave well in the bichromate bath.

This leaves one with a very few pigments from which to make a selection. Lampblack, Venetian red, madder lake, cobalt blue, sepia, burnt umber, sienna, and cobalt green, are all good colors, and by proper mixing any color desired can be obtained.

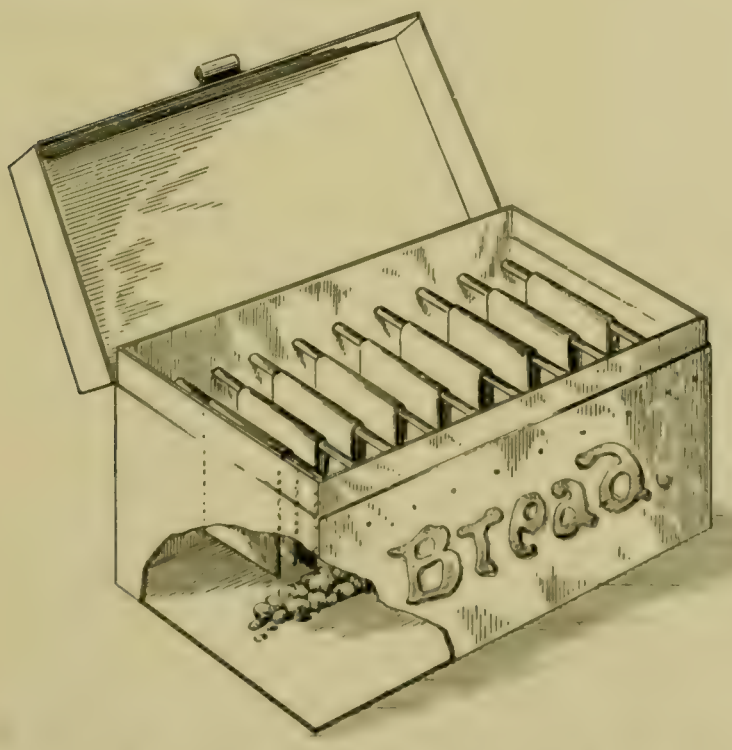
While the making of carbon tissue on a small scale is not a difficult operation, one must not expect to secure the same amount of uniformity that is obtainable in the purchased article. Still, by a little practice and some care in watching the temperatures, excellent results can be obtained. The most important matter is the securing of pure pigments, seeing that they are properly ground into the warm gelatine, and care in the final filtering.

First, secure some heavy negative glasses from which the films have been removed with hot water. Have these about four sizes larger than the tissue to be coated, and as free from warp as possible. For example, use a 10x12 piece of glass for a 4x5 piece of tissue. Next take some ordinary writing-pad paper having a smooth matt surface, remembering that a thin, tough paper that will absorb water is better than a thick, spongy one. The former becomes limp in the transfer bath before the gelatine film becomes too wet for adhesion. Steinbach paper, although rather expensive, is about the best for the work. In making tissue for three-color work, be sure and cut the paper so that each sheet is the same, either with or across the length of the roll. This provides for even shrinkage and allows the three prints to register more closely when superimposed. Cut this paper into 6x9 pieces for 4x5 tissue, to allow for trimming and the folding in the middle in the drying box. In other words, one makes two 4x5 sheets of tissue at a time. Soak the paper in cool water for ten minutes, avoiding air bubbles; then squeegee each sheet onto the center of a 10x12 glass. Level up each of these pieces of glass, using wooden toothpicks and a small carpenter's level while working upon some firm and rigid table or bench.

Having previously cut up one hundred parts of sheet gelatine, Nelson's No. 1 preferred, and allowed it to swell for four hours in three hundred parts of cool water, dissolve it by gentle heat and then grind in the desired color. Keep the solution at one hundred and ten degrees, and when thoroughly mixed, filter through muslin into a cup or pouring bottle. Do not allow the gelatine mixture to chill or set, but work in a warm room.

For a sheet of paper 6x9, measure out three hundred and seventy-eight minims of warm gelatine solution and pour it onto the center of the leveled paper, rapidly coaxing it out to the edges by using an old spoon or bent glass rod. Touch out any air bubbles before the gelatine sets, and in ten minutes lift up the coated paper and hang over one of the rods in the drying box.

This drying box is the most important accessory used in the work, and one should provide himself with something of the kind. If the tissue be hung up in a room to dry, it will be subjected to dust, gas and moisture; while by using a drying box all these are avoided and quick drying of the tissue is secured.



Obtain a large tin bread box with a tight-fitting cover, and nail in pieces of round wood, as shown in the sketch herewith. These cross-pieces should be about two inches apart and about an inch below the edge of the box. When ready to dry the tissue, place about two pounds of anhydrous calcium chloride in the bottom of the box. Then hang the pieces of tissue over the round rods, close the box and seal the joint with a band of electrician's tape or the kind used for bicycle tires. Do not make a mistake and use chloride of lime, but use the same chloride as is used in platinotype tubes. The tissue should be dry in four hours. If found so, cut it into the desired sizes and put under pressure in a printing frame. Dry the calcium chloride on an iron plate over the stove, and place in an air-tight can until again wanted.

The carbon process has much to recommend it. As only gelatine and pigment are employed, the process is characterized by both simplicity of working and permanency of results, and as nothing but warm water is used in developing, it is, in reality, the most inexpensive process known; particularly so when one has learned to make his own tissue.

Besides the facility of employing any shade of color desired, the process has a wide field of adaptability. It will give direct prints on paper, fabric,

glass, celluloid, wood, metal, and the like, either in monochrome from ordinary negatives, or in colors, using three suitable negatives. Enlargements can be made from negatives that are not too dense, and lantern slides, transparencies, and positives for the production of enlarged negatives, are all most satisfactorily produced by the carbon process.

The coating forming the pigmented tissue is made by swelling one hundred parts of gelatine in three hundred parts of water for four hours; then melting it at a temperature of one hundred and ten degrees, and lastly grinding in one of the following pigment mixtures, which can be made up into stock powders ready for use. No rule can be given as to the exact amount of pigment to employ. Add enough to insure the coating being opaque. The paper should never show through, except in the case of the three-color tissue.

Black.

Lampblack	60 grains
Indigo	30 grains
Carmine lake	64 grains

Brown.

Vandyke brown	125 grains
Carmine lake	156 grains
Lampblack	94 grains

Sea Green.

Chrome green	200 grains
Cobalt blue	10 grains
Lampblack	50 grains

Marine Blue.

Frankfort blue	100 grains
Alzarine blue	15 grains
Lampblack	50 grains

Polychrome tissue for producing brown, blue, and green tones at one printing from a single landscape negative is made by coating the paper, using an air brush, first with a layer of brown, then with green, and the third or top layer of blue. For moonlight effects, coat first with purple and then with dark brown.

Tri-color tissue for three-color work is made by using for the yellow, chrome yellow; for the red, Pinatype Red F, or regular carmine; and for the blue, fast blue-green, to each fifty grains of which has been added one grain of picric acid. Grind enough color into the warm gelatine solution so that a drop of the mixture allowed to fall on a sheet of white paper will appear slightly darker than the shadows wanted in the print.

To be brief, carbon tissue is a film of pigmented gelatine coated on a temporary support of tough, porous paper. This is made ready for printing by sensitizing in a bath made by adding three ounces of bichromate of ammonia to one hundred ounces of hot water and allowing it to cool to sixty-five degrees Fahrenheit. Use C. P. bichromate of ammonia, and not bichromate of potash. Using lamp-light, the tissue is immersed in the bath for three minutes, moved about to avoid air bubbles. Lifted out it is then

squeegeed face downward on a piece of glass, and when stripped, given a five-second immersion in a bath of wood alcohol. It should not be hung up to dry and collect dust, but placed in a calcium drying box or squeegeed to a ferrotype plate. If this is done, one will never be troubled with insoluble tissue. It should be used as soon as dry, and therefore one should sensitize only what is wanted for immediate printing.

The negative should be given a safe edge of opaque color or a border mat of non-actinic paper used between it and the tissue, in printing. This leaves an unexposed border all around the print and prevents frilling in developing. The negative should be fairly thin and of good quality. The exposure should be about as long as for Solio paper; the time can be judged by placing a strip of the Solio paper under another negative of identical quality and placing both out to print at the same time. Still protecting the tissue from all except lamp-light, other than when printing, place it in cool water until limp, removing it as soon as the curl disappears, and squeegee to a piece of white matt celluloid. Next place in a tray of warm water, at about eighty degrees. If the tissue strips at once and the image washes away from the celluloid support, it is a sign of under-exposure. If it fails to strip after raising the temperature of the water to one hundred and five degrees, over-exposure of the tissue is indicated.

Any good paper can be used for single transfer work by dipping it in a sizing bath made up by dissolving three ounces of shellac and one ounce of borax in thirty ounces of water. The matt celluloid requires no size. Heavy, unexposed bromide paper, fixed out in hypo, washed, and then given a hardening bath of formaldehyde, makes an excellent support. If one uses films and prints from the wrong side, or if negatives are made by exposing the plates through the glass side, one need not bother with the more troublesome double-transfer process.

In three-color work one will have to use the double transfer. The tissue is squeegeed onto clear celluloid sheets that have been waxed. This waxing of the temporary support is done by rubbing on a solution composed of one-fourth ounce of beeswax in ten ounces of benzine, afterwards polishing it off with a soft cloth. The three prints are developed on their respective sheets of waxed temporary support and afterwards transferred to the final support, one at a time and in perfect register, using a warm cementing solution. This last is made by adding one-fourth ounce of swelled gelatine and seventy drops of acetic acid to twenty-six ounces of wood alcohol. They should be put down upon the well-wet support and stripped when dry, cleaning the face of the last print free from wax, by using benzole. The negative should be fairly thin, as contrast gives high relief and causes air bubbles in cementing the films together.

Do not use too much force with the squeegee; it is the vacuum, not the pressure, that is effective. If one makes his own tissue, uses a drying box, prints as soon as the tissue is dry, and works by lamp-light, little or no trouble will be experienced. If the paper used in the single transfer process be not wet enough, the tissue will not adhere. The paper requires at least fifteen minutes' soaking. In double transfer the wax may have been rubbed

off of the temporary support, or the wax may not have been allowed to dry fully.

In three-color work the red and blue tissue must be very transparent, and the same is true in the case of trichromatic tissue to be used under an ordinary negative. Carmine and prussian blue pigments are too opaque. Use neutral analine rhodamine for the red and neutral fast bluish-green for the blue. These work well and are the colors employed by the large European factories. Red is to be avoided in three-color work; light pink is the color best suited. Many of the aniline crimsons and reds are acid and will not only stain the waxed temporary support but the color will run and spoil the effect. The yellow must be bright and contain no trace of red. As a final caution, do not use a pigment or a sensitized bath that is at all acid.

DIGGER INDIAN HOME — INA. L. COOK

Honest Work

As long as civilization is allowed to pursue its course, however tastes may change, and whatever developments may be wrought, the stamp of good, honest, skilful, and cultivated art industry will not only preserve its value, but pay compound interest as well.—Walter Smith.

What's Art Anyway? Here's a Soul That Wants Light

Portland, Oregon, July 16.

Friend Clute:

Say! what's art?

What do they mean by an artistic photograph?

Huh?

"Any fool knows that," eh?

Will you kindly stir up someone who knows and who will tell me so that either of us will know what he has been talking about when he gets through?

"Art is—um, um, let's see; why, art is that expression that truthfully—naw, that won't do. Art is—why, art is that which tells others what we saw, or thought we saw, or might have seen, or—oh, hang it, you know what art is; don't bother me with all those fool questions."

Exactly, just so; having arrived where we started from we alight and wonder where we have been.

Is an artistic photograph a pictorial one?

Is photographic art only seen at club exhibits and salons?

Is it always seen there?

Who decides what art is? Who decides while others hold their peace, and the rest of the wise men agree without demur at his dictum?

For twelve years I have been philandering about cramming down duff about art; your art, my art, the art of the ancients and honorables, the art of the brush and the art of the knife and the art of the needle and the art of the lens and the art of every old thing except the art of art. Others have rammed more art down me until my throat clutch is jammed and my Adam's apple is all juice and pips.

I show a portrait to a fellow club member; he squints one eye at it, clears his throat, rubs his chin, spraddles his legs, makes a telescope of his left paw and oracularly announces:

"Very good portrait, but it isn't artistic."

There I learn that the quality of a print has nothing to do with its artistic qualities. Cheering thought, very.

I show a landscape to another wise man and he blats:

"Say, that's fine; good composition, good atmosphere, good distance nice treatment of the sky line, but, of course, it isn't pictorial."

There you are: any picture that's a portrait that looks like the person it represents, and a landscape that has atmosphere, composition, drawing, distance, tone value, et al., are neither artistic nor pictorial. Mysterious things are these art-pictorial medleys.

What's art?

One chap says it's the imaginative rendering of the beautiful.

Another asseverates that it is the truthful rendering of the pleasing.

Again I discover that it's making other folks see and feel what you saw and felt was worth while or not.

Webster says that it's "the system of rules serving to facilitate the performance of certain actions." That last is a peach of a definition for the photographer athirst for dope about art.

If art is a bunch of rules, who made the rules, who has 'em now, who observes them, who cares whether one does or not?

Do you know an artist, dead, living, or half and half, who has ever made what we are pleased to term a masterpiece, who did not violate half a dozen rules the prep student takes as gospel? How about Turner? And the drawings of the old masters? And the modern French impressionalists?

Can you be an artist and violate the laws of nature and perspective and composition, and grow great painting horrible dreams of drug madness? Can you remember such an instance?

Can you take a sharp stick and point out a text-book on art that does not assert forcefully that it is deadly and barbaric to do any one of two-score things that every master does?

What's art?

Can you guess, and is your guess today the same as yesterday's?

Mine isn't?

And if you are satisfied with your definition of art, do you know anyone else that is?

I've read Ruskin, most texts that libraries have, art magazines, photo journals, once managed to grab a B. A., am fairly intelligent, have seen an exhibit or two, and I don't know what art is; nor do I know any standard by which I can gauge my work or anyone else's, and I know no one who is much better off, though I know several who skillfully conceal their ignorance. And I never saw a definition of art that could not be shot full of holes in four minutes.

Art is that facile dexterity, guided by experience and genius, that personifies suggestion.

There's a nice esoteric definition of art as applied to painting and the rest of the "hand arts." I made it up as I went along and could make up a dozen more, but it means nothing when you crawl inside of it and try to find out what makes it tick.

They are strong on suggestion and imagination these days, and they prate about the master-hand who paints a bee and the room buzzes; and who breathes a sigh and nature weeps. Imagination, fancy, feeling, suggestion—fine quartette these days; but how about truth and realism and perspective and drawing and tone, and even beauty? And did you ever see a man get 'em all in one picture? And if so, how about simplicity being art?

Were the great painters of battle scenes mere workmen because they did not present imaginative beauty instead of forceful horror?

Is there a general code for the conduct of art, or can it roam around nights, doing as it pleases and sticking around any old place and whistling any old dance-hall tune it fancies?

Do we revere the Old Masters as we did one hundred years ago, or have our art "ideals" been boosted? And who boosts them?

Has every generation, every clime, every class, every religion an art? Then where's universality and who is right?

Just playing with words am I?

Then come on and tell me what is photographic art, since you're so brash.

How would you instruct a good technical worker to produce one artistic, pictorial masterpiece that would get past a jury and climb into the salon? Can't do it, can you?

Nor can anyone else.

THE ALARM By DANA SLEETH

Then is it playing with words to express a little of the miserable doubt most serious workers feel when they try to decide what is the right and good thing in photography?

Painters can tell you little, and that little the next painter derides. Only the first-year student has the problem solved.

No old member of the R. A. will take an even bet that he can get a picture on the line without his name attached, nor that he can paint so poor a daub as not to get first award.

Look here, you know lectures and exhibits; that's your business. Can you pick out a dozen pictures out of three hundred offered and be sure any other judge will select the same dozen or any considerable part of them?

What's art?

I am sending you a photograph—is it exhibit stuff or rot or both?

Does it comply with the particular brand of art dope the last lot of judges you knew fed on?

It's called "The Alarm." It's a four times printed gum. Look at it closely and the chap has no eyes, he has smallpox and measles, he has no tone value in his face, there is neither detail nor gradation. It's rough, crude, slambang.

Put it forty feet away, what grabs you? Isn't it the whites of the eyes? Fear, eh? Telescope your fist, note how the gun stands out, note the ten-

sion in the face, detail left where it counted, the high lights are only strong where needed, no distracting detail, pose fairly good.

Is it a daub or a picture?

I don't know and I have found no two persons whose decisions agreed.

If it's a picture, how did it get to be one by violation of most important rules? If it is a daub, how does it come to comply with so many nice definitions, and what can you do to improve it? And, when you get it improved, will it have any better chance than it has now?

What's art?

Do you know? Who told you? Read it in a book, did you?

Whose book, and who was he in the art world? What things did he do, and did he keep his own rules, and did any other artist either assent to his rules or pronounce his work good?

Art is not the expression of the beautiful, nor the expression of truth in nature, nor the happy glint of mother-sun shining through the sedgy veil by the pond and caught in madder lake and creme de menthe green.

So, come on and tell me what is art.

Ah, come on and be decent about it; don't hang back and split words, because I've an exhibit to get up and I want to know; say, I just gotta know what art is.

And if you don't know, who in the—oh, never mind!

Sincerely,

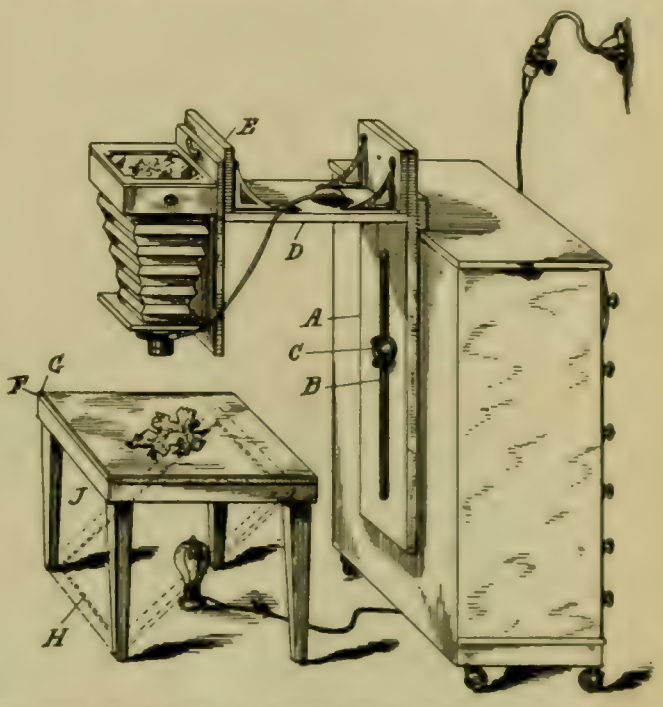
DANA SLEETH,
Member Oregon Camera Club.

PARISINA By A. W. RICE

Photographing Semi-Opaque Objects

By H. E. Blackburn

I wanted to get some good negatives of autumn leaves, three-color negatives, by the way, and aside from wanting right color values wanted that real color texture of the leaves that lies more in their fiber than in the actual surface that reflects the light through the lens. I finally hit upon a plan that gave me excellent results, and for the benefit of others who may at some time wish to photograph something of a like nature, wood veneer, for example, I will give a sketch and describe a simple piece of apparatus which I employed.



The tripod is a piece of board, A, with a slot running through its center as shown at B. A common bolt with nut and washer is inserted through the back of an ordinary dresser or other piece of heavy furniture that can be pressed into commission. A winged nut as shown at C will be an added convenience, as it can be tightened up without the use of a wrench. From the upright piece an arm, D, is fastened and strengthened with two or more simple brackets such as can be obtained for a few cents at any hardware store. This arm D terminates in a small piece of board E placed parallel to the upright piece and fitted with a hole to engage the shank of the ordinary tripod screw. The whole thing is easily set up and the length of the slot B provides for considerable range of position.

The real advantage of this method of working is due to the plan of supporting the leaves over an illuminant that will give some light through them from below while they are also being illuminated from above; and it also permits one to arrange the subject leisurely and without fear of movement. This is done by making a small frame J upon four legs to support a sheet of ground glass, matt side uppermost, as shown at F. A sheet of light yellow paper G can be used on top of the glass if thought best to cut off the excess of violet rays. On this glass or paper the leaves are arranged, an ordinary incandescent electric light placed below and connected with a wall bracket as shown. The exposure is made while the leaves are illuminated both by the electric light below and a stronger light from above. The results secured will surprise one who has tried to photograph such things in the usual manner. There is secured a suggestion of color and texture that it is practically impossible to obtain when working by ordinary direct lighting.

By placing a mirror H, shown in dotted line in the sketch, at an angle of forty-five degrees and below the glass surface of the stand, daylight can

be used for both the direct and reflected light. If this is done, the legs supporting the ground glass frame should be made of sufficient length so that the mirror H can be illuminated by light that is not intercepted by the top of the stand.

AT THE DRINKING PLACE By WM. T. KNOX

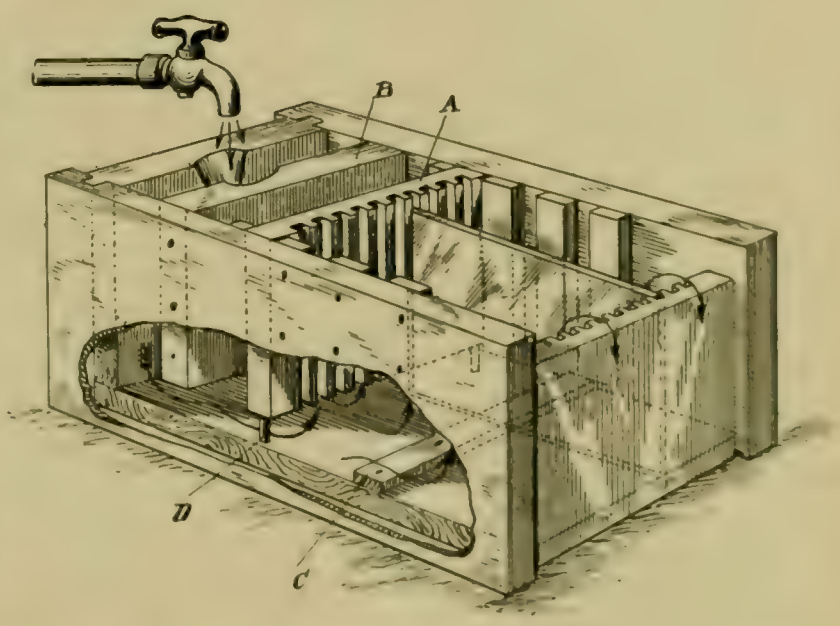
Symbolism

Symbolism is the suggestion through form and color in art, through words in language, sound in music, and signs in motion, of something which is beyond and in addition to the mere outward meaning of the thing seen, spoken, heard, or done. It is characteristic alike of the infancy and the maturity of the arts and of social history; but its use marks the existence of a distinct type of mind. What the allegory and parable are in literature; what figurative speaking is in language; what the war-cry is in the death-struggle of contending armies, or the trumpet-note in face of the foe,—what these things were and are in their several ways, the same is symbolism in art and architecture.—Walter Smith.

An Efficient Plate Washer

By Walter Thurston

The washing of my plates and films has always been more or less of a task and one accompanied with occasional mishaps to the film and a constant doubt as to the efficiency of the rather crude methods used. I had, early in my experience as a photographer, used a metal washer, but this soon became rusty and gave me iron spots on my negatives. There are, no doubt, many good metal washers on the market today that would not develop this failing, but those that seemed the most efficient had the drawback that but one size of plate could be accommodated.



The sketch herewith shows a washing box made out of wood. The one I am using was originally a packing case containing a dozen bottles of some proprietary medicine sold by my nearest druggist. The corners were well dovetailed and this prompted me to select it, despite the fact that it was not the exact size desired. As can be seen, the grooved partition A is removable, and and as several places are provided for its insertion, the tank can be made to accommodate any one of several sizes of plates.

The other stationary partition B, which does not reach quite to the bottom of the tank, is placed immediately next to the end of the tank, leaving a channel between the two for the inflow of the wash water. To allow of the even flow of this and prevent splashing, I suggest cutting out a conical half groove in the partition and end of tank as shown in the sketch. A narrow, thin strip C is fastened to the bottom of the tank to keep the plates slightly raised, at the same time allowing a clearer flow of the water from the bottom upwards to the discharge, which will keep the tank bottom scoured and free from deposited hypo and other impurities. The water enters the narrow partition at the end, flows under the partitions B and A, then upward between and parallel to the surface of the plates, escaping at the opposite end over the tops of the tank end, in which the upper part has been cut away for that purpose. The depth of this cut, in the upper part of the tank end, should allow the overflow to be a trifle higher than the width of the largest size plate for which the tank is fitted, as otherwise its upper edge projecting above the overflowing water would not be washed. Partition B being stationary, it can be nailed in position permanently, allowing

its bottom edge to clear the bottom of the tank the desired distance. Partition A being movable should have attached to its bottom edge a couple of nails, D, or, better still, wooden pegs, which will keep it also above the bottom of the tank at the desired height, when used in any of the grooves used for the different sizes of plates. The number of these plate grooves must naturally depend upon the size or width of the box utilized in making the wash tank—but if the services of a professional carpenter are utilized it can be made to hold whatever number of these is required.

The building of the tank is well within the capabilities of the home carpenter, and a regular shop would charge but a small sum to construct one out of scrap lumber during a slack period. The corners need not be dovetailed, but should be joined as shown in the sketch. A coat of paraffine paint should be applied, and, just before it sets perfectly hard, any rough spots trimmed down with a knife or chisel and a second lighter coat applied. If the wood used is very dry and porous, a preliminary coat of the paint should be applied and allowed to soak into the pores. It is also well to apply a coat of the paint to the joints at the corners and around the edge of the bottom, before nailing together.

Evidence of Progress

It is prima facie evidence of progress that a nation will not ignore landmarks nor despise the wisdom of past ages; it is conclusive proof of advancement when a people estimates past experience at its full value, whilst it claims for itself independent action for the present, and displays consideration for the future. The tendency of art and design is to help forward civilization by providing a peaceful object on which to expend both love and genius. It is also to be regarded as a thermometer of national development; for so long as the inventive powers are displayed in discoveries of new processes or the improvement of old ones, and art is employed to enrich and ennoble the nation by its triumphs, the meridian of that nation has not yet been reached; but when love of the beautiful decays and art is on the decline, then, in fact, people are relapsing into barbarism, and neither civilization nor society will long survive their extinction. The influence of good design upon happiness of people is real, if not direct. A sense of fitness and propriety, of unconscious rest, marks the presence of good design. The opposite sensation is the inevitable accompaniment of bad design.

The perfect adaptation to purpose of everything which God has made and men have left alone, or which has strength enough to resist his corruption, has given us a standard by which the arts and works of men may be judged, and by which, consciously or unconsciously, we form an opinion about them.—Walter Smith.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, AUGUST, 1908. No. 8

Those Flash-light Articles

We have received a large number of letters asking that Mr. Ogilvie continue his articles on flash-light work as he offered to do in our March issue. Taking up the matter with him, he suggested that it would be more timely and appropriate to do this a little later, as the winter months would no doubt find more of our readers inclined to make practical use of such advice as he might be able to offer. We have therefore decided to postpone the publication of further articles on the subject until our October or November issues. We regret that it has been impossible to answer all our correspondents who have written on the subject, and trust they will forgive us for the neglect and at the same time accept this as our acknowledgment of appreciation of their kind words in behalf of our contributor and his efforts.

Our Advertising Pages

We have been running a small advertisement in the "Trappers World," of Algona, Iowa. The large number of enquiries for sample copies which we have received from this modest little announcement has been a source of gratification and surprise. The magazine is an excellent one and no doubt a fine advertising medium, but we could not understand the large returns until one of the subscribers wrote to say that the magazine that, quoting our words, "carried more photographic advertising than any other published in this country," was just the one he wanted. He went on to say that when he saw a lens or camera advertised in other than a photographic magazine he looked upon that particular lens or camera much as he did upon the gun or rifle that was the only such article advertised in a boys' magazine. The advertisement did not impress him. When he saw a gun or rifle using good space regularly and in a dignified manner in a sporting magazine in competition with dozens of like lines, he knew by experience that that particular gun or rifle was worthy of all confidence. We believe there is much in our correspondent's contention. Nothing so gives a certain line of photographic goods the standing which results in sales as continued use of good space in

a good photographic magazine. Other kinds of publications may perhaps bring in more enquiries in proportion to their cost, but the actual sale is generally consummated on the strength of a favorable impression formed as our correspondent suggests.

The Detroit Convention

The twenty-eighth annual convention of the Photographers' Association of America, which was held at Detroit, July 14th, 15th, 16th, and 17th, was a most successful and enjoyable one. The treasurer's report showed an increase in the funds of over five hundred dollars. A vote taken on the day of the largest attendance, the third, resulted in two hundred and seventy-one ballots being cast. Treasurer Barrows, in a speech criticizing the Central Passenger Association, estimated that about one-third of those present traveled on mileage books; other estimates placed the number of manufacturers and their agents present at upward of two hundred and fifty; consequently the total attendance must have been most gratifying to those who have worked so hard for the success of the convention. The bulk of the foreign exhibit collected by Harry Fell and intended for the convention was destroyed by fire in the custom house at Boston. The first, second, and third prizes for exhibits were awarded to Strauss, of St. Louis; Doty, of Belding, Michigan; and Moore, of Cleveland, in the order named. The prize of one hundred dollars for meritorious devices was divided between Charles W. Lewis, of Bad Axe, Michigan, and W. G. Rounds, of Woodstock, Ontario, for the adjustable printing frame of the former and the baby holder of the latter. At the same session, retiring President Medlar was presented with a handsome shotgun in recognition of his services. A. N. Camp, of Jamestown, New York, was awarded the cup for the best display of color photographs. Rochester was selected as the next meeting place, its nearest competitor being Chicago with fifty votes. New officers were chosen as follows: President, Frank R. Barrow, Boston; first vice-president, A. T. Proctor, Huntington, West Virginia; second vice-president, J. H. C. Evanoff, Salem, Massachusetts; and treasurer, L. A. Dozer, Bucyrus, Ohio.

The P. A. of A. Annual

We cannot refrain from complimenting the National Association upon the handsome annual which was gotten out as a souvenir of its last convention just closed. In addition to the ninety-six pages of valuable letter press, it contains about twenty-five handsome full-page plates. The press work and typographical arrangement are of the finest quality, and the good taste and skill employed throughout are a credit to the Chambers Press and its presiding genius, Frank V. Chambers, editor of our two most excellent contemporaries, "The Camera" and the "Bulletin of Photography." The annual is one of the best pieces of printing we have had the pleasure of examining in a long time, and it certainly establishes a record for such publications that it will be hard to excel.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department Should be Addressed to its Editor.

Edited by
H. D'ARCY POWER, M. D.
Burlingame, California.

COLOR PHOTOGRAPHY.

Among the possibilities of the future is yet another screen plate, that of M. Dufay. It is essentially a trichrome screen in which the colored elements are applied to the plate by means of printings, each application being separated by a layer of varnish. It is anticipated that the screen will permit of greater rapidity than is obtained by the Autochrome.

Autochrome Plates

The most important communication of the month is perhaps an article by Alfred Stieglitz, in "Camera Work." As I have stated before, frilling is a hot-weather trouble, and Mr. Stieglitz had to develop Autochromes when the temperature of the wash-water was seventy-five degrees. This led him to experiment with formalin, with the result that he was able to entirely eliminate the frilling trouble by bathing the plates in three-per-cent formalin for one minute, followed by a rinse, and then proceeding to develop. He concludes by stating:

"Although these experiments are by no means conclusive, they seem to point the way in which frilling of Autochromes may be entirely overcome. They also seem to show that with the introduction of the formalin the necessity of keeping the various chemical solutions employed in the process at a low and equal temperature will be eliminated. Furthermore, the tanning of the film will permit one to wipe its surface during the operations, and to treat it locally with ease, if necessary, besides permitting the plates to be dried by heat. Two factors to be definitely determined are, whether all emulsions will stand the formalin treatment —Autochrome emulsions still vary considerably—and whether it will be better to introduce the bath before or after the first development. Before will be a decided advantage, for it would eliminate the question of temperature from the start as far as frilling is concerned. In no experiment was the brilliancy of color affected. The experiments recorded were made with 13x18 centimeter plates, emulsion number one hundred and thirty-three.

Autochrome Stereograms

The "British Journal of Photography" points out that the color plate has not given the results expected in this field, because the layer of starch granules, by reason of the stereoscopic projection, assume an unexpected importance, and form a haze.

General Technique

Those who would read the lastest on the above, should read the "British Journal of Photography's" abstract of a paper by M. Monpillard. It is a quite exhaustive paper. The main point seems to be that if reduction in the fixing bath is to be avoided, there must be more liberal washing after each operation than the Lumiere directions call for.

PROF. NAMIAS ON NO-SCREEN PLATES.

In a recent communication from the photochemical laboratory of the Progresso Fotographico, Prof. Namias discusses the formula recommended by Dr. Konig for bathing a plate so that it will give an orthochromatic rendering without a color filter. The formula is:

Distilled water	600 c cm.
Filter yellow K	5 grams
Erythrosine	0.1 gram
Alcohol	300 c cm.

The screening dyes tried by Prof Namias, to replace the filter yellow K, were the well-known tartrazine and naphthol yellow varieties. Neither of these dyes absorbs the ultra-violet completely, but in practice they are both suitable for work in ordinary daylight

The bathing formula used by Prof. Namias was:

A.	Water	1,000 c. cm.
	Erythrosine	0.1 gram
	Naphthol yellow ...	5 grams
or, B.	Tartrazine	5 grams

From spectrographic tests shown by the author, there would seem little doubt that the A formula, *i. e.*, naphthol yellow and erythrosine, gives the best results. A strong band of color-sensitiveness between the E and D lines is apparent, the blue-green region appearing less strongly, and the sensitiveness seeming to end just beyond H. With each plate there is, however, the weak gap in the green about E ½ F, which it is so extraordinarily difficult to fill in. However, actual landscapes taken by M. Luigi Crispi show the advantages obtainable with the A formula plate, and as naphthol yellow and erythrosine are both inexpensive and easily obtainable dyes, those who wish to experiment with non-filter plates should give the formula a trial.

The treatment given to the plates was five minutes' immersion in the coloring solution, then drying in complete darkness without previous washing. No special precautions were taken in the drying, but we may remark that quick drying in a dry, pure atmosphere, within three hours, is always productive of the best results in this work.—"Amateur Photography."

NEGATIVES WITH TELE-PHOTO LENSES.

The last year or two has seen a decided increase in the number of amateurs who use tele-photographic lenses, says Mr. Washington Cobb, in "Photo Facts." As they are generally used not constantly, but now and again when the particular circumstances of the case seem to require them, the photographer does not have time or opportunity to get thoroughly master of their peculiarities. One is their tendency to give flat, foggy negatives. It is not a fault of the lens, but is due to the nature of the subjects on which we use it. The general appearance of such a negative in the developer is the same as if the plate were decidedly over-exposed. To remedy this, the development should be carried much further than usual. Twice the customary length of development will, in most cases, be found to be none too long. Even then, it may be needful to intensify. In such a case, a slight reduction first with ferricyanide and hypo will help to get rid of the fogged appearance, and will make the net increase of density due to the intensification distinctly greater. For the same reason, backed plates should always be used for tele-photo work, and if possible a slow plate, which gives density more easily. A peculiarity of orthochromatic plates is their tendency to give hardness, and this may be taken advantage of. If a yellow screen is used, much of the characteristic flatness of a tele-photo negative may be got rid of.

PLATE SPEEDS.

T. Thorne Baker has an instructive article on this subject in the "Amateur Photographer," from which we cull the following rules and tables. To convert Hurter and Driffield numbers into Watkins, multiply by one and one-fourth, if the former are ferrous oxalate. Multiply by twenty-five thirty-sixths if pyro-metol. To convert Watkins into Wynne numbers, multiply by forty-five and take the square root of the product. To convert Wynne numbers into Watkins, square the numbers and divide by forty-five. He gives the following table of comparative rapidities:

Watkins	Wynne	Hurter and Driffield	
		Fer-Ox.	Pyro-Soda
55	45	36	64
65	56	52	94
90	64	72	130
130	80	104	188
180	90	144	260
250	111	200	360
350	128	280	504

DETAIL IN PHOTOGRAPHS.

G. A. Storey, A. R. A., in his lecture on Art and Photography, given at the R. P. S. a few weeks ago, dealt with the matter of detail in a manner that may seem strange at first to many photographers. The position he took up was this: Detail in small images tends to give an appearance of littleness, while in large pictures it simply looks natural. The reason of the dwarfing effect of detail in small images is fairly easy to understand. In general, small scale suggests distance, but fine detail denotes nearness, and when the two co-exist, we can only reconcile one with the other by assuming small size. From this we may argue that in the case of large

images, say nearly full size portraits, the size suggests nearness, and detail is then expected. If it is entirely absent, the effect is difficult to account for. If we assume the lack of detail to be due to distance, then the big scale denotes gigantic size, while if this seems unreasonable we are apt to feel that something has gone wrong with our eyesight. It is very curious that so many photographers seem to look upon detail from quite opposite points of view to those we have mentioned. They tolerate intricate detail in small images, probably because it looks pretty, but aim at most obvious fuzziness in large pictures where detail is most in place. Possibly this is due to want of consideration of the various factors that tend to suggest distance or the reverse. One of these factors is, of course, depth, and this, naturally, should vary in quite the opposite way to the detail. For example, if our attention is directed to a very near subject, we see all the detail in that subject, while more distant objects are practically ignored, and are therefore best represented without detail. If, however, the principal object is moderately distant, we see very little of its detail, while its general definition is very little better than that of much more distant objects in the background. In this latter case fair depth, but little detail, is desirable, while in the other detail is wanted, but practically no depth.—British Journal of Photography.

THE CLAIMS OF THREE, SIX, AND TEN TIMES COLOR SCREENS.

When the photographer has decided to employ orthochromatic plates and a color screen, he is apt to ask himself what particular strength of color screen is likely to be of most service to him. Is he to have a three-times or a six-times screen, or is he to go still further and get the ten, or even the forty-times screen, which is said to give perfect color rendering?

The answer to such a question is that it is better not to overdo it. Except for the professional copier of pictures, the very deep color screens are not much required; if, indeed, they are wanted at all. A ten-times screen means that exposures are often to be prolonged to such an extent that the photographer, in desperation, leaves the screen off altogether; or if he does use it, he cuts the exposure down and so falsifies his color rendering at once. A full exposure, it should always be remembered, is an absolute necessity, if the full benefit of orthochromatic plate and light filter is to be secured. With all ordinary exposures multiplied by ten, this is often very difficult. Moreover, if a six-times and a ten-times filter of the same kind are compared in the camera, it will be found that by giving a full exposure with the six-times screen a better color rendering can be obtained than by giving too short an exposure with the ten-times screen; so that where the exposures have to be short, as is so often the case, it will be found that the six-times screen will have a marked advantage.

The question between three-times and six-times is not so readily answered, although the need for a full exposure in each case, if the full benefit of the screen is to be secured, is just as great. For strongly-colored flowers and fruit and similar work, the six-times screen is almost a necessity, as the three-times one will not reproduce very pronounced reds and yellows with sufficient truth.

Landscape workers, on the other hand, can find nearly everything they want in a good three-times light filter. It will sufficiently lighten the foliage greens for them to look true, and if clouds are in the landscape it will render them with good printing value in the negative. They may want a little shading during printing, but nothing more; they will be there, and in sufficient contrast. Such a screen also does not put instantaneous work out of the question —a consideration in windy weather or for the hand-camera user. Many a landscape subject can be secured with a twenty-fifth of a second at f-8—that is, assuming it is an ordinary open landscape and that a fast plate is in use. This means that with a three-times screen we must give approximately an eighth of a second—not by any means an impossible hand-camera exposure.

The conclusion, then, is that for all ordinary work the advantage lies with the three or four-times screen, which will give all the correction wanted in landscape and general photography; while the photographer of still life subjects, such as flowers, and of highly-colored objects generally, will do best to get a six or more times screen.

Certainly, if only one screen is to be bought, it would be wise to get the weakest, as being most often useful.—"Photography."

Photographic Post Card Exchange

C. Frederick Potter, Jr., Director, 620½ Nicollet Ave., Minneapolis, Minn.

I have asked Mr. Clute if it would be possible to act on the suggestion of one of our older members, who writes as follows: "The idea occurred to me while looking over the post cards I have received the last few months, that if the members would send in a few cards to the Director occasionally, say, every two or three months, this department of ours in "Camera Craft" could be illustrated with one or two of the best examples of our work so received each month. This would prove an incentive to the best work, stimulate interest and be the means of bringing in new members."

Many readers hesitate to join the Exchange through ignorance of the high grade of work done by our members, and if the space can be spared for the illustrations, I am sure that we can furnish at least two good examples of post-card work for reproduction each month. [The space will gladly be provided, and I trust members will see that the Director is supplied with an abundance of material from which to make a selection each month.—Editor "Camera Craft."]

A REMINDER

Every one joining this Exchange obligates himself to reply to every card received from another member, sending one of equal or superior quality in return. If further exchange is not desired in any particular case, the sender of the card should be so advised, but a reply should invariably be given to the first card, at least. This is imperative; it is not only that, but it is a matter of courtesy due. I would not have mentioned it but for the fact that two or three members have written to say that they send cards to the new members announced each month and invariably find several who do not reply. We wish to avoid having a set of rules and regulations to be printed each month. The employment of ordinary courtesy and consideration is all that is required.

Those wishing to join the Exchange will send me a specimen card for approval, together with their subscription to "Camera Craft," if they are not at present subscribers. Subscribers are entitled to membership upon their speciment card being adjudged of sufficient high quality.

NEW MEMBERS

Burton H. Albee, 41 Myer St., Hackensack, N. J.

George B. Adams, care Mason Construction Co., Klamath Falls, Ore.

H. J. Becker, Cascade, Iowa.

O. H. Barnhill, Big Fork, Mont.

Geo. R. Bosworth, R. F. D. No. 4, Montpelier, Vt.

H. Celleyham, 1206 Eighteenth Ave., N., Minneapolis, Minn.

James Dunlop, Placerville, Cal.

H. D. Fowler, 1600 Thirty-fifth Ave., Seattle, Wash.

Arthur Gill, R. F. D. No. 1, Sheridan, Wyo.

Harold Glixman, 1282 Eddy St., San Francisco, Cal.

R. M. Glenn, R. F. D. No. 1, Courtland, Kan.

Thos. E. Guerin, 701 Erie Ave., Philadelphia, Pa.

Stella P. James, Vernon, Utah.

W. L. McMillen, Box 275, Osborne, Kan.

Dr. C. F. Meacham, Bellows Falls, Vt.

Alfred F. Nisle, 3257 North Fifty-fourth Ave., Jefferson Park Sta., Chicago, Ill.

Rev. Robt. M. Pratt, Upham, N. Dak.

Joe Silverburg, care Y. S. D. G. Co., Vandeventer and Quincy Aves., St. Louis, Mo.

Edward Truman, Kyle, S. Dak.

CHANGE OF ADDRESS

Van P. Ault, 712 Latrobe St., Parkersburg, W. Va.

Carl G. Frahm, 703 W. Ninth St., Grand Island, Neb.

O. P. Lynum, 3815 Brooklyn Ave. N. E., Seattle, Wash.

Emily Smith, 68 N. Grove St., East Orange, N. J.

Frank Smith, 96 Huntington Ave., Boston, Mass.

WITHDRAWALS

J. H. Fentress, Norfolk, Va.

The AMATEUR and HIS TROUBLES

Conducted by
FAYETTE J. CLUTE

DEALING WITH OVER-EXPOSURE.

One of my friends in the amateur class thinks he has solved the question of exposure and good printing negatives. He has done so to his own satisfaction, at least for the present. As he becomes more advanced and more critical he will no doubt abandon this method, if such it can be called, but it is at the moment giving him a great amount of satisfaction. He goes about it in this way: When at all in doubt as to the proper exposure, and that is generally the case, he simply gives such an amount of time as to assure a fully-exposed plate. When he comes to develop his exposures he does not try to secure the required amount of density, but rinses and fixes his negative as soon as all needed detail is out. This negative is later intensified. I am recording this method, neither to ridicule it nor to advocate its adoption. What I desire to do is to suggest that there is a good hint embodied in this description. The general tendency is to try and secure density in an over-exposed plate by prolonged development. This is all wrong, nine times out of ten. Prolonged development will simply result in a negative that is unprintable, or if not so, so veiled in fog that the resultant print has little to commend. An over-exposed plate is one that has been subjected to more than the ordinary amount of undesired light that always finds its way into a camera unless the lens is hooded most carefully. This light tends to produce surface fog on the plate if development is unduly forced or prolonged. This surface fog once deposited, the continuation of development simply adds to the printing time of the negative and in some cases even lessens the contrast through the fog strengthening at a greater rate than the image itself. In addition to this, such surface fog renders it almost impossible to improve the negative by after intensification, for the reason that the fog present will show a tendency to profit more by the taking on of strength than does the image which lies lower in the emulsion. It is much better to remove an over-exposed plate from the developer just as this slight veiling starts to appear and then secure the desired printing quality by after intensification.

LIVER OF SULPHUR

Liver of sulphur is a common name for sulphide of potassium. It was used to precipitate the silver in old fixing baths. This perhaps accounts for the presence of so large a supply in the stock of old photographic chemicals which you have acquired.

PRESERVATIVE TREATMENT OF WOODS.

Fence posts and the like of many kinds of cheap woods which ordinarily would soon decay if set in the ground can be made to last for twenty years by a simple treatment with creosote. Most of the so-called "inferior" woods are well adapted to the treatment, and this is especially true of cottonwood, aspen, willow, sycamore, low-grade pines, and some of the gums.

Impregnation with creosote has been greatly cheapened by the introduction of the "open tank," which can be installed at a cost of from thirty to forty-five dollars, or much less if an old boiler is used. A tank with a bottom twelve square feet in area will suffice for treating forty or fifty six-inch posts a day, or double this number when two runs per day can be made. The absorption of creosote per post is about as follows: Eucalyptus, one-tenth gallon; willow, two-tenths gallon; sassafras, ash, hickory, red oak, water oak, elm, and maple, four-tenths gallon; Douglas fir, quaking aspen, and black walnut, six-tenths gallon; sycamore, cottonwood, and lodgepole pine, seven-tenths gallon. The price of creosote is about ten cents per gallon in the East and Middle West, sixteen cents per gallon on the Pacific Coast, and twenty-seven cents per gallon in the Rocky Mountain

States. The cost of treating a post will therefore vary from four to fifteen cents. Properly treated, it should give service for at least twenty years.

Experiments of the Forest Service show that with preservative treatment the durability of lodgepole pine in Idaho is increased sixteen years. The cost of creosote is there relatively high, yet by treating posts there is a saving, with interest at six per cent, of two cents per post yearly. More important than the saving, however, is the fact that through preservative treatment other woods are fitted to take the place of cedar, of which the supply is rapidly becoming exhausted. A detailed description of experiments in preserving fence posts, together with practical suggestions for treating them on a commercial scale, are contained in Circular 117 of the Forest Service. This publication can be obtained upon application to the Forester at Washington.

The above is inserted as of interest to our readers, several of whom have asked us for information concerning wooden foundations for disconnected studios and darkrooms.

INTERNATIONAL PHOTOGRAPHIC EXHIBITION, DRESDEN (SAXONY) 1909.

The International Photographic Exhibition in Dresden, 1909, has just sent out its business schedule and notification forms in an edition of over fifteen thousand copies to the various societies and single persons in all circles interested in the work done by photography. These papers had been forwarded to the photographic industry as early as January last. The notifications from industrial circles have already attained such a volume that the place in the large Industrial Hall provided for that purpose is almost all taken. The participation in the other classes will probably be of equally enormous extent, all the more so, as already numerous notifications from scientific circles and others interested in reproduction, professional and amateur photography have been sent in. As latest date for notifications in all classes the 1st of August of this year has been fixed. This exhibition is especially arousing great interest outside Germany. In some States working commissioners are organizing traveling societies to enable the exhibition to be visited with the best advantage. In the various German States a travel fund has been arranged with great success, and there is a prospect of State or municipal support to these travel funds. For the information of the public, reports are being made out on the purport and contents of the exhibition, and these, together with explanatory lantern-slide illustrations, will be loaned to societies interested free of charge. Information of all kinds can be obtained from the business offices of the exhibition, Dresden-A., Neumarkt, 1, Hotel Stadt, Berlin.

THE REFLECTOR IN PORTRAITURE.

When the beginner first essays portraiture he finds that the side of the face next the source of light, generally the window near his sitter, comes out perfectly white while the other side of the face is in deep darkness. He reads up on the subject and finds he must use a reflector, something to lighten the dark side. A reflector, used intelligently, is no doubt a good thing, but it is easily overdone. Its use should be avoided unless absolutely necessary. It is much better to use a diffusing screen between the sitter and the light. Almost the same effect is secured with the added advantage that all danger of cross lighting and resultant false effect is avoided. Pose your sitter near a window and look for the excessive contrast between the side of the face that receives the light and the side that does not. Then, still standing at the camera, bring a large sheet of tissue paper or muslin between the head of the sitter and the window. This is easily done by having the material fixed, flag fashion, to a light piece of bamboo or fishing pole. If the effect is watched as the material is lowered into position, one will notice that a vast improvement has been made. When the lighting appears to be satisfactory, make the exposure. This flag-like screen will, of course, be held far enough away from the sitter, so as not to show in the picture. The effort made to appreciate the effect of the screen serves a good purpose; it teaches the worker to see the lighting upon the face before his camera. This knack of seeing the lighting will be found well worth acquiring.

CLUB NEWS and NOTES

Club Secretaries and others will oblige by giving us reports for this Department.

CALIFORNIA CAMERA CLUB.

This club has maintained its reputation for activity and enterprise, giving its illustrated lectures each month, before audiences of twelve hundred or over, each time. In May, Fred W. Prince lectured on Alaska, showing a collection of his excellent slides. The June lecture dealt with Venice, and was delivered by Henry Payot; both the slides and the lecture being of the highest order. The July lecturer was Professor Gustav Eisen, who showed great familiarity with his subject, "The Palaces of Alhambra," and the slides were such as are always expected at the hands of this master of the camera and the coloring palette.

The monthly exhibit of pictures for May, an exceptionally fine one, was by Annie W. Brigman and Emily Pitchford; in June, Oscar Maurer favored the club with examples of his recent work, and at this writing the walls carry some excellent examples of colored photographs by Ina L. Cook.

The May outing was held at Glen Ellen, Sonoma County, and was enjoyed by a large number of the members, as was the June outing to Paper Mill Creek, Marin County. Recent demonstrations have been given by W. D. Masters, of the American Aristotype Company, and T. H. Wilton, of the Photographers' Association of California. Slides have been shown from the New York, Newark, Trenton, and Syracuse clubs upon special evenings set aside for entertainments at the rooms. All in all, the club is enjoying a period of activity that can only result in an added membership at the end of the season.

JAMESTOWN (N. Y.) CAMERA CLUB.

The annual meeting of the Jamestown Camera Club took place Tuesday evening, July 14th, in the club rooms of the organization. It was a well-attended and specially-interesting session. An informal review of the year's work proved very satisfactory to the members, and showed that the months had been busy ones and the results most beneficial and enjoyable.

The officers for the coming term were elected, as follows: President, John M. Cushman; Vice-President, Charles E. Craven; Secretary, Albro H. Hooper; Treasurer, E. A. Sample. Directors for three years: Myles C. Nichols and Al. Eckstrom. Directors for two years, to fill vacancies: Charles E. Craven and Alex. Parsons. Director to fill vacancy for one year: Albin R. Carlson.

After the business meeting the members repaired to the pleasant home of Vice-President Craven, on East Second Street. The yard and verandas were attractively lighted with Japanese lanterns and decorated with mid-summer flowers. Luncheon was served, and Miss Esther Morse contributed several piano selections. The entire evening was a delightful one, and the annual gathering will be long recalled with pleasure.

LOVING CUP.

The officers and members of the Northwestern Photographers' Association send greeting to all photographers throughout the United States and Canada. We offer a beautiful loving cup for the best exhibit of photographs at our Convention at Minneapolis, Minnesota, August 27th, 28th and 29th, 1908, for non-association members. Photographs to be on any paper, framed or not, with or without glass. Two to four pictures in number, nine inches or larger one way. They must arrive not later than August 25th, addressed to C. H. Galbraith, 1231 Washington Avenue North, Minneapolis, Minnesota. The exhibitor to pay charges both ways, unless the exhibit is chosen. In the latter case, the Association reserves the right to retain the pictures as its permanent property. Any further information will be freely given on request.

Fraternally,

C. H. Galbraith, Secretary

The International Photographic Association

As we advised last month, we wish all who are interested in the plan upon which this Association is based, to write to the nearest officer and secure a blank application for membership. Those who may be at present subscribers to "Camera Craft" will be considered as eligible for membership upon payment of an amount sufficient to extend their subscription one year in advance of their date of application. Former members of the I. P. E. will be credited with a month's subscription to "Camera Craft" for every two months due them on the "Exchange," which has never been resumed. We are placing these former members on the mailing list as fast as we can secure the co-operation of a State Secretary in correcting the several lists. Mr. Hinman would be pleased to hear from former members or others who might be induced to accept the secretaryship of such States that have not at present such an officer.

Below is given the list of officers who will act in the capacities quoted until the next annual election:

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

W. C. Marley, Director Stereoscopic Division, 149 Hillside Ave., Newark, N. J.

STATE DIRECTORS.

The State Secretaries who have reported upon the membership of their respective States are as follows:

Alabama—Richard Hines, Jr., 155 State Street, Mobile.

Colorado—F. B. Hinman, Room 4, Union Depot, Denver.

Illinois—Harry Gordon Wilson, 4950 Washington Avenue, Chicago.

Indiana—H. E. Bishop, 1704 College Avenue, Indianapolis.

Kansas—H. E. High, R. F. D. No. 1, Wilson.

Maryland—E. G. Hooper, 218 East 20th Street, Baltimore.

Michigan—W. E. Ziegenfuss, M.D., 327 West Hancock Ave., Detroit.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South 32nd Street, Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor Street, Manchester.

North Dakota—Jas. A. Van Kleeck, 619 2nd Avenue North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Utah—John C. Swenson, A. B., Provo.

THE CIRCULATING ALBUMS.

The "Clearing House," in charge of the Interstate Album Director, is now in good working order, with eleven State albums on hand, ready to be sent out to State album directors who may send their albums for exchange. State album directors are requested to send any album they may have circulated in their State to the "Clearing House," and one will be sent them to circulate in its place. Every effort will be made to send out an album as good, if not a little better, than the one received. Advise what you are sending, and address: J. H. Winchell, R. F. D. No. 2, Painesville, Ohio.

EXCHANGE NOTICES.

1—George C. Kirkland, 315 Twenty-third St., Denver, Colo.
4x5 on developing paper, of mountain scenery and general subjects. Class 2.

502—F. B. Hinman, Room 4, Union Depot, Denver, Colo.
2¼x3¼ and larger, on all kinds of paper, of various subjects. Class 2.

1241—Grant Hinshaw, 762 Delaware Ave., St. Paul, Minn.
5x7, smaller, and stereo, on developing, printing-out or platinum papers as desired. A general variety of subjects. Is in Class 1 for good stereos in small quantities and Class 2 for other prints.

1709—S. R. Doty, 910 Tennessee St., Louisiana, Mo.
Louisiana, St. Louis and Colorado views on printing-out paper. Class 1.

1716—H. E. Hinkson, Wilson, Kansas.
3¼x5½ on Solio of landscapes, buildings and the like for landscapes, street scenes and the like. Will exchange post cards. Class 1.

PROSPECTUS OF THE ASSOCIATION.

ITS OBJECT.

To afford its members an opportunity of exchanging, through correspondence, photographs, stereoscopic views, and lantern slides. To circulate albums of photographs among such of its members as may contribute prints for that purpose. To encourage and assist its members to the better enjoyment of photography, by affording that stimulus which association and example always provide. In enabling its members to form collections either of miscellaneous photographs or of some particular kind, such as historical, typical, or artistic, this society stands unrivalled. It is admitted by all that more useful photographic information may be secured by the exchange of prints and the attending correspondence than by any other method.

CLASS I.

Regular members or those desiring a general exchange. Such members may limit their exchange or specify a certain class or kind of work desired, in their exchange notice. Class I members are expected to answer promptly all letters in which stamp is inclosed for reply.

CLASS II.

Members who, from lack of time or uncertainty as to address, might find it inconvenient to always reply promptly to inquiries concerning exchange. Class II members will receive few if any unsolicited exchanges, as they are expected to acknowledge only such correspondence as they may themselves invite.

CLASS III.

Members desiring to enjoy only the benefits of the Circulating Albums. All members, regardless of the Class to which they belong, in order to receive the albums must send prints to the Director of their State or the General Circulating Albums for insertion therein. In no case are Class III members to be asked to exchange.

WHO ARE ELIGIBLE.

Any one interested in photography and willing to conform with the rules of the Association; amateur or professional, tyro or Salon medallist. All can find congenial correspondents and each can derive, as his individual taste may suggest as desirable, benefits from his membership in this Society.

METHODS.

On joining, each new member is given an exchange notice in "Camera Craft," setting forth his number and designating the Class in which he wishes to be placed. Mention is also made of the kind of work offered and desired in exchange, if any, together with such other detail as he may furnish. All members, irrespective of the Class in which they are enrolled, are privileged to send prints to the Album Directors for the Circulating Albums, entitling them to a place on the route list of all such as contain one of their prints, as well as on that of such other albums as it may be found convenient to so route. The most liberal contributors to the albums are understood to be the most deeply interested, and, of course, are given the preference when routing foreign or other special albums. A numerical correspondence system, translations of which are furnished all foreign members, permits the exchanging of prints between those using different languages, with the greatest facility and satisfaction. All exchanging is done by direct correspondence, on any agreed basis.

DUES.

The subscription price of the official organ, "Camera Craft," is one dollar a year for residents of the United States and its colonies and Mexico. All other countries, a sum equal to one dollar and fifty cents in U. S. money. This amount remitted to any of the Secretaries or Directors, together with a request for enrollment or application for membership, entitles to all the benefits of the Society.

THE STEREOSCOPIC DIVISION.

I have taken over the directorship of the Stereoscopic Division which Dr. Gardner was compelled to resign. Stereo album No. 14 was sent out June 20th, and I hope to start No. 15 about July 25th, as the slides, addresses and the like will all be in my hands shortly. I hope, however, that those who sent Dr. Gardner but one or two slides will at once send me others, so that they may be represented in all future sets. Members will please use only the so-called standard size of mounts, 3½x7, so that the sets will be uniform. And please do not forget to notify me by card when you forward one of the albums to the next on the route list. It is only by doing this that the sets can be located promptly, if at all, in case of their going astray.

W. C. MARLEY.
Director, Stereo Div., 149 Hillside Ave., Newark, N. J.

A SUBSCRIBER WRITES

"The Duplex Phonograph" which I ordered from the Duplex Phonograph Company, 410 Patterson Street, Kalamazoo, Michigan, through seeing their advertisement in "Camera Craft," has been most thoroughly tested during the past two weeks, and has fully justified the high claims made by the manufacturers. It has a tone that is powerful, exact, and not metalic or mechanical; in fact it surpasses the higher priced machines by the possession of what might be termed "a human element" in the rendition of vocal selections. E. E. ROBERTS, Alameda, Cal.

Our Competitions

Since starting these competitions the first of the year we have learned a whole lot about such things; have learned much that is practically a revelation to us. Our ideas of competitions were gathered from what we had observed in the conducting of like contests by other photographic magazines, both in this country and abroad. We are willing to admit that nearly all of our ideas were wrong. Our first competition was for a simple landscape, and that brought us a flood of pictures that we have not been able to clear up entirely, even at this late date, although the pile grows smaller as spare time permits. In order that we might foster a more correct idea as to what constituted pictorial work, we changed from subjects suggesting facts to a series having for their subject some portrayal of feeling or emotion—something that represented an idea as distinguished from a bare portrayal of a fact. This had the gratifying effect of cutting down the number of entries, and our announcement of the change has also given many of our readers a clearer idea of what is required if pictorial work is the aim, judging from many letters on the subject which have come to hand. However, the pictures being sent in are at present hardly of the high quality that would justify us in reproducing them as prize winners. We will, therefore, discontinue in a way these competitions for the present, and in doing so retain the criticism feature.

What we propose to do for the remainder of the year, is to invite all the examples of good work that our readers may care to send in as applicable to these competition requirements. Such as appear to stand some chance of ranking well in one of the monthly competitions will be retained until such time as the competitions are resumed, possibly the first of next year. All others will be returned to their makers, together with a more or less lengthy criticism as our time will permit. In other words, we invite from such of our readers who may desire to increase the pictorial quality of their work, such examples as they may care to send in for our criticism. We would ask that such examples contain indications of an effort to interpret an idea, rather than a fact; in other words, that they be more than examples of an effort to produce a faithful delineation of some object or collection of objects. A certain scene may be very beautiful in itself, but an exact reproduction of it in miniature may fall far short of being pictorial. On the other hand, fine detail and exact reproduction of texture is often desirable aside from its photographic quality, which is at all times commendable if permissible in the treatment being employed.

If our friends will favor us with prints suitable for the series of competitions outlined, we will try the plan of criticizing them, independent of the competition, for a few months. In this way we believe we can encourage and help a large number along the road to pictorial work, and upon the resumption of the competitions we will be assured of sufficient entries of a high quality to make it interesting and worth the while of the best workers. At the same time, our efforts will have the same value for our subscribers who may care to send in their work. The list of the monthly series of subjects is given herewith. It is our intention, upon resuming these competitions, to have the same list of subjects recur each six months in the same order. We will later condense this list and publish it regularly, so that our readers may acquaint themselves with the requirements. It may be advisable to reproduce the best picture criticized each month in the interim, and this we will decide upon before the next issue is printed, and make due announcement.

The subject for our monthly competition, ending the last day of each July and January, is sunlight effects. This does not mean that the picture is necessarily one that is taken in a broad flood of sunlight; in fact, quite a dim interior, in which a single beam of sunlight emphasizes the motif of the picture, may be more desirable. The subject selected can also assist by being itself such as to suggest the joy and gladness associated with sunlight and warmth. For the competition ending the last day of each August and February, we want pictures that portray mist, haze, fog, and kindred effect; suggesting in turn an interpretation of sorrow, tears, veiled emotions, and the like. The next, or September and March competitions, require some effect depicting the sentiment of dreariness, desolation, depression, departed activity, or kindred idea.

NOTES *and* COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

MONEY IN POST CARDS.

We would advise all our readers to write the "Laurel Press," 308 Pearl Street, Hartford, Connecticut, for samples of their post cards, such as they make to order from customers' own photographs. There is a photographer in a nearby city who does considerable business simply supplying such cards in the case of local events of note. A print is at once dispatched, the order follows. Very often he secures large orders from his local firms for the cards for advertising purposes, and by showing a sample and the print to be used, he is often able to gather in orders for several thousand, which can follow by the next day's mail. Despite the low cost of the cards they are of excellent quality and will compare favorably with any of the cards produced in one color, as they are the highest grade of halftone work carefully printed on special stock. We can recommend their work to our readers, and believe many could add considerable to their income by a little enterprise in the matter of local views in post-card form.

CHANGE OF DATE.

The Eastman School of Photography, which we announced in our last issue was to be held September first, second and third, we have been advised will be held just a week earlier, or August twenty-fifth, twenty-sixth and twenty-seventh. It will be held at the handsome new store of Hirsch & Kaiser, 218 Post Street, San Francisco. Announcements will be mailed to all professionals on their list, but should you not receive one, drop Hirsch & Kaiser a card, asking that a program be sent you. As any who attended the last will testify, the school is worth making a long trip to attend. The dates originally intended to apply, September first, second and third, will find the school at the store of the Howland & Dewey Company, Los Angeles, where our professional readers in the Southern part of the State will be assured the same cordial welcome.

THE KODAK PHOTOGRAPHIC ADVERTISING CONTEST.

We think that our readers will be interested in knowing something about the judges who have been secured for the Kodak Photographic Advertising Contest, which closes October 1st. In all of the Kodak Company's photographic contests, and in all of its advertising contests, they have taken especial care to have the judging done by men who stand at the forefront in their respective lines of work. This year's jury for passing upon the pictures in the Kodak Photographic Advertising Contest is no exception. Both the photographers and the advertising men who have consented to serve, are well known in their respective crafts, and the announcement of their names should inspire confidence in the fairness of the result. They are: A. F. Bradley, of New York City, president of the Professional Photographic Society of New York; Elias Goldensky, of Philadelphia, whose work has given him an international reputation; J. R. Mix, advertising manager of "Scribner's Magazine"; Robert Frothingham, advertising manager of "Everybody's Magazine"; and H. S. Houston, advertising manager of "World's Work" and "Country Life in America." With Messrs Goldensky and Bradley looking after the pictorial quality and the technique of the photographs, and Messrs. Frothingham, Houston, and Mix watching for advertising ideas, there will be some interesting arguments before the prize money is handed out. It's an energetic jury, as well as a well-informed one, and the awards are sure to go where they belong.

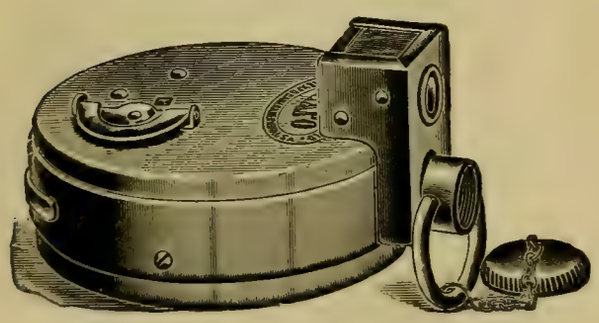
TWO ADMIRABLE UTILITIES

By the time this comes before our readers all the dealers will be supplied with Century Negative Pencils and Century Photo Spotting Pencils. The first makes a smooth, even mark upon a glass surface, enabling the user to build up thin portions

of his negative, work in backgrounds and the like, with an ease not otherwise attainable. The spotting pencil gives a mark on photographic papers that has none of the shine of the ordinary lead pencil, while at the same time it has an equal or added facility in the matter of directness and ease of working that makes it much more convenient and simple in use than India ink or moist colors used with a brush. A trial is all that is necessary to convince the worker of the value of these two utilities.

A WATCH-POCKET CAMERA.

The "Expo" Watch Camera is one of those handy contrivances that comes upon the market from time to time and at once secures for itself an enormous sale and popularity. It is the size of an ordinary watch, weighs but three ounces, and produces pictures that have been enlarged and used as three-column illustrations in some of the leading dailies in the country. The simple fact that the alert newspaper photographer finds it an effective ally in his work, is a strong piece of evidence that the little camera is not merely a toy.



The little camera loads in daylight, using a spool of twenty-five exposures; the pictures being 5/8x7/8 of an inch. It is fitted with time and instantaneous shutter. The film used is Eastman make, and a roll costs but twenty cents. The little camera itself costs but two dollars and fifty cents; an "Expo" view finder, fifty cents extra, and an enlarger or box for printing the pictures in enlarged size, 2¼x3¼, costs one dollar and fifty cents. Hirsch & Kaiser, the popular local dealers, have secured the agency for the Coast, and will fill orders promptly; or our Eastern readers may secure the camera and supplies direct from the Expo Camera Company, 256 West Twenty-third Street, New York.

THE PREMO SUMMER BOOKLET.

The latest booklet from the Kodak City is small, but it is handsome, attractive and interesting. Part of the contents is taken from "Camera Craft," in quoting Dr. Power, but, of course, that only adds to the merit of the booklet. It tells one all about the new line of Premo cameras, the Premo film pack, film-pack tank, and the Eastman plate tank. Best of all, is the clear exposition of the advantages of the Premographs, those handsome little reflecting cameras that sell for twenty dollars and upward, according to the lens, fitted with focussing attachment and speed-retarding device. The Premograph No. 1 without the two devices mentioned, with single achromatic lens of universal focus, sells for the modest price of ten dollars. By all means, secure a copy of the booklet. If your dealer does not have one, write directly to Rochester Optical Division, Eastman Kodak Company, Rochester, New York.

BURKE & JAMES' NEW CATALOGUE.

The new catalogue, Catalogue No. 11, issued by Burke & James, of Chicago, should be in the hands of every photographer. The Ernemann "Kino," for taking, making the positive, and projecting the animated film pictures upon the screen, is listed, with descriptive matter. Its low cost, $85.00, including projecting lantern, might lead one to believe it was a toy. The truth of the matter is, that it is a most exact piece of mechanism, and one that is used by scientific bodies in Germany for the most trying work. Another new piece of apparatus is the Ingento Stereographic Attachment which gives two stereo pictures at one exposure with a single lens. It can be fitted to any camera as easily as one of the old-style drop shutters, and the resultant negatives are as perfect as if two lenses had been used; in fact, more so, for the reason that no transposing of the prints is necessary. The transposing is done by the mirrors which it contains and which resolves the picture into two stereoscopic halves as the light passes through the lens. The Ingento Enlarging and Printing lamp is another new piece of apparatus—but space forbids. Send for a copy of the catalogue. It will interest you and prove of constant use in showing what is new and desirable in the way of photographic facilities.

LIBRARY OF PRACTICAL PHOTOGRAPHY.

A prospectus of some twenty pages, covering in detail the scope and arrangement of the matter contained in the "Complete Self-Instructing Library of Practical Photography," has just reached our desk. The set is composed of eight volumes containing over three thousand five hundred pages, illustrated with more than half that number of photo-engravings and drawings. However, it would take us the same eighteen pages to describe all the good features which go to recommend this great work to the individual at all interested in photography, and that amount of space is not at our disposal. Write to the publishers and secure a copy of the prospectus. The address is, American School of Art and Photography, 213 Washington Avenue, Scranton, Pennsylvania.

THE SIMPLIMETER.

The inventor of this device found that every exposure guide or meter heretofore sold, begins with the diaphragm stop, adjusting the shutter speed to it.

Studying the matter over, it was learned by persistent experiment that the size of the stop had almost no bearing on the final results, except perhaps, to make some parts of the negative a trifle sharper when the stop was made smaller. Why, then, should the stop be the first consideration? It was found that all depended on the speed of the shutter. Every exposure had to be timed sufficiently short to overcome blurring of moving objects, and the stop then adjusted to it. This was the only condition which seemed to have any bearing on the stop or the shutter which should be used.

The shutter speed is the first consideration of the Simplimeter, and by an ingenious and systematic method, the stop is easily and accurately adjusted. This new method allows the least possible error of any method used, and produced the greatest number of perfect negatives and a better average than similar experiments when starting with the stop. Simplicity was constantly borne in mind and accuracy was the goal. The final results, which concluded very extensive experiments covering a period of several years, were summed up in the Simplimeter, now in the second season's sales.

One can start out early in the day and make negatives all day long, by simply referring to the Simplimeter on starting. It not only gives the correct exposure when reference is made to it, but gives it without any calculating or possibility of error. No exposure is given which cannot be made with the ordinary camera regardless of the kind of shutter used. Such a thing as wandering around from table to table and arriving at an exposure of 17-100 of a second, is impossible with the Simplimeter.

The exposure is given at a glance, and every exposure, every condition given, has been thoroughly tested. It is not a guide only, but an instructor. After using it a few weeks, the user knows how to make exposures without any help whatever.

THE NEW MOUNT CATALOGUE.

The new catalogue of the California Card Manufacturing Company has just come to hand. It is a book of nearly one hundred pages, and should be in the hands of every photographer in the land. Nearly every page carries a cut of one or more of the popular mounts turned out by this progressive firm, and, of course, with such an assortment it is not difficult for the most exacting to find something that will suit his wants. All of the designs are absolutely new, and many of them are strikingly original and artistic. The prices are inviting, and a trial will demonstrate the high quality that can be secured in a factory where the entire work of production is carried on under the supervision of men so long identified with the business. Their goods can be secured of all the large dealers throughout the country. Every professional photographer should write for a copy of the catalogue, addressing California Card Manufacturing Company, Potrero Avenue and Mariposa Street, San Francisco.

THE NEW CROWN LENSES.

We desire to again call attention to the new Crown catalogue which we mentioned recently. Of the three lenses, the new Series II Anastigmat deserves particular notice. Much experimenting work, extending over a long period, has resulted in this form of lens which the makers believe will compare favorably with much higher-priced ones now on the market. It is very modest in price, and should be given a trial by intended lens purchasers. They list a new

rapid rectilinear, suitable for portraiture, working at f-6. The third new lens is an extreme wide-angle doublet working at f-16, and, like the other two, moderate priced and of the best quality. Send for this new catalogue; it will prove most interesting. Write the Crown Optical Company, Rochester, New York.

COMMENDABLE ENTERPRISE.

A recent issue of the Chicago "Real Estate and Building Journal" devotes several pages of space to the new St. Clair manufacturing district, mentioning some dozen or more large firms that will shortly locate there. The list includes such houses as Calumet Baking Powder Company, A. C. McClurg Company, Samuel Cupples Company, and Burke & James. Concerning the latter the magazine says:

"Among prospective settlers in the St. Clair district is the well-known Chicago photographic supply house of Burke & James, who recently purchased the lot on Ontario Street, at the corner of Fairbanks Court, measuring 200x108 feet. On this site they plan to erect a handsome structure of modern design, containing general offices, stock rooms and factory. It is contemplated to begin building operations before the fall of 1909. The business of Burke & James, which was originally started in a very small way in 1897, by Henry Burke and David James as co-partners, has since grown to be one of the biggest photographic supply houses in the world.

"The present quarters of the firm are in the Electric Building, 118 West Jackson Boulevard, with two large floors and additional accommodation at 103 Monroe Street. Five years ago the firm incorporated, retaining the original, with David James as president and Henry Burke as secretary and treasurer.

"Besides a domestic trade which covers the whole country, they ship to all parts of the world. The company employs about one hundred and twenty-five people."

"HAMMER'S LITTLE BOOK."

We are just in receipt of a copy of the last or eighth edition of this popular forty-eight page booklet gotten out by the Hammer Dry Plate Company, of St. Louis, Missouri. If your dealer cannot supply you with one, write direct to the factory. It contains much new matter and a vast amount of information and formulæ that will be of the greatest assistance to the photographer. The stripping of films from the glass support, the treatment of stains and spots, improving the character of negatives, and such like subjects are well treated in a clear and practical way. It is a booklet that all our readers should have, as its perusal will give them a wealth of information.

LETO PAPERS.

Just as we go to press a number of letters come to hand from several pleased subscribers who have been investigating the merits of Leto papers, by ordering samples of the agent, J. L. Lewis, 379 Sixth Avenue, New York. These letters all speak in the most laudatory terms of the merits of the Leto papers, and particularly in Seltona. It bids fair to achieve great popularity in this country as soon as its merits are known. Do not overlook the advertisement on another page.

"BEN" PELGRIFT PASSES AWAY.

While not so well known to us of the West as to the rank and file of the profession in the East, the reputation of J. B. Pelgrift reached this territory many years ago. "Ben," as he was known by thousands who could not have told you what his full name really was, held the good will and friendship of thousands. Honest and kindly, to know him was but to give him your friendship at once. He passed away early last month, too late for us to mention it in the June issue, but our sympathy and sorrow is none the less sincere. His loss will leave a void not easily filled in the hearts of those who knew him, knew him but to give him their love.

MR. BISSELL A CANDIDATE.

President Lewis H. Bissell, of the Bissell Colleges of Photography, according to the "Effingham Morning Record," of a recent date, announces his candidacy for the nomination of state senator for the forty-second district. The paper quoted goes on to say: "He is spendidly equipped for the duties of a legislator. He is educated, has mingled in those circles which congregate about legislatures, and possesses the ability and courage to fathom any scheme or law which may come up for consideration." We trust Mr. Bissell will secure the nomination, and that his so doing will result in his election. His past record as an alderman and as Mayor of his city should have no small weight in the matter, and his many friends in the photographic world will join us in wishing him all success.

Vol. XV No. 9 SEPTEMBER, 1908 Price, 10 Cents

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Also Makers of STRATHMORE PARCHMENT; a beautiful sheet for Studio Stationery.

THE PRIEST AT THE TEMPLE STEPS
By JAMES DANIEL MILLER

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, SEPTEMBER, 1908. No. 9

The Tourist Photographer in Japan

By James Daniel Miller

With Illustrations by the Author

For the tourist who contemplates taking a trip to Japan, I would advise starting about the middle of March, as the best time for traveling in this country is during the spring and autumn; March, April, May and the early part of June being very pleasant, as it is again from the first of September

IN A PRIVATE GARDEN

to the middle of October. The intermediate period beginning with the latter part of June being rather warm and damp. In the early part of April one will see the wealth of cherry blossoms; the last week of the same month and the early part of May, the wistarias; the early part of June, the irises; in August, the lotus flowers; and early in November, the chrysanthemum, the national flower, in all its glory.

FOUNTAIN—ASAKUSA PARK

In America the midsummer months are dry and warm, while here they are hot and accompanied with occasional rain. For that reason, these months are not advisable for the tourist in Japan. The excessive humidity and dampness is destructive to patience and to property, particularly that of a photographic nature. A pair of shoes cannot be laid aside for a couple of days without gathering a good coat of mildew. It is not advisable to keep a camera open for more than a few hours at a time during this damp season, as the wood will swell so that it can only be closed with difficulty. The only thing possible is to keep it closed and stored in as dry and cool a place as can be found, when it is not in use. I have had considerable trouble with my own camera recently. After taking it for a day's outing it was left open on a table until the next day. I then found that the woodwork had expanded to such a degree that, when closed, I could open it only with the aid of a strong pocketknife. I not only broke the ground glass but damaged the camera considerably in forcing open the back in this manner.

Should one go out with a roll of film in his camera during this period of excessive heat and moisture, he should not allow the roll to remain in the camera for more than two or three days at the very most as the dampness will be sure to spoil it. Plates will keep a little longer. If going out for a trip extending over several days, I would advise the keeping of each roll in a separate tin case sealed with an adhesive tape. The Eastman people are now supplying their film to the dealers here in this form. As soon as a roll is exposed it should be returned to its can and sealed again with the

A YOKOHAMA WATER-WAY

same piece of tape. This precaution, in most cases, will prevent damage to the film due to dampness. For one who is not a beginner, the carrying of a developing machine or tank will be found profitable. The necessary chemicals can always be secured from the local dealers. Developed at once, danger is minimized, and, in addition, should a picture turn out not exactly to one's liking he can easily make another exposure while on the ground.

The best form of camera to use in this country is one of the hand cameras of ordinary type. A large instrument with a tripod is so unhandy to carry about, and, besides, attracts too much attention from the Japanese. I have found that very few persons carry a large plate camera and I am convinced that it would not be a wise plan, as the dealers rarely carry plates of the desired size. Of late I have experienced considerable trouble in securing the ordinary 5x7 size, having to use what is called in England the Continental size about 4¼x6½. The tourist who escapes this damp season in midsummer does not have to be so careful with his camera and films: the weather during the months mentioned being very mild and agreeable.

There is no reason why the average amateur, working under ordinary conditions here, should under-expose any of his negatives. On the contrary, there should be a tendency to slightly over-expose. The light being bright and often glaring in its intensity, with an exposure short enough to catch people walking, a medium stop should be used. At this season of the year, early summer, I use f-11.3 for street scenes and the like: on rare occasions during July and August I use a smaller aperture, f-16. In the United States at the same season one could use full aperture without fear of over-exposure.

"DIABUTSU"—GREAT BUDDHA

My lens is an ordinary one such as is supplied with the camera. It is a very easy matter for the visitor to make allowance for the brightness and glare so prevalent here in summer, and anyone who has any knowledge of photography will know about what stop to use. Besides, after developing his first roll of film, one should know whether his exposures have been under, over, or correct, and govern himself in future work accordingly. When developing, it is advisable to place the tray in a larger one containing a little ice, as the solution getting too warm would result in fog. When ice cannot be obtained, equal parts of nitrate of ammonia and water can be employed. Another good cooling mixture and one that will reduce the temperature still more is made by taking parts by weight as indicated of the following: Water, sixteen; saltpetre, five; chloride of ammonia, five.

Aside from the various Japanese curio stores and the like, there is little of interest in Yokohama itself. Should the stranger wish, there are several Japanese theaters conveniently located, but I fear he would not care to listen to the second. I will only attempt to mark out a few of the places of interest around the city, doing so as briefly as possible. It would take entirely too much space to do justice to the numerous points of interest that should be visited.

First, there is the trip from Yokohama to Tokyo, the capital, and excursions in turn from Tokyo. The "Diabutsu," or Great Buddha, at Kamakura; the Hakone district; Miyanoshita; Nikko; ascent of Mount Fuji, the sacred mountain, and any number of other interesting places that should not be overlooked. I would advise the visitor to make his first pleasure trip to Tokyo. The railroad journey occupies but fifty minutes. The principal sights are Shiba, Ueno, and Asakusa parks. There are temples and tombs of the Takugawa Shoguns in each, Shiba Park being the most easily accessible. The Temple of Kwannon is at Asakusa, the Museum at Ueno, and the Kwankoka Bazaar in Shiba. Drive along the main street "Ginza," to Nihon-bashi and the Inner Moat.

The Shiba temples, the chief marvels of Japanese art, should be visited on the afternoon of a fine day, if possible. The public is admitted only to the Temple Pillars. Those desirous of seeing the interior, together with

ZOTOKUIN TEMPLE

the tombs, must apply to the custodian and pay him a fee of twenty cents or so on departing. Shoes must, of course, be removed on entering. One is not permitted to photograph any of the temples or tombs, cameras not being allowed.

THE SACRED WELL AT SHIBA
Showing Bronze Lanterns, Two Hundred and Twelve in all. Dated [illegible] A. D. and some from [illegible]

THE RELIQUARIUM—IKEGAMI

However, if one wishes to go on a photographic tour, it would be best to secure a permit, stating for how long a period it is desired, as also the various places to be photographed. This will save the photographer a great deal of trouble. I do not know just exactly what data must be given for a permit of this nature, but if you ask your hotel guide he can most likely help you out. There is no definite time given, so it is best to ask for a period longer than is desired. I might mention here that the pictures reproduced of the "Diabutsu" at Kamakura and the temples at Tokio were secured through the kind offices of my friend, Karl Lewis, through one of the Japanese priests.

CHERRY BLOSSOM ROADWAY

WITHIN THE TEMPLE GROUNDS

Skirting the moat around the Imperial Palace, the large building seen at the front is the headquarters of the General Staff Department. The inner moat with its green banks and spreading trees, and with its myriads of wild birds fluttering in the water, affords one of the prettiest sights in Tokyo. The vast enclosure of the Imperial Palace lies beyond the moat and cannot be seen from the outside. This can be enjoyed from the inner moat, although the new palace inhabited by His Majesty, the Mikado, since 1889, is not accessible to the public.

Owing to the peculiar shape and vast extent of the city, it is impossible to compass any satisfactory number of the chief points of interest in a single day. The best plan is to take them in groups, according to the direction in which they lie. I would strongly recommend "Murry's Handbook on Japan" as a guide for tourists, as it contains a vast amount of notes that are of great use and value. The "Diabutsu" or Great Buddha at Kamakura stands alone among Japanese works of art. The height of this bronze image is approximately forty-nine feet seven inches; length of face, eight feet five inches; height of curls (of which there are eight hundred and thirty), nine inches. According to tradition, this image is over five hundred years old. The hollow interior contains a small shrine, and the visitor may ascend above into the head upon payment of a small fee. This idol is best viewed from a point half way up to the approach. I might mention that it is useless to try and photograph this image, as it is not allowed. People entering are carefully watched for cameras. There is a man near the "Diabutsu" who

will take your picture alongside the image, either in a group or singly, for a nominal sum, and I presume he makes his living in this manner.

I must not neglect to mention that in April, at Ueno Park, all Tokyo assembles to admire the wonderful mass of cherry blossoms for which this place is famous. No traveler should miss this opportunity of witnessing a scene so charming alike for its natural beauty and its picturesque throngs of characteristic Eastern life.

Art Conventions

By Wm. Judd Wood, Vice-President P. A. of K.

If the man will but "make" the conventions, the conventions will "make" the man. Much has been said of conventions and their uses, but none too much, for we have a large list of camera workers who to-day never have a thought outside their own shop, or the limits of their own field of work. What is there in photography that makes of an ordinary mortal a mere selfish recluse? How grand and interesting is Art, and particularly photographic Art; and how much grander if the soul of fellowship be diffused therein amongst those who are its adherents. It is well to have a theory, and a good hobby is not bad, but take it with you to the convention, or expound it to your local camera club; if then it withstands the "knocks" and is not picked to pieces, it may be far more valuable than you ever dreamed. One can scarcely overestimate the possibilities for good that can come from our association with those who are engaged with us in the same field. Let us be liberal in our own views, and interested in the views of others. It may require bravery to fight, but something of a higher order is necessary to determine when not to fight and what not to fight. Let us regularly attend our conventions, and institutions of art; not for hard business alone but in the spirit of good fellowship as well. It cannot fail to help us where mostly we need help as fellow craftsmen.

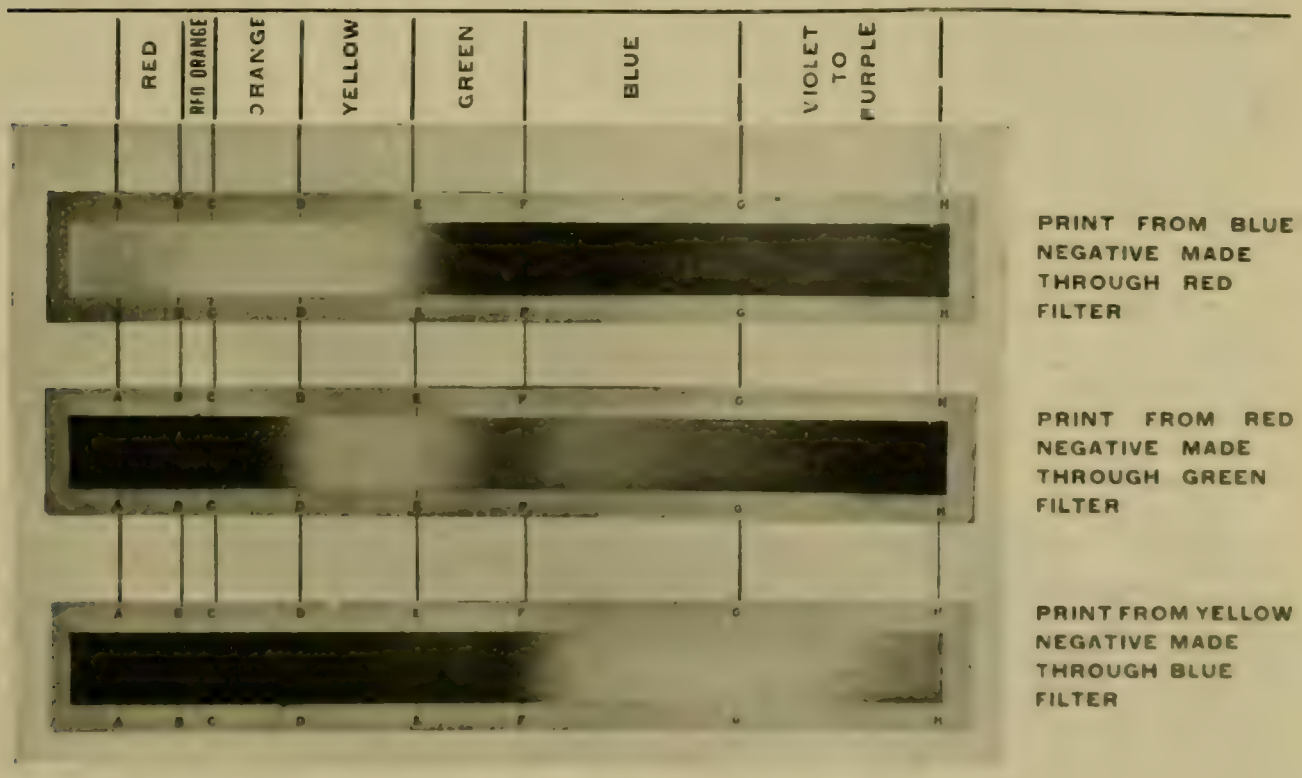
ROSES By CURTIS BELL

Filters for Three-Plate Color Photography

By H. E. Blackburn

If a ray of sunlight is allowed to pass through a slot in the window shutter of a darkened room, and through an interposed triangular piece of glass called a prism, the ray, as it emerges and falls upon the opposite wall or a white screen placed in its path, will be found divided up into seven colors arranged consecutively as follows: Red, orange, yellow, green, blue, indigo, and violet. This band of colors is called the spectrum, and shows that white light is composed of many colored rays. This spectrum, for convenience, is graduated into degrees according to the varying wave lengths of the rays, so that the location of each color can easily be described and understood.

Three-color photography is based upon the assumption that all the colors occurring in nature can be divided into three groups, namely, red, green, and blue. If the photographic image of a colored object is to be split up into three separate negatives, three separate ray filters will be required. Of the results, one is called the red filter negative, as it represents



PRANG'S SPECTRUM COLOR CHART USING PANCHROMATIC PLATES AND RED, GREEN, AND BLUE COLOR FILTERS

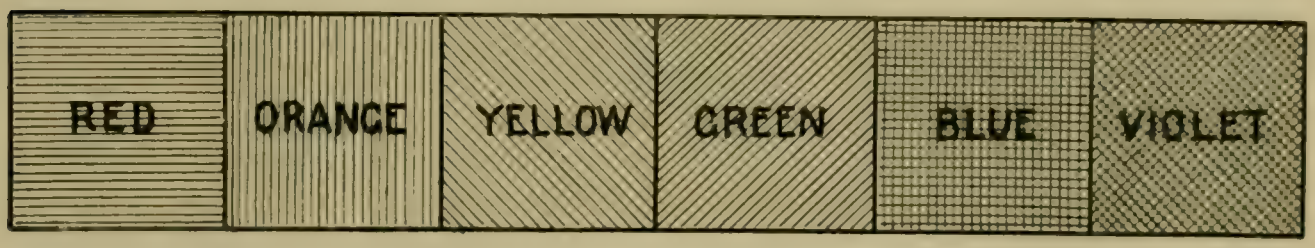
in monochrome, and in reversed gradation, of course, all the colors a red filter allows to pass. The second or green filter negative contains the corresponding reversed gradation of colors that the green filter permits to pass; and the third, the blue filter negative, carries the same image of the colors that the blue filter passes. Consequently, in the three finished negatives will be found reversed, in varied depth of monochrome deposit, all the colors contained in the original subject photographed.

YACHT SPEEDWELL By F. J. C.

If a print is made from the red filter negative, using bichromated blue carbon tissue, another print from the green filter negative upon red tissue, and a third from the blue negative upon yellow tissue, the three tissues, when properly exposed, washed out, superimposed in exact register, and cemented one above the other, should produce a correct representation of the original color subject photographed. To exclude certain color rays and prevent their action upon the panchromatic or color sensitive plates that must be used, so as to render, upon its corresponding plate, each color in monochrome, a filter, which may take the form of a glass plate covered with colored gelatine, must be used. Thus, if, in photographing some subject containing all the primary colors, a blue filter be used on the hood of the lens, the filter will exclude all the yellow rays coming from the subject photographed and allow the red and blue rays to pass and act upon the color-sensitive plate. The red and blue of the subject will be found reproduced in the negative in monochrome deposit upon development, leaving more or less clear glass where there would have been a deposit representing yellow or colors containing yellow had the yellow rays not been stopped out by the blue filter. This negative, printed upon yellow carbon tissue or a substitute, gives a yellow positive with gradations representing the varying amounts of yellow rays originating in the subject photographed. The red filter, roughly speaking, will pass red, yellow, and yellow green, and stop out blue, violet, and part green. This will give, in the negative, red and orange in monochrome deposit, and clear glass in the blue and green parts, as those rays were stopped out by the red filter. Hence, the use of blue carbon tissue is suggested for this or the red filter negative. The green filter passes green and stops out red, red tissue being used in printing from the green filter negative.

It is easily seen that too much importance cannot be given to the matter of properly adjusted and rightly made filters. They should be purchased from a reliable firm and care taken to avoid cheap forms containing aniline dyes, as they are often useless, or soon become so, for good work. Plain glass filters carrying pure dyes will work quite well if placed back of the lens, but optically worked glass must be used if the filter is to be employed in front of the lens.

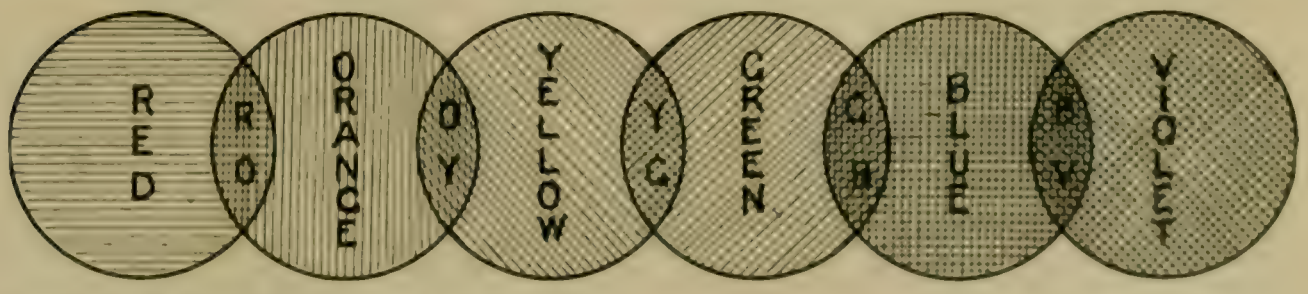
Carefully made tests of various three-color filter sets, found on sale in the ordinary photographic stock houses, only go to prove that one set has a better red filter than the others, but an inferior green; another has a good green, but is lacking in quality in the red; the blue filter seems to be satisfactory in nearly all cases. Panchromatic plates require deep-dyed filters, which necessitate longer exposures; while special color-sensitive plates, suitable to each of the three filters, admit of lighter-dyed filters being used and more speed secured in the exposures. Some European manufacturers prefer to make their filters suit certain plates, differentiating the



EUROPEAN METHOD. Sharp differentiation, no overlap

colors sharply without allowing any overlap as do the American firms.

There is very little doubt but that, in using panchromatic plates, some amount of overlap is best, except in photo-microscopic work or where special plates are employed to suit the filters used. For all ordinary



AMERICAN METHOD. Allowing a slight overlap.

and commercial work the Ideal filters sold by Burke & James, of Chicago, and the Autotype Company's filters sold by George Murphy, of New York, are well adapted to the production of fine results. Cramer advises those of the New York Engraver's Supply Company, called Nye's Dry Filters, for his Trichromatic plates. The great objection to these filters is the price asked; for, while they work perfectly, their cost is double that of other filters that will do the same. For the price asked, the Ideal filters made by Burke & James, of Chicago, are about the best filters I have used for all-around work. The filters sold by George Murphy may work a little

better, but they are necessarily slower on panchromatic plates. All these filters are recommended by the best American makers of color-sensitive plates, and have been found by careful experiments to consist of optically worked glass carrying pure dyes. They are spectroscopically tested to see that the red filter passes no green, and that the green filter passes no red; and, above all, that they are corrected to give true registration of the three photographic images.

To those who desire to employ their filters at the back of the camera or next to the plate—the best possible position—or mounted in the plate holder, but are deterred from doing so by the weight, thickness, or high price of the larger sizes, the following instructions will be of service. However, there are always a few who will contend that celluloid used in the manufacture of filters cannot be as clear as glass. This may be true, but razor-like sharpness is not desired in the three negatives, as they are used to produce one image as does one ordinary negative. The celluloid has the advantage of being very light and about the best possible substitute for glass.

Take Eastman's single-coated, moving-picture film of the desired size, and place it, unexposed, into a tray of ordinary hypo fixing solution. When clear, transfer it, without washing, to a ten per cent bath of red prussiate of potash, doing all this by lamplight only. When the film is clear, wash well and hang up to dry, avoiding dust, and using a Kodak clip, as in drying ordinary films, to prevent curling and to avoid wrinkles. When the film is dry it is ready to be stained, using preferably the following simple dyes obtainable from Victor Koechl & Company, 123 Hudson Street, New York:

Blue Filter.

Crystal violet	256 grains
Warm water	8 ounces
Glacial acetic acid	48 drops

Green Filter.

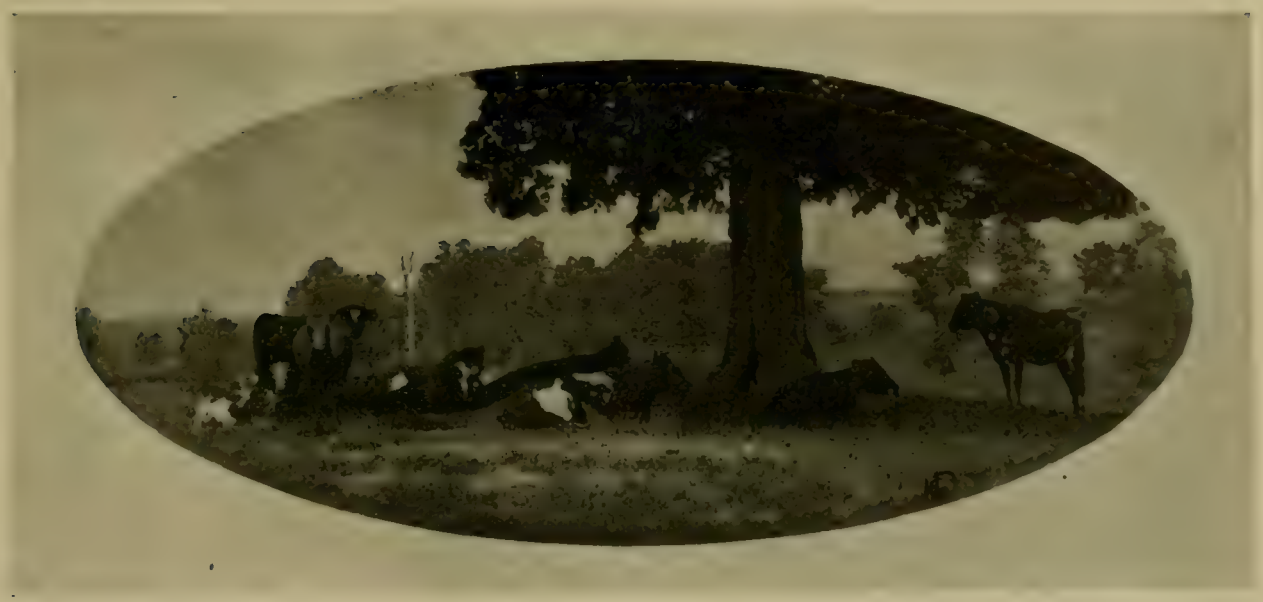
New filter green No. 1	106 grains
Water	8 ounces

Red Filter.

Filter red No. 1	120 grains
Rose Bengal	20 grains
Hot water	12 ounces

These baths should be mixed up twenty-four hours in advance, filtered, and then used at sixty-five degrees Fahrenheit and the film immersed therein for twenty minutes, keeping them in gentle motion meanwhile. Then rinse the films under the tap and hang up to dry, using clips and avoiding danger of dust as much as possible. A calcium drying box is just the thing.

Opinions differ as to the most practical method of procedure in the selection and use of the various plates suitable for three-color work. Some favor one panchromatic emulsion for all three exposures, while others prefer



A NOON REST By H. G. DORSEY

a different color-sensitive plate with filters to suit. The one-plate plan, although necessitating longer exposures, is much easier and simpler, and gives negatives more nearly alike in gradation. The separate plate method of working requires shorter exposures, but there is a chance for mistakes in placing the plates under the proper filters. There is also a danger of securing different gradation in the resultant negatives, due to the different dyes used in the emulsions. Errors are liable to creep in in either case, and good work can be done by employing either method. The following combinations work well: Autotype filters sold by George Murphy, or Nye's filters sold by New York Engravers' Supply Company, used in connection with Cramer's Trichromatic plates. This is one of the best panchromatic plates on the American market for all three exposures, but it is not as rapid, used under the deep-dyed filters necessary to properly reproduce color values, as are separately dyed plates used with their lighter filters. For this second method, a good combination is secured by using Burke & James Ideal or the Lumiere filters with Seed's Panchromatic plate, when using the orange-red; Seed's L Orthochromatic plate, when using the yellow-green; and Seed's Gilt Edge 27 plate, when using the blue filter. This last combination gives correct color values with the shortest allowable exposures. For those who do not object to mixing up filters and plates, the following is perhaps the best combination of the three: Seed's Panchromatic plate and Burke & James' red filter, Cramer's Instantaneous Isochromatic plate and Nye's green filter, and Lumiere's Green Label plate with Murphy's Autotype blue filter.

The plates and filters being selected, it is next in order to determine the ratio existing between the different exposures by trial and error. In doing this it is not desirable that a colored object be used, as the presence of color introduces confusing factors. Secure a large sheet of rough, neutral-gray cardboard, and be sure that it has no tinge of blue or red. Draw out on it a rough sketch like the one herewith. Set it up so that it receives a strong, even, reflected light, working on a sunny day. See that it is

RED	GREEN	BLUE
40 SEC.	10 SEC.	2 SEC.
80 SEC.	20 SEC.	4 SEC.
120 SEC.	30 SEC.	6 SEC.
160 SEC.	40 SEC.	8 SEC.
200 SEC.	50 SEC.	10 SEC.
240 SEC.	60 SEC.	12 SEC.
280 SEC.	70 SEC.	14 SEC.
300 SEC.	80 SEC.	16 SEC.
340 SEC.	90 SEC.	18 SEC.
380 SEC.	100 SEC.	20 SEC.

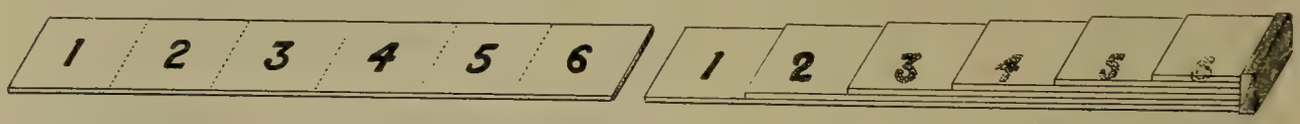
perfectly square with the camera front and then focus, using the red filter with lens wide open, getting the chart to just cover the ground glass, finally stopping the lens down to f-16. Go into the dark room and place the selected color-sensitive plate in the holder, having first cut a strip of black paper, such as comes about the plates, to fit inside of the holder, and leave one-third of the plate exposed for the red column of the chart. Then place this holder, with the black paper covering two-thirds of the plate, in the camera so that the open section comes in line with the red column of the chart. Pull the slide all the way out and expose as indicated by the top figures in the red column of the chart, namely, forty seconds. Carefully insert the slide a little way, so as to just cover the image of the section marked "40 Sec.," and expose forty seconds more. Keep this up until that part of the plate unprotected by black paper is exposed in sections in accordance with the figures on the left-hand column of the chart. Take the holder into the dark room, and, without using a light, slide the black paper over to the other side of the holder so that the uncovered portion of the plate will come in line with the blue column on the chart; remove the red filter, place the blue one in position on the lens, and expose as in the case of the red filter, only using two seconds as a factor instead of forty, following the chart's figures. Again take the holder into the dark room; cut the black paper in two, leaving one piece at each side protecting the exposed sections on the plate, with the center section open for the green column on the chart. Put the green filter on the lens in place of the blue one and expose as before. using ten seconds, however, as the factor.

Develop this sectionally exposed plate in the dark, using some normal, rapid, soft-working developer, like rodinal, for three minutes, at a temperature of sixty-five degrees Fahrenheit. When finished and dry, expose a piece of printing-out paper under it. From this print you can easily read off the number of seconds on the sections of the three columns that in their densities match each other and appear to be correctly exposed. This print thus gives at a glance the correct exposures for the three filters and their ratio to each other. Of course it may be advisable to select slightly higher or lower figures; for example: red, ninety seconds; green, thirty; and blue, five. Never change the ratio determined upon, as long as the tested brand of plates is used, and always repeat this trial when adopting a new brand.

GOOD MORNING
By MRS. W. W. PEARCE

If at any time the light should be weaker or stronger than when the test was made, compensate for the difference, if possible, by using a larger or smaller stop in the lens. If the subject will admit of so doing, avoid changing the exposures, for it is easier to figure that a larger or smaller stop is needed than it is to figure out a new set of exposures with the same plate ratio. In no case should the work be attempted on a dull day when reds and greens predominate.

As to exposure meters, tables, and the like; the old rule, to expose for the shadows, will not apply in three-color work; and, how any one can expect to calculate correct exposures by measuring the light outside of the camera and roughly allowing for change of stop value owing to increased focal distance for nearby objects, without employing an expert mathematician, is a source of wonderment to me. The only proper place to measure the intensity of the light or color is where the ground glass rests in final



THE BOTTOM STRIP THE COMPLETED METER

focusing, for there is where the plate comes in for the actual production of results. Take a sheet of celluloid that is matt or ground on one side and cut it up into one-inch strips. Take one of these strips and, using a pen and black ink, mark on the matt side a series of figures as shown above. When dry, place a slightly shorter strip on top, the end starting half way between 1 and 2, continuing with other and still shorter strips, building up until 6 is covered with five thicknesses. Cut the ends off square and bind all together with lantern-slide binding or paste and a strip of black paper. It will then look like the cut herewith.

At some time when the correct exposure is known, try this simple meter on your ground glass, using the lens wide open. Place, in the same light and near the subject just photographed, a piece of the gray cardboard advised for the test chart. Place this meter over its image on the ground glass, and under the focusing cloth see which of the six numbers you can just make out. Do not try the meter on colors, as they will introduce error, as also will trying to follow the old rule to expose for the shadows. When using this meter on the ground glass, see that the same light falls on the gray card as on the subject. If, on trying a new subject in a different light, one fails to see the same number he did in the first test, or if he sees the next one plainly, it is clearly evident that the stop can be changed to suit the new occasion, as all thicknesses of celluloid are alike and so is the stop ratio. Bearing in mind that one generally has to work quickly in this line, it would seem that there is no simpler method of determining the exposure than the above. A piece of the gray card can be pasted in the top of the carrying case so as to be always available.

In closing this article, I wish to say that my aim has been to try to help those who may be in the dark or those who have perhaps made a failure in the start. Some of my statements may not appeal to every worker; I can hardly expect that they will. Any lack of completeness, however, is owing entirely to my lack of words and not to want of time and care spent on original research.

Back Yard Photography

By W. G. Earle

With Illustrations by the Author

I HAVE often wondered, judging from the scarcity of articles or illustrations calling attention to the subject in our photographic magazines, why so little attention is given to the making of portraits, groups, and the like, in the rear of our residences. Many of the back yards of our village and city homes are beautified with shrubbery, vines, flowers and other accessories which serve admirably as backgrounds for groups and figures. Oftentimes there are bits that do not appeal very strongly to the eye, but in the proper light they are photographically well suited to the purpose. It is the rule, rather than the exception, that such spots are to be found adjoining most residences, the barns or sheds in the rear, or even the prosaic back yard fence, where, at some hour in the day, the light effect upon subjects posed for portraits is almost ideal, or at least such as will yield very pleasing results. It is possible, by utilizing these unsuspected facilities about the home dwelling, to secure most gratifying results in the way of family groups or groups of friends, single figures from bust to full length, pet animals, and in fact anything within the scope of the camera and suited to the conditions. Still life subjects of a certain kind, such as fruits, fish, and the like, often lend themselves admirably to such backgrounds.

It must not be assumed, however, that satisfactory results in this class of work can be secured without care and thought, both as to the arrangement of subject and condition of the light. I have often been amused, during a stroll through one of our city parks, by observing persons with a kodak or hand camera posing a group of friends facing the sun, or with the sun shining flat in the faces of the subjects, and making a snap shot

under these conditions of lighting. Others, in doing flashlight work, will place their flash lamp or explode the powder directly over the camera, where the light which is produced will strike the subject flat in the face. It would seem that any person of ordinary intelligence, who would only give the matter a few moments thought, should know that satisfactory results could not be secured under such conditions. It is necessary to have shadows as well as highlights, and they should be graduated and productive of relief and roundness in order to secure pleasing results in photography. And those who will give the subject a little intelligent thought must realize that satisfactory portraits cannot be made with the unobstructed light of the sun striking the subjects, no matter from what direction the light may fall upon them.

It is absolutely essential, in order to get a proper blending of the lights and shadows, when working out of doors, to pose the subjects in the shadow of a tree or building, or make the exposure when the light of the sun is diffused by passing clouds. And it is, of course, necessary, when

the subjects are so posed, that a short time exposure be given. This will necessitate supporting the camera upon a tripod, or in some other substantial manner, to the end that it will not move during the exposure.

The greater the extent to which Nature is allowed to run riot, the greater are the opportunities afforded by our garden patches for effective accessories. A few shrubs, a climbing rose, an untrimmed vine, a clump of long grass and weeds, and a few old logs may be put to better service than the most expensive studio furniture. With these adjuncts, quite interesting camping scenes may be extemporized, such as may illustrate the long vacation which we have not had time to take. Children may be easily taught to pose most effectively among such surroundings, especially

if it is a "make-believe" of some incident in a story which they like to have retold again and again. In this connection I may mention that I have seen what might have been some very beautiful pictures spoiled by inappropriate city dress. Over-dressed Percy with plastered hair is out of place in a wild forest scene.

I am sending herewith a few illustrations of work which has been produced in a back yard that lays no claim to beauty on account of its botanical excellence. I trust that the two or three which the editor may reproduce will furnish a suggestion at least of what may be accomplished by a little care in the selection of a location and the condition of the light. While I do not claim for them the highest excellence, even in this particular line of work, I hope that they may prove of interest to some of my fellow workers who may be inspired by them to try their hand at this interesting class of work.

The Mind the Master

The hand never lies. It always obeys without question the orders of its master—the brain. If it is desired to improve the product of the hand, attention must be given to the education of the mind, which has exclusive jurisdiction over the hand.—The Printing Art.

Photography Versus Medicine

By Jere Montague

With Illustrations by the Author

A well-known physician who is somewhat of an amateur photographer made the following remark to me the other day, while we were speaking of the value of photography as a diversion: "Why, do you know, Jere, that what one-quarter of my patients need is **photography, not** medicine." He then told me why this was so. "The trouble with most people is," said he, "that they need some stimulating diversion to get their brains off the track of continual self-thought. I have tried golf, riding, and walking, but for absolute diversion, that will make the nervous, neurotic girl forget herself, that will enable the fast-growing, cigarette-smoking male members of the community to obtain fresh air and needed exercise, there is nothing that equals the camera! A well-to-do, tired, nervous woman, the mother of three children, consulted me a short time ago as to the climate best suited for her recuperation. I advised her to remain at home, buy a camera and developing tank, and start a photographic biography of her children with the nurses-afternoon-out, employed photographically in the park. She became interested, walked more every day, gained health and vigor and has now the nucleus of as fine a home collection of photographs as one could wish. Her children have 'Brownies,' too."

A CHARMING "BIT"

This medical friend of mine, I am certain, is right in his views of photography as a health-giving diversion. The stuffy, superheated dark-room is relegated to past realms of disquietude; the bulky photographic apparatus has been replaced by compact really and truly pocket cameras of a few ounces' weight. A consumptive friend of mine took his camera, went to the mountains, and came back in two years a well man. Yes, he might have been cured without his camera, but it enabled him to have some definite purpose for remaining out of doors.

The unsophisticated camera population of a great city often yearns and longs for the summer time to come round so that they may get away from town in order to obtain some good photographs.

AN INVITING SHORE

Are there no parks in your city? Surely there are. Then go thither. Arm yourself with an easily obtained permit, if necessary; for you little know, if you have never tried, of the many spots of beauty that await your coming.

REFLECTIONS

These three appended photographs taken in the very heart of New York City, within the sound of trolley bells and auto horns and the hum of heavy traffic, will give my readers some idea of the still "unexplored" bits of nature so near to them.

Printing Without Light by the Donisthorpe Process

By H. E. Blackburn

It is customary to herald every new process as the best, most simple, and least expensive ever put forward. At the risk of violating all precedents, I will omit these claims for the Donisthorpe process, trusting that I may be able to convince you of its merits more conclusively by allowing you to form your own estimation as you come to the end of this article.

The process resembles pinatype, and is applicable to either one or three-color work. Pinatype requires at least three plates for monochrome work and nine for three-color work; while, in the Donisthorpe process, only the original negative, or, in the case of three-color work, the original three negatives as made in the camera are wanted. True, Louis Didier eliminated the last print plate in the pinatype process by bichromatizing the positive and using it as a print plate, after exposing and washing; still, the greatest of care is required in order to secure good results by so working.

The Donisthorpe process employs either ordinary film or plates; but, as no light is required, the negative may be upon an opaque support, as is their special film coated upon black paper, which last is much cheaper on that account. Negatives upon bromide paper of course answer admirably. Any number of prints can be made from one negative and the contrasts may be varied at will. The paper is not affected by light, and the only other material required is a supply of the hardening solution, dye or dyes, a sheet of glass, and an ordinary squeegee. The list of materials is certainly not an appalling one, and the use of a printing frame, as well as any form of toning, developing or fixing chemicals, is avoided.

The process in brief is as follows: An ordinary negative, or a set of three-color negatives as the work in hand demands, is hardened in a bath composed of vanadium chloride, potassium ferricyanide, ferric chloride, oxalic acid and glycerine, practically the vanadium toning bath, for five minutes in daylight. This solution hardens the negative, acting upon various portions in proportion to the amount of density present in such parts. A negative quite dense in the sky portion will, over such part, become so hard that the dye which is applied later is not absorbed, and consequently that portion will print with little or no color in the final result. Parts of the negative, such as deep shadows in the foreground, that contain but little reduced silver or "density," are less hardened and consequently take up a considerable amount of the dye or color to be deposited later as printing is carried out. Intermediate degrees of density assume their proportional degree of hardness and accept the dye in a lesser or greater degree, printing accordingly.

THE FIRST LESSON
By JAMES E. TAGGART

A negative thus hardened is ready for the dyeing, and this is accomplished by placing it in a strong solution of the color for five minutes, rinsing and then placing face up on the sheet of glass. A piece of the gelatine-coated paper is soaked in water for two minutes, laid down upon the negative and squeegeed into contact, where it is allowed to remain for a few minutes so as to transfer the color from the negative to the paper in the form of a positive picture. The depth of printing can be easily gauged by turning up a corner of the paper and examining progress, longer or shorter contact resulting in deeper or lighter prints.

When printing has progressed to the right depth, the print is stripped off, placed in alcohol for a moment, blotted off, and in about five minutes it is dry in the form of a finished print. The hardening is done but once. The second and subsequent dyeings require but a half minute, more or less; and when the required number of prints have been secured, the negative is dried and stored away. Further printing at any future time necessitates only the rewetting of the negative and dyeing as before.

As might be expected, the action of the hardening bath not only slightly intensifies the negative but it turns it a blue color which takes on a green cast upon washing. The best negatives for the process are those that are inclined to be a little thin, but free from all fog or veil. The black paper used as a support for the negative film supplied by the makers is an entire preventative of halation, and, as we have explained, admirably suited to the process, as no light is required in printing. All the material keeps well, is always ready for use, and the production of a print is but the work of ten minutes or less. Lantern slides are easily made on ordinary lantern slide plates which have been fixed out, washed, drained, and then printed in the same way as the gelatine-coated paper employed.

The process as outlined is certainly simple enough to require no defense on that score. Rapid it certainly is, and there is little or no danger of spoiled prints. Printing can be done in any light or in the absence of light. The results are as permanent as the paper upon which the gelatine is coated, unless unsuitable dyes are employed. The hardening bath renders the negative almost indestructible, and its utility for printing by other processes is not destroyed.

COLD PICKING By BELLE JOHNSON

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, SEPTEMBER, 1908. No. 9

The Pacific Northwest Convention

Just as we go to press, a letter, dated August 20th, comes to hand, advising that the Vancouver convention is a most enthusiastic and largely attended success. It could hardly be otherwise; but confirmation of our prediction is of course gratifying as such, aside from our pleasure in learning of the success achieved by those having the matter in charge. A report will appear in our next or October issue, together with reproductions of pictures and the text of the addresses delivered.

The Photographers' Association of California

Because it is not holding a convention this year, the Photographers' Association of California is by no means lacking in activity and enthusiasm. Permanent quarters have been secured at the southeast corner of Ellis Street and Van Ness Avenue, and have been fitted up ready for occupancy at the holding of the next or September meeting. Two meetings were held in August, the regular one and a second called meeting for the benefit of out-of-town photographers visiting the Eastman School of Photography at Hirsch & Kaiser's store on Post Street. At this last meeting, held on the evening of August 26th, over one hundred and fifty were present and enjoyed to the full the several good talks on practical subjects, the two handsome Eastman exhibits from the National and the Pacific Northwest conventions, and the luncheon served during the evening. Next year the Association will hold a rousing convention. Many of the leading professionals of the city are changing their locations, business is more or less unsettled, and suitable convention quarters are not easily obtainable at this time.

Shields That Shield Not

There is a magazine published in the East that is supposed to cater to the hunting and fishing element. A recent issue contains a full-page advertisement of near-lenses offered by our "near-sting" friend of bargain lens fame. With a keen appreciation of the obvious needs of his advertiser, the editor adds a statement over his own name to the effect that he has known the advertiser for many years and takes pleasure in recommending him as an honest, reliable, trustworthy man. A correspondent sends us one of these pages and writes: "My opinion of an editor who will descend to such statements is even less flattering than your own opinion of his "*friend*"

It is evident that, at least in this case, the editor has failed in his efforts to inspire confidence in a misleading advertisement, and at the same time has lost the good opinion of one of his readers. A few months ago I explained that the photographic editor was handicapped, as compared with his more prosperous brother of the general press, in the matter of knowing the status of his advertisers. While regretting the fact that the editor of a publication in another class is still weaker, I am pleased to find that photographic editors are not as yet at the bottom of the scale. I am quite sure that none of my brother editors of the photographic press would insert the advertisement in question and am positive that none of them would prostitute their pages by a recommendation such as the editor of the alleged sporting journal furnishes. To quote from Chaucer: "God shield that it should so befall."

Louis Thors on the Road

Every professional photographer on the Pacific Coast knows Louis Thors, at least by reputation, and they will now have a good opportunity to know him personally. As a leading professional of this city for many years before the fire, his reputation spread throughout the country as his excellent work won the recognition that it deserved. He was president of the Photographers' Association of California during its most successful period, and for many years acted as vice-president of the Copyright League. He is now covering the coast territory in the interest of the Artura Photo Paper Company, renewing many old friendships and compelling, by the pleasing personality that has made him always popular, a host of new friends wherever he goes. He was to have visited the Northwest convention, but a photographer in Cozzeno or Cucamonga, we have forgotten which, was having trouble, and Mr. Thors went to his rescue.

Are Your Files Complete

In filling out our files after the fire we secured a large number of copies which were duplicates. These are taking up room that is needed and before using them as sample copies would ask such of our readers as wish to complete their own files to advise us what they require. It is quite possible that we may be able to supply from these duplicates just the numbers they lack, and in other cases we may be able to advise them where the required issues can be obtained, doing this last by referring to some of the lists sent us. If you have odd numbers, particularly of the earlier issues, kindly send us a list of them, as they might include some number that will allow another to complete a set, which he would then value quite highly.

Our Cover Embellishment This Month

The life of a photographic editor is not exactly a bed of roses. The little sketch on our front cover this month gives an intimate view of the mathematical condition of the editorial mind with a figurative Scylla on one side, and Charybdis on the other, personified in real life by the advertiser and the printer.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department
Should be Addressed to its Editor.

Edited by
H. D'ARCY POWER, M. D.
Burlingame, California.

COLOR PHOTOGRAPHY.

The past month has offered nothing strikingly new. None of the many promised rivals of the autochrome plate have as yet appeared, but the Lumieres have taken out a patent for a color plate in which the screen consists of a regular pattern of colored inks imbedded in varnish. This is expected to give greater uniformity, and also be capable of cheaper production than the starch granule plate.

Paul Torchon, in the "Photo-Revue," has a new technique for autochrome. After developing and reversing he hardens the plate for two minutes in a bath of

Alum	5 parts
Bisulphite solution	25 parts
Water	1,000 parts

Then wash and develop in a five per cent solution of ammonium sulphite; wash, dry, and varnish. This is a very simple and rapid method, and if the plate after reversing should appear exactly right, one to be commended; but it allows of none of the many modifications of density which are so often needed, and, for my part, I should but seldom feel inclined to use it.

The reproduction of autochromes from autochromes has been further investigated by M. Gimpel, who arrives at the same conclusions as the English experimenters, previously reported. He therefore only advises its use on exceptional occasions. When it is needed, he advises daylight copying in the camera. As to time of exposure, he obtained correct results, copying an autochrome using bright but diffuse light in June, with a lens stopped to f-4.8 by an exposure of fifteen minutes. Obviously this must largely depend on the density of the autochrome. The yellow screen is used in the copying the same as in making the original autochrome, but he finds that it slightly over-corrects, and suggests the additional use of a pale violet filter.

A NEW METHOD OF DEVELOPING AUTOCHROME PLATES.

Messrs. Lumiere have now published another method of dealing with autochrome plates, whereby the necessity of developing in darkness is obviated. The sensitiveness of autochrome plates to the whole of the spectrum has hitherto prevented the use of ordinary means of dark-room illumination, and control in development has consequently been impossible. Use of the new formulae for developing enables a special light to be employed, by which the image can be examined. The plates are immersed in the new developer, which partially destroys the color sensitiveness of the plate, and it is then possible to follow the progress of development by using for the illumination of the dark-room those rays to which the developer has rendered the plates least sensitive. Messrs. Lumiere have therefore prepared specially colored and transparent papers, which they style "Virida papers," for use in lighting the dark-room.

These papers are green and yellow. For dark-room lamps with a weak source of light, such as candle or oil lamp, use two green and two yellow Virida papers in place of the usual ruby light. For stronger lights use two green and three yellow. The yellow papers should be placed nearest the source of light, so that the light traverses the yellow papers before reaching the green papers. When the dark-room lamp is furnished with Virida papers, the dark-slides may be unloaded, but this must be done as far as possible from the lantern, with the operator's back turned to the light, and the plate must be immediately plunged into developer.

This light has a decided action on the plates before development, as it must be borne in mind that in this state their color sensitiveness has not been diminished by immersion in the developer. Risk

of fogging is, therefore, incurred if this method of lighting is abused during the loading or unloading of dark slides.

The formulae for the new developer are as follow:

A.A.	Water	100 cm.
	Bisulphite of soda (commercial solution)	2 drops
	Pyrogallic acid	3 grm.
	Potassium bromide	3 grm.
B.B.	Water	85 cm.
	Anhydrous soda sulphite.	10 grm.
	Ammonia (.920)	15 cm.

For use, dilute this solution to quarter strength; that is:

Solution B.B.	50 cm.
Water	150 cm.

In the following formulae it is understood that by "Ammonia Solution" it is the solution B.B. diluted to quarter strength as above.

To conduct development, take for a half-plate or one 13x18 centimeters:

Water	80 cm.
Solution A.A.	10 cm.
Ammonia Solution	10 cm.

The solution to be at sixty degrees Fahrenheit. Place the solution in a dish and have ready in a small graduate forty-five centimeters of ammonia solution, to be added wholly or partly to the bath during development, if necessary.

Time of first appearance of image (not counting sky)	Quantity of ammonia solution to be added after image appears	Total time of development, including time of appearance	
Seconds	Cm.	Mins.	Secs.
22 to 24	None	2	—
25 to 27	2	2	15
28 to 30	8	2	30
31 to 35	15	2	30
36 to 41	20	2	30
42 to 48	25	2	30
49 to 55	30	2	45
56 to 64	35	3	—
65 to 75	40	4	—
over 75	45	5	—

I made mention of this new method in a previous number, but the above details from "Amateur Photography and Focus" will enable our readers to apply it.

DRYING A NEGATIVE QUICKLY.

Although the film of a negative ought to be treated with respect, if it is not to be injured, there are certain forms of treatment which it will stand, and which are at times very useful. For example, if we have a plate which we wish to dry as quickly as possible, but have no methylated spirit available, the following plan will hasten the drying very considerably. A fine, smooth, clean cambric handkerchief, folded in two or more, is laid evenly down on the film side of the negative, which latter has first been placed on some flat surface. Two or three pieces of plain paper, or blotting paper, are put on the top of the handkerchief, and then a roller squeegee is passed two or three times over the top, with a medium pressure. On plate, it will be found that it has abstracted a great deal of the moisture; so much, indeed, that the negative will be dry in less than half the time which it would have taken if this treatment had not been applied.—"Photography and Focus."

ENLARGEMENTS FROM SOLIO PRINTS.

Some years ago I described a method of making enlarged negatives from unfixed Solio prints, which I have used ever since, and which has been much advocated by several writers. One difficulty was the tendency of the print to change color before the process was complete. I now note that the "Photo-Revue" states that a print-out paper, such as Solio, if well washed remains comparatively insensitive to light. This would seem to solve the only trouble I have ever experienced in applying this method.

A DEMONSTRATION OF THE BROMOIL PROCESS.

A combination of bromide printing and oil printing, to which the name of Bromoil has been given, was demonstrated before the Royal Photographic Society recently by C. Welborne Piper, who is responsible for the development of the process. It is, of course, a direct outcome from the ozobrome process invented by Mr. Manly, and, in fact, involves the use of the ozobrome sensitizing solution, by means of which a bromide print, or rather a bromide enlargement—for the method is not likely to be one often worked upon contact prints—can be converted into an oil print.

As demonstrated by Mr. Piper, the print was first bleached in a modification of the ozobrome solution, made up as follows:

Ozobrome stock solution.	4 parts
Ten per cent potash alum solution	1 part
Ten per cent citric acid solution	1 part
Water to make.....	20 parts

When bleached, the print was immersed in a five per cent solution of solution of sulphuric acid for a minute or two, and then fixed for about one minute in—

Hypo	2	ounces
Sodium sulphite	½	ounce
Water	20	ounces

After fixing, it was washed by simply soaking in a few changes of water, and was then ready to pigment.

Any bromide paper can be used, but each variety has peculiarities. Some require the use of colder water than others, owing to the gelatine being of a soft nature. Some will stand long soaking in acid, while others will not stand more than a few minutes.

Generally, a thick paper works most readily, and in all cases amidol seems to be the best developer to use in preparing the original bromide print. Other developers can be used, but some, notably rodinal, do not seem to produce the right kind of result. In cold weather care must be taken to ensure that the washing waters and also the fixing bath are not below about sixty-five degrees temperature. Cold water applied after the acid bath is a common cause of failure, while other causes are the use of the bleaching bath and of the acid bath for too many prints in succession.

The bleaching bath should not be used for more than about six prints, and the acid should be thrown away as soon as it becomes decidedly yellow in color. By rinsing the print, after bleaching and before applying the acid, the same acid bath can be made to last longer. Inspection of the print when it is ready for pigmenting will tell very accurately whether it is in proper condition or not. If correct, the image will be slightly colored and glossy, while the rest of the print will be white and matt. The effect varies slightly with the kind of paper used. If the print shows too much matt surface or want of detail, the bleaching bath is exhausted; but if the print is glossy all over, the acid bath is overworked. Generally the image will be seen to be in sunk relief, or intaglio; but the degree of relief is not of any consequence. It appears to depend mainly on the thickness of the paper and smoothness of the surface. With a thin, rough paper little or no relief is produced, but the image will pigment just as readily as one in strong intaglio.

The inking-up process, as demonstrated, consisted of soaking the bromide print in water, placing it in the bleaching solution, giving it a short rinse, transferring it to the acid solution, again rinsing, and then fixing. After washing in two or three changes of water the print was ready for pigmenting and was placed on the blotting paper still fairly wet, and the superfluous moisture was removed with a pad of damp cotton-wool, followed by dabbing with a handkerchief. The pigments used were Rawlins' colors as supplied for oil printing.

The ordinary brushes used in the oil process were most satisfactory for this method also. Hog-hair brushes, Mr. Piper said, he found too stiff for the purpose. The gelatine was liable to be picked off by the brush during pigmenting if very thick, heavy papers were worked at too high a temperature. If the prints were allowed to soak too long a very marked granular effect was obtained, the image softened, and the pigment only took here and there. As a rule he did not pigment on an easel, but worked horizontally. In reply to a question whether the amount of pigment could be reduced after over-pigmentation, he said that this could be done by repeated dabbing with a dry brush, or a portion or the whole of the pigment could be wiped out with a piece of wet cotton-wool. He found it rather difficult, however, to obtain a satisfactory new image after such treatment. He had never tried to roll up the pigment, but he did not think that this plan would possess any particular advantages. The pigmenting could be carried out more rapidly than in the oil process, and it was not necessary to begin with such a small quantity of pigment.—The Photographic Journal.

The AMATEUR and HIS TROUBLES

Conducted by
FAYETTE J. CLUTE

EXPOSURE FOR NIGHT SCENES.

A correspondent in Ohio wants some advice about street scenes at night. What he wants to get is a series of pictures depicting portions of the business district of his small city, with wet pavements and streets reflecting the light from the well-illuminated shop windows. His first trial did not result as well as he could wish; and, as rain is not common at this time of the year, he wishes some advice that will be applicable when the next opportunity for such work presents. Not knowing just what was done at the first attempt and just how well lighted are his subjects, it is a little hard to advise. I can only suggest that he try f-16 stop and give about five minutes exposure on an Orthonon plate. I have secured fine results working in that way, but of course my correspondent may be dealing with subjects not so well lighted, or possibly better so. My plan was to decide about what proportion of the time the view was obstructed by passing cars or automobiles, add that to the determined five minutes, and start the exposure by opening the shutter at the time that the minute hand of my watch lacked the determined time of reaching a quarter-hour mark on the face of the watch. This relieved me of much attention on that score. If I figured that passing lights that were liable to leave a streak on the negative were in evidence for one-third the time, I figured the exposure as seven and one-half minutes and started half way between any two quarter-hour markings on the watch. The plate-holder slide was held before the lens whenever any interruption of the sort made so doing necessary. Figures moving about in the view will do no harm; but if a figure stands still for any length of time, particularly if in a well-lighted spot, the same precaution should be observed and the slide held in front of the lens. The developer should be well diluted, and no effort made to force development. And development should not be carried too far. These subjects demand a peculiar negative, and such a one is secured only by exposing fairly correctly, and developing for softness. However, there is a wide allowable range of exposure that, if the negative be soft and not over-developed, merely means a little more or less exposure in making the print.

USING ONE STOP.

If you will take the trouble to talk it over with the next four or five beginners that you meet, you will be surprised to learn of the general lack of confidence they have in their knowledge concerning depth of field secured and exposure made necessary by changing the stop in the lens. It takes some of them several seasons to discover that a large stop will give as much depth of field when the object focused upon is at some distance from the camera, as will a smaller stop with the focal point quite near the lens. The average beginner knows that he photographed a landscape some time previous under the same general conditions as the one he now has before his camera, but he cannot use another stop on the present occasion and feel sure that he can give a proportionately correct exposure. A beginner came to me the other day with a plan that looked about right as a means of acquiring valuable information. He had made up his mind to use only his largest or f.-8 stop for the next few weeks. At the end of that time he believes that he will know pretty nearly what the correct exposure is for a wide variety of subjects, using that particular stop. He will also know what particular class of subjects is suited to that stop, and what classes require a smaller one. Then he will be prepared to stop down intelligently; and, knowing the correct exposure at f.-8, it will be a simple

matter for him to give the correct exposure for the smaller stop. My friend does not claim to be a genius, but he has simply learned, in another field, that the only way to ascertain the results of varying conditions is to alter as few conditions as possible for each experiment. It would take a genius to learn anything by comparing the results of two exposures, with stop, subject, distance, and time, each different. If but one condition is allowed to vary, then a comparison of the results would convey a lesson to anyone. Try it yourself. Make a few dozen exposures on varying subjects with the same stop, of course changing the exposure time according to the requirements. Then make a few dozen with the same exposure time, but using a larger or smaller stop as more or less exposure seems requisite. Doing this, you will learn more about stops and exposures, and learn it in less time, than you could in any other way.

GET A GOOD TRIMMER.

There are few workers, either amateur or professional, who realize the comfort and satisfaction that can be derived from a really good print trimmer—one that cuts, cuts true, and cuts square. The amateur, knowing that he does not have much trimming to do, feels that he is not justified in spending several dollars on a trimmer. He therefore contents himself with a small, cheap contrivance that causes a waste of time, patience and material. The same man knows that he requires a hammer about the house only on rare occasions, and yet he would not be guilty of buying one of the cheap, cast-iron articles sold as a part of boys' sets. A good print trimmer is worth many times its cost, while a poor one is not worth the room it occupies. A good one makes for satisfaction and good work. One edge of the print is trimmed to form the base line, and the other three are simply three rapid clips of the knife, and the print is perfectly true as to right-angle corners. If double mounting is indulged in, the advantage of a good trimmer is even more apparent. Do not buy a poor one. Trim your prints with a pocket knife and a ruler until such time as you can get a good one, one of generous size, so that large sheets of mounting paper can be trimmed successfully. A small trimmer, particularly one of the cheaper kind, will simply cause you to doubt the utility and efficiency of print trimmers in general.

COMPLETE FIXATION OF PRINTS.

A worker came to me the other day and asked if there was any way in which he could be absolutely certain that his prints on gaslight papers were thoroughly fixed. He said he had a developer of his own and did not care to use the N-A formula. I think I have mentioned the matter before. My own practice is to get the dealer to let me have occasionally a box of old plates. Every dealer that has been in business for a few years has a few such with which he will be quite willing to favor an old customer; stock that has not sold, or plates returned. If he has none, buy a roll of Brownie film. If you get the plates, cut them into narrow strips with a glass cutter and stand the strips on edge in the box. Light will not hurt either the plates or the film for the purpose intended. When your last gaslight print goes into the fixing bath, drop in a piece of the film or stick in one end of a strip of plate. Keep the prints moving so that they do not mat together, and when the first piece of film or the end of the plate has lost its whiteness, drop in another piece or turn the strip around. When the second piece or strip end is fixed clear the prints are sure to be perfectly fixed; that is, if they have been so handled that the bath has had access to their entire surface.

THE SPEED OF FLASH POWDERS.

To the Editor.

Dear Sir:—I have your recent favor in which you mention that a Los Angeles subscriber, in commenting upon my article on "Flash Light Portraiture," published in your March number, writes that: "While the article is instructive, Mr. Ogilvie does not state that the Victor powder is much slower than most other brands." Your correspondent thus inferentially criticizes the powder in respect to speed.

I first wish to challenge the correctness of his assumption that it is slower than "most" others. Of the ten most prominent brands on the market, but two, according to my carefully-made experiments, explode with greater rapidity than the Vic-

tor. All the others are slower or about the same in speed.

I am glad you called my attention to the remark of your correspondent, because it indicates that he seems to regard high speed as a prime essential in a flash-light compound, and that being, I believe, a quite common but erroneous impression, suggests to me the advisability of your calling the attention of flash-light workers to the matter of speed or rapidity of combustion of the powders used.

My own theory in regard to the speed of explosive powders is that they should be quick enough so that they will explode with sufficient rapidity, when used for portrait and group work, to make it impossible for subjects to close their eyes during the flash, but no quicker. It is well known that in making portraits or groups by flash-light, that most people will close their eyes involuntarily the moment they see the flash of the powder. The duration of the flash, therefore, should be short enough, as above indicated, to avoid the possibility of producing closed eyes in the negative. But it is entirely unnecessary to make it of any greater speed than is necessary to produce perfect results, and thereby produce increased concussion. One fact, often overlooked, is, that the greater the speed of the powder, the greater the amount of concussion or noise produced. It is manifestly objectionable to cause any greater concussion than is absolutely necessary; and it is undoubtedly true that some powders have been made to produce a great deal more concussion and to work with greater speed than is necessary in order to accomplish the desired results. There has been no way as yet discovered of reducing the concussion or noise without at the same time reducing the speed. Smokeless gunpowder has been in common use for a number of years, and we recently read of the invention of a noiseless firearm, but smokeless flash powders that are noiseless, but very rapid and effective, are yet to be invented. A certain amount of speed is, of course, essential, but to go beyond that, is a mistake; not only because of the amount of noise made, but because it will be found necessary to use a larger quantity of powder to produce a sufficient illumination, for the reason that the duration of the illumination is shorter. Of course, it is often necessary to have an extremely rapid powder; such are often required for certain work by newspaper photographers. They have at times occasion to photograph rapidly moving figures, either inside of buildings, or out of doors at night, and it is only by the use of an extremely rapid powder that satisfactory results can be secured under such conditions.

To illustrate the desirability of doing away with noise as far as possible: A friend of the writer recently had occasion to make a group out of doors, but had the greatest difficulty in getting the subject, a child of some seven or eight years, to pose with her friends in the group, because she had been nearly frightened out of her wits a short time previously by an extremely loud report of flash-powder used in making an interior group of which she formed a part. It required the greatest persuasion and coaxing on the part of her parents and friends to quiet her fears, dry her tears, and get her to pose in the outdoor group. And it is often reported that even adults are frightened by extremely loud explosions, to say nothing of the danger of broken windows. I have found the normal-speed Victor powder sufficiently rapid for all ordinary work, and therefore consider the remark of your correspondent a recommendation, rather than an objection, inasmuch as the speed is sufficient and the concussion enormously reduced as compared with compounds having extreme rapidity. Your correspondent apparently is not informed of the fact that the Victor powder is made in three grades of speed, viz., extremely rapid, for use of those requiring it; normal, or rapid, but not extremely rapid; and slow, which last is slower than the normal, for those who require a powder of such speed for use in bags or smoke-confining devices. Such devices, for the reason that they to some extent confine the powder and thereby increase its speed, cause the "slow," when used in such devices, to explode with practically the same speed as the normal when used in an ordinary open lamp.

Trusting the above may be of service, not only to the subscriber mentioned, but to others as well, I remain,

Fraternally yours,

CHARLES R. OGILVIE.

July 16th, 1908.

Photographic Post Card Exchange

C. Frederick Potter, Jr., Director, 620½ Nicollet Ave., Minneapolis, Minn.

POST-CARD EXCHANGE.

In accordance with our editor's promise to give some space to the reproduction of post-cards, I have selected three from my collection for this number of "Camera Craft."

These reproductions are from cards sent me by applicants for membership, and were selected by looking through a pack of post-cards and picking out the first three that suited my fancy, regardless of the makers' names.

One feature of post-card work is the recording of current events, and the cards made with this end in view become able assistants of the newspapers, with this great advantage in favor of the cards, they are preserved as pictorial history while the newspaper is thrown aside. An example of this class of work is shown in Harold Glixman's picture of the fleet of battleships entering San Francisco Bay. Mr. Glixman has secured a fine atmospheric effect in this negative, a good sky, a good composition in line and mass.

SAND SCULPTURE By VAN P. AULT

LANDSCAPE By O. H. BARNHILL

In the timely-topics class is also the view by Van P. Ault, showing the work of the sand artist at Atlantic City. In this we leave out consideration of the pictorial except as the sand sculptor's work may be so considered. The work was at least extremely clever, and Mr. Ault's photograph would surely prove interesting to any one.

The original idea of the post-card seems to have been lost sight of by quite a number of readers who apply for membership in the Exchange. Cards, must, above all things, be interesting to the recipient. You may have subjects in your collection that appeal to you personally, but place yourself for a moment in the position of the "other fellow"—the one who will get your card and who is not acquainted with that jolly group you prize, nor with grandpa, whom you posed on the river bank. He is not interested in your baby, having a much prettier one of his own; nor does he care for "High School," "M. E. Church," or "Main Street," all of which he considers are excelled by like subjects in his own town. Lacking points of historical interest, or edifices of note and architectural beauty, one can turn to nature and select bits of scenic beauty, or, getting closer still to nature's heart, depict individually the wild-flowers, trees, birds and animals.

I have yet to meet the real camera enthusiast who is not a lover of nature, so that subjects in this class, when well executed, will generally receive a favorable reception.

As an interesting landscape the picture by O. H. Barnhill appealed to me. He gives us no title, so the location of the scene has no influence in our selection; it is simply a good piece of composition, a view-point well chosen, and combined with it is faultless photographic technique. We may not all be favored by living amid beauty spots like this, but there is hardly a locality in which the camera man cannot hunt out something pictorial. Remember, a great deal depends upon the conditions under which

the view is taken, the light and shade, atmosphere, presence or absence of clouds or a suitable sky effect. Imagine Mr. Barnhill's picture with a blank white paper sky and water of nearly the same whiteness, and you have the result of the average amateur's under-exposed and over-developed snap-shot.

NEWS AND NOTES.

We have a few new names to add to the membership roll this month, in spite of the warm weather during which they were received—a season of vacations during which print-making is liable to lag. I believe that we have now reprinted in "Camera Craft" all of the names of the old original members of the Post-Card Exchange. The list has extended through several issues, so look it over carefully, and if we have made any omissions, let us know.

Inquiries reach me almost every day for particulars in regard to the Exchange, from some new reader who has seen but a single copy of the magazine on some news-stand. As we have no circular or prospectus, and as I cannot write each one full details, all I can tell them is to send for the back numbers of "Camera Craft." These copies will give you all the requirements, rules and regulations, the complete list of members, and, in addition, are just as full of readable articles and fine illustrations and just as valuable to you as this current issue.

I still hear of some instances in which members do not receive cards in return, after sending out what they consider good work. I am convinced that in such cases it is not intentional violation of rules on the part of any member, but is due to a lack of proper record-keeping. You will soon find it impossible to keep track of your exchanges unless some record system is adopted. Memory will not answer; you will forget some and duplicate on cards to others, until your exchange matters will become sadly mixed.

Several members have submitted their record systems for publication, and I have been able to select the best features of all of them, and have combined them to make what should prove the ideal exchange record. Our space will not permit giving it until next month.

NEW MEMBERS.

Henry C. Ferris, Lock Box 720, Denver, Colo.

Samuel J. Hornibrook, Box 101, Goldendale, Wash.

S. Leroy Lyons, Coburg, Ore.

Percy J. McNie, Camino, El Dorado County, Cal.

V. Aragon Morales, Morelia, Mich. Mexico.

A. J. Newman, 3315 North Twenty-sixth Street, Tacoma, Wash.

O. A. Olson, 1352 Tenth Street, Milwaukee, Wis.

J. P. Rollins, Condon, Ore.

WITHDRAWAL.

Reed W. Hyde, Joliet, Ill.

BATTLESHIPS ENTERING SAN FRANCISCO BAY By HAROLD GLIXMAN

International Photographic Association

During the past month we have sent copies of the magazine to all the old members who filled out and returned the cards sent for the purpose of locating them. This has not given time to permit of our hearing from them with renewals of their membership. The several State directors have busied themselves with locating the members in their respective States, and with the most gratifying results. A number of old members have volunteered to assume the duties of director in their several States and the matter is now in the hands of Mr. Hinman. Membership blanks are now in the hands of the officers and we expect a large number of them will be filled out and sent in shortly.

Below is given the list of officers who will act in the capacities quoted until the next annual election:

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

W. C. Marley, Director Stereoscopic Division, 149 Hillside Ave., Newark, N. J.

STATE DIRECTORS.

The State Secretaries who have reported upon the membership of their respective States are as follows:

Alabama—Richard Hines, Jr., 155 State Street, Mobile.

Colorado — F. B. Hinman, Room 4, Union Depot, Denver.

Illinois — Harry Gordon Wilson, 4950 Washington Avenue, Chicago.

Indiana — H. E. Bishop, 1704 College Avenue, Indianapolis.

Kansas—H. E. High, R. F. D. No. 1, Wilson.

Maryland—E. G. Hooper, 218 East 20th Street, Baltimore.

Michigan—W. E. Ziegenfuss, M. D., 327 West Hancock Ave., Detroit.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South 32d Street, Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor Street, Manchester.

North Dakota—Jas. A. Van Kleeck, 619 2d Avenue North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Utah—John C. Swenson, A. B., Provo.

THE CIRCULATING ALBUMS.

The "Clearing House," in charge of the Interstate Album Director, is now in good working order, with eleven State albums on hand, ready to be sent out to State album directors who may send their albums for exchange. State album directors are requested to send any album they may have circulated in their State to the "Clearing House," and one will be sent them to circulate in its place. Every effort will be made to send out an album as good, if not a little better, than the one received. Advise what you are sending and address: J. H. Winchell, R. F. D. No. 2, Painesville, Ohio.

PROSPECTUS OF THE ASSOCIATION.

ITS OBJECT.

To afford its members an opportunity of exchanging, through correspondence, photographs, stereoscopic views, and lantern slides. To circulate albums of photographs among such of its members as may contribute prints for that purpose. To encourage and assist its members to the better enjoyment of photography, by affording that stimulus which association and example always provide. In enabling its members to form collections either of miscellaneous photographs or of some particular kind, such as historical, typical, or artistic, this society stands unrivalled. It is admitted by all that more useful photographic information may be secured by the exchange of prints and the attending correspondence than by any other method.

CLASS I.

Regular members or those desiring a general exchange. Such members may limit their exchange or specify a certain class or kind of work desired, in their exchange notice. Class I members are expected to answer promptly all letters in which stamp is inclosed for reply.

CLASS II.

Members who, from lack of time or uncertainty as to address, might find it inconvenient to always reply promptly to inquiries concerning exchange. Class II members will receive few if any unsolicited exchanges, as they are expected to acknowledge only such correspondence as they may themselves invite.

CLASS III.

Members desiring to enjoy only the benefits of the Circulating Albums. All members, regardless of the Class to which they belong, in order to receive the albums must send prints to the Director of their State or the General Circulating Albums for insertion therein. In no case are Class III members to be asked to exchange.

WHO ARE ELIGIBLE.

Any one interested in photography and willing to conform with the rules of the Association; amateur or professional, tyro or Salon medallist. All can find congenial correspondents and each can derive, as his individual taste may suggest as desirable, benefits from his membership in this Society.

METHODS.

On joining, each new member is given an exchange notice in "Camera Craft," setting forth his number and designating the Class in which he wishes to be placed. Mention is also made of the kind of work offered and desired in exchange, if any, together with such other detail as he may furnish. All members, irrespective of the Class in which they are enrolled, are privileged to send prints to the Album Directors for the Circulating Albums, entitling them to a place on the route list of all such as contain one of their prints, as well as on that of such other albums as it may be found convenient to so route. The most liberal contributors to the albums are understood to be the most deeply interested, and, of course, are given the preference when routing foreign or other special albums. A numerical correspondence system, translations of which are furnished all foreign members, permits the exchanging of prints between those using different languages, with the greatest facility and satisfaction. All exchanging is done by direct correspondence, on any agreed basis.

DUES.

The subscription price of the official organ, "Camera Craft," is one dollar a year for residents of the United States and its colonies and Mexico. All other countries, a sum equal to one dollar and fifty cents in U. S. money. This amount remitted to any of the Secretaries or Directors, together with a request for enrollment or application for membership, entitles to all the benefits of the Society.

EXCHANGE NOTICES

16—Dr. E. D. Starbird, 202 Elati St., Denver, Colo.
Various subjects on all kinds of papers and in several sizes. Class 3.

1236—H. W. Paris, R. F. D. No. 3, Eaton, Ohio.
4x5 on developing paper of general views for general views of interest. Class 1.

1683—E. D. Mayo, 2808 Fremont Ave., South, Minneapolis, Minn.
Stereoscopic views. Prefers to exchange those of historical interest, animals and artistic subjects. Class 1.

1714—H. A. Nerison, Westby, Wis.
4x5 on developing and printing-out paper of all kinds of subjects, for scenery and historical subjects. Class 1.

1717—H. I. Mills, Box 240, Wheatley, Ontario, Canada.
Exchange notice later.

1718—G. C. Flegel, Box 11, Westville, Ind.
4x5 and 5x7 on printing-out and developing papers of landscapes, objects of general interest and genre subjects. Wants 3½x5½, 4x5, 5x7, and post cards of like subjects. Class 1.

1719—C. R. McDonough, 957 Tenth St., Denver, Colo.
5x7, Velox generally, of miscellaneous subjects for similar work. Class 2.

A CHEAP BACKGROUND.

The nearest large dry goods store will sell you a cheap muslin that is over six feet wide for about twenty cents a yard. Get enough to make several backgrounds; leave one white and color the others with Diamond dyes. Slate color, brown, and black are the most useful. Tack one edge of them all to the same strip of round wood, and in each end of the stick place a common screw eye. Through these two eyes thread a piece of strong cord—fish-line is good—long enough to reach across a large room. A small brass hook can be screwed into the edge of a door casing here, and another on the opposite side of the room where some woodwork comes handy. These will support the rod, and the cord passing through the two screw eyes allows it to be slid from one side to the other. If the angle is not right, another hook in a different part of the room allows it to be changed. If the supporting cord is vibrated during the exposure there is no danger of the texture of the material showing, and even quite pronounced wrinkles will fail to show in the negative.

CLUB NEWS and NOTES

Club Secretaries and others will oblige by giving us reports for this Department.

FIFTH AMERICAN SALON.

The announcement of the Fifth American Photographic Salon reached us just a little too late for mention in our August issue, much to our regret. We would urge all our readers who are working along pictorial lines to contribute of their best with a view of gaining acceptance for their work if possible. Entry forms may be secured of the secretary or of any of the following named gentlemen, to all of whom pictures may be forwarded for entry: Fayette J. Clute, care "Camera Craft," San Francisco, California; C. F. Potter, 420½ Nicollet Avenue, Minneapolis, Minnesota; George B. Goodwin, Wisconsin Camera Club, Milwaukee, Wisconsin; C. C. Taylor, Toledo Camera Club, Toledo, Ohio; E. G. Fountain, 203 Chamber of Commerce, Cleveland, Ohio; E. C. Brooks, 3546 Washington Avenue, St. Louis, Missouri; William H. Zerbe, 345 Spruce Street, Richmond Hill (Long Island), New York; R. L. Sleeth, 1120 Wood Street, Wilkinsburg, Pennsylvania; or direct to American Federation Photographic Societies, 5 Northwestern University Building, Chicago, Illinois.

American entries must be framed. No passe partouts accepted. Failure to comply with these conditions will prevent pictures from being submitted to the jury.

Foreign entries to be sent mounted but not framed.

Entries from Great Britain should be sent to H. Snowden Ward, 6 Farringdon Avenue, London, E. C., England. Entries from Italy (address to be announced later). Entries from Norway, Sweden and Denmark, to Copenhagen (Denmark) Camera Club. Entries from Australia, to A. Hill Griffiths, 66 King Street, Sydney, N. S. W. All to arrive in the hands of these agents by September 1st, 1908, and should be marked "For American Photographic Salon."

Entries from all other countries should be sent direct to the American Federation of Photographic Societies, 5 Northwestern University Building, Chicago, Illinois, U. S. A., marked "For American Photographic Salon, in bond to Chicago," and should arrive in Chicago Custom House by October 1st, 1908. Accepted foreign entries will be framed at the expense of the Federation.

The conditions are as follows: Entries must be in the hands of the American Federation, 5 Northwestern Building, Chicago, Illinois, U. S. A., by noon of October 1st, 1908. There will be no invited work. All prints will be submitted to the jury. No work accepted by former American Salons will be eligible. Entries must be suitably framed (not passe partout), and the title, with name and address of entrant, plainly written on back of each—except in case of foreign contributors. A list of titles must be sent separately by mail, giving name and address of sender, price of each if for sale, and special instructions, if any. This list should be in the hands of the secretary a few days before the closing of entries. All work, mounting and framing excepted, must be done by entrant. Sign names of collaborators.

CLARENCE B. HALE, Sec'y,
215 Jackson Boulevard, Room 506,
Chicago, Ill., U. S. A.

DR. POWER'S LECTURE BEFORE THE CAMERA CLUB.

The illustrated lecture for August, given by the California Camera Club to its members and their friends, was on the New Color Photography. It was illustrated by a large number of excellent autochrome slides, all of them the work of Dr Power. This was perhaps the best presentation of

autochrome lantern slides yet made in this country and is no doubt the first such presentation of a semi-public character. The attendance was very large, over twelve hundred testing the capacity of Christian Science Hall to the limit. Dr. Power, fearing that his voice would not be equal to the strain, delegated the reading of his lecture to W. Rob Whyte, a fellow member of the club, whose excellent delivery made it possible for every member of the large audience to follow the lecture with added delight.

Familiarity with the process on the part of our readers makes it needless to give the popular explanation which was made, but an excerpt or two as below will be instructive and enable them to form an idea of the entertaining and instructive character of the lecture.

Let us suppose that we had a window made up of thousands of pieces of colored glass—blue, yellow, red—and we drew thereon a picture of a rose. Let us next take pieces of black paper, and, within the boundaries of our drawing, stick them over all the blue and yellow glass, but not over the red. Now, standing close behind that window, we should see the mosaic of red, blue and yellow surrounding the rose, made up of red dotted with spots of black paper. Now, let us in imagination go some way back from that window and look again. At this distance the separate pieces of colored glass are no longer separable, and the light coming through mixes and blends to reproduce white (which is a combination of all colors), and the little black spots on the image of the rose are all indistinguishable; but the light coming through that part of the window shows red (because there is nothing for it to mix with), and so we see a red rose on a white ground.

But what has all this to do with the Lumiere color plate? Just this, that the new plate (autochrome it is called) is just such a window, a sheet of glass coated with silver emulsion like any other dry-plate; but between the glass and the emulsion are the little colored windows—not thousands, but millions of them—nine millions on an ordinary lantern plate. Take the plate in your hand and it looks just an ordinary plate; strip off the silver coating and it looks like a rather dirty piece of glass, but put it under the microscope and you get a surprise. Your colorless, transparent plate turns into a brilliant carpet. Turn the microscope out of focus, and the light from the little windows blends and the colors disappear into white light once more.

These colored windows are granules of potato starch colored blue-violet, yellowish-green and red, and mixed in such proportions that their rays reproduce white light. With wonderful manufacturing skill they are so dispersed over the plate that, while everywhere in contact so as to let no light pass between them, yet they rarely neutralize themselves by overlapping. They are imbedded in a waterproof varnish that protects them from the chemicals used in development.

Now let us see how the colored picture is formed. The plate is placed in the camera, glass side towards the lens, so that the image of the objects photographed must first pass through the layer of strongly colored granules before it reaches the silver. In doing this, the colored rays pass only through granules of their own color, and behind each granule they change the white silver bromide into black metallic silver. Thus, if a red rose were focused on the plate, all the red granules would have silver behind them over the region of the flower, and all the green granules would be blocked by silver where the image of the leaves fell.

Now, we have substances which will dissolve metallic silver without affecting the unchanged silver bromide; and, if we so dissolve this metallic silver off the places where it has been deposited behind the red granules over the flower region, and the green granules in the place of the leaves, and we then hold the plate up to the light, the light will only pass through these cleared granules (the rest being still covered with silver emulsion); and this light, taking the color of the granules through which it passes, will reproduce the color and the form of the objects whose image was focused on the plate. Without going into technical details, which would be out of place in a popular lecture, you have here the whole story of the latest marvel.

NOTES and COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

"LOOK PLEASANT, PLEASE."

The above is the title of a most interesting little booklet recently gotten out by the C. P. Goerz American Optical Company. The author, Robert Lee Dunn, is too well-known as a forceful writer and skilled photographer to need any introduction by us. The booklet contains characteristic poses of some twenty-five famous men, and aside from its charming interest and the excellence of the pictures, it is particularly satisfying as a demonstration of the possibilities in press photography when skill and good equipment is brought to bear upon the work. Mr. Dunn uses Goerz lenses exclusively. Most of the dealers have a supply of the booklet, and it will be sent free upon request by the C. P. Goerz American Optical Company, 52 Union Square East, New York, N. Y.

THE AUTOTIME EXPOSURE SCALES.

We had the pleasure of examining an assortment of the new Autotime Scales, some fourteen or more kinds, made to fit nearly every shutter on the market today, at the store of Hirsch & Kaiser of this city. The scales are handsomely made, well finished, and are apparently indestructible, being of metal with raised letters that only a file could remove. Fitted to the shutter, they are always in place and the simple operation of setting the shutter also sets it automatically to give the correct exposure for the conditions prevailing at the time. If the average photographer would but keep a record of his expenditures he would find that the outlay for plates, film and paper form the larger portion of his expenditures. Still more important is the fact that it is with these articles that the largest waste occurs. Reducing the making of good negatives to a mechanical certainty will, of course, not only eliminate much of this waste of material and time, but will greatly reduce the cost of following photography either as a business or a hobby. Hirsch & Kaiser of this city have been appointed trade agents for California. Their advertisement of the Autotime Scales appears on another page.

SOME NEW BACKGROUNDS

A catalogue of backgrounds is not a novelty but the new one, gotten out by Robey-French Company of Boston, should be in the hands of every photographer in the land. The line is an entirely new one. Send for one of these lists and see what the leaders are using. If you want a ground you will be making no mistake by ordering any one of those listed. The list is sent free on request but in writing specify "400 series." The advertisement appears on another page of this issue.

TO SECURE DENSITY.

Some workers seem to have difficulty in securing the desired amount of density in their negatives, or at least in some cases. Such a one came to me recently and complained that he often had to resort to intensification with negatives that apparently were not far from correctly exposed. The difficulty is one that can be very easily overcome. All that is required is a ten per cent solution of sodium citrate. A few drops added to the developer after all the desired detail is out will cause the negative to take on any desired amount of density, and do it quite rapidly.

A WONDERFUL ENLARGEMENT

To the C. P. Goerz American Optical Company belongs the credit of displaying at the convention the most extraordinary photograph shown at a national convention for years. The picture in question is entitled The Four Hundred of New York, and is a flashlight made by Drucker & Company, showing the diners at the annual banquet of the Playground Association of America, an organization composed of the leading society people of the East. The Duchess of Marlborough and Mrs. Humphrey Ward, the novelist, were guests of honor, and practically every leading family in New York was represented.

The picture, 40x80, shows over four hundred faces, every one of which is absolutely clear and distinct, showing the remarkable covering power of the Goerz lens. Objects and faces in the immediate foreground are just as sharp as those in the furthermost part of the room. The picture was taken in the gold banquet room of the Waldorf-Astoria, which is known to photographers as one of the hardest rooms in the country in which to make a picture.

A contact print, upon which was indicated a number of faces, which were shown in enlargements of even greater power than the big picture, was also exhibited. The pictures were labeled Fragment of the Four Hundred of New York. One picture, that of the Duchess of Marlborough who was seated in the furthermost part of the room, one of a man who occupied the extreme right-hand corner of the picture, and another of a man in the immediate center of the foreground—each of these faces was greatly enlarged, yet there appeared no diminution of portrait effect in any of the separate pictures. Any one of the faces in the group could be made into an individual portrait without retouching or after-work whatever. The lens used in the enlargement was a Dagor, Series III, No. 7A.

THE PHOTOGRAPHIC ANNUAL 1908.

This is the new annual with which is incorporated "The Figures, Facts and Formulae of Photography," in the form of the fourth edition, extended, largely rewritten and revised throughout, edited by H. Snowden Ward. It contains 284 pages; paper covers fifty cents, postage eight cents; cloth bound one dollar, postage ten cents.

In this new annual we have what is undoubtedly the most comprehensive and most carefully digested collection of photographic information ever contained within the covers of a single book.

As the sub-title shows, it is a new edition of the well-known "Figures, Facts and Formulae," but doubled in size, rewritten and revised througnout. The subject matter covers every phase of photographic work in classified sections, giving formulae, tables and practical methods in the fewest possible words consistent with clearness. A special feature is the sixty-four-page glossary of photographic facts, definitions, and the like, making the book one which no photographic worker should be without. It can be had of all dealers or ordered direct of the American publishers, Tennant & Ward, 122 East Twenty-fifth Street, New York.

SEPIA TONES ON ARTURA PAPER.

To obtain sepia tones on Artura paper by re-development, it must be understood that the sepia tone obtained by re-development is entirely dependent on the quality of the black print, and that an over-timed and under-developed print will re-develop to a color too yellow in tone. The following developer should be used in making the black print:

Water	20 ounces
Metol	10 grains
Sulphide of soda, dry	½ ounce
Hydroquinone	40 grains
Carbonate of potash	300 grains
Hyposulphite of soda	10 grains
Bromide of potash, saturated solution	10 drops

After prints are developed, rinse and fix in the usual way, and then wash thoroughly until all traces of hypo are eliminated. Prints should then be bleached in the following solution:

Water	32 ounces
Ferricyanide of potash	½ ounce
Bromide of potash	½ ounce

Add ten to twenty drops of aqua ammonia (stronger ammonia) to the above solution, then bleach prints until the last trace of black has disappeared from the deepest shadows. Next rinse and re-develop in:

Water	32 ounces
Sodium sulphide (not sulphite)	½ ounce

Prints will instantly re-develop to a rich sepia in the above solution and should be allowed to remain in the bath for about thirty seconds. Then wash prints in running water for one-half hour and dry.

Both the bleaching solution and the re-developer may be used repeatedly until exhausted. The latter should be kept in a tightly corked bottle or it will lose its strength. Prints may be dried previous to bleaching and re-developing if more convenient.

Camera Craft

San Francisco, California

POLLY READING
A Lamplight Effect
By HENRY ESSENHIGH CORKE

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

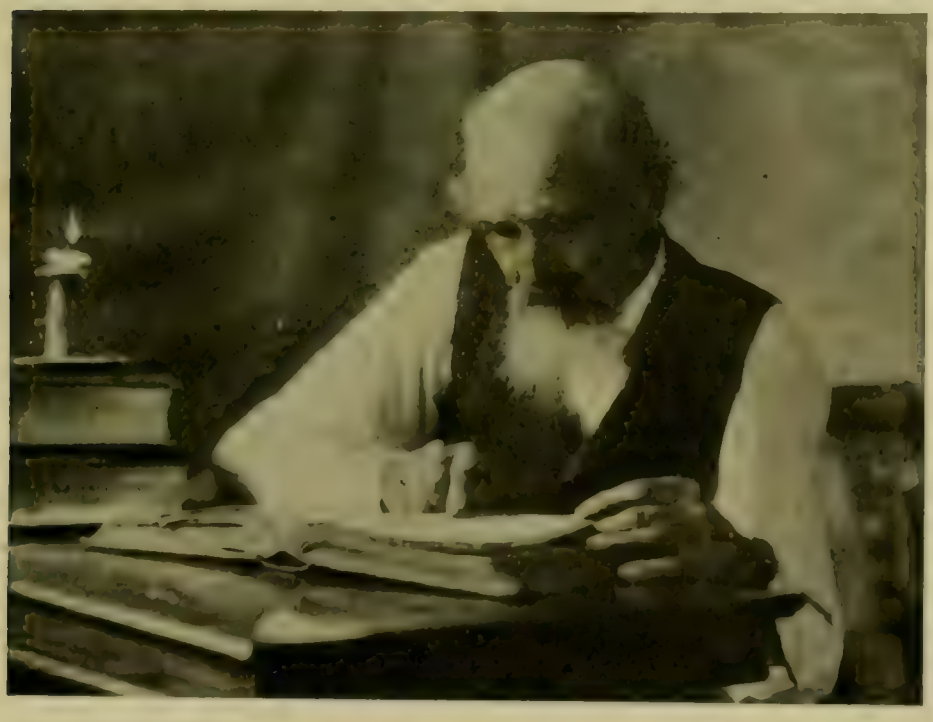
VOL. XV. SAN FRANCISCO, CALIFORNIA, OCTOBER, 1908. No. 10

Lamplight and other Effects

By Henry Essenhigh Corke

With Illustrations by the Author

In a former number of "Camera Craft" I explained to the readers my method of producing firelight effects by using only ordinary studio or window lighting. In this article I will attempt to give a description of the simple methods which I employ in securing other effects, such as suggesting lamplight and the ordinary low lighting that prevails when artificial light is used in and about the home. Succeeding so well in my efforts to produce firelight effects, I naturally turned my attention to lamplight studies. In the former case it was not necessary to include the actual fire; but, with lamplight effects, it is necessary to show the lamp or other apparent source of illumination in order that it be convincing. This made the problem much more difficult, and I would be ashamed to say just how many plates and how much time and patience were expended in experimental work.



"THE CANDLE IS SHOWN IN RELIEF"

As we all know, from observing the results of aspiring workers who have tried to portray sitters as reading by the light of a candle when the light actually came from a point behind and above the flame, that, to make the effect at all satisfactory, the light must come through or past the candle flame. Doing this, the candle is shown in relief, with one side light and the other dark. This then is the problem to be overcome; and, to solve it, I had recourse to a dummy lamp. I first secured a table lamp with a pink silk shade, preferring such a one because it would avoid the rather difficult portion, the naked flame. This was lit and carefully studied

in a room without other source of light. It is plain that if an actual lamp was used and the daylight used to light the sitter allowed to fall upon it, the whole thing would look to be only what it really was. This necessitated the use of a lamp with a perfectly flat surface so that it would not show one side in light and the other in shadow. To make this flat or dummy lamp is but the work of photographing it while lit and, from the negative, making a life-sized bromide enlargement. This should be mounted upon card, carefully trimmed to its outline, and supplied with a strut at the back so that it will stand upright. My own lamp was photographed by taking it into a darkened room, removing the glass chimney, and, by means of a short piece of wire that suspended it where the flame would come, burning about an inch of magnesium ribbon.

"ON A TABLE OR A PEDESTAL"

Supplied with this dummy lamp, the rest is easy. It need only be placed beside the sitter on a table or a pedestal, and the sitter so lighted from a small, near opening in the blinds that the light has the appearance of coming from the lamp and falling on the sitter, graduating into darker tones on the drapery and surroundings that are without apparent light from the lamp. The dummy lamp is so thin that, if set at the right angle, it does not cast a perceptible shadow; but, so placed, it will not receive enough illumination to give the desired result. This can

be overcome by reflecting some of the light back onto it with a mirror at the right position on the shadow side. The diagram herewith will make the matter clear. Some difficulty will be experienced in securing just the right strength of light upon both the sitter and the dummy lamp to give the right effect; but a few spoiled plates and a little patience will overcome this difficulty. The room should be kept almost dark, except for the light coming through the opening in the blinds; and, as we want more detail than in the firelight effects, it is advisable to give full exposures and develop carefully. The examples herewith are not put forth as more than suggestive of the possibilities of the method as outlined. The candlelight study was produced in the same way, except that a carefully drawn picture of a candle was substituted for the dummy lamp.

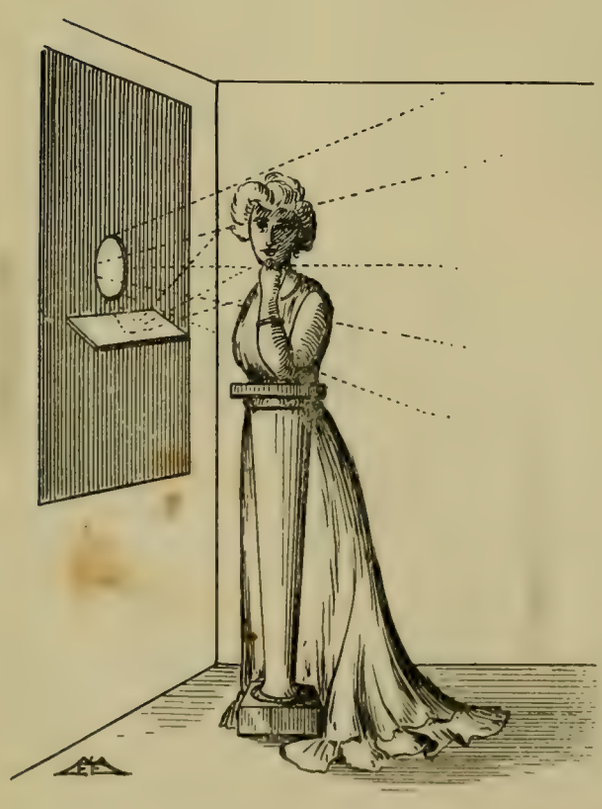
"A CAREFULLY DRAWN PICTURE OF A CANDLE."

I have had several inquiries from readers of "Camera Craft" as to the method employed in the production of "The Cigarette Smoker," which was used on the cover of the issue for September, 1907. This was a difficult matter, for the reason that both daylight and magnesium were used. The light proper was from a small opening as shown in our second sketch, an opening just large enough to insure some detail in the shadows, while about a quarter of an inch of magnesium ribbon was burned. The ribbon can be held in a small pair of pliers or the end stuck firmly into a bit of metal tube. The slide was withdrawn, the ribbon lighted, and, while it burned, the exposure was made. It is necessary that a third person stand beside the subject and agitate a fan rapidly in order to disperse the smoke which the magnesium ribbon will give off, otherwise it will photograph as a streak of light ascending from the hands.

The "Portrait of Miss S." was made in an ordinary room with the window covered except for a small round hole cut in a sheet of brown paper as shown in the diagram referred to in connection with the last example. This opening, by the way, is only about five inches in diameter, and the subject is posed only a foot therefrom. These are offered, not as pictorial successes, but simply to show what can be obtained as novel effects in portraiture.

The prints, particularly those of lamplight effects, should be made in carbon and transferred to an orange support. If carbon is not used, printing-out, gaslight, or bromide paper prints can be made almost as effective. After the final washing, the prints should be blotted off; and, while still "tacky," stained some suitable warm yellow or orange color with any of the transparent colors upon the market. A tuft of cotton answers admirably; but, if a number are to be turned out, they may be plunged directly into a solution of the dye. If too much color is secured, washing will remove it; and this suggests that washing should not follow the staining of the prints except in such cases. In closing, I would suggest

PORTRAIT OF MISS S.



that a professional undertaking this class of work should avoid showing any proofs unstained, as the effect in black and white is not nearly so pleasing. For the same reason, the reproductions herewith, except in the case of the frontispiece, are not nearly so good as would be the case could the stained effect be given.

In the sketch opposite is shown a small mirror placed below the opening. This was used in making the portrait above in order to secure a little more softness in the hair and drapery.

On the next page is reproduced a real lamplight study, one of a series of several which I made in order to

"A REAL LAMPLIGHT STUDY"

assure myself that the effects secured by daylight were fairly true. Magnesium ribbon was used inside the lamp in the same way as when making the dummy lamp picture for the portrait studies. This suggests that there is a field for like use of the ribbon inside of the lamp shade in making still life studies along the lines of this example.

In the production of portrait studies, the home worker could no doubt secure the same effects as I have shown by substituting a flash for the small opening in the light. However, it may be found necessary to control the light in the same way by utilizing only that coming through a small opening in a screen.

Art

To those who think about industry in the right way, art is a synonym for all that is uplifting and inspiring in the work of human hands . . . not with pictures and statues especially, but with all sorts of objects that embody the idea of human service, imaginative or other, and whose production represents in any marked or striking way the results of human thought or care.—Leslie W. Miller.

Picture Making Versus Snap-Shooting

By Reverend George V. McAllister

President Roosevelt is quoted as having said: "Hitch your ladder to a star; but remember, its foot is on the ground." This admonishment carries a lesson for those of us who use, for pleasure or profit, a camera. How often is a camera cast aside and an artist (?) lost to the world for perhaps no other reason than the lack of an ideal; possibly only the lack of a clear idea as to results actually desired.

Camera users have been roughly classified as "record-makers" and "picture-makers;" the two classes often uniting in the making of subdivisions. There are not a few who are ready with little else than criticism of the record-maker; but, when this record-maker is working with a definite end in view, he serves or may serve a very good purpose. Used in a commercial way, record-making arouses interest and increases knowledge; and such use need not be confined to the professional, for the amateur, with his larger field and less ordered time, may often secure a record of no small value.

There is the family reunion; nothing very artistic about it, try as we may; but, if a film or plate be exposed, it is quite certain that the resultant prints will be of great value to every unit in the group, and that the sale of the prints at a modest figure will put dollars into the pocket of the photographer. These prints are but records; but, after all, they are pleasant records, bringing back, to those who took part, many pleasant memories. We who may not care for them have no right to pronounce them unworthy of attention. I have done much of this kind of work with my own camera, and have found it to pay well, not only in dollars and cents, but in the consciousness of pleasure given others, and pleasure that was not of the moment, but that could be enjoyed again and again.

On the other hand, the camerists who are satisfied with this class of work alone, going about with only the idea of snapping friends, their houses, their pets, and the like, may well be considered as subjects for pity. Their number is large. Nearly two years' membership in our Post Card Exchange has convinced me that a majority of the grand total of camera users are working without any definite aim; although I have noted a great advance in the quality of the work I have received. I have had cards showing churches, railroad stations, school houses and the like, subjects without a trace of pictorial value and without interest further than a trifle of a strictly local nature. I have received cards that indicated an entire lack, on the part of their makers, of either artistic perception or technical skill. On the other hand, I have received many that are little gems; ones that have a clearness combined with softness, a something about them that commands the attention and wins admiration. Hence the Exchange has been a school to me; the uninteresting cards have served a purpose by showing me what to avoid, while the others have taught me to appreciate the merit in the work of others. Placing them before me and turning on the search-light of criticism, low power though it may be, has augmented my ability to distinguish between the qualities of general and lasting interest and the dull

BACK TO THE FOLD By F. C. BAKER

and uninteresting. One may know little about the influence of line and mass, but little by little he will learn to discern the artistic in the work of others and mark the discords in his own compositions; learn to avoid the undesirable and incorporate that which makes for concentration and beauty.

Doing this, it is clear that one has an ideal, even though he be unable to express it in so many words. With some it is intuitive, perhaps, but that is no reason why it cannot be created or developed. No faculty is given us so complete and perfect that it cannot be developed; neither is there a limit to the amount of development; and development will only follow the activity of those forces which are intended to produce growth. By the simple examination and study of the work of others, we will not become mature artists. So doing, however, may be expected to make for correction in misguided conceptions on our part and awaken such latent faculties as we may possess.

We should go out into nature; and I use the preposition "into" with a definite purpose, because it is not enough that we mingle with, or simply stroll amid, the beauties of nature. We must feel the inspiration of the swaying trees and the rippling brook, the ever-changing moods and constantly varying phases of nature. It is not enough that we appreciate the effect of sunshine and shadow in their relation to each other and their use in the production of a pleasing picture; we must have a receptive mind for the more elusive, more subtle quality of the foggy morning, the dull day, the sombre twilight and the like, perhaps not so beautiful in themselves; and yet, as these special moods are translated in the print, we can quite often translate the feeling and pronounce the result at least akin to art.

But we may not all be able to do this. Must we content ourselves, therefore, with being mere snapshooters? Surely not; there are other, and it seems to me, equally fascinating branches of photographic art. Still life, character studies; what a boundless range of opportunities is offered in these to the worker who will but apply himself. There is the every-day life about us that is always interesting; commonplace scenes they may seem,

but they have been considered worthy of the attention of the masters. However, we must not enter into a discussion of subjects, as this article addresses itself primarily to such as have not as yet attempted any serious work. It aims merely to give a hint of the possibilities, to the end that those who have not as yet "hitched their ladder" may be interested in finding a "star." Have a definite aim, get something on your mind, and do not be discouraged if you fail to achieve your ideals at the first time of trying. You may not, during a whole season, reach your ideals; but you will end the season with a much better conception of what constitutes a picture, and you may perhaps have added to your collection of pictures one that is worthy to be hung on the walls of a salon exhibition. Your interest in picture making will have been increased, and nature herself will be found to have taken on a new beauty for you.

Snapshooting is short lived as a source of interest. It sends down no roots of artistic research into the soil of nature's beauty. On the other hand, picture making increases in interest as each small victory is won in composition and each achievement gained in expression.

SHADOWS By MYRA A. WIGGINS

This picture was given a wrong caption and wrongly credited to Mrs. Gatch in our August issue.

Eighth Annual Convention of the Photographers Association of the Pacific Northwest

The Eighth Annual Convention of the Photographers' Association of the Pacific Northwest was called to order Tuesday, April 18th, at 2 p. m., by President O. W. Pautzke, of Ellensburg. Roll call, minutes of last convention, report of auditing committee, followed. Mayor Green welcomed the members to Vancouver and President Pautzke spoke interestingly on "The Necessity of Attending and Exhibiting at Conventions." Committees on Nominations, Resolutions, Auditing, and Rating were named. Under Good of the Association, a discussion followed and on motion duly seconded and carried it was decided to award certificates of merit only to exhibits in Class IV rating fifty per cent or better. A committee was appointed to look into the advisability of issuing a monthly Association Bulletin. In the evening were given interesting demonstrations by the Eastman staff of experts.

EASTER OFFERING By EMERY, VANCOUVER, WASH.
Salon Honors—P. A. P. N. W.

The business session was called to order Wednesday morning at 9 a. m. An hour later the members adjourned to the studio of W. G. Emery for a skylight demonstration. The entire afternoon was given over to demonstrations. The evening session first resulted in the report of the nominating committee being accepted and their selections being declared unanimously elected, as follows: President, J. E. Ralston, Seattle; Vice-President, F. M. Ingalls, Missoula; Secretary and Treasurer, W. G. Emery, Vancouver, Wash. Vice-presidents

OFFICERS P. A. P. N. W. 1908

H. B. WILLS, Vice-Pres. W. G. EMERY, Sec.-Treas.

J. E. RALSTON, Vice-Pres., Wash. F. M. INGALLS, Vice-Pres., Montana

O. W. PAUTZKE, President

JOHN FINK, Vice-Pres., Idaho GEO. MARSDEN, Vice-Pres. B. C.

A. G. CHURCHLEY, Vice-Pres., Oregon

for the several sections were elected as follows: Lulu Tollman, of Eugene, for Oregon; J. C. Linquist, of Kalispell, for Montana; B. J. Brush, of Everett, for Washington; J. C. McCandless, of Boise, for Idaho; and V. V. Vinson, of Vancouver, for British Columbia. William B. Dyer, a member of the Photo Secession and a worker of national reputation, gave a most interesting talk, illustrating it with a number of very fine examples by the best workers in the pictorial field. At 9:30 the members assembled at the St. Elmo grill and enjoyed themselves until the closing speech by President Pautzke. The hall was then cleared and music and dancing occupied the rest of the evening. This banquet, the excursion on the Columbia, the ride to "The Oaks," and other entertainment features were provided for by a popular subscription made by the citizens of Vancouver and amounting to some five hundred dollars.

THE BUBBLE By WAYNE C. ALBEE, TACOMA, WASH. Salon Honors, P. A. P. N. W.

Thursday, Portland Day, was the banner day of the convention, over two hundred being in attendance. The awards were made as follows: Angelo Trophy, A. L. Jackson, of Tacoma; Vancouver Trophy, Moon & Wills, of Seattle; Salon Awards, Jackson, of Tacoma; Moon & Wills, of Seattle; Loryea, of Spokane; Emery, of Vancouver, Washington; Wadds Brothers, of Vancouver, British Columbia; Skene Lowe, of Victoria; Collier, of Wenatchee; Wayne Albee, of Tacoma; Drake, of Silverton; and Herbert C. Carter, of Astoria. In Class IV: First to Ritter, of La Grande; second to Bryant, of Forest Grove, and Certificates of Merit to Ritter, Bryant, and Sesmister, of Medford; Drake, of Silverton; Collier, of Wenatchee; and Neick, of Hoquiam. Seattle was selected unanimously as the next place of meeting. The rest of the forenoon was given to an Artura demonstration at the studio of Mr. Emery. The afternoon was given over to the Eastman School of Photography, lighting and posing with the Aristo lamp and various printing methods and processes. At 5 p. m. the members went aboard the steamer Kellogg and enjoyed a delightful trip on the Columbia River, with music and dancing by moonlight.

One of the set of eight pictures winning Vancouver Trophy. Eighth Annual Convention P. A. P. N. W.

By MOON & WILLS, SEATTLE, WASHINGTON

One of the set of three winning Angelo Trophy. Eighth Annual Convention P. A. P. N. W.

By JACKSON, TACOMA, WASHINGTON

FIDDLE AND I.
Salon Honors P. A. P. N. W.
By LULU TOLLMAN.
EUGENE, OREGON

A Portrait
By SKENE LOW
Salon Honors P. A. P. N. W.
VICTORIA, B. C.

SIGNOR L. D'URBANO
Salon Honors, P. A. P. N. W.
By CHARLES BUTTERWORTH
PORTLAND, OREGON

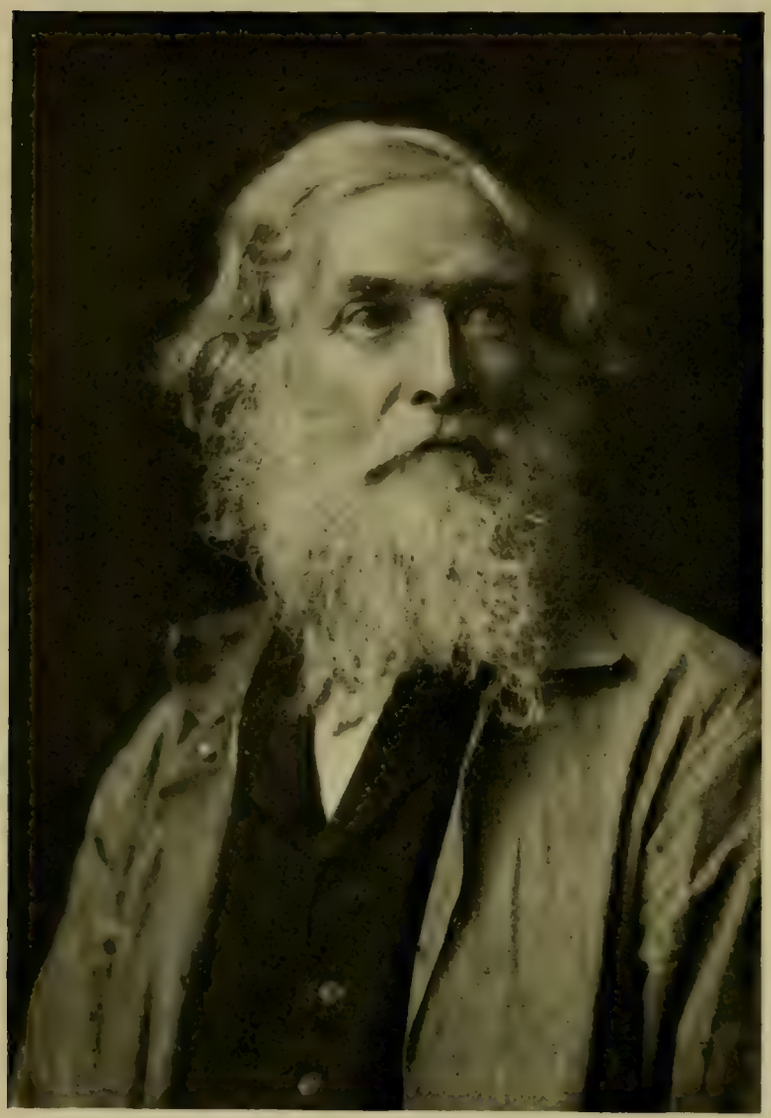
OVER THE MOUNTAIN TRAIL — By B. C. COLLIER
Salon Honors, P. A. P. N. W.

Friday morning's business session opened with a communication from Fayette J. Clute, Secretary of the Photographers' Association of California. Mr. Clute expressed his regrets that business prevented his intended attendance. In behalf of the P. A. of C. he requested that an exhibit be selected and forwarded to that association for an exhibit at a later date. After considerable discussion, it was decided that the members individually should prepare and send one or two pictures to Mr. Clute for the purpose. The award winners were called forward and each responded in a fitting manner. Again the members adjourned to Mr. Emery's studio for a demonstration of Artura paper. In the afternoon Miss Henrietta H. Falling, curator of the Portland Art Association, gave a most interesting talk on "The Claims of Art," illustrating it with copies of many famous paintings. Following, Mr. Jackson, in behalf of the Association, presented President Pautzke a silver loving cup and Secretary Emery a gold-mounted elk's tooth. Mrs. Lulu Tollman, in behalf of the lady members, presented Mrs. Emery an elegant cut-glass fruit dish. A good, old-fashioned love feast followed and the members adjourned to the Anderson studio for a skylight demonstration by Mr. Smith, of the Seed Company, and Mr. Rose, of the Hammer Company. At 6 p. m. the members practiced their "yell":

Vancouver, Vancouver,
Just watch them improve her.
We like her so,
We hate to go.
Vancouver, Vancouver,
Rah! Rah! Rah!

This was indulged in on the trip to "The Oaks," and, arriving there, the evening was spent most enjoyably.

Saturday morning the final business session convened. The Secretary's report showed an estimated balance of over two hundred dollars on hand. Resolutions were read thanking the citizens of Vancouver for their generous hospitality, the press for courteous treatment, the manufacturers and dealers for their support, and the officers for their tireless efforts. W. E. Yates, a prominent attorney of Vancouver, took the floor and in behalf of the city invited the members to come again and remain longer. His able and eloquent tribute to photography brought everybody to their feet with cheers, and his good-bye and Godspeed was a fitting close of the many courtesies extended by the citizens of Vancouver.



A MODERN MOSES By SUE DORRIS, EUGENE, ORE.
Salon Honors, P. A. P. N. W.

The above has been condensed from a full and voluminous report, signed by President Pautzke and Secretary Emery, who say in conclusion: "We desire to thank each and every member in attendance for the uniform courtesy extended to your officers, and for the hearty assistance and co-operation which so materially helped to make this, our eighth annual convention, the best we have yet held. The only protest recorded is from our friend, Skene Lowe, who was heard to remark: 'It's a beastly shame, don't you know, that we are having such a good time at somebody else's expense.' Your officers feel that the promises made in the souvenir program have been fulfilled and we hope and trust that the good-fellowship so much in evidence at the convention just closed will continue and increase, manifesting itself at each recurring gathering of the Photographers' Association of the Pacific Northwest."

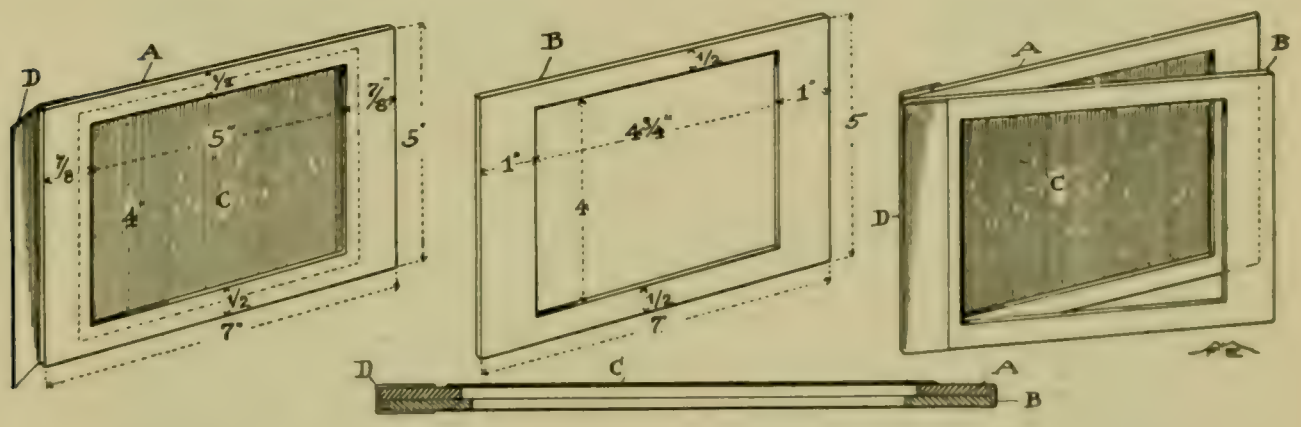
Right Works

To produce beautiful works, the sole condition necessary is that which the great Goethe indicated: "Fill your mind and heart, however large, with the ideas and sentiments of your age, and the work will follow." —H. Taine.

Home-made Kits and Other Helps

By H. L. Malony

If you have a 5x7 camera and wish to use some 4x5 plates, make a few simple kits to hold the smaller plates and fit the larger holders. Take two pieces of pasteboard, A, B, black surfaced if possible, and exactly 5x7 inches in size. Piece A will form the back of the kit, and in this cut an opening directly in the center, 4x5 inches in size, and paste a piece of strong, black paper, C, over the under side of it to keep the plate from falling through. Next cut an opening in the other piece, B, but cut it a quarter of an inch shorter. This opening, being one-eighth of an inch shorter at each end, will retain the plate in position and cut off only that small amount of the plate surface when the plate is exposed in the camera. Cut a piece of thin, black cloth, D, one inch wide and five inches long. Lay it down on a piece of newspaper and coat one side with gum or mucilage. Stand the two pieces of 5x7 black cards on end together so that they will



be square and true and bind the other ends with the strip of cloth so as to form a hinge. The drawings herewith make an explanation almost unnecessary. The two cards form a thickness about equal to a thick glass plate, and go into the holders in the same way. Lay one of these kits down against the ground side of your focusing screen and draw a line around, inside of the opening. This will give a guide as to just what will be secured upon the smaller plate when the kits are used.

If you have a fixing tank that is sprung out of shape with the sides curving in so that putting the plates in or taking them out becomes difficult, they can be easily put into better shape. Take a small bar of wood and cut it of such a length that it will just fit across the top of the tank, inside near the top. Fill the tank with boiling hot water and, in five minutes, replace the hot water with cold. Take out the wooden bar, and the tank will be found with its sides back in their original position. Rubber trays having their bottoms sprung up or down can be reshaped in the same way by using boiling water and a little pressure while so softened. Do not use the water too hot in the case of celluloid trays, and do not use alcohol in such a tray or it will be damaged.

If you have a negative that needs intensification, try soaking it in a strong infusion of coffee. The color should not be very deep, or the negative will be too slow a printer. Try it on one of your weak-printing negatives. It will surprise you what an improvement can be made in this simple manner.

If you have trouble with pinholes in your negatives, try spotting them out with a fine-pointed pen and any good black ink. You will be able to hit the spot with less trouble and can deposit the right amount of ink more easily than when using a brush.

If you have prints or films to pin up for drying, use the sharp, glass-headed steel pins that are sold at the dry goods stores. Ten cents' worth will last one a lifetime.

If you want to print gaslight paper by daylight, tone down the light by hanging muslin across the window or by pasting tissue paper over the front of the printing frame. Better still, coat a couple of sheets of glass with ground-glass substitute and put one or both in the printing frame under the negative.

If you have that common trouble with gaslight papers, small brown stains, bear in mind that they are nearly always caused by the continued action or oxydization of the developer in the film of the paper after it goes into the fixing bath. If the paper is kept moving in the fixer for a few seconds after being placed therein, the developer in the film is washed out or diluted so that it does not decompose and cause stain. Contact with another print or a confined air bubble prevents the fixing bath getting at the film, and the developer contained therein simply oxydizes and causes a stain. Citric acid in the rinsing water will also help to prevent stains, as it neutralizes the alkali of the developer and also acts as a preservative, thus preventing stains.

If you have a baby to photograph, try burning a piece of paper in an old tin pan or pie plate just at the moment of exposure. Or set fire to one of these little Fourth-of-July pin wheels. You will have baby's undivided attention as long as the display lasts.

If you are traveling about and cannot keep all your photographic magazines intact and made available by a well-kept index book, it is a good plan to clip out the best articles and preserve them in 8x10 negative envelopes. These should be labeled: Intensifying and Reducing, Copying and Enlarging, Miscellaneous, and the like. These can be carried about easily when traveling and they will be found to constitute an excellent reference library. You will find many amateurs who do not subscribe for the photographic magazine and who will be glad to get an armful of the clipped copies. Besides, it will get them into the habit of reading photographic magazines.

If you are making carbon prints, you can develop them on ivory, porcelain, celluloid, paper, or any other support, without staining the border of the picture, by first thoroughly washing out the bichromate. If you remove the bichromate before developing, it is best afterwards to dry the tissue and develop on some other day. The bichromate being removed, the tissue will not become insoluble and there will be no continued action

ROSES
By LOUIS FLECKENSTEIN

of light. In double transfer, I have better success when I hang up the print on the temporary support for about thirty minutes before squeegeeing down to the final support, doing this last under water.

If you should be using a solution of potassium permanganate on your prints as a hypo-eliminator, and, through using it too strong, secure yellow stains, you will find that a solution of acetone sulphite will make the prints as clear as can be wished. The strength of the solution seems to be unimportant; about one ounce in eight is what I employ.

A CORNER IN THE PIAZETTI By WILLIAM H. PHILLIPS

Improving the Printing Quality of Negatives

By James Thompson

The perfect negative falls to our lot but seldom. It is no reflection upon our capabilities as photographers to admit as much, for the reason that only the worker who is new to the game is likely to get precisely what he wants every time. Even with the exposure calculated to a nicety, the use of ordinary plates,—to which the major portion of us are wedded for economical reasons,—precludes the production of anything but an imperfect rendition of the color values found in the subjects that come before our cameras.

Only through the employment of orthochromatic plates can anything like correct values be recorded in our prints. Not otherwise than by the use of color-value plates can we hope to suggest the myriad hues of green to be found in the foliage of trees, in the grasses of the fields, or the delicate blues and grays of cloudland. All too often do we find greens recorded as black, and fields of golden grain,—so luminous in nature,—coming out in our pictures in much the same somber hue.

The resultant negative from the average exposure must needs have some little doctoring to render it available for pictorial purposes. Negatives all but useless may be made to the better serve our purpose by a little manipulation rightly applied. High lights may be lowered or enhanced, halation may be eliminated or reduced, and scattering and distracting lights may be sent into retirement. These improvements at least we can effect; yet, simple as is the procedure, thousands fail to avail themselves of the power, as their pictures testify.

Numberless are the negatives that could be greatly improved by a little reduction, local or otherwise; while intensification, wholly or in part, is all that is required to render many of our negatives capable of producing satisfactory pictures. I know a number of amateurs of years of experience who have never availed themselves of the power given by intensification or reduction, despite the fact that many of their negatives cry aloud for one or both of these treatments. We come across photographs almost daily that plainly show that all that is needed to make the negatives good printers is a little local reduction. A small wad of absorbent cotton moistened with alcohol, used to rub down the excessive density at any particular point on the negative, is such a simple remedy that one wonders that no effort has been made to remedy matters.

The same method is very effective in removing evidence of halation, if there is not too much to remove. Rub the spot with the moistened wad of absorbent cotton, using a circular motion. Small spots may be rubbed down by using a pointed stick wet with the alcohol. Long strips or streaks can be best treated by laying down the straight edge of a stiff card as a guide and rubbing with the pointed stick or the butt end of a match that has been whittled down to the proper size. When the work is completed,

wipe off the surface of the negative with a larger clean wad of the same cotton wet in alcohol, finishing up by rubbing with the palm of the hand if smooth; otherwise use the back of the hand.

When there is much work to be done, we can paste tissue paper over the back of the negative and work our will with lead pencil or with lead and stump. The tissue paper should be strong and of the finest grain. Wet it and lay it flat on a sheet of clean glass or paper. With a fine brush or the finger, put a thin line of mucilage or photo-mounter all around the edge of the negative on the glass side. Place this glass side down on the wet tissue paper, turn both over and, with a sheet of blotting paper on top, press into good contact, and then set aside to dry. When this is accomplished the tissue paper will be found as tight as a drum, innocent of creases, and presenting an excellent surface for the pencil.

Having a fine, smooth surface upon which to work, the excellence of the results depend wholly upon our skill in applying the lead where it is wanted. Hold the negative up to the light with the film side towards you and you will have an excellent opportunity to see just what is required. Using a soft pencil and reaching round to the tissue-paper side, lightly indicate the places requiring treatment by roughly outlining them on the tissue paper. This done, turn the negative over and more conveniently complete the penciling. Large areas may more conveniently be treated by dipping the end of the finger or a paper stump in powdered lead and applying in the usual way. Small portions requiring decided accent may be given a heavy stroke from the sharpened point of the pencil. The thickness of the glass between the paper and the print in printing insures a softness of the edges in the print. The quality of the tissue used is important. Close in texture it must be, and free from spots and holes, otherwise defects will appear in the finished picture that are not in the negative itself.

While the above method works well, color applied to the film side of the negative works better in many cases. Thin shadows, tinted with a wash of red or yellow water color, will print slower, thus bringing the various portions of the image into a better conformity, each with the other. Clumps of trees or shrubbery that lack density may thus be given a little body that will prevent faint detail from being buried in blackness in the print. Distant foliage, particularly at the horizon, almost invariably prints too dark in our pictures. In nature, the intervening atmosphere causes these distant trees to look many shades lighter than black. If these parts of a negative are given a wash of color as advised, they will print less dark and as distant objects they will take their correct position instead of coming forward in the picture as they do when represented too dark.

Trying this method of control, the worker will notice, using it to hold back thin shadows in his negatives, that he will often develop an image quite unexpectedly. In these under-exposed shadows there is usually a mere ghost of an image or detail of such a faint character that the eye has failed to notice it. Apply the color and this skeleton of an image becomes quite apparent; and what is of still greater importance, the detail that was before buried in shadow in the print now comes forward and asserts itself as such. The explanation is easy. We could not focus an image upon a clear glass

focusing screen; but, if a semi-transparent medium like the water color be applied, the image would make its appearance.

Almost any of the photo-coloring preparations will answer the purpose, although I prefer those known as Acme water colors, sold in square tin pans at twenty-five cents each. One of these will last for years, unless wasted by being dissolved more rapidly than required and the solution thrown away. For small patches, one can work directly upon the dry film. Using a fine pencil brush, about a No. 3, quickly apply the color where wanted and as quickly wipe off with a wad of absorbent cotton wet with clean water. This will give an even, clear tint in the film without a surplus muddy sediment on the surface. To operate upon larger areas it is best to wet the film so as to soften its surface; then quickly run the brush around the outline and flood the center with color from a full brush, immediately swabbing the whole spot with cotton and clear water. The way to avoid muddy, irregular results is to always clean off the surface quite free from superfluous color, and this can best be done with a wad of wet cotton as explained. When it comes to large surfaces, such as thin skies or foregrounds that print too dark, we should have recourse to a larger brush, or we may even use a small wad of the cotton wet in the color. However, it will be best to use the large brush to flow the color over the surface and then use the wad of color-soaked cotton to soften off and spread the color, never neglecting to finish off by swabbing with absorbent cotton and clear water to remove the surplus from the surface. Always doing this the negative will have a beautiful transparent tint without any muddy sediment remaining on the surface. Should we find that a mistake has been made and overmuch color applied where it is not required, we have but to soak the negative in clear water for an hour or so and all the color will be discharged and the film left in its original state ready for another treatment if so desired. If we find that the stain in any part is not as deep as we wish we have simply to add another wash of the color.

That many a good landscape photograph lacks atmosphere must be admitted. The distance portions often show up as clear and distinct as the foreground. There is none of that softening down that is due to the intervening atmosphere. This is often the case when an orthochromatic plate has been used with a screen that cuts out the blue haze in the distance. This effect of haze may be replaced in the negative by the judicious application of our water-color medium. With a full brush go around the outline of the distant portions, flood inside the outline, and then quickly wipe off with the wet cotton. Such treatment is particularly applicable to meadows, rivers, and the like, where the effect of rising mist is often most pronounced in nature.

Of course a little skill is necessary, but a few waste negatives and half an hour's work are all that is required. The whole secret of successful working lies in the wiping off of the surplus color before it becomes unevenly set in the film. Broad washes must be secured by flooding and spreading on a wet film, immediately softening the outlines and graduating the lines of demarkation with the thoroughly wet absorbent cotton and clear water. Further, after all coloring operations have been completed, rinse the surface of the film under the tap and set aside to dry.

A GREEK SLAVE
By HANA ROBISON

Difficulties In Photography

By Geo. S. Smallwood

The average critic who is kind enough to examine our prints is very fond of telling us that we should have left out a certain tree, rock, or other objectionable feature. He will tell us that had we not included this or that our picture would be worthy of selection as a prize winner. He does not stop to think that the conditions under which we work do not give us full control over our subjects. A rustic bridge, for example, is found, and a good picture seems certain. However, after walking all around it and finding the best viewpoint, the focusing screen discloses the fact that the ever-present overhanging bough makes the picture impossible, or at least less pleasing than it would be otherwise. A good seascape is found and hope rises high in the breast of the photographer, but, alas, the sun is shining directly into the lens. A charming view in the park tempts the erection of the camera, but just as everything is ready a seemingly endless string of people, old and young, invade the scene; people who think there is something to be accomplished by posing themselves before your camera. Sometimes these misguided individuals can be deceived and gotten out of the way by going through the motions of making an exposure and then starting to pack up. Too often the juvenile portion of the assemblage will simply wait in order to see where the next exposure will be made in order that they may appear again before the camera.

Not long ago I went with a couple of my camera friends on a little trip after pictures in the rural district. On the train I remarked that I believed we would be free from the annoyance of intruding figures so far out in the woods and fields; that we would be able to spend plenty of time in selecting good lighting and the most desirable view points. I was doomed to disappointment. When we arrived at our destination we started up a small, picturesque stream that promised some fine pictures. The first good view we came across contained three small boys seated on an old tree trunk, fishing. They absolutely refused to do other than stare at the camera and consequently made the view an impossible one as a picture. A little further on there was a most pleasing combination of creek, small timber, hedge and fields, but there were several children busy gathering thorn apples, and they could not be made to understand the requirements of a picture in the matter of natural or unconscious poses. Leaving the stream, we sought the fields. Some shocked corn attracted us, but when the selection had been made, lo and behold, three hunters with their guns and dogs jumped the fence determined upon finding a rabbit that had sought shelter in one of the shocks of corn upon which we had focused. The light was not strong enough to make the necessary short exposure to give us a good hunting picture and so we moved on. As we had noticed a lot of sheep on a near-by hillside we went after them. One of my friends tried to get them together in such a position that a picture would be possible.

Something frightened them and they scampered away. Our next experience was with a herd of cattle that almost destroyed our lunch while our heads were under the focusing cloths, preparatory to exposing on a landscape that pleased our artistic senses. Dispersing them, they scattered over the landscape before us in a most unpicturesque way. Back to the creek we followed it under the dense foliage which overhung its banks and came upon a painter sketching a nice bit of scenery. He proved to be a friend of one of our party and we spent quite an enjoyable half-hour with him. Of course, we could not secure in our negatives the charm which he was recording upon his canvas, but we photographed him at his easel and secured some very good pictures.

Such, I believe, is the everyday experience of every camerist. When he desires to make a time exposure and secure good detail in the shadows of a landscape, along comes some obtrusive individual who persists in moving about within the field of the lens. This is all the more annoying to us poor unfortunates who live in a city, itself without a hill, surrounded by a flat country that is nothing but a waste of prairie land. The camerist who lives in a mountainous country where beautiful streams and wooded hills abound, has a larger field and greater opportunities. Too often he does not realize his advantages. My main purpose in writing the above, aside from a desire to instruct our critics, is to awaken these fortunate individuals to a realization of the benefits which they enjoy as compared with their less favored brother camerists in the cities and in the less interesting parts of the country.

EARLY MORN — By A. J. Swanson

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, OCTOBER, 1908. No. 10

The Fourteenth Convention of the N. W. P. A.

We have received a full report of the Northwestern Photographers' Association Convention held at Minneapolis, August 27th, 28th and 29th. Lack of space prevents our giving a more detailed account, but we wish to record the fact that the attendance was the largest in the history of the Association. Louis Dworshak, of Duluth, was elected president, and C. H. Galbraith, of Minneapolis, secretary. St. Paul was decided upon as the next meeting place. The other officers and the winners of prizes will kindly pardon our failure to record their names. The Association is to be congratulated upon the ever-increasing success that attends its conventions and it has our best wishes for a still larger success at St. Paul next fall.

Our Last Issue

As our advertising pages recorded, our printers were so unfortunate as to have a fire just as the last issue was well under way. New material had to be gotten together and the haste necessary is our excuse for the slight falling off in the typographical appearance of the issue. The frontispiece was put on the press from blocks that were rushed through without even the taking of a proof of the blocks. We trust that this issue will be up to our regular standard and that our friends will excuse us for the falling off in the appearance of the magazine, under the circumstances.

Melville A. Yauck on the Coast

Melville A. Yauck, the genial president of the Artura Photo Paper Company, is visiting the city and making a host of friends by his cordial manners and pleasing personality. Mrs. Yauck is with him and it seems that his rather far-fetched claims to being an invalid and needing the trip has caused her more anxiety concerning his reputation for veracity than has his alleged poor health. We are all glad to have them with us and trust that their visit may be as long as possible and that it may be repeated as often as Mr. Yauck's duties at the home office will permit.

"The North American Indian"

We have received a copy of the handsome prospectus gotten out in connection with that sumptuous publication, "The North American Indian," by Edward S. Curtis. The work consists of twenty volumes of text, each consisting of about three hundred and fifty pages, 9½x2½. Embodied with the text there will be fifteen hundred full-page photogravure plates.

some forty of which will be hand colored. In addition there will be twenty portfolios, each consisting of thirty-six or more copper-plate photogravures. 12x16 or 18x22. Beyond doubt, this is the finest publication of the kind ever produced and when completed will furnish a fitting monument to Mr. Curtis' lifetime work and study of the interesting subject which he has made so much his own particular domain. All correspondence should be addressed: North American Indian, 437 Fifth Avenue, New York.

The Autochrome in Landscape Work

Last month we gave an extract from Doctor Power's lecture on the Autochrome process and were compelled, for want of room, to leave out the portion below, which had been put in type. On page 398 of this issue is an excerpt from the "Studio," which, in connection with the following extract from the Doctor's lecture, will be found interesting.

From the popular to the artistic is but a step, and it should be a short one. To what extent can we hope to derive from color photography aesthetic pleasure such as the painter affords us? It is a question not to be answered off-hand. Most people enjoy good art, and appreciate beauties of line and harmonies of color; most people love the beautiful in nature and praise the man who puts it on canvas for their delectation; but few, very few, people can compare a picture with the thing it represents and recognize how different they ultimately are. We look out on a landscape, and our eye roves from one mass of color to another; the eye is fixed first on the blue expanse of the sky, then on the purple distance, then on green or golden foreground. At no time do we see these all together, but we get a general impression of blue, purple, green, that is strong because of the very largeness of the masses comprising it. If we look very critically at the sky we find it very likely only grey-blue; the mountains are purplish-brown; the foreground dirty-yellows and greens. This, however, is not our original impression, but a cold, scientific analysis which scarcely anyone ever makes. The artist, painting the scene, works to re-create your impression, not the colder reality. He makes the sky blue, the coloring of the hills purer, the foreground more brilliant, and he leaves out every useless or annoying detail. So, when you see the result, you say, "How beautiful and true." But it is not true to Nature, though it is true to your impression of Nature, which is like our memory of past joys, a page of history with the annoyances and discords omitted. Now, when you render such a scene on an autochrome plate, you get the scientific reality without any of the artistic additions or abstractions, with the result that you are apt to be disappointed. And the same is true of even brilliantly colored objects when at a distance. For example, we drive along a road and note a tree brilliant with blossoms. We admire, concentrating all our gaze on the patch of color, which, though it does but constitute a fraction of the total landscape, still claims our whole attention. We make a color plate of it, and then are surprised and disappointed to find but a speck of color in an uninteresting waste.

I mention these things to show you that the making of pictures by copying nature is not an easy task. Yet the conditions do, at times, present themselves, particularly if you work with brilliantly colored subjects of limited extent. A hedgerow gay with flowers, a pool of water reflecting clouds and sky, a brilliant sunset — all these may make pictures admitting of little improvement by the painter's art. If landscape is not such a good field as it looks, we can turn to genre and still-life studies with confidence. Color and arrangement are now under our control, and what we arrange the plate will perpetuate. Such examples as are here shown are in no sense typical of the possibilities of the method, for I have been too busy in experimental and technical work to devote the time and thought that must always precede any success in the realization of works of art.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department
Should be Addressed to its Editor.

Edited by
H. D'ARCY POWER, M. D.
Burlingame, California.

PHOTOGRAPHING FADED OR BURNT DOCUMENTS.

Burnt documents are perhaps the most difficult things which it falls to the lot of the photographer to deal with. Faded photographs and manuscripts or documents are also unpleasant things to reproduce. But by using the right system the difficulties can be overcome, and in a recent issue of the "Photo Revue," Dr. Reiss contributes a useful and practical article on the subject.

Age, damp, and a variety of other influences may cause writing to almost disappear, and more especially to become faint yellow. The document or paper can be flattened out by placing it between two large pieces of glass in a big printing or other frame. In order to increase the contrast of the faded writing on the paper, there are three distinct operations, each of which gives additional clearness.

First of all, since yellow rays of light cannot pass through blue glass, the yellowish, faded writing will appear almost black if examined through a deep blue screen, and hence, by photographing it with an ordinary plate and employing a deep blue "contrast filter," we shall get a negative in which the writing appears considerably intensified.

This, however, is only one step. The next is to intensify the negative itself, and for this purpose mercury and ammonia will be found good. Reduction and intensification combined may prove even better, as we can reduce the "shadows" (in this case the writing) more proportionately than the "high-lights" (the paper). Acid ammonium persulphate is recommended for this purpose by Dr. Reiss, but we should imagine that Howard Farmer's hypo-ferricyanide reducer would prove better, as it will attack the writing in preference to the "background." In either case, mercurial intensification follows.

By this double treatment, the use of both contrast filter and intensification, the very faintest writing will have become fairly legible in the negative. But one further improvement is available in the printing, and that is the use of a very vigorous gaslight paper, with a concentrated developer well restrained with potassium bromide. The results are astonishing, as the writing, which at first it may seem hopeless to try to photograph, will be quite distinct in the print.

Burnt documents are still more difficult to deal with, but they should be very carefully flattened and placed between glass as before, steam being used to render the brittle paper more supple. If the paper is black and the ink grey or brown, a positive result is obtained direct. Slow plates should be used, sufficient but not over exposure being given, and a slow-working developer, such as ferrous oxalate, well restrained.

SLOW-BURNING POWDERS.

The photographic activity of the undermentioned mixtures was measured by means of the Eder tube photometer, gelatino-bromide of silver dry-plates being exposed to the various lights. The chemical strength of the light is expressed in candle-metre-seconds (H.M.S.), the Hefner amyl-acetate lamp being taken as unit. The candle-metre-second (H.M.S.) is the chemical strength of a Hefner amyl-acetate lamp at one metre distance, acting for one second.

The powder in all these experiments was six metres from the photometer, and was arranged in small capsules placed on an asbestos plate. The powder was fired by means of a saltpetre touch-paper. For this purpose filter-paper was dipped in a warm solution of one part potass nitrate in two parts of water, and the paper hung up to dry. Three ground-glass screens were placed in front of the sensitometer in order to reduce the strength of the light. The powder burnt contained uniformly a charge of one gram of magnesium. In estimating the rapidity of combustion, five grams of the slow-burning powder were taken. These latter were placed in capsules made of parchment paper of a diame-

ter of one centimetre, closed below by cork, and provided on the upper side with a length of touch paper. The time of combustion was ascertained with a chronograph. The following table gives the results obtained. The first column gives the amounts of the several ingredients in grams or fractional parts of grams. The second column gives the ingredients; the third, the relative chemical strength on dry plates in candlemetre-seconds (H.M.S.) of mixtures containing one gram of magnesium; the fourth gives the rapidity or combustion in seconds of five grams of the powder.

Combustion Powder.			
1	Magnesium		
7/10	Ceric nitrate (anhydrous)	160,000	5.5
3/10	Strontium carbonate		
1	Magnesium		
6/10	Ceric nitrate (anhydrous)	140,000	4.5
4/10	Strontium carbonate		
1	Magnesium		
5/10	Ceric nitrate (anhydrous)	125,500	4.8
5/10	Strontium carbonate		
1	Magnesium		
6/100	Strontium nitrate.	140,000	1.3
4/10	Strontium carbonate		
1	Magnesium		
4/10	Strontium nitrate.	130,000	4.3
6/10	Strontium carbonate		
1	Magnesium		
1	Magnesium carbonate	86,500	11.2
1	Magnesium		
1	Calcium carbonate	67,500	25.0

Comparing the slow-combustion mixtures, prepared according to the above formulae, the best is seen to be that consisting of one gram magnesium, seven-tenths gram ceric nitrate, and three-tenths gram strontium carbonate. The mixture of magnesium one gram, strontium nitrate four-tenths gram, and strontium carbonate six-tenths gram, is a weaker light, and burns somewhat quicker than the mixture just mentioned; it is, however, an excellent preparation.

The mixtures containing magnesium and calcium carbonate give very much less light; and in regard to those in which calcium carbonate occurs, it should be mentioned that the combustion takes place irregularly, and they cannot be recommended for practical use. The smallest production of smoke occurs in the case of mixture containing ceric nitrate and strontium carbonate, a greater amount being produced in those containing strontium nitrate and strontium carbonate. If a portion of the magnesium is replaced by aluminium powder a reduction in the amount of smoke produced is usually noticed, but further experiments in the use of aluminium in slow-burning powders are still in progress.—"Photographische Korrespondenz."

AUTOCHROME LANDSCAPES.

In another part of this issue is given an abstract from my recent lecture on color photography. About the time this lecture was given here, Mr. Dixon Scott was writing in London the letter-press for the special number of the "Studio." It is interesting to compare the following excerpt from his article with my remarks:

"We all know that when we survey a landscape we do not see each color independently, at its intrinsic value, but that all sorts of strange feuds and alliances going on between the colors as they settle themselves in the chambers of the eye, result in an image curiously interwoven and interdependent — this color being subordinated to that, another thrilling warmly in response to the attentions of a fourth, a fifth and sixth entering darkly into a sinister suicidal pact. Detach any one color from the sweep of sea, sky, field, and shore —guard it with your hands, as you look at it, so that it may be held free from the interference of its neighbors,—and you will find that its color is a very different thing from that which it wears when you let your hands fall and the whole great company of yellows, blues, and greens burst upon the sight at once. The actual intrinsic value of the sand is flushed almost to flesh color by the vivid green of the grass. The water beyond it deepens its blue a little in response to the glow of the beach; and even the purple distance behind you, the long range of rolling woods whose aspect still rings and echoes subtly in your senses, is not without a secret influence, inducing the whole orchestration to vary its tone some fine and delicate degrees further."

The AMATEUR and HIS TROUBLES

Conducted by
FAYETTE J. CLUTE

COPYING AT NIGHT.

An Oregon correspondent writes to ask how elaborate an equipment will be necessary to enable him to use up a number of the coming winter evenings making copies of prints, some very fine, which he has received in foreign publications and which he wishes to share with his friends by sending them copies. No special apparatus will be needed if his camera will rack out to double the focal length of the smallest lens he has that will cover the plate used. At least that much extension is demanded if he wishes to copy full size. Additional extension will be required if enlargement is intended at the same time. It is simply a question of fastening up the print to be copied, securing the focus, and then burning a few inches of magnesium ribbon on each side, taking care that the light is shielded so that its direct rays do not strike the lens. From five inches to a foot of the ribbon, according to the distance burned on each side, will be found sufficient. Hold the ribbon with a pair of pincers when burning.

INEXPENSIVE ALBUMS FOR SEPIA PRINTS.

The worker who is tired of the ordinary black and white print on gaslight paper should try the simple hypo-alum toning process. A bath that has been used some time gives the best tones. A new bath may be put in shape for the best results by adding a little silver nitrate or soaking in it a quantity of trimmings from bromide prints, waste sheets and the like. But, to come to the albums. The large paper dealers now carry what they call "leather paper" or Swedish manila. The wrapper in which this magazine is mailed is a sample of the light weight. The wholesaler might not care to have you take up the time of his salesman, stock clerk and accounting department just to make a sale amounting to but a few cents, but your dealer will get it for you along with his other supplies of mounting paper. It comes 30x40 in size, so that album leaves 7½x10, 5x7½, and 4½x6 2-3 are easily cut so that folding a piece in the middle gives two leaves. The paper dealer will charge but little to cut it all neat and square; but remember to order it cut twice the length given above so as to fold into two leaves. The sizes best suited to albums that will cut without waste are 7½x20, 5x15, and 4½x13⅓. The paper is very tough, and, for albums that are to have much handling, is much superior to the ordinary material used. The only trouble is that it comes only in this warm brown tone that, despite its suitability for sepia prints, is not quite satisfactory for any other kind.

LETTERING BLUE PRINTS.

But my becoming interested in these albums came about in this way: The maker was in the habit of sensitizing some heavy bond paper, a kind almost as tough as leather, and printing this right out to the edges, using one of the several enlarged negatives which she had had made from some of her best negatives. On these she lettered the title in white ink. The trouble was that the ink was not near so indestructible as the prints and eventually wore off. Remembering that I had seen a formula that, used with a pen or small brush, would reduce the blue print and leave white paper wherever it was applied, it proved to be a solution of potassium oxalate, seventy-five grains in an ounce of water, thickened with a little gum or sugar. It requires but a few seconds for it to act, after which the print should be well washed. Sometimes the print forming the cover design is ruled into a series of panels; again, two border lines are ruled all around and a little distance within the edge. Lettering becomes simply a matter of skill, and, when there

is a large area of fairly dark print that is not too interesting in itself, an appropriate verse in thin line lettering can be introduced.

WORK FOR WINTER EVENINGS.

The long winter evenings will soon be here, and many users of the camera will find that the warm weather, pressure of business, or some other cause has left them with little or nothing to show for what is supposed to be the photographic season. They will want to do a little photographic work, if only to "keep their hand in," as the saying is. The books all advise lantern-slide work, enlarging, and the like; work that requires more or less special equipment which the worker may not care to install and which presupposes a supply of new negatives. I have an amateur friend who seems to have hit upon the better plan. He does little photographic work during the summer months, but in winter he turns out a large number of negatives. He found that his Bausch & Lomb Zeiss, of about eight inches focus, would cut a 10x12 plate, working at f-16, very nicely. He bought a 10x12 plate-holder, and then made an additional or extension back to his 5x7 camera, so that the large plate-holder could be used. The work was rough and crude, but that did not matter. A rough frame containing a sheet of ground glass in the right position to correspond with the plate surface was made. This was inserted in the grooves used for the plate-holder, to be replaced by the holder after focusing. All the extra equipment required consisted of two portable gas burners with the necessary tubing. My friend has devoted most of his time to the making of 10x12 negatives of such paintings, engravings and other pictures as his own home and those of his friends can furnish. The result is that, after two or three winters' work, he has a supply of negatives from which he can turn out a larger proportional number of prints that are really worth framing than can any of his photographic friends. His work has all been done quietly and without haste or inconvenience. The waste has been trifling, as a kit allows him to make trial exposures on a small plate whenever he is at all in doubt as to the exposure. With an incandescent gas light at each side of the picture to be copied, an exposure of about three minutes, using stop f-16 and a not too rapid plate, answers the requirements. A color screen and isochromatic plates of course add to the exposure when they are made necessary by a colored original. In working in this way, the lights should be so shielded by pieces of card that their rays do not strike the front surface of the lens. When the arrangement of incandescent is not convenient, the same results can be secured by burning from six to twelve feet of magnesium ribbon at each side of the picture to be copied, taking the same precautions as to light striking the surface of the lens.

FLASH POWDER.

I would strongly urge the several workers who have asked me for a formula for flash powder to refrain from mixing it themselves. It is cheap enough ready prepared, and the danger of an explosion hardly justifies an inexperienced person in trying to prepare it. However, here is a good formula, the favorite of a gentleman who has had considerable experience in compounding such powders: Equal parts of aluminum and magnesium powder are well mixed; then, to every ten ounces of this mixture are added five ounces of potassium chloride and one ounce of potassium permanganate. In mixing, friction or the use of a metal stirring implement should be avoided for the sake of safety. This is a quick-burning and active flash powder, and one that produces the minimum amount of fumes.

VALUE OF THE ALKALIES.

It makes little difference which of the alkalies you use in your developing formula. The caustic potash may, perhaps, soften the film more than does either the carbonate of soda or carbonate of potash. The former is a more stable salt in the crystal form and, for that reason, more desirable. The three mentioned are those most commonly employed. Different samples vary, and for that reason I can only approximate their relative value. Ten grains of the caustic potash are equal to fifteen grains of the carbonate of potash, and equal to twenty-five grains of carbonate of soda. In writing or speaking of the latter, the crystalized form is always understood, unless otherwise stated.

International Photographic Association

Matters are now progressing nicely, and by the time the winter months set in we hope to have I. P. A. matters moving along nicely. Quite a list of new members is published this month, and the names of the officers for Oregon are added to the list. New York will be represented next month, and we hope to fill out the list of State officers as fast as delayed correspondence will permit. Members, particularly those in the larger cities of States not represented, are asked to communicate with Mr. Hinman or Mr. Winchell, should they feel that they can devote a small portion of their time to the duties of a State officer.

Through an oversight, the names of our old officers in Mexico have been omitted from the list. Our membership in that country is most gratifying, and these officers have done good work in maintaining the interest and circulating albums. Their names will be found listed below.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

W. C. Marley, Director Stereoscopic Division, 149 Hillside Ave., Newark, N. J.

ALBUM DIRECTORS.

Alabama—Richard Hines, Jr., 155 State Street, Mobile.

Colorado—F. B. Hinman, Room 4, Union Depot, Denver.

Illinois—Harry Gordon Wilson, 4950 Washington Avenue, Chicago.

Indiana—H. E. Bishop, 1704 College Avenue, Indianapolis.

Kansas—H. E. High, R. F. D. No. 1, Wilson.

Maryland—E. G. Hooper, 218 East 20th Street, Baltimore.

Michigan—W. E. Ziegenfuss, M. D., 327 West Hancock Ave., Detroit.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South 32d Street, Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor Street, Manchester.

North Dakota—Jas. A. Van Kleeck, 619 2d Avenue North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

Oregon—Leonard S. Hopfield, Box 622, McMinnville.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Utah—John C. Swenson, A. B., Provo.

STATE SECRETARIES.

Answers to enquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

Kansas—H. H. Gill, Hays City.

Oregon—F. L. Derby, La Fayette.

FOREIGN OFFICERS.

MEXICO.

Vice-President—Jose Ramos, 2a de Morelos 44, Morelia, Mich., Mexico.

Album Director—J. Jesus Martinez, Ap. 5, Morelia, Mich., Mexico.

RENEWALS.

170—Thomas J. Ronald, R. F. D. No. 1, Orient, Iowa.
$3\frac{1}{4}$x$4\frac{1}{4}$ and 5x7, mostly on Aristo Platino, of landscapes, portraits and still life. While not exchanging generally, will answer any inquiries or help any beginner if possible. Class 2.

369—W. A. Van Wagner, 536 Tallman St., Syracuse, N. Y.
$4\frac{1}{4}$x$6\frac{1}{2}$, on platinum and Velox, pictorial work for same kind of work only. Class 2.

403—Lou P. Tillotson, 1305 South 32d St., Station B, Omaha, Neb.
4x5, 3¼x5½, and 5x7, on Velox, of interesting subjects, child life, monuments and historical subjects. Post cards also. Class 1.

510—George D. Steck, 1327 West 11th St., Cleveland, Ohio.
Up to 6½x8½, on developing and platinum papers of marines and landscapes, for general views of interest. Class 1 for stereos; all else, Class 2.

672—Henry L. Dillon, R. F. D. No. 3, Darlington, Pa.
4x5 and 5x7, on printing-out and developing paper, of country views, farm scenes, animals, birds' nests, and some flash lights, for street scenes and the like, particularly in foreign countries, and especially the northern part of Ireland. Class 1.

739—Wharton Schooler, R. F. D. No. 2, Eolia, Mo.
4x5 and 5x7, on developing paper, of cyclone wrecks, floods, historical subjects, farm life, landscapes and the like, for interesting subjects, particularly from foreign members. Class 1.

1093—H. C. Heidrich, 1303 Washington Ave., New York, N. Y.
3¼x4¼ and 4x5, mostly on developing papers, of landscapes, statuary and genre studies, for like work. Class 1.

1257—L. F. Sieferd, 5305 St. Clair Ave., Cleveland, Ohio.
4x5, on Velox, of views of general interest for the same. Class 1.

1573—E. D. Miller, 226 North 10th St., New Philadelphia, Pa.
5x7 and stereos, on developing paper, of miscellaneous subjects. Class 1.

1611—Arthur R. Allen, Trinidad, Colo.
5x7, on different papers. Class 2.

1612—W. Strait, Trinidad, Colo.
5x7 prints. Class 2.

1613—Will L. Crouch, Trinidad, Colo.
5x7 prints. Class 2.

1614—Walter Dearden, Trinidad, Colo.
5x7 prints. Class 2.

1616—O. E. Aultman, Trinidad, Colo.
5x7 prints. Class 2.

1617—Steve Patrick, Trinidad, Colo.
5x7 prints. Class 2.

1618—E. E. Runge, Trinidad, Colo.
5x7 prints. Class 2.

1619—E. N. Carter, Trinidad, Colo.
5x7 prints. Class 2.

CORRECTIONS.

1681—C. E. Guffin, 503 East 117th St., Cleveland, Ohio.
5x7 and smaller, on developing paper, of landscapes and miscellaneous subjects, for the same. Class 1.

NEW MEMBERS.

1719—Horace Sykes, care S. P. Freight Depot, Salem, Ore.
5x7, on various papers of the better kind, of artistic compositions, for the same class of work. Class 1.

1721—Sanford Bacon, 74 South 1st St., San Jose, Cal.
5x7 or larger, on kallitype and bromide, mostly landscapes, for pictorial work. Class 1.

1722—Mrs. Georgia Graham, Marshland, Ore.
Exchange notice later.

1723—Harold Glixman, 568 Golden Gate Ave., San Francisco, Cal.
3¼x5½, on Cyko, of general views of interest. Class 1 for photographic post cards only.

1724—Bernt W. Johnson, P. O. Box 4, Lily, So. Dak.
6½x8½ and 5x16, on developing and printing-out papers, of various subjects. Class 1 for post cards only.

1726—Don Hill, Aberdeen, So. Dak.
Exchange notice later.

1727—E. Deming Smith, P. O. Box 233, Niagara Falls, N. Y.
Post cards on Solio and Artura, of general interest. Desires pictures of railway locomotives and trains as well as landscapes, waterscapes and the like. Class 1 for post cards only.

1728—E. H. Wilson, 304 South 16th St., Omaha,
Exchange notice later.

1629—J. H. Cardwill, 304 South 16th St., Omaha.
Strictly in Class 3.

1731—E. C. Huntington, Windom, Minn.
5x7 and smaller, including post cards, on developing and printing-out paper, of general interest for same. Class 1.

1632—Gustav G. Stortz, 2424 Germantown Ave., Philadelphia, Pa.
3¼x5½, on Velox, of landscapes, buildings, statues and the like. Class 1 for photographic post cards.

1733—A. C. Ames, Peninsula, Ohio.
Up to 5x7, on Cyko. Class 1 for photographic post cards.

1734—W. D. O'Neel, P. O. Box 920, Lamar, Colo.
5x7 and post card, on developing papers, of local views and landscapes, for post cards and 5x7 views. For present in Class 2.

1736—C. E. Straton, 211 East Main St., Trinidad, Colo.
5x7 prints. Class 2.

1737—John Gysin, 319 South Animas St., Trinidad, Colo.
5x7 prints. Class 2.

1738—Miss Carrie Page, Lock Box 446, Monticello, Iowa.
4x5, post card and smaller, on developing paper. Class 2.

1739—George K. Helder, care Experimental Station, Hays City, Kans.
Exchange notice later.

1741—John H. Barger, P. O. Box 102, Edwardsville, Kans.
4x5 on glossy paper, of all subjects. Class 2.

1742—Albert W. Burtscher, Hays City, Kans.
4x5 on developing paper, of general views. Class 1.

1743—P. S. Irish, 1012 Delmont Ave., Schenectady, N. Y.
Up to 5x7, on developing paper and bromide, pictorial work of rural and wooded scenes, for like work and pin-hole pictures; also desires historical subjects. Class 1, but write first.

Photographic Post Card Exchange

C. Frederick Potter, Jr., Director, 620½ Nicollet Ave.,
Minneapolis, Minn.

A RECORD SYSTEM FOR EXCHANGERS.

To begin with, it is the consensus of opinion that no blank-book system will ever prove satisfactory, unless it is of the loose-leaf variety. Such a book is practically the same as a card index, but is a little more bothersome to use when it comes to inserting new leaves in their proper alphabetical order.

Let us consider then the card index as the only satisfactory record system, as this conclusion must inevitably be reached by all who investigate the subject carefully. It is the only system adopted and retained by the largest of publishers who have thousands of names to handle on their subscription records, and is the system universally in use by libraries.

I believe none of our members will deny that some kind of a record is absolutely necessary, and I trust all of you will put the following suggestions into practice as you will find them to be the means of keeping exchange matters running smoothly. I quote from one member's letter as follows:

"After experimenting to some extent and trying blank books and other means of getting the thing straight, I came to the conclusion that the most practical way to do this was with a small card index outfit. This can be obtained at all stationery stores and consists of a heavy pasteboard box and a couple of hundred cards, with an alphabetical division, for which the charge is fifty cents, with complete set of 3x5 cards. I personally use cards 4x6, as this size enables me to keep post cards received but not yet credited to the proper parties, in the front of the box containing the alphabetical index. I use cards with margin ruled on each side and space in center, which is a regular stock ruling. On the left margin I put the date of sending out my card. In the center space I put the name and number of the subject sent, and in the right-hand margin I put the number given the card received in exchange, when it is received. When I do not make the initial exchange, I simply fill in the number of the card or cards received in the same right-hand margin, and when I send out my returns I fill up the other spaces as indicated above.

"Of course at the top of each card I put the name and address of the person with whom I am exchanging, and as soon as I am able to ascertain as to the quality of their work, I make a memorandum on the top of the card accordingly, and if their work does not appeal to me, do not continue to exchange.

SNOW SHADOWS By W. T. WHITEFORD
SPEARFISH SO. DAKOTA

"My own scheme is to send what I term a sample card or exchange to a person, and if their return is of a good character, I open an 'account' with them on the cards as stated above, and exchange more or less regularly with them as desired."

By giving a certain number to each nega-

tive you are using for post-card printing, and using this number instead of a title in making your entries on record cards, some time will be saved, and you will also avoid sending duplicate subjects to anyone. In the column for cards received, if you did not care to keep a subject record, you can simply indicate by a check mark that an equal exchange has been received, and as long as the column is blank you know that no card has been received. It is a simple matter to keep such a card index, much more so than it is to describe it, and as fast as you add the names of new members to your list they are placed in the box in their proper order in a moment's time.

Additional cards can be used for any name under which the entries made have filled the first card. Most cards are also ruled on both sides, making the backs available for data.

NEW MEMBERS.

Quite a few names are withheld from this month's list, and I would say to recent applicants who do not find their names below that the work submitted was lacking in either technical quality or subject interest. Do not let this discourage you, however, but try again. Take a little more care in selecting a suitable negative, make the best print you can from it on a grade of card suited to it, and send it in, or, better, send three or four cards, so that I can get a better idea of the class of subjects and the kind of negatives you are making, writing me at the same time, and I can give you some pointers in a personal letter.

The following are new members received up to September 12th:

E. D. Blacet, Painesville, Ohio.

Arthur G. Joy, 244 Edmonton St., Winnipeg, Man., Canada.

Chas. A. Koch, Collbran, Colo.

F. L. Davies, 115 Revere St., Sta. B, Portland, Ore.

E. J. Kennelley, 905 Collins St., Joliet, Ill.

H. E. Swan, Kearney, Neb.

Geo. P. Morgan, 20 Pontcanna Road, Cathedral Road, Cardiff, South Wales, England.

W. D. O'Neil, Lamar, Colo.

W. E. Staples, Box 386, Glenwood, Iowa.

H. E. Swan, P. O. Dept., Kearney, Neb.

Henry F. Weigle, Kutztown, Pa.

CHANGE OF ADDRESS.

Joe Silverburg, 3906 Finney Ave., St. Louis, Mo.

Elmo W. Edison to Gaviota, Cal.

WITHDRAWALS.

Daniel V. Ward, Bridgeton, N. J.

A HILLSIDE ROAD
IN THE COAST RANGE MOUNTAINS

By MRS. A. J. C. BLACK
R. F. D. No. 2, CORVALLIS, ORE.

NOTES *and* COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

HAVE YOU SEEN IT?

Perhaps you have not seen the little monthly magazine "Prism," and if not, two excellent articles which have been widely copied, dealing with anastigmat lenses may have escaped your notice. The articles to which we refer are "The Amateur and the Anastigmat," which furnishes the theme for the June issue, and "The Making of an Anastigmat" in the number for August. The first paper presented a comparative analysis of the ordinary type of lens and the modern anastigmat, giving ample reason for the amateur to invest in such an equipment. The subject matter of the second article is evident from its title, and it proved very interesting. The June issue dealt entertainingly with field glasses, while September has Microscopes as a title.

The illustrations in every issue add much to the attractiveness of the magazine, and it is well worth while to send in your name for a sample copy of the next issue. A different phase of optics is handled each month and much valuable information placed in a convenient form.

"Prism" may be had without cost from the Bausch & Lomb Optical Co., Rochester, N. Y.

SPECIAL POST CARDS.

We have recently had the pleasure of looking over some samples of special post cards gotten out by the Laurel Press. Mr. Thompson advises that they are prepared to get out these special cards on orders for five thousand of one subject, two thousand each of two subjects, or one thousand each of four subjects. Special colors and special sizes afford a wide range of effects, many of them very effective for advertising purposes. The low prices and the quick delivery makes the work of the Laurel Press very attractive to the knowing ones who have given these excellent cards a trial. We would advise our readers to write the firm for prices on any special ideas they may wish carried out, as well as for prices on their regular line of post-card work. The advantage of getting a fine quality of card from your own pictures and having them delivered within a week or ten days of the date ordered, is most gratifying. Address Laurel Press, 304 Pearl Street, Hartford, Conn.

THE MULTI-SPEED SHUTTER.

There seems to be an inclination on the part of some of our readers to question the claims made for the Multi-Speed Shutter that is advertised on another page without giving the shutter itself a trial. This is all wrong. The makers, as we know from letters shown us, are at all times willing and anxious to see that every shutter they turn out is satisfactory and they will take any pains to see that a customer is satisfied. We have, in the past, shown our readers work done with the shutter, and one which we have had in our possession for over six months has been loaned to quite a number of workers, all entirely unacquainted with its mechanism, and it is seemingly in as good condition today as when shipped to us last spring. It is numbered eighty-one, and no doubt the later shutters are even more mechanically perfect, and we are advised that an improved valve has been added. We would advise such of our readers who want an efficient shutter to communicate with the manufacturers of the Multi-Speed and we can assure them the fairest treatment and a shutter that will give the best of satisfaction should they conclude to buy.

A HANDSOME LITTLE BOOKLET.

J. H. Dallmeyer, Limited, Denzil Road, Neasden, London, N. W., send us one of their new booklets describing the Dallmeyer cameras and ask that a notice be given it in our pages. It is a most interesting list of some twenty-four pages and cover, well illustrated and containing full particulars concerning their excellent line

of cameras. It is sent upon request and we feel sure that it would interest our readers, particularly those who are residents of England and other foreign countries.

THE EASTMAN SCHOOL OF PROFESSIONAL PHOTOGRAPHY.

The Eastman School of Professional Photography, conducted under the auspices of Messrs. Hirsch & Kaiser, on August 25th, 26th, and 27th, brought together a representative gathering of professional photographers.

The demonstrations were followed with the utmost interest, there being an exceptionally able corps of demonstrators. This comprised Messrs. Frank Hazlett, Milton Waide, C. R. Cornell, H. W. Oliver, J. F. Masters, and Walter Schulze. The Ozobrome demonstration, given on the last day, directed particular attention, as it was the first time this method had been demonstrated in California.

The Folmer-Schwing printing cabinet, for developing papers, with Cooper-Hewitt Mercury Vapor Lamp was constantly under inspection, and discussion. The use of the Aristo Lamp in making negatives and prints was followed with keen interest, even by those who had witnessed its operation the previous year.

The Convention display of pictures proved of interest to many visitors; there were portraits of many celebrities, and an interesting comparison of printing on various papers from the same negatives.

THE KOILOS SHUTTER.

We are advised that Burke & James have been appointed the sole North American agents for the famous Koilos shutters. This shutter is described in their No. 11 catalogue and a cut is shown in their advertisement this month. All the working parts in the interior of the case are of hardened steel, precluding wear and giving the greatest durability. The construction is simple, the speeds accurate and the efficiency or illumination superior. We would advise our readers to look into the merits of this excellent shutter.

THE LETOL SPECIALTIES.

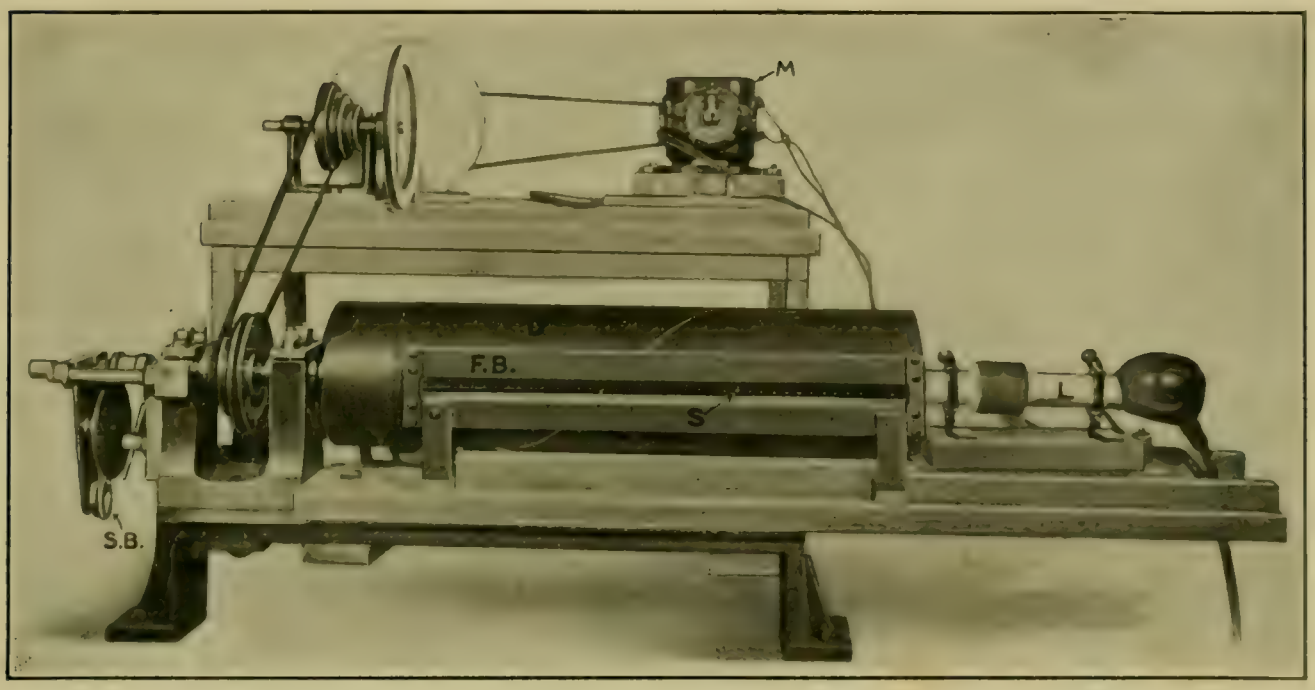
Over in the front of the magazine is an advertisement of the Western Photo Supply Company, calling attention to their line of special preparations. We have used several of these preparations ourselves, and found them entirely satisfactory, and would advise our readers to give them all a trial. At the last meeting of the Photographers' Association, one of the members took a group of those present, using Letol flash powder. Several of the assembled photographers assured the operator that the flash was not powerful enough to secure a negative; this judgment, of course, being based upon the absence of report and smoke. Despite the fact that stop f-22.5 was used, an excellent negative was secured, one full of detail and gradation. Letol developer had been supplied in bulk to professionals in the Bay cities and in San Francisco for nearly two years before it was placed upon the market regularly. These preparations are certainly worthy of trial, and the firm will be glad to set you right should trouble arise. They wish to popularize these specialties with the amateurs, as well as the professionals.

THE BARNET PAPERS.

We recently received some samples of various grades of bromide paper manufactured by Elliott & Sons, Limited, of England, through J. L. Lewis, of 379 Sixth Avenue, New York, who carries the paper in this country. These samples we turned over to an experienced worker, W. Rob Whyte, of this city. Mr. Whyte showed us some excellent prints as a result of his experiments, and handed us the following note: "I have to report on the Barnet bromide paper which you have placed in my hands for trial, that the tone and gradation are excellent; there is no difficulty in working, not even with the 'Tiger Tongue' or very rough-surfaced paper. The result of sepia toning is all that can be desired, and no special care is necessary in the manipulation. The time of exposure, roughly speaking, is four times that of Eastman's Royal Bromide Paper, which, of course, makes contact printing quite easy. I made contact prints with no more care or precautions against light than I employ in the case of gas-light paper." This excellent line of papers is worthy of a trial and we believe Mr. Lewis will be glad to furnish samples at a most modest price. A descriptive list of the various grades will be sent upon application.

TESTING PHOTOGRAPHIC SHUTTERS.

The above cut represents a new and very ingenious device for testing the speed of shutters. The machine was designed by Fred Schmid, of the C. P. Goerz American Optical Company, to insure the accuracy of the XL Sector shutters manufactured by this company, and is in use at their New York factory. The essential parts of the device are: a hollow metal drum, D, perforated spirally by a series of two hundred holes, making exactly one complete revolution around the drum; a front board, FB, with a narrow slit, S, in it, equal in length to the distance from the first to the last hole of the spiral perforations and placed exactly at the same height as the axis of the drum; a mercury vapor lamp, L; a small electric motor, M, and such mechanical appliances as are necessary for revolving the metal drum at various required speeds.



The apparatus is used as follows: The lighted tube, supported horizontally, is placed inside the drum, the drum is then revolved at a given speed which is ascertained by a striking bell mechanism, SB, giving one stroke for every five revolutions of the drum and thus permitting an accurate determination of the speed of rotation. The speeds, in practice, vary from three to eight revolutions per second, and as the drum revolves each perforation therein appears in turn before the slot in the front board. To a spectator who is watching the operation the slit appears as a continuous row of light-dots blending finally into one line of light.

The shutter to be tested is attached to a camera, placed in front of the apparatus, focused on the slit, and with the drum revolving at a known speed and the shutter set for a given speed, an exposure is made. The photographic image which appears on the negative is a succession of dots of which the single white dot appearing on the slit in the reproduction is an example. The single and double dots appearing in the reproduction are openings in the front board above the slit, and facilitate the counting of the dots by marking groups of five and ten in the negative.

In making the exposure a special plate-holder is used which permits of the same plate being used for a complete test of all speeds of the shutter. This is brought about by means of a device by which the plate is raised or lowered in the plate-holder.

The length of exposure is determined from the resultant negative in the following manner: Knowing the time value of each dot, derived from the speed of revolution of the drum, multiplying this value per dot by the number of dots gives the actual length of exposure. If the value of each dot is determined at one one thousandth of a second and the shutter was set for one one hundredth of a second, ten dots would indicate the exposure to be one

one-hundredth. However, under same conditions, should twenty dots appear in the negative, the actual exposure would be one-fiftieth of a second.

An important feature of this device is its equal adaptability to the testing of focal plane shutters. This is due to the record being produced on a straight horizontal line, thus being correctly exposed by the slit in the focal plane shutter.

PHOTOGRAPHY IN THE SCHOOL.

At the recent teachers' institute held in Mobile, Richard Hines, Jr., Sunday editor of the "Register," and one of the best-known amateur photographers in the South, delivered an address upon "Photography as Allied to the Teacher and the Class Room." Mr. Hines began his address by dwelling upon the value of pictures in the education of the youth; how they impressed the subject under discussion upon the youthful mind and enabled the child to form an adequate idea of the form and semblance of whatever was being described to him. He said that Dr. Sanders, in showing pictures of the various bacilli and micrococci of diseases, had given a very good application of this fact, which he sought to impress upon those present. Taking a hand camera, the speaker then explained its workings; the use of the diaphragms or stops, the relation of exposure to diaphragm, the use of the bulb in making instantaneous, bulb or time exposures, the loading and unloading of the camera, taking therefrom a roll of film which had but recently been exposed, winding about the exposed film its paper envelopment and sealing it before the teachers. He also explained the method of tank development. He touched upon the value of full exposures and of tone value in pictures, and the relations of the various tones or values one to the other in graduation from absolute black to white.

He also touched upon the cost of photography, stating that he hoped the alleged bugaboo of expense, so much harped on, would not deter any of those present from taking up the work; for, like the matter of dress, one could spend a couple of hundred or a couple of thousand per annum thereon. The speaker dwelt upon the value of the camera in the prosecution of nature study, how the trees and plants and flowers could be photographed at different stages of their growth and development, such series of photographs making an interesting collection of great value in such study. He said that while it would be ideal for each child of a class to have its own camera and learn to handle it, that the work could be prosecuted with but a single camera. Mr. Hines was listened to with interest throughout, and applauded at the conclusion of his remarks.

DID HE PRINT IT IN P.O.P.?

A Los Angeles subscriber, Mary C. Hubbard, sends us a clipping from the "New York Times." The verses display an appreciation of photographic characterization so rare in the non-photographic press, that we gladly give it space for the benefit of our readers:

AN ESTRANGEMENT.

They stroll together o'er the sunlit hill,
Hand clasped in hand and smiles within their eyes;
They heed no music of the babbling rill,
They note no beauty in the Summer skies.

Ah! What is this? Their fingers swift untwine!
With hurried step she leaves her lover's side.
Now he observes each changing weather sign,
The growing cloud—the sunlight half denied.

Apart they stand, she with fixed, steady gaze
Upon his face, her body stiff and stern;
From head to foot a steadfast impulse sways
The youth, and from his lips we learn

That this estrangement is no sudden thing;
No brain-storm, falling from the cloudless blue—
He but desires before the light takes wing
To snap his kodak at his sweetheart true.

LURANA W. SHELDON.

L. XV No. 11 NOVEMBER, 1908 Price, 10 Cents

Camera Craft

San Francisco, California.

ISOLDE
By F. E. MONTEVERDE

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor
CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, NOVEMBER, 1908. No. 11

"Up Lighting" Effects

By H. Essenhigh Corke

In the last issue of "Camera Craft" I gave its readers a brief description of methods of securing some out-of-the-ordinary lighting effects that at least have the merit of being different from the ordinary production of the camera that takes the form of portraits and figure studies. The examples shown were not put forward as having special pictorial merit or as being

THE CRYSTAL

the best obtainable with the means described. They were intended merely to suggest the possibilities that were at the disposal of the worker willing to devote a little time and study to the application of the methods outlined. In this article I will give a few further examples of out-of-the-ordinary lighting effects, trusting that they will be of interest.

The reader must not imagine that I have any fault to find with the ordinary lightings that the examples of the masters and our own experience

have taught us, are the most certain to give pleasing and satisfactory results in the majority of cases. These lightings have become the standards just as have a certain number of easy and quite natural poses. But, on the other hand, the skilled artist is not bound down to these stock poses; in fact, he frequently becomes quite daring in his departures from the conventional in

"PROSIT"

his treatment of the pose. Along the line of lighting there seems to be a much less pronounced inclination to depart from the accepted standards. It is my belief that there should be as wide a field for originality in one branch of the work as in another; or rather, that the scope should be hampered only by a proper regard for truth of effect and the skill of the worker.

And, I would add, the suggestions put forward herewith are not offered with the belief that they are of the greatest value; they may not even have

the merit of originality, although discovered by the writer in his own efforts to secure certain effects. They are put forward with the belief that our art may be made to advance only by our giving to others such ideas as we may stumble upon, to the end that a number may try them, experiment with them, and, if found worthy, collectively enlarge upon and incorporate them into the general practice of our art.

In the case of the illustrations herewith, explanatory sketches, such as were given in my last article, are hardly necessary. It is only needed that I explain one or two points in regard to the light, which, in the several examples shown, is ordinary daylight reflected upward from a mirror placed on the floor at the feet of the subject. It must be remembered that the mirror will reflect the light at the same angle at which it is received. If one is using a skylight directly overhead and the mirror is placed flat upon the floor and directly below, the light will be returned in the same direction. The subject should be placed some distance back of the point where the light from the opening in the curtains strikes the floor, itself falling at an angle. The mirror being placed at this point will then reflect the light upward upon the subject at a corresponding angle in the opposite direction. If this angle is not the exact one that is required, a bit of wood or a cork placed under one edge of the mirror will give a change that may make it unnecessary to rearrange the position of the sitter in regard to the light.

"SWARTHY CHEEKS AND BOLD BLACK EYES
BROW-BOUND WITH BURNING GOLD."—Tennyson

To secure this effect of "up lighting," as I term it, is not at all difficult if a skylight is available. All that is necessary is to construct a canopy-like protection to keep the top light from reaching the subject. If a dark background is used and the light from the sides also cut off by dark curtains or screens, the sitter is then in much the same situation as if posed just inside the door of a darkened room. With a mirror placed upon the floor so as to receive the strong light falling in front of the subject and reflect it upwards towards the subject, a variety of effects may be secured, effects that may be made quite realistic and pleasing according to the care taken

to have the pose and accessories carry out some idea with which the "up lighting" is consistent.

I can hardly do more than ask the reader to make a few experiments along the lines suggested by the examples herewith. In "Prosit" the light came from a not too large opening left uncurtained near the top of an ordinary studio light. This light fell upon the floor at some distance in front of and a little to the right of the subject, who was protected from top lighting by a rough, tent-like structure made of dark backgrounds and curtains. The mirror was placed on the floor several feet in front of and a little to the right of the subject; and, in order that the cloth-covered piece of lumber, which did duty as a table, might not intercept the reflected light on its way to the face, the mirror had to be moved a little forward away from, and inclined slightly towards, the subject. In the negative the edge of the make-believe table comes but to the bottom of the print as it is trimmed for display. Its shadow can be located where it blends with the light from above upon the white shirt front of the subject. The light upon the near edge of the table shows that the direct light from above was not entirely cut off by the canopy over the subject's head.

"Swarthy Cheeks," which, by the way, has won first award at Beaford, Isle of Wight, and other English exhibitions, is another example of the same kind. In "The Encore" the light is reflected more directly upward by the mirror and the light from above was allowed to reach the lower part of the figure and cast its own shadow, thus doing away with the lack of detail and excessive contrast that must be guarded against in this class of work.

It must be remembered that this kind of lighting almost entirely alters the likeness of the subject; many portraits so made will be hardly recognizable. Some subjects will be found whose features will lend themselves kindly to our "up lighting," while the features of other subjects will give but a caricature of what may be a most pleasing face under ordinary conditions of lighting and posing. Where "stagey" effects are essayed, the addition of a little theatrical make-up is advisable if the necessary skill for its application is available. Our artists of the stage are in no small degree forced to employ its kindly assistance to counteract in a measure the unkind effects that the footlights produce upon the normal face.

Combination Negatives

By Preston E. Anderson

Some few years ago I was asked to visit the home of a family residing a few miles out of town, for the purpose of making a group picture. The photograph was taken; in fact, several negatives were made; but none of the resultant prints seemed entirely satisfactory. The consequence was that I received only a small "consolation" order and the incident was forgotten. However, about a year ago, one of the family came to me with a request that I print the head of one figure, from one of the least pleasing results, upon the shoulders of the same figure in the pictures that had been delivered, supplying him with a number of enlargements of the best obtainable quality, and for which he would gladly pay any reasonable price. I might explain that the original negatives all showed motion in one or more of the figures comprising the group, as my work had been delayed until a late hour of a very dull day, and a long exposure, upon a group containing very elderly people as well as children, had been my undoing.

Seeing an opportunity of not only securing a good order, but of redeeming myself in the eyes of my patrons, I set about the work with the greatest of care. Searching out the negatives, I first made a good transparency from each, so that they would be available in case of accident. The two negatives were then given a hardening in formaline. The best negative, the one used for the printing of the original order, I will call the principal negative; and the one from which the desired head was to be taken, the auxiliary. Taking the principal negative, after drying from the hardening bath, I placed it on a retouching stand and, following such lines as lent themselves to the purpose, such as the edge of the collar, the shoulder of the next figure, and the like, I scratched a line all around the head to be removed, next scraping away all that part of the film coming within this line. This patch of clear glass was next painted over with a thin solution of clear gum and allowed to dry.

The next thing was to secure the desired head from the auxiliary negative. Placing the principal negative again in the retouching frame, the auxiliary negative was placed on top and shifted about until the head required came into the desired position directly over the clear glass patch in the negative below. With a few strips of gummed paper it was fastened in place, and with the sharp point of the retouching knife the film of the auxiliary negative was cut through around the desired head so as to give me a patch that would exactly fit the cleared spot in the other negative. This done, the surrounding film was all scraped away so as to leave the piece to be removed as an isolated patch of film.

The next operation was the stripping of this patch and transferring it to the bare spot in the other negative. I secured a small bottle of hydrofluoric acid; this comes in a wax or rubber bottle and has very destructive fumes, necessitating great care in handling. Into an ebonite receptacle, in reality the corner of a broken tray, I poured three or four drops of the

acid and added about half an ounce of a mixture of alcohol and water, three parts of alcohol to one of water. The auxiliary negative had been leveled up with three wooden wedges and the acid solution poured upon the patch of film to be removed. In a few minutes it was found that the edge of the patch could be raised with the point of a toothpick. Lifting up one side at a time, it was found to be entirely free from the glass, and so it was laved with a quantity of the alcohol and water in order to wash out and remove the acid. A piece of firm, white letter paper was then laid down upon the piece of film and gently pressed into contact. Lifting the paper and coaxing the piece of film to adhere to it in preference to the glass, the patch came away nicely, leaving it only necessary to lay it down upon the bare spot

CHEER UP LASSIE By H. E. PECK

in the principal negative. This was quite easy to do with the negative supported on the retouching desk. Bringing the patch into exact register with the place prepared for its occupancy, it was pressed into contact and by moistening the back of the paper and again using the toothpick, the paper was peeled off. I then had only to wait for my patch to become dry when a very little work with an etching tool and spotting brush made the joints imperceptible.

The fact of the matter is, the process is much more simple than the description would lead one to believe. Since this first effort which I have tried to describe, I have used the method over and over again, and for the securing of many different kinds of results. I have taken groups so arranged

that the lighting would correspond with that of a cabinet portrait taken perhaps in another country, and leaving a space for the introduction of the cabinet head, which was afterwards copied and introduced into the group in the same way as in the example cited. I have made combination negatives showing a single ear of corn forming a large load for a staunch farm truck and a double team of horses. I have introduced the figure of a restless child taken outdoors into timed exposures of interiors, often taking the precaution to introduce a "dummy" child so as to secure a realistic shadow upon the floor; this "dummy" of course being removed in making the hole in the film for the introduction of the figure. In doing this last form of combining two negatives, it is best to locate the camera so that the child

ON NORWAY'S COAST By H. E. PECK

will come against either a quite light or quite dark background in both negatives. If the desired position in the interior be in front of a mass of distracting detail and the background secured in the outdoor snap be also well marked, it is evident that the only available outline will be that of the figure itself; and if one attempts to follow even the plainest outline of such a character it is hard to avoid a cut-out effect. Where the two backgrounds are kept as plain as possible, one can follow the outline of the figure for a part of the way and at other places follow a zigzag line at a little distance therefrom. It is of course understood that the lighting of the figure in the outdoor portrait must be such as will appear correct when the figure is introduced into the interior negative in the desired location.

I do not wish to claim any originality for the above method, because it was worked out from suggestions almost identical with my procedure which were published in one of the English magazines a few years ago. I am giving my experience for the benefit of others, because I have found that the method is by no means generally practiced. The old method of securing like results by double printing, such as we find described in the books, might give good results where only a few prints were required and these could be made upon printing-out paper, but with bromide or other printing processes that do not give a visible image until developed, combination printing would be very tedious and uncertain as to results. Another method often advocated and frequently practiced consists of building up the desired print by cutting out and pasting into position the additional parts, and then copying. The results are rarely satisfactory; proclaiming themselves as copies and, to the trained eye, disclosing more or less clearly the fact that they are of composite origin.

I would urge the worker to try the method I have outlined, even if he have no immediate demand for its services. The confidence that he will acquire in his capability to undertake such work when the demand is made will well repay him for the time spent in the experiment. He must remember that hydrofluoric acid, even in the diluted state, must not come in contact with the skin or trouble will follow. The fumes are quite poisonous and will have a corroding effect upon any metal which they may reach. It is best to use the acid only in the open air where no damage can result. Should, by any mischance, some of the solution reach the skin, immediate application of an alkali, to neutralize the acid, should follow.

If the process as described be carried out with ordinary care and the skill that one or two experiments will give, the results should be so perfect that no indications will be given that the negative is other than a normal one, even when used for the production of enlargements. There is no loss of quality as is the case when copying has been made a part of the process, and, once the negative is prepared, there is no further trouble such as is involved when recourse is had to double printing.

COMING HOME By GEO. M. CROWE

Flashlight Portraiture

By Charles R. Ogilvie

With Illustrations by A. W. Rice

Last spring I wrote a little article on flashlight portraiture, which appeared in the March issue of this magazine. I was so incautious as to intimate that I would give more detailed instruction if enough of my readers signified a wish to have me do so. The readers certainly responded nobly. The next time I saw the editor he advised me that he had received a large number of letters, many of them from professionals who were well known as progressive and enterprising men with a reputation for good work and no little skill. Then my busy season came on with a rush, and I asked the editor to make the announcement in the August issue that I would take up the matter later, as, during the winter months, such a series of articles would be more timely. Coming down to the actual work of preparing some illustrations, the matter was so simple that I hardly know how to string out the little that there is to tell into even one good-sized article. With the hope of multiplying difficulties so as to have something to say, I decided that, in making the initial experiments, I would place the matter in the hands of a professional who had no previous experience in this class of work. Even this plan failed, as I will explain.

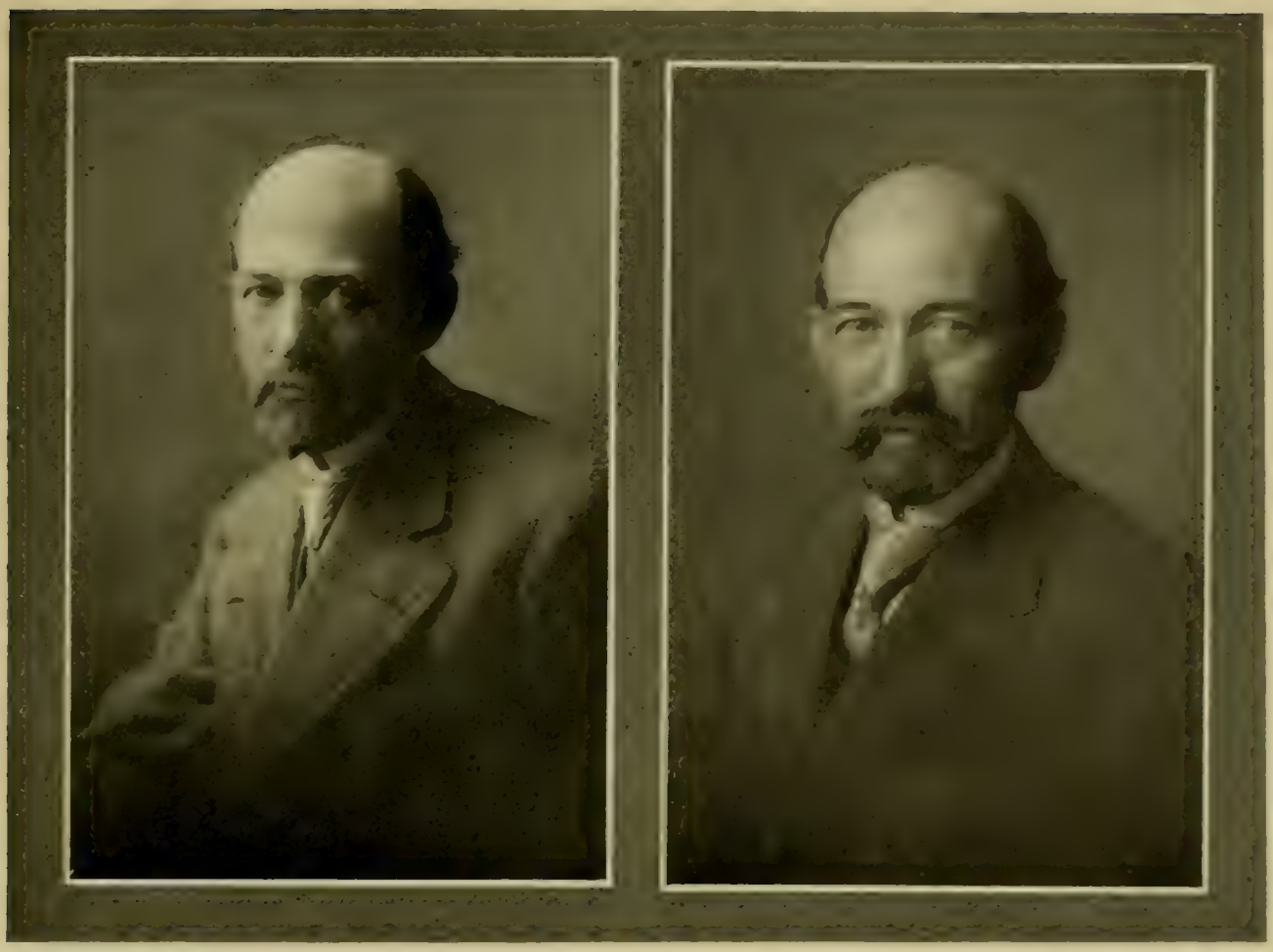
The gentleman decided upon as a "victim" was selected because of his near approach to being a very trying subject for the camera. I believe that the reproductions herewith will bear me out in this, at least with my professional friend. A pretty girl, a care-free child, a picturesque old gentleman; any of these would have given results, compensating somewhat for the shortcoming of the work by the pictorial interest that their portraits would unconsciously have created. In addition to this, such subjects are easier to handle. Taking an average, busy, business man, and the production of anything more than a technically good map of his features is an exceptional achievement. If our "victim" will pardon a few added indignities; taking one whose "dome of thought" scorns a thatch, whose cheeks have not exactly the plumpness of youth, and whose beard hardly conforms to the lithographed beauty one sees on the barbers' style card, and we have a subject that should at least test the capabilities of any method of photographic portraiture. To make matters even more trying, the complexion of our subject is such that a negative made under ordinary conditions by daylight would require an amount of retouching that, except in the most skillful hands, would result in a marked loss of likeness and, in almost every case, an entire sacrifice of skin texture.

The machine used was a Victor portable lamp, which the maker had kindly asked a local dealer to place at my disposal. Despite the fact that neither Mr. Rice nor myself had ever seen one erected, it was but the work of a very few minutes to unpack and make it ready for the exposures. But

I am getting ahead of my story. Mr. Rice is a well-known professional in Berkeley, the site of our State University. I telephoned him that I would be over on a certain evening, explaining that I wished to bring a victim and have made a few negatives with a flashlight lamp. He explained that he had no lamp and had used flashlight only in the making of large groups. This availed him nothing; he was simply informed that such being the case made him just the man I wanted. He had flash powder, and Victor powder at that. On learning that the lamp I would bring over was of the same make as the powder he used, he thought more kindly of the idea and gave his consent.

The lamp, consisting of a large smoke bag and a well-devised support that allows it to be raised to the ceiling of the ordinary studio, comes in a neat, strong case about seven inches square and a little over three feet long. Fitted with straps and a handle, this is even more portable than the average view camera. Reaching the studio and enjoying dinner with the proprietor, we repaired to the operating room only to find that it contained no provision for lighting after nightfall. We must work in the dark except for some stray light which reached the studio from the work room that opened into one corner. Every other room on the floor was well supplied with gas fixtures, except this one. An expedition sent out to locate some candles only disclosed the fact that most of the stores in Berkeley close about 6 o'clock. We had to use matches. This will explain why some of the pictures are a little out of focus and why the vignetter was not used to the best advantage in all cases. Holding a match in the sitter's face is not conducive to the best selection of focus, particularly when the sitter has a well-grounded belief that he has little need of a hair singe. Eight negatives in all were made, six of which are reproduced herewith. Of the two not shown, one is the first made, which, in our inexperience as to the strength of the Victor powder, we sadly overtimed. It is duplicated exactly by our example No. 1. The other is exactly duplicated by our example No. 6, as it was made over in order to correct the focus, which was too far out.

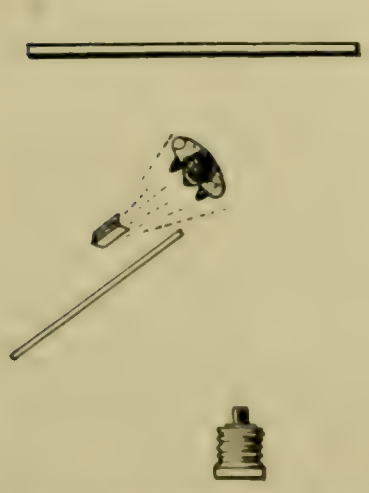
As I said before, there is really very little to be told. Once we found that our guess as to the amount of powder required was wrong, we decided upon five grains as the proper amount and held to that quantity throughout. The lens was a Voigtlander Portrait Euroscope, at full opening, as Mr. Rice uses it in nearly all of his work. The plates used were Seed's 27 Gilt Edge. The background was a graduated one of the ordinary kind used for bust pictures. It came lighter or darker as it was turned more to, or more away from, the lamp. No reflector was employed in any of the portraits; and, although a screen has been indicated in the sketches showing the arrangement of the sitter, background, lamp and camera, none was really used, as the lens was supplied with a cardboard cone that made the use of a screen to protect the lens from the flash unnecessary. The original intention was to arrange everything and then make, with a supplementary flash, a wide angle negative showing the arrangement of the sitter, background, lamp, and camera. This would have introduced difficulties on account of the smoke from the secondary flashes. It would have been necessary to make



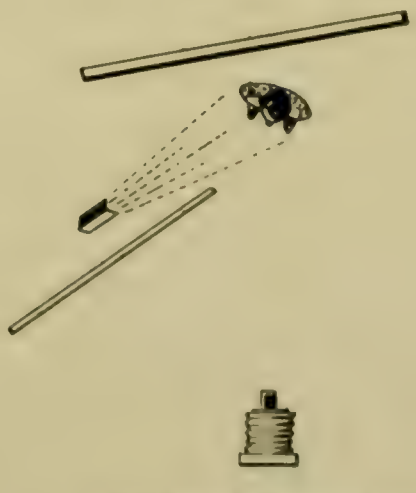
EXAMPLE NO. 1. EXAMPLE NO. 2.

them by igniting the powder on an open pan, as we had only the one Victor lamp, and besides, the whole thing was so simple that we could not see where anything would be gained. Even the simple sketches herewith seem almost superfluous. The photographer can easily determine the relative location of the flash and its height by observing the shadows cast by the nose or ear, as the case may be, in the examples herewith. As I explained before, the background is darker or lighter as it was turned more or less at an angle with the light.

All in all, the veriest tyro could hardly go about the work with a more spontaneous lack of effort than did we. No head rest was used; and, further



Lamp eight feet from floor, showing arrangement when Example No. 1 was made.

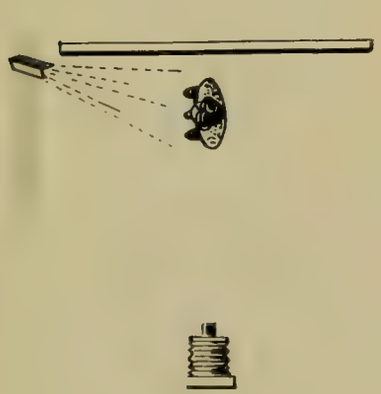


Lamp eight feet from floor showing arrangement when Example No. 2 was made.

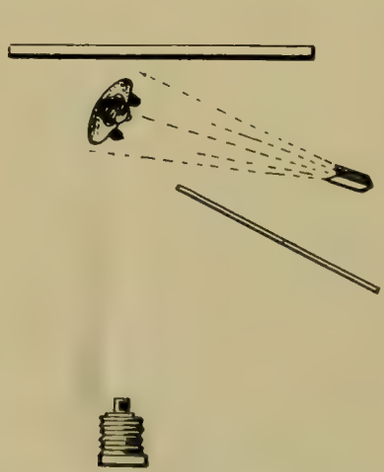
Lamp six feet from floor showing arrangement when Example No. 3 was made.

EXAMPLE NO. 3 EXAMPLE NO. 4

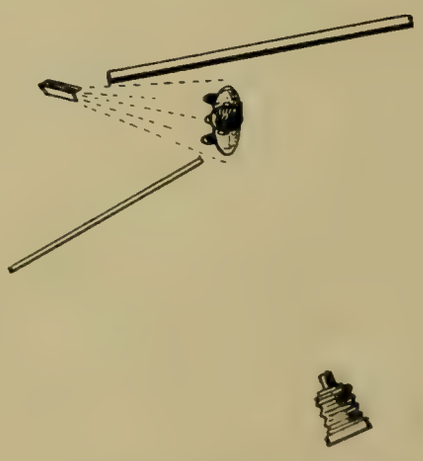
than a simple request indicating the new position to be taken, no posing was done. There was no turning about of the sitter's head, no demand for a pleasant expression, no arrangement of the clothing, in fact, none whatever of the usual photographic ritual through which the sitter is usually initiated. The semi-darkness in which the work was done made all this wellnigh impossible, even had such been Mr. Rice's method of working. And it must not be imagined that the victim is one that is trained to the ordeal. He had not faced the camera for a number of years, and his knowledge of photography is limited to that which he has gained from making out the bills for the printing of "Camera Craft." Give the average operator the same sitter, allow him to use the Victor portable lamp, and just as good, if not better, results would be secured. I can hardly imagine how he could fail.



Lamp six feet from floor showing arrangement when Example No. 4 was made.

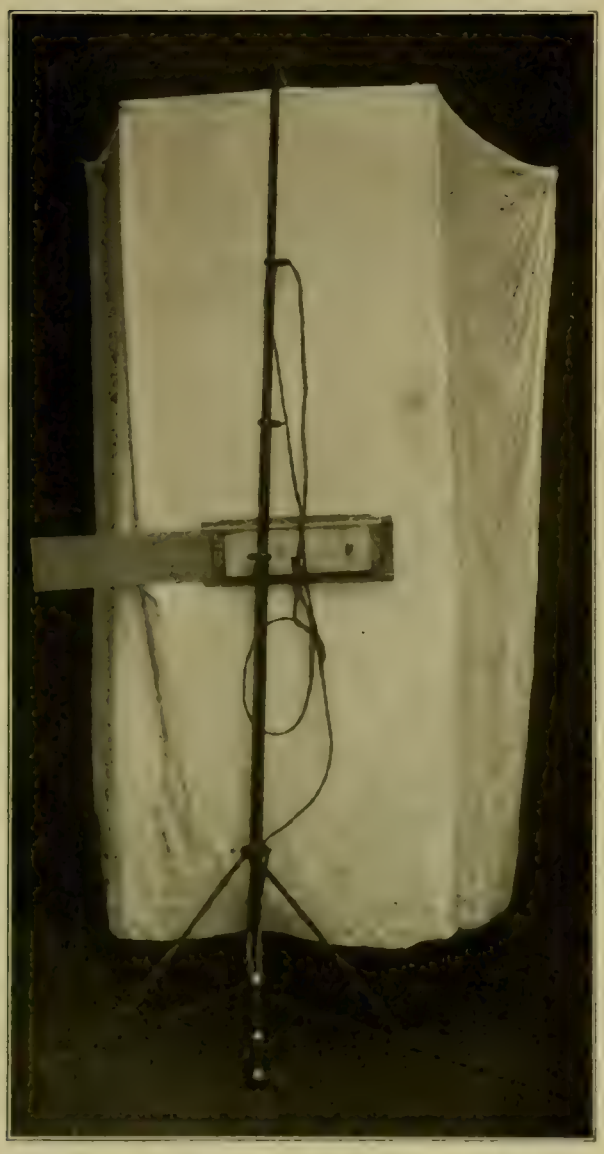


Lamp five feet from floor showing arrangement when Example No. 5 was made.



Lamp eighteen in. from floor showing arrangement when Example No. 6 was made.

The results herewith are not put forward as exceptional examples, but they certainly include several portraits that, had they been made in the regular way of business, would not be hard to deliver. The prints from which our reproductions are made are all on smooth paper; the heads are large cabinet size; and yet the need of any retouching is not apparent. Absolutely none has been done on any of the negatives.



THE VICTOR PORTABLE FLASH LAMP

The illustration herewith shows the back of the lamp used. The metal slide just above the center of the bag carries the flash powder. Sliding this to the right as one faces the back of the bag, as he does when looking at the cut, the extension slide at the left comes along and covers the opening, at the same time releasing the slide proper carrying the shelf for the powder. The inserting of the fuse and placing in position of a few grains of powder is but the work of seconds, when the slide is shoved back into position. The flexible cord shown in the illustration connects with a very handy electrical igniting device or handle, containing a dry battery cell, that will last for innumerable sittings, as it is only active for the one instant that contact is made to ignite the flash. The illustration shows the bag lowered until the bottom almost touches the floor. In our example No. 6 the bag was lowered until the slide or lamp proper was within about eighteen inches of the floor, about where the three legs join the standard. In our example No. 1 the lamp was raised as high as the ceiling opposite Mr. Rice's skylight would permit, and, as the portrait shows, rather too high for the best results. In that position the bottom of the bag came about where the top is now situated in the cut. Even then the extreme range of height was not reached, showing that the lamp would be well adapted for large groups.

The bottom of the bag is shown hanging free in the illustration. In actual use a gathering string is drawn, tightly closing the bottom. Making our first flash entirely too large, the bag was unhooked from the support at the top, taken outdoors and the smoke allowed to escape. Surprised at the small amount produced by so large a flash, the next six exposures were made in rapid succession, with no attention to any smoke which the bag might contain. The seventh exposure Mr. Rice felt was not in focus, and so a halt was made to develop. Finding it was too unsharp, the eighth and last exposure was made. Again taking the bag outside to empty the smoke,

only a small trace was found. The powder employed was the Victor slow, which, when consumed in charges of only five grains, even in the bag, made no noticeable report. While the speed was sufficient, as the results show, I believe the normal speed powder, when used in such small quantities, better suited to the average subject. The slow would be better, no doubt, for bag use, in charges of, say, sixty grains or more; for the reason that, being somewhat confined by the bag, its speed as well as the report is increased to about that of the normal powder when fired in a lamp not enclosed in a smoke bag.

I would like to add that the use of a reflector on the shadow side of the face would no doubt have improved the results in the opinion of some of my readers. The worker who desires to secure less depth in his shadows has but to use the reflector just as he would in ordinary lightings under the skylight. In two of the examples the sitter might possibly be supposed to have his eyes closed. This is not the case. In our example No. 4 the sitter was looking rather too low, a fault which was not noticed in the darkness. In example No. 6, the sitter was asked to assume a meditative pose, as if looking into the corner of a low fireplace, with eyes almost closed. The lamp, as I have explained, was but a few inches above the floor.

Since writing my former article, a correspondent has written me to say that he knew of a man who had discarded the flash for portraiture for the reason that he could not secure catch lights in the eyes. This hardly seems consistent with either theory or practice, as no one could wish a

EXAMPLE NO. 5 EXAMPLE NO. 6

better representation of the human eye than in our example No. 2; and, the same lighting that will produce catch lights under a skylight should produce them under the flash. Of course, one will not secure a barely distorted image of the sash bars in the skylight in the eyes of his sitter, neither will the white of the eyes come out as several shades lighter than a white collar. Another correspondent feared that the shadow of the sitter upon the background would be objectionable. Neither of these faults was anticipated or guarded against in the examples shown. Still another correspondent went to some length to explain that, after making a flash or two, the operator would become so blinded that focusing would be impossible. I can only say that we did not even notice such a difficulty. Six of our flashes were made in rapid succession, both myself and Mr. Rice looking directly at the unscreened flash, and yet the none too easy task of focusing by means of a lighted match was not found difficult.

If the readers of this article who may be interested will drop me a line, care of "Camera Craft," saying just what particular lightings they would like to have explained; or better still, send me pictures showing the effect they wish duplicated, I will be only too glad to spend another evening at the fascinating work of making flashlight portraits in an effort to give them the desired effects. These I will reproduce in an early issue, together with another set of diagrams. If anything in the above article is not perfectly clear, or if any further advice is wanted on the subject, an inquiry covering the point, if not too long delayed, will receive attention in the same article.

A DREARY DAY — BY F. C. BAKER

Top, Side, Front and Correct Lighting

By Walter Thurston

The photographic novitiate, athirst for knowledge concerning portraiture, repeatedly in his reading runs across the information that the lighting not only influences the expression, but makes for a pleasing portrait or otherwise as it is rightly or wrongly selected. But he is not told why or how. He, our photographic novitiate, although it is not hammered into him so

TOP LIGHTING

SIDE LIGHTING

persistently, imagines that the lighting is controlled by the location of the skylight, its height, slant, and the like. I wish first to dispel this last idea by saying that, within wide limits, the position of the light has no power to impose restrictions. The light may be directly overhead and yet, if the room be large enough, the sitter may be placed so well to the side that it becomes for all practical purposes a side light. The light may be as low as the floor and extending but little higher than the sitter's head, and yet, by curtaining off the lower part and bringing the sitter up quite close, the effect of a good light can be secured.

As to the effect of various lights, I would call the attention of the reader to the four examples reproduced herewith. The first shows the light curtained in such a way, and the subject so placed, that all the light comes

from the top or from a point directly over his head. The result is that the eyes appear hollow, with heavy shadows directly under them, as well as under the nose, lips, and chin. Notice the absence of expression in the eyes and generally heavy and lifeless expression of the whole face. As no light reaches the eyes, there can by no possibility be any life or expression in them. Light travels in a direct line and, in falling downward over the forehead, it strikes the frontal bone, "jumps" the eye cavities, and again strikes the face at the next prominent part, the cheek bone. And what happens? By allowing the cheek bones to receive this stronger light they

FRONT LIGHTING

CORRECT LIGHTING

are given an added prominence, and the result is an appearance of hollow eyes and prominent cheek bones. The nose, lips, and chin also suffer.

The next picture shows the light coming directly from the side, all top light being curtained off. The effect is harsh and lacking in modeling. One side is strongly illuminated, while the other has no light except that reaching the right eye over the bridge of the nose, giving the under side of the eye a swollen appearance. One side of the face is brought out in equal tone from the top of the forehead to the point of the chin; there is no gradation and consequently no form. It is just as if an artist put in a flat wash of flesh tint and then drew in an eye and a dark line to represent that side of the mouth. The shadow side of the face is even more objectionable for the reason

that it not only gives but little form, but that little is wrongly represented by the apparently swollen eye. This is a fault most common with pictures made by an ordinary window and in flash-light work, due to the window not being properly curtained off at the bottom and the flash being too low.

The third example shows the effect of almost direct front light, the result of posing the subject so that he faces directly into the light. Notice that the high lights are flat and practically of the same strength from the top of the forehead to the point of the chin, and on both sides of the face. This is a fault more common to the work of the professional than to that of the amateur. The former, in his efforts to secure soft, delicate results, allows his zeal to go too far and the negative comes up flat and lacking in roundness. Of course the examples here shown have been purposely exaggerated. This has been done so that the faults could be more easily recognized. If they appear in any degree in your work, your work lacks just that much of being right. The fourth or last example shows correct lighting for the ordinary, every-day portraiture, such as the operator should know how to produce with any light that he may be called upon to use. If the worker will spend an hour each day experimenting under his light, learning to recognize the various lightings by the shadows, or lack of them, in the face of his subject, he will find himself a much better operator at the end of the year.

The last example shows the lighting as it should be for ordinary straightforward portraiture. Observe the values that have been secured in the high lights from the forehead to the chin on the light side of the face; then the value of the shadows on the shadow side. Notice the lifelike expression of the eyes, due to their having received their due proportion of light. If you do not secure such results, look for the shadow cast by the nose, and change the light or position of the sitter until that shadow runs out to the corner of the mouth; and turn the subject's head until the light comes into the eyes. If your work looks like our second example, and you will recognize it by the flatness of the high lights, draw an opaque curtain upward from the bottom of your window until a point is reached where the high-light on the forehead is about to be affected; not high enough to actually affect it, but as far as possible without actually doing so. Again turn the subject's head until the catch light appears in the eyes. If your work looks like the third example herewith, you will know it by finding the highest high-light in the center of the forehead. The remedy is to turn the head away from the light until this highest light rests on the forehead directly over the eye on the light side of the face.

What to Do in the Beginning

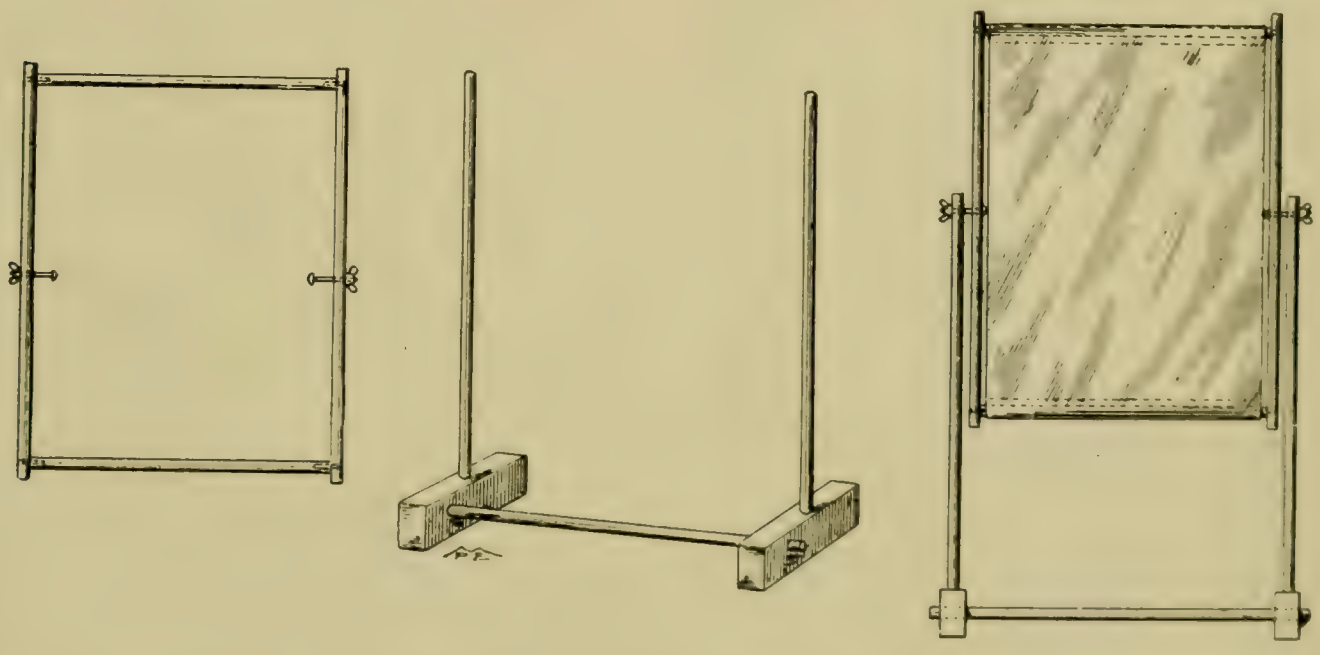
Now, then, you of noble mind, who are lovers of this good, come at once to art, and adorn yourselves with this vesture—namely, love, reverence, obedience, and perseverance. And as soon as thou canst, begin to put yourself under the guidance of the master to learn, and delay as long as thou mayst thy parting from the master.—Cennino Cennini.

Some Simple Conveniences

By E. G. Eisen, D. D. S.

Some time ago I noticed an article in "Camera Craft," describing the construction of a simple, inexpensive background. Seeing this copied into another magazine led me to believe that articles of the same description might be thought more interesting than I had believed. This brought to mind a reflector which I once made when experimenting with portraiture by an ordinary window. Although it was made in a hurry and originally intended only for the needs of the moment, it has been in almost constant use for several years. A description may prove of interest to others, as it is portable, cheaply constructed, and can be quickly taken apart and packed away.

The framing is made of ordinary one-inch dowel rods. Two of these are taken, cut to required length of the screen, and a three-eighths inch hole



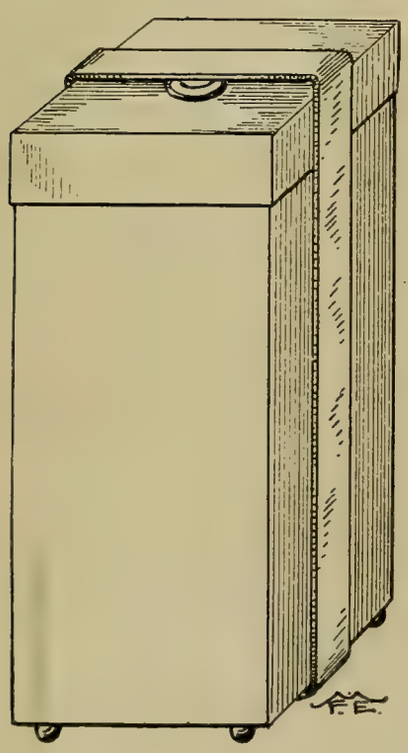
bored through from the side at a distance of about one inch from each end. Two shorter lengths to form the top and bottom are cut to the required length; and directly into each of the four ends a three-eighths inch hole is bored for a depth of one inch. Into these holes are driven short pieces of smaller dowel rod, each piece being allowed to extend about an inch. These projecting dowels fit into the holes in the two longer rods; and, when all four are put together a frame is formed that only requires the addition of the cloth forming the reflector to hold them snugly together.

Midway on each side of the two side pieces, a hole should be bored to take an ordinary bolt with a winged nut, these bolts also passing through the two upright standards between which the reflector is to swing. A piece of white sheeting is cut a few inches longer than the distance between the two end pieces of the frame, and a hem sewed at each end. The two end

rods are slipped through these hems; and, if the fit has been made a good one, the cloth will be stretched tightly and hold the frame firmly together when assembled.

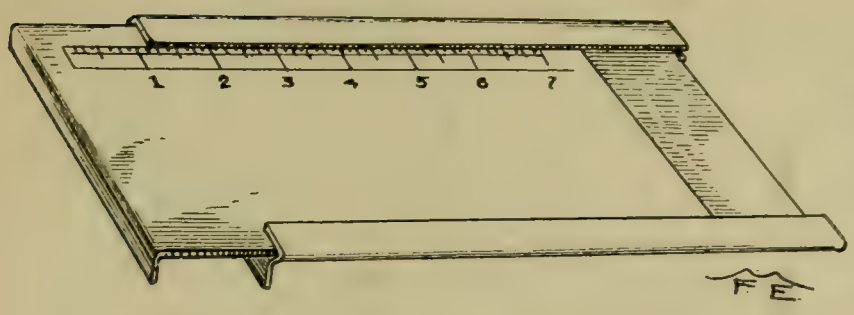
The two standards should be of such a length that the frame will revolve between them when the hole is put together. They are supported by two blocks, each 2x4x16, with an inch hole bored half way through the middle of the two-inch side of each to receive the uprights. Another hole is bored through each block from the four-inch side, this time an inch or two from the center, so that they will cross but not pass through the first set of holes. Drive one end of the two lengths of dowel rods forming the support for the screen into each of the two holes in the top of the blocks and cut a short length about five inches longer than the width of the frame, and connect the two blocks as shown in the sketch. The parts only require putting together, and the sketch should make it perfectly clear. When not in use as a reflector, the cloth frame can be brought level, clamped by the two bolts being tightened up, and one has a very serviceable table upon which to dry prints. Large prints can be pinned by their edges to the cloth and then the whole frame swung face down so that no fear of dust settling upon the print need be entertained.

I have become a firm believer in the efficiency of tank development, but believe better results can be secured by agitating the contents from time to time. I have improved upon my plate tank in the following manner:



First I soldered a rivet at each corner of the bottom so that the tank was raised above the surface upon which it might stand, avoiding the danger of the contents being chilled by too close contact with the cold bottom of my sink or other support. Next I cut a piece of rubber from a discarded inner tube of an automobile tire so that it would just fit inside the cover. I next made a band of sheet brass that would pass under the bottom and over the knob on the top of the tank, fitting loosely enough to slip off and on easily, yet tight enough so that a small wooden wedge would cause the cover to be clamped down and be perfectly water tight. By putting a small piece of the same rubber over the inlet and holding it in position with the thumb, the tank can be reversed and the contents shaken up to one's heart's content without danger of spilling a drop. Later, to simplify matters, I soldered on an extension to the inlet so that a cork could be used. Then I could reverse the tank and leave it in that position until I wished to turn it back into its original position.

The device shown herewith is a gauge intended to simplify the centering of prints upon their mounts. My own is made of sheet aluminum, but tin or brass will answer almost as well. Get a tinsmith to make the bends in his folding machine. The cut explains it so fully that little description



is required. The artist should have started the lines representing inches and fractions of an inch at the edge of the bend. This ruler effect is not necessary, but can be added as an improvement if one wishes. The end of the enclosing or carrier piece is turned down one-eighth of an inch at the end while the sliding piece is turned down a trifle less. To use the gauge, place the turned-down end of the carrier against the edge of the mount and then push the slide out until it meets the edge of the print as it lies roughly in position. Then try the other side of the mount and adjust the difference. If the gauge is rightly made, the turned-down ends will be perfectly parallel, and consequently, when the print is up against the sliding piece and the carrier against the edge of the mount, one will be perfectly parallel with the other; and, if the gauge is rightly set, the margins on both or all four sides will be exactly the same.

An Improvised Focusing Screen

By H. E. Blackburn.

Some months ago while out at camp in the woods I had the misfortune to break my ground-glass focusing screen. I remembered several kinds of directions I had read in the magazines; one of tedious grinding with grit or a piece of stone and water; another as to developing a slightly exposed plate. The first did not look promising for a large size, the second was rejected because it would give a screen too dark and opaque, while a plain plate would be inclined to become more so as light action continued. Furthermore, all the prescribed chemical processes were out of the question, as I had only my stock of plates and the equipment of the camp cook to draw upon.

I therefore tried a plan of my own devising. I made up a weak solution of salt and fixed an ordinary, unexposed plate in the solution for an hour or more, washing and drying it afterwards. Then I sprinkled some dust on the film side and with the palm of my hand rubbed it around until the desired effect was secured. This took but a few moments and resulted in a focusing screen that I am still using simply because I never found one that I liked any better. The grain is fine and there is not that sparkle from the surface that obtains when the roughness is that of the glass itself, as is the case with the ordinary ground-glass article.

IN A DUTCH KITCHEN
By MRS. JEANNE E. BENNET

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, NOVEMBER, 1908. No. 11

Business in This Territory

There is certainly little cause for complaint out here. Just this morning comes a letter from a background firm complaining of the recent poor business "except in your Coast territory." Within the last few months we have had here several men representing Eastern concerns who are making their first visit since the fire. They have been surprised at the favorable conditions existing here. For months the demand for studios has been much greater than the supply. Two callers within the last week were particularly desirous of finding an opening in the northern part of California, but we knew of nothing being offered for sale. Never in the history of the magazine have those advertising studios for sale in this territory been so favored with replies, and never has the available number of for sale studios been so small. The Camera Club has leased larger and finer quarters than it occupied before the fire, and, although the location is the same, the rental is higher. The Photographers' Association has its own permanent quarters, with an assistant secretary in attendance during business hours. Even our own subscription list has continued to increase in a most gratifying manner. There is surely but little indication of hard times here on the Coast.

Still Another Plan

A few months ago we gave detailed instructions covering one or two plans for the marketing of cheap and worthless lenses. While we have not been flooded with letters of thanks, we cannot refrain from giving publicity to another scheme that is too easy to be allowed to remain the exclusive property of one individual. The plan is this: Take a few worthless lenses and, instead of engraving them with something that looks like "Hens Earrings," make the engraving look as near as possible, without actually spelling it the same, like that on a Goerz Dagor lens. Mark them fourteen-inch focus. Then send a boy around to pawnbrokers' shops, one at a time, with one of these lenses. Have him walk in, lay down the lens, and ask to have $30.00 on it. The poor pawnbroker is not an expert on lenses, but he looks up a dealer's catalogue and finds what he supposes is the same lens, listed at four or five times the amount asked, and gladly parts with the $30.00. The originator of this scheme has about thirty

indictments against him on this score in New York. Consequently we feel quite sure he will, considering that the scheme is no longer practicable for him, pardon us for giving it publicity.

Mr. Yatman on the Coast

The ever-genial and always entertaining John L. Yatman, spent a few days in San Francisco early last month. It has been three years since we last had the pleasure, and yet, greetings exchanged, it seems but a few short weeks, seems as if the conversation of yesterday was but being resumed. He is a mine of information on the subjects of photographic optics; and, despite his moderation in setting forth the merits of the Voigtlander lenses, one feels that they must be about the best or they would not have the endorsement which his connection with the firm gives them. We all wish that he could be with us more often.

A. H. Bresler Again With Us

Mr. Bresler's card says he is representing the Carbona Photo Paper Company, of Minneapolis, but it is money wasted having the printer make the announcement. The card is useless. Everybody knows him and he does not leave you in ignorance of his interest in Carbona products. He placed a large stock with one of our progressive local firms while here, leaving for the south almost the same day. He reports business surprisingly good throughout the Northwest and is so confident of continued success that a visit from him is as good as a tonic.

The Question of Art

What is art, anyway, and what is the secret of its magical charm, that makes everybody want to study it, whether they have the ghost of a chance of success as painters or sculptors, or not? Of all the tweedle-dee and tweedle-dum discussions in which stupid and unprofitable argument has been wasted since the world began, this one about what constitutes the Simon-pure article in art, as distinguished from imitations, is surely among the least profitable. What does art mean to anybody but the ability to make something? Whether it is a sight or a sound, an object or an impression, does not matter so much, only something is made that serves as a means of expressing a definite, possibly a conscious, purpose, and exciting a definite, possibly a conscious, interest?

The trouble is mostly caused by unprofitable hair-splitting. The many forms and shades and degrees of creative effort in the world are part and parcel of Nature's infinite variety, but the impulse that is the compelling cause of them all is practically one and the same; and if such human manifestations of it as we are interested in at present are worth cultivating, as we think they are, there are excellent reasons for believing that they are to be most profitably cultivated at that fountain head which we call art.—Leslie W. Miller.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department Should be Addressed to its Editor.

Edited by
H. D'ARCY POWER, M. D.
Burlingame, California.

A NEW METHOD OF CONTROLLING THE COLOR IN SULPHIDE TONING.

By C. Welbourne Piper.

It is now a recognized fact that the brown image produced by sulphide toning is not composed of simple silver monosulphide, but is a colloidal compound soluble in hot water. From this it may be argued that the exact color obtained should be more or less under control if we could find any way of either hindering or accelerating the formation of the colloidal compound, and an obvious experiment is the hardening of the gelatine before the toning process. Tests, however, show that hardening agents such as chrome alum or formalin have no effect on the color; therefore I have recently turned my attention to the use of reagents that have a special hardening action on the gelatine in the vicinity of the silver image. I tried the ozobrome solution as a bleach, but with no success. If anything, the resulting tone was inferior to that produced by ordinary methods. I also tried preliminary baths of bichromate, with numerous variations in the time of immersion and duration of washing, and followed by various bleaching solutions, but still the modifications obtained were only trivial, and no real improvement was effected. In these experiments, however, I noticed that there was often a difficulty in bleaching the print after a preliminary soaking in bichromate, especially when the bichromate was not washed out, and to get over this trouble I added a soluble bromide to the bichromate bath. After a preliminary soaking I added ferricyanide to the bichromate and bromide bath, and so turned it into a bleacher. The final result was then rather astonishing, for it turned out to be a quite cold sepia tone, or just the color I had been aiming at all along.

Numerous subsequent experiments show that the bromide in the first bath is essential to the effect, and so possibly the final result is due to the action of bromine on the gelatine, for it is well known that bromine water used alone as a bleach gives a rather stronger brown than the ordinary bleaches, and also that bromine gives an insoluble precipitate in gelatine. The exact final tone obtained by this new process varies with the time of preliminary soaking, and thus the result is perfectly under control. After testing many variations, I have fixed on the following as the best procedure to recommend:

Soak the bromide print in water until limp and then immerse in the following solution:

A.

10 per cent ammonium bichromate . .....5 ounces
10 per cent ammonium bromide . . ..5 ounces

The dish must be kept rocking during this immersion, otherwise uneven markings will result, and to produce a cold sepia the time of immersion must be six minutes. Shorter periods give intermediate tones, but six minutes give as cold a tone as seems to be desirable. While the print is soaking, prepare for the next stage by taking ten ounces of twenty per cent potassium ferricyanide solution and adding to it two drachms of ammonia .880. It is desirable to have this solution in readiness, as it is unnecessary to wash between the soaking and bleaching of the print.

When the time is up, pour off the A solution and add to it the solution of potassium ferricyanide. Rinse the print once or twice in water, and then bleach it in the modified solution. The result is not very light colored. It is a fairly strong brown, but the action can be considered to be complete when the last trace of blackness has disappeared. Next, wash in running water for about ten minutes, and then tone for five minutes in a five per cent solution of sodium sulphide. Pure sulphide from a

reliable manufacturer should be used, but it does not appear to matter whether it is of the crystalline or fused variety. The former gives a very slightly colder tone than the other, but that seems to be the only difference.

The bromide prints should be fairly strong ones, and the best results seem to be obtained from clean, vigorous negatives of the kind suited to printing-out paper. This appears to be the case in all kinds of sulphide toning, but, so far as I know, no kind of negative will give by the ordinary process a tone that approaches the one obtained by the new process, excepting on a few exceptional brands of paper.

The method as described is suited to the preparation of one print. If a number have to be toned I simply make up two separate solutions, one according to the formula A already given for the preliminary soaking bath, and a second one for bleaching. The formula for the bleach is then:

B.

10 per cent ammonium bichromate	5 ounces
10 per cent ammonium bromide	5 ounces
20 per cent potassium ferricyanide	10 ounces
Ammonium .88	2 drams

Solution A can be used for a number of prints in succession. B will lose power in time and will then have to be re-mixed, but it will serve for a long time if the prints are rinsed very slightly before bleaching. Apparently it is necessary to use a bleach of this or of very similar composition, and the bichromate in B seems to be quite as important as the bromide in A. Why is not clear. The mechanism of the process is undoubtedly obscure, but in spite of this the results seem to be very certain, and the tones obtainable are of a very desirable kind.

The bleaching the print takes about two minutes. An alternative bleaching bath is obtained by adding twenty minims of strong nitric acid to twenty ounces of a solution. The final result is then a very rich brown tone, approximating to a warm sepia, when the preliminary soaking in A is six minutes. We can thus obtain either warm or cold sepias as desired, the exact colors varying with different brands of paper.—British Journal of Photography.

MAKING POSITIVES DIRECT.

The following plan of securing a direct positive picture on a plate or paper in the camera from nature, or the reproduction of a transparency on glass or paper on another sensitized plate or sheet of paper without the use of a negative, was recently described at the Thornton Heath Photographic Society in England by W. Wood, and reported in the "Amateur Photographer and Photographic News" as follows: An enlargement was made from a negative on thin bromide paper, and developed for three minutes in:

Water	1 ounce
Amidol	5 grains
Sodium sulphite	24 grains
Potassium bromide (10 p. c. sol.)	3 minims

The exposure was obtained by test pieces and judged by transmitted light, the portion selected showing a slight veiling of the high lights.

The prolonged development was to insure the reduction of the whole of the silver bromide affected by the light. After washing, the print was bleached in:

Water	10 ounces
Potassium bromide	150 grains
Nitric acid	1 drachm

It was left in this solution until the shadows were only visible as a faint yellow.

Washing out this solution can be done by water alone, but it is a lengthy task. Five minutes' immersion in the following is sufficient:

Water	1 ounce
Sodium sulphite	200 grains
Potassium metabisulphite	10 grains

A thorough wash removes the last of this clearing solution, and the bleached print is exposed to incandescent light for one minute, five or six inches away.

The print is now redeveloped in the first solution and gives a negative containing all the graduations of the original. Development should be for ten to fifteen minutes to secure sufficient density. Fix in the usual hypo bath, wash and dry. After the bleaching, all operations may be conducted in the light.

To reproduce lantern slides direct in the camera, the prepared 3¼x4 lantern plate is put in the plate-holder with the film side down and the glass side up, so the latter will face the rear of the lens. Some black paper or soft material should be put under the plate to prevent the delicate film from being scratched. The focusing glass of the camera should be reversed, with the ground-glass side out, to bring it in the same plane with the sensitized film on the plate Then after the picture is arranged on the ground glass of the camera, the plate holder is inserted and exposure is made in the usual way. The image is then developed and reversed as above described, and a positive lantern slide is obtained. After washing and drying, it may be mounted and used directly in the lantern.

If a sheet of bromide paper is substituted for the glass plate a positive paper print is obtained, but the position of the objects will be reversed unless a prism is used in front of the lens or the exposure is made through the back of the paper.—Scientific American.

STENOPAIC PHOTOGRAPHY.

Much good work can be done without an expensive lens, says Dr. Niewenglowski, writing in "La Photographia Artistica." When photographing documents, or in scientific work, it is almost always necessary to use an objective as perfect as possible, which will give good definition throughout the entire picture, but for landscape work there is no reason why the photograph should be any sharper than the picture as seen by the eye.

The employment of a very small hole, such as a pin-hole, instead of a lens, enables one to produce photographs characterized by a certain softness which lends to them an artistic charm; but pin-hole photography has been left a good deal alone, owing to the long exposures usually necessary. Since, however, the introduction of the many varieties of ultra-rapid plates, which will enable the exposure to be cut down very considerably, there is every reason to suppose that a new impetus will be given to stenopaic photography, and certainly portraits can now be comfortably obtained, as will be seen later.

Firstly, however, what is the "focal-length" of a pin-hole of some given diameter? Abney, Lord Rayleigh, and Dallmeyer have found a relation based on theoretical considerations, which has proved, in practice, quite accurate. They found that the diameter d of the pin-hole is connected with the focal length F by the relation:

$$d^2 = 0.0016 \times F,$$

$$\text{or } F = d^2 \times 625$$

Hence the focus of a pin-hole is obtained by multiplying the square of the diameter of the opening by 625.

The focal lengths of the most common sizes of pin-holes are as follows:

Diameter of Hole.	Focal Length.
3/10 mm.	5.62 cm.
4/10 mm.	10 cm.
5/10 mm.	15.62 cm.
6/10 mm.	22.50 cm.
7/10 mm.	30.6 cm.
8/10 mm.	40 cm.

The small hole behaves exactly like a lens which has the same focal length. If, for instance, one wishes to reproduce a small design with a /10 mm. pin-hole, the design may be placed twenty centimetres in front of the pin-hole, and the plate twenty centimetres distant from the pin-hole; the design will then be reproduced natural size on the plate.

The exposure depends, as in ordinary photography, on a number of factors.

As some indication of the length of exposures, the following table is given for a bright day, when using an ultra-rapid plate and a pin-hole of half a millimetre diameter:

Distant views	1 to 2 sec.
Well-lit objects less distant.	2 to 3 sec.
Well-lit near objects.	15 to 30 sec.
Reproductions, full-size	4 min.

It is thus seen that portraits are well within the ordinary limits.

The exposure does not remain the same with different sizes of pin-holes. Thus, suppose one uses a pin-hole of 4/10 mm. diameter, the plate will be 10 cm. distant from it; with a pin-hole of twice the diameter, 8/10 mm., the plate would be 40 cm. distant from it. The area of the pin-hole is four times as great with the 8/10 mm. as it is with the 4/10 mm., and the distance between the plate and pin-hole is also four times as great; the latter depends on the inverse square law, and the ratio of exposures would be $\frac{4^2}{4}$, or 4. In other words, four times as long exposure is required, using an 8/10 mm. pin-hole as is required with a 4/10 mm. one, and thus one can arrive at the following table:

If exposure with a 4/10 mm. pin-hole be one second,

5/10 mm. pin-hole will mean an exposure of.....1.5 sec.
6/10 mm. pin-hole will mean an exposure of.....2.25 sec.
7/10 mm. pin-hole will mean an exposure of.....3.06 sec.
8/10 mm. pin-hole will mean an exposure of.....4 sec.

I have for some years given in these pages every new communication touching pin-hole photography; therefore I give the above from the pages of "Amateur Photographer and Focus," but I cannot help wondering why workers still go on treating pin-hole exposures as though they were calculating the orbit of a planet, when the simple factorial method I first described in this magazine, and afterwards developed in my monograph on Stenopaic Photography, in "Photo Miniature," No. 70, would enable them to take pin-hole pictures under any and every possible condition of pin-hole aperture, bellows draw, light, or plate speed, as simply as with a lens. In the years that have elapsed since that publication, I have received letters and specimens of work from all over the continent, and never a complaint of difficulty in getting correct exposure.

THE AMOUNT OF HYPO NEEDED.

A correspondent asks just how much hypo is needed for fixing any given amount of plate or paper surface. With plates one can always determine when fixation is complete, and using the bath to the limit of its fixing ability is not worth the waste of time involved by its final slow action, particularly with the price of hypo around three cents per pound. In fixing prints, one can calculate that each square inch of surface requires two grains of hypo. Even if this amount is exceeded, the bath should be thrown away after each use.

RUBBER AS AN ADHESIVE.

Writing of the above use of rubber, calls to mind the special usefulness of rubber as an adhesive for temporarily affixing masks to the negative. This is usually done with gum or other aqueous cement, but if at any future time the negative is required for other purposes, the mask can seldom be removed without leaving marks or stains where the adhesive was applied. With rubber used as the adhesive, however, the mask can at any time—even months afterwards—be pulled off, and any adherent rubber rolled off, and then the negative be left in perfect condition. In some cases of double printing on P.O.P. it is convenient to hold the mask firmly in position while printing. This, of course, is impossible with any aqueous cement, but with rubber solution it is quite practicable. A few touches of the solution are put on the negative, and the paper laid in position, when it will adhere. After printing, the paper is pulled off, and any rubber sticking to it rolled off with the finger. The print can then be toned, and no mark due to the cement will show in the finished picture. Again, in double printing in the carbon process, one of the methods is to secure a mask to the tissue with dabs of rubber solution. After printing, the mask, which will serve for many prints, is removed, and the dabs of rubber rolled off, when the tissue will develop just as if it had not been touched by the cement.—"British Journal of Photography."

MAKING LANTERN SLIDES OR NEGATIVES FOR TRACING.

The following formula by Sir Henry Wood may prove of value to some of our readers:

"In three-fourths fluid ounce of alcohol dissolve thirty grains of shellac, two grains of aurine, then add thirty drops of Judson's mauve dye, and thirty drops of water, one-half ounce of negative collodion and three-fourths fluid ounce of ether. The mixture is flowed on the plate like collodion, and the coating dries in a few minutes. The film is sufficiently transparent to make it easy to trace from the print or engraving, yet so non-actinic as to yield a dense artificial negative. Further, the visual density is sufficient for lantern diagrams, and when these are to be drawn in the presence of the audience, the lantern should have a horizontal stage, and if a long steel point like a lady's hatpin is used, there is no obstruction, and the subject appears to come into focus on the screen line by line, as traced on the soft ground or film.

TONING BY DEVELOPMENT.

I recently had sent me, by a subscriber, a photograph on gaslight paper of very pleasant, warm color, with the

statement that it had been obtained by the use of stale (that is, weak) developer. The writer was surprised and asked for information as to the cause, and the possibility of regularly producing such tone. Now, it is of course well known that a series of tints running from greenish black through brown to red may be obtained on all papers of this class by the use of so-called restrainers; that is, salts holding back the action of a developer upon the silver salts, and this fact has been employed commercially, both in the production of transparencies, lantern slides and prints. The restrainers commonly used are ammonium carbonate, potassium citrate, and potassium bromide. Mr. Bolas, recently writing on this subject, says:

"Although twenty-seven years have passed since the appearance of the booklet of Eder and Pizzighelli on gelatino-chloride, there has, in my opinion, been no formula or instruction for restrained development as an aid to tone production that is equal in practical value to one given by them, whether for pure bromide, commercial bromide, ordinary gaslight, or pure chloride papers.

Here is the formula:

Water	100 parts
Alcoholic solution of hydro-quinone, one in twenty	4 parts
Sodium chloride solution, one in thirty	12 parts
Ammonium carbonate solution, one in thirty	20 parts

"This developer is slow in its action, and tends to intensity, so in its nature it is favorable in cases of over-exposure. If compounded as indicated above it is suited for exposures that are three or four times the minimum correct exposure, and with this exposure it will give a reddish or reddish-yellow tone on a pure chloride paper, but to obtain a similarly warm tone on the usual gaslight papers, a longer exposure will be necessary, and an increase of the sodium chloride. For pure bromide papers even a tenfold exposure and a quadrupling or tenfolding of the sodium chloride may not in all cases suffice to give a fully warm tone, but sepia tones will involve less exposure and less restraining."

TREATMENT OF OVERPRINTING ON SOLIO AND SIMILAR PAPERS.

Professor Namias has an article in "La Photographie des Couleurs" dealing with the theory and practice of the above subject. In the matter of practice he offers two simple plans of treatment; the first for slightly over-exposed, the second for greatly over-exposed prints. For the first, the prints are immersed without washing in:

Common salt (sodium chloride)	100 gms.
Hydrochloric acid, commercial	20 ccs.
Water, enough to make	1,000 ccs.

The prints are left in this bath for from five to ten minutes, then given a rinse and transferred to a combined toning and fixing bath.

This treatment, however, will be found sufficient only in the case of prints which have not received a very great degree of over-printing. In the case of prints in which the printing has been carried on a good deal beyond the proper point, addition is made to the above solution of from one-half to two grams of copper sulphate. The reduction takes place to an extent about proportional to the quantity of copper sulphate added, but the action is most effective after the print has been through the combined bath. The action of the bath is very rapid, and it is well to make one or two preliminary trials in order to keep it in hand. The bath soon becomes exhausted and requires to be renewed by fresh additions of sulphate of copper. If the prints are to be separately toned and fixed, the following solution can be made up as a combined toning and reducing bath:

Gold chloride, pure	½ gm.
Common salt (sodium chloride)	10 gms.
Hydrochloric acid, commercial	5 ccs.
Water, to make	1,000 ccs.

This bath tones and reduces the prints at one and the same time. If the resulting tone is not satisfactory, the print can be transferred to a normal toning bath of gold and acetate after it has reached to right degree of vigor in the bath given above.

TECHNIQUE.

No serious worker can defend poor technique or neglect the acquisition of an adequate power of expression, but the following excerpt from Dr. Mumery's lecture on the "Artistic Impulse," given before the Royal Photographic Society, is a warning on the other side:

"At different times of our lives we find ourselves contending against different errors, striving to overcome various mistakes, but before each one of us there is always a pitfall into which we may easily tumble open-eyed. It is the mistaking of the means for the end. Technique makes such demands upon the attention (art being impossible without it) that the acquisition of technical skill, of execution, is an object never out of the artist's mind. How natural, therefore, is the error that so many fall into of accepting technical skill as art. Those who know the drudgery that must be given in exchange for the most moderate power over the brush will see how easily this mistake can be made by the painter. But to all, whatever their medium may be, the same temptation occurs. Remember also that to the bulk of the onlookers cleverness and dexterity will always appeal.

"I do not for one moment deny that fine execution is one of the sources of the pleasure to be derived from pictures; it is the wonder at difficulties overcome, but it is different in degree only from the pleasure given by the juggler who balances a collection of miscellaneous articles on the end of his nose. The deepest pleasure that art can give is the revelation of beauty before unseen, the expression of the artist's thoughts concerning the things he loves. But though good technique is necessary for such expression, too often it is this, the means only, that attracts the attention, and the end of art is obscured and lost in pride of technical skill."

THE PREMOGRAPH NO. 2.

Some months ago I described the Premograph No. 1. It was an innovation and marked an important step in popular photography, for it enabled the average man to utilize the advantages of the reflex camera at small cost. Excellent as this little instrument is, its capacity is limited by the fixed focus lens with its small aperture, and lack of provision for exposures between a thirtieth of a second and one second—i. e., time exposure. Now we have a camera providing all these requirements, and leaving little to desire to the practical worker. The lens is a good rectographic, working at f-8, (a part working Tessar or Cooke lens is supplied at an advanced price) and fully covering the 3¼x4½ field. The iris diaphragm is fairly accessible. The front of the camera moves forward on a ratchet and easily permits of focusing object up to five feet. The focusing screen is under the easy control of the left hand and is cleverly devised, so that when the front is fully retired on its bed, two shutter blades automatically close in front of the lens and protect it. The shutter arrangement makes provision for exposures of one one-hundredth, one-fiftieth, one twenty-fifth, one-fifth, and one-half second. It is notorious that the speeds marked on shutters are largely properties of the imagination. I am not prepared to say that all Premographs would accurately respond to a shutter tester, but the high speeds do give clean-cut pictures of moving objects at close range. I have a most active kitten and I caught him on the jump at six feet. The low speed works well without causing vibration. Using the camera in the hand I had no difficulty in taking a fully exposed and quite sharp portrait with the lowest speed. The Premograph No. 2 is thus a great advance on its predecessor. There is little to suggest in the way of improvement without going entirely outside its class; but it appears to the writer that inasmuch as many prefer plates, and the number of workers in Lumiere's autochrome color plates is increasing, it would be well to arrange the back for the use of an ordinary plate holder, instead of confining the worker to the film pack. Those who desire to use the latter could always employ an adapter which is perhaps the best way of employing that useful contrivance. Taken all in all the Premograph No. 2 is a big success, and I cannot imagine a beginner wisely entering the photographic field by any other route.

The AMATEUR and HIS TROUBLES

Conducted by
FAYETTE J. CLUTE

THE SOURCE OF LIGHT IN ENLARGING.

An Ohio subscriber is a little bit mixed concerning the effect of size of the radiant or source of light. He has read that this radiant should be a point of light; that the condensers bring an inverted image of this radiant to a focus upon the back combination of the projecting lens; if this image be a point no light is lost and the effect is the same as stopping down the lens, or, in other words, a sharper and more brilliant image is thrown upon the screen. The trouble with much that my Ohio correspondent has read is due to the fact that no consideration has been given the negative which is interposed between the condensers and the projecting lens. The negative acts more or less as a diffusing screen. Light through the clear portions reaches the lens, but that passing through other parts of the negative is diffused, and the result is a "hard" effect in the print. Using a large point of light, it will be found in actual practice that a softer effect can be secured from hard negatives, negatives that would be out of the question with a small, strong radiant; while, by the simple expedient of stopping down the lens, almost any amount of contrast may be secured from very soft negatives. One must, however, be quite sure that the light is well centered; and remember that, with a large source of light or radiant, stopping down increases the exposure in a somewhat larger ratio than is the case under opposite conditions; while with a small radiant, the effect of stopping down increases the exposure in a smaller ratio.

ROCKING THE TRAY.

Imogene sulphite is the developer our Cleveland correspondent evidently requires. It is an excellent developer, and for his lantern-slide work, where rocking the tray prevents his doing a full evening's work, it is just what he wants. It acts perfectly uniformly without any need of rocking. Dissolve one ounce of the imogene sulphite in twelve ounces of water for the A solution. For the B solution, dissolve six ounces of sodium carbonate in twelve ounces of water. For fairly correct exposures, use one ounce of A, one ounce of B, and four ounces of water. For under-exposure, decrease A and increase B; while for over-exposure, use half the amount of water, adding as much as half an ounce of a ten per cent bromide solution. As a developer, it is the least influenced by bromide of any reducer known.

PRINTING CLOUDS INTO A TRANSPARENCY.

The busy professional had to make a number of enlarged negatives the other day; and, as the ultimate prints were to be used as copy for reproductions in a land company's printed matter, he wanted to get in some clouds. The original negatives all had dense skies that printed white. He put one in the frame, then an unexposed slow plate, held both up to the light, and with a brush charged with India ink, roughly traced the outline of the horizon on the glass side of the unexposed plate. The back was put in the frame and the exposure made. Then the original negative was removed and a cloud negative substituted; and again holding them up to the light, he traced a line of color on the glass side of the cloud negative just below the one on the plate. He then cut a cardboard shield roughly to the outline of this line; and, using it during exposure, he easily vignetted the sky into the landscape. The card must, of course, be large enough to cover the entire lower or landscape portion, and it must not be moved too far above or below the horizon during the exposure. I watched him long enough to see that the success achieved in the

results was all that could be desired, provided the right exposure had been given to the two portions, the landscape and the sky. In other words, such failures as he made were all owing to wrong timing during one or both of the exposures.

SCREENS FOR PHOTOMICROGRAPHY.

Quite a number will be required to meet all cases. It must be remembered in using them that a red or deep orange cuts out the violet-blue and blue-green, that yellow stops the blue and violet according to its depth of color, the green cuts out red and stops some violet, blue cuts out red and yellow, while violet stops the yellow and green. Cleared lantern plates may be stained by soaking in the proper dyes. For violet, methyl violet, one in five hundred; for blue, victoria or methylene blue, one in one hundred; for green, acid or naphthol green, one in one hundred; if a yellowish green is wanted, add another screen stained with a saturated solution of picrate of ammonia or add some naphthol yellow to the original green dye. For pale yellow, use naphthol yellow or weak uranium or picric acid; for deeper yellow, use aurantia; for orange, use uranine and fuchsine, or weak crysoidine; for orange green, use uranine with a larger proportion of the fuchsine; and for red screens use cochineal red A or Biebrich scarlet

EXPOSURE FOR SNOW SCENES.

A Michigan correspondent writes to ask how I would calculate the exposure for a snow-covered landscape. He explains that snow has not yet started to fall in his State, but he wishes information in order to confirm or refute his own contentions, which he does not give, in an argument with another photographer. Our own plan is to calculate the light in mid-winter as being one-fourth the speed of the same light in mid-summer, and then, if the landscape be well covered with snow, to give one-half the exposure we would give for the same landscape without the snow. This is virtually doubling on the snow-covered landscape the exposure that we would give the same view at mid-summer, working of course with the same lack of dense foliage if such be the case.

WARMING THE DEVELOPER.

When everything else fails, or rather, everything that is at hand, warming the developer will be found worth trying in cases of under-exposure where heroic methods seem better than giving up entirely. Particularly is this the case now that colder weather is coming on, with the attendant weakening of the light, resulting in under-exposure. The dodge is an old one, but has never had much attention, one reason being that it was revived about the time that metol and such developers came into popular usage. With them, the plan is not as certain of satisfactory results as when pyro is being used, as they have not the tanning effect upon the gelatine film that the last-named has. The solutions, using from the stock, should be made up to the required amount or a little more by the addition of hot, soft water until the measure or graduate feels quite comfortably warm to the hand. Another, and perhaps better, plan, as it also warms the dish, is to immerse the developing tray and its contents in a dish a size larger, containing water just so hot that the finger can be placed in it, adding more hot water as the contents become cooler. Still another plan is to apply heat locally, by using a small amount of developer in a previously warmed tray and then blowing upon such portions of the negative as may hold back, through the long stem of a clay pipe, one end of which has been made quite hot by allowing to lie across the top of the ruby lamp.

SOME DAINTY LITTLE ALBUMS.

An amateur friend uses her camera almost entirely as a means of producing dainty little albums containing small collections of views. Printed in the ordinary way, the large number which she bestows upon her friends would mean quite a drain upon her purse. She therefore does most of her printing on the rather inexpensive "blue-print" paper. When a little thought is given to the matter of a suitable paper for the leaves, it is remarkable how rich the blue prints may be made to appear. Another great advantage lies in the fact that the blue print has absolutely no inclination to curl and draw the album leaves out of shape. The coating of the paper is so simple that even the low cost

of the ready-prepared paper does not seem an object. Preparing her own paper and using a printing frame several sizes larger than her 4A Kodak negatives, it becomes an easy matter to make the print itself serve as the album leaf. The wide margins are of course kept white during printing by the employment of a black or orange paper mask. If the white border seems too glaringly white, it is not a hard matter to protect the printed center with a piece of waxed paper cut a trifle larger, and then apply a wash of some blue water color. If these borders be washed in irregular clouded effects, the results are even more pleasing than when the effort has been made to get the tint absolutely even.

REMOVING FINGER MARKS.

One of our correspondents, Mr. Turpen of Indiana, mentions a little experience of his that is worth recording. He says: "Placing a negative aside to dry recently, I was chagrined and surprised to find, on looking at it a few minutes later, that it was well sprinkled with finger marks. Trying an experiment with the handiest chemical that suggested itself, I found that a few drops of hydrochloric acid in a couple of ounces of water gave a solution that, applied with a piece of cotton, removed them perfectly." The suggestion is a good one and worthy of being noted down for future use. We all have had similar experiences with finger marks, despite our best care, and this remedy of Mr. Turpen's is certainly simple enough.

CORRECTING A VIEW FINDER.

An Illinois correspondent has a view finder that includes more than does the plate with which it is used, and asks how it may be adjusted. There is really no way of adjusting it perfectly as the variation in the size of its image, due to the distance of the object, does not vary in the same ratio as does the image formed by the lens on the plate or ground glass. However, if he will set the camera up in front of a brick wall and focus sharply he can, by selecting certain courses of bricks, draw a chalk mark around a parallelogram of the bricks just included in the image on the ground glass. Then, referring to the surface of the finder, it will be easy to block out on its surface with some black varnish all except that portion of the image enclosed by the chalk mark on the wall which encloses the portion on the ground glass.

TREATING RUSTY LEATHER.

About the best treatment for the leather cover of a camera is to dissolve a little nigrosin aniline dye in alcohol and mix it with a very thin shellac varnish. This should be applied to the surface of the leather with a brush, and, when dry, polished lightly with a little beeswax and turpentine.

MAGNESIUM RIBBON.

One foot of the magnesium ribbon is equal to about twenty grains of ordinary magnesium powder. If you want to be exact, measure off a few feet of the ribbon. The ribbon will give a trifle more light, weight for weight, than the powder unless the latter is burned in a form of lamp insuring complete combustion.

PYRO-ACETONE FORMULA.

A good pyro-acetone formula is as follows:

Sodium sulphite, crystals	1 ounce
Acetone	1 ounce
Water	10 ounces

At time of using, add four grains of dry pyro to each ounce of above stock solution, and dilute more or less according to weather, class of negatives wanted, and character of the subject. It is claimed for this developer that it gives fine detail, absence of stain, and any desired amount of density without stain.

GRAMMES VERSUS OUNCES.

To convert grammes into ounces avoirdupois, divide by twenty-eight and one-third, or, to be a little more exact, 28.35.

COPPER INTENSIFIER.

Dissolve one hundred grains each of copper sulphate and potassium bromide in ten ounces of hot water. When cool, immerse the negative until bleached, then rinse for five minutes, and apply a solution of silver nitrate of a strength of forty-four grains to the ounce. A final washing is, of course, required.

International Photographic Association

AN ENCOURAGING OUTLOOK.

This month we list the names and addresses of several new State Directors. While the list has been of slow growth, we can assure the members that in no case is enthusiasm lacking. All the officers listed are giving considerable time to the work, as the gratifying list of new members indicates. As our space becomes crowded, it may be necessary to condense the notices somewhat, and this we will do by printing only the names and addresses of members who are in Class 2 or 3, or those desiring to exchange only post cards. As they do not exchange generally, the information given on their application blanks is not of general interest.

Next month we will have a report from Mr. Winchell, and we would like to have an occasional letter from the State Directors.

THE CIRCULATING ALBUMS.

The "Clearing House," in charge of the Interstate Album Director, is desirous of helping all the State directors. It has a number of State albums on hand, ready to be sent out to State album directors who may send their albums for exchange. State album directors are requested to send any album they may have circulated in their State to the "Clearing House," and one will be sent them to circulate in its place. Every effort will be made to send in an album just as good, if not a little better, than the one received. Advise what you are sending, and address: J. H. Winchell, R. F. D. No. 2, Painesville, Ohio.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

W. C. Marley, Director Stereoscopic Division, 149 Hillside Ave., Newark, N. J.

ALBUM DIRECTORS.

Alabama—Richard Hines, Jr., 155 State Street, Mobile.

Colorado—F. B. Hinman, Room 4, Union Depot, Denver.

Illinois—Harry Gordon Wilson, 4950 Washington Avenue, Chicago.

Indiana—H. E. Bishop, 1704 College Avenue, Indianapolis.

Kansas—H. E. High, R. F. D. No. 1, Wilson.

Maryland—E. G. Hooper, 218 East 20th Street, Baltimore.

Massachusetts—Mrs. Alice P. Damon, 50 Autumn Street, Lynn.

Michigan—W. E. Ziegenfuss, M. D., 327 West Hancock Ave., Detroit.

Minnesota—Leonard A. Williams, St. Cloud.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Montana—Mrs. Ludovica Butler, 932 W. Broadway, Butte.

Nebraska—Miss Lou P. Tillotson, 1305 South 32d Street, Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor Street, Manchester.

New York—W. A. Van Wager, 536 Tallman Street, Syracuse.

North Dakota—Jas. A. Van Kleeck, 619 2d Avenue North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

Oregon—Leonard S. Hopfield, Box 622, McMinnville.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Utah—John C. Swenson, A. B., Provo.

Washington—C. L. Deyo, Ballard.

STATE SECRETARIES.

Answers to enquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

Kansas—H. H. Gill, Hays City.

Oregon—F. L. Derby, La Fayette.

FOREIGN OFFICERS.

MEXICO.

Vice-President—Jose Ramos, 2a de Morelos 44, Morelia, Mich., Mexico.

Album Director—J. Jesus Martinez, Ap. 5, Morelia, Mich., Mexico.

CORRECTIONS.

897—H. Crosby Ferris, 837 Acoma Street, Denver, Colo.
4x5 and larger, on developing and printing-out paper, of general views. In Class 1 for post cards; other prints, Class 2.

RENEWALS.

1127—Oscar Schoza, 556 Evergreen Avenue, Brooklyn, N. Y.
4x5 on developing paper; landscapes. Class 2.

1273—Jessa J. Pearson, 644 N. Detroit Street, Xenia, Ohio.
Exchange notice later.

1557—E. D. Blacet, Box 418, Painesville, Ohio.
4x5 to 6½x8½ on printing-out and developing paper, of views of general interest. For post cards and stereos is in Class 1.

1666—W. S. Cobban, 724 S. Main Street, Butte, Mont.
Class 3.

1684—E. J. Houser, R. F. D. No. 8, Wooster, Ohio.
4x5 and post cards, on developing and platinum paper, of landscapes and historical subjects, for views of general interest. Class 1.

NEW MEMBERS.

1744—Radelet Fortuna, Maben, care Flat Top, Ala.
4x5, on Velox. Class 3.

1746—Ben W. Ward, Laguna, New Mexico.
8x10, on developing paper, of Indians. Class 2.

1747—W. C. Cosby, Norwood Hotel, Shawnee, Okla.
2½x4¼ and 4x5, on developing paper, of general views, for same and post cards. Class 1.

1748—J. R. Reifsnyder, Lock Box 252, Lititz, Pa.
5x7, self-toning and developing papers, of scenery. Class 1.

1749—Elsie M. King, P. O. Box 222, Santa Cruz, Cal.
4¼x6½, on developing paper, of nature studies, woods, water and country, for nature subjects. Class 1.

1751—Frank R. Driscoll, 423 East Senter St., Pocatello, Idaho.
Up to 5x7, mostly cabinet size, on various papers, mostly good clean-cut portraits, for full lengths, groups and Rembrandt lightings. Class 1.

1752—H. Orchard, Chipman, N. B., Canada.
3¼x5½ on velox, Aristo and carbon. Class 1 for post cards.

1753—George T. Seymour, Box 285, Fessenden, North Dakota.
5x7 and smaller, on developing paper, of landscapes and general. Class 1.

1754—Charles M. Smyth, 1418 St. Paul Street, Denver, Colo.
4x5 and 3¼x5½, on developing paper, of landscapes, mostly Colorado mountain scenery. Wants initial exchange in post card form. Class 1.

1756—George W. Given, 2771 Pratt Street, Bridesburg, Philadelphia, Pa.
4x5 on developing paper, of Fairmont Park, buildings, general landscapes; for like work. Class 1.

1757—F. B. Hill, Fullerton, La.
Class 3.

1750—C. E. Moore, R. F. D. No. 2, Eddyville, Iowa.
4x5 and 5x7, on developing paper, of mines, farm scenery, and the like. Either post cards or prints. Class 1.

1759—Charles O. Dexter, 350 Union Street, New Bedford, Mass.
Class 3.

1761—George W. Ott, 508 County Boulevard, Egg Harbor City, N. J.
Class 3.

1762—Louis M. Anderson, Box 7, Merrill, Ore.
6½x8½ and smaller, on developing paper, platinum and carbon, of landscapes, seascapes and portraits. Desires in exchange, lantern slides, landscape and genre prints.

1763—J. P. Reymond, 1010 Broadway, Kansas City, Mo.
6½x8½, on W. & C. platinotype, of landscapes and interesting subjects. Desires to exchange lantern slides. Class 1, but send only sample at first.

1764—Wm. H. Slocum, 306 Shipman Street, Peoria, Ill.
5x7 on developing paper, of outdoor views. Desires to exchange post cards and lantern slides only. Class 1.

1766—August Anderson, R. F. D. No. 2, Ruthven, Iowa.
5x7, on developing paper, of scenery, lake views and the like. Class 1 for post cards.

1767—J. H. Thorpe, 640 W. Verango Street, Philadelphia, Pa.
4x5, on developing and printing-out paper, of general work, for prints or post cards, of views, street scenes, and general subjects. Class 2.

1768—W. C. Barbour, Sayre, Pa.
4x5, on all kinds of paper, of landscapes, scientific subjects, photo-micrographs, and lantern slides, for same line of work. Class 1.

1769—C. H. Benton, 3114 The Paseo, Kansas City, Mo.
Class 3.

Photographic Post Card Exchange

C. Frederick Potter, Jr., Director, 620½ Nicollet Ave.,

Minneapolis, Minn.

YOUR ATTENTION, PLEASE!

It is my unpleasant duty to deliver a short lecture this month, and I trust that the members to whom it applies will take it seriously to heart. The Exchange is now running along smoothly, and we do not want to drag in a lot of rules and regulations. However, there is a certain matter that must be given attention if we are to preserve and maintain the high standing which our organization enjoys.

Several of the members have recently written me, complaining of the poor quality of the cards received by them in exchange, in most cases enclosing samples of the poor work in question. I will, of course, mention no names, but I can say that beyond doubt, many of the cards that have been sent in with these complaints, are, to put it mildly, very poor. A large number of them are not only the poorest kind of work, technically, but they are entirely devoid of pictorial or other interest. What makes the matter all the more distasteful, is the fact that in even the most glaring cases, the cards originally sent me by the same parties when seeking membership, were of more than average merit. Members who submitted a sample that was passed only after writing them and advising that their work was barely up to our standard, are not represented by any of the poor work received.

This leads me to believe that it is simply a case of some of our members failing to understand that they owe it to the Exchange, its Director, the members, and themselves, to turn out good work. Two or three members turning out poor work will harm the entire membership, discrediting the Exchange, and discouraging new members. The minute poor work begins to circulate, good workers will become disgusted and drop out. We prefer to have the Exchange stand for quality rather than a large membership.

To this end I ask all members to report to me the receipt of any cards they consider poor, sending me the cards at the same time. If these complaints are considered well founded, they will be recorded, and three such complaints from different sources against any one member, will result in the expulsion of the offender. I do not relish this course, but it is important that some such means be adopted if the high standing of our Exchange is to be maintained.

Again this month quite a few names are withheld from the list, and I would advise such applicants who do not find their names below, that the work submitted was lacking in either technical quality or subject interest. Do not let this discourage you, however, but try again. Take a little more care in selecting a suitable negative, make the best print you can from it on a grade of card suited to it, and send it in, or, better, send three or four cards, so that I

By V. ARAGON MORALES. Morelia. Mich.. Mex

By G. J. SCHUUR 60 Da Costakadi Amsterdam. Holland.

can get a better idea of the class of subjects and the kind of negatives you are making, writing me at the same time, and I can give you some pointers in a personal letter.

The following are new members admitted up to October 12th:

NEW MEMBERS.

C. H. Jongejan, Grandville and Fifth Avenues, Grand Rapids, Mich.

J. C. Hegarty, Utahville, Pa.

Edw. Heinl, Leopolis, Wis.

Gustav G. Storz, 2424 Germantown Avenue, Philadelphia, Pa.

M. G. Schnechenberger, 155 Whitney Place, Buffalo, N. Y.

CHANGE OF ADDRESS.

Harold Glixman, 568 Golden Gate Avenue, San Francisco, Cal.

H. Crosby Ferris, 837 Acoma Street, Denver, Colo.

Samuel J. Hornibrook, 810 Washington Street, Vancouver, Wash.

WITHDRAWALS.

Harrison Brown, Elkhart, Ind.

Elmo W. Edison, Gaviota, Cal.

OUR REPRODUCTIONS.

In response to the suggestion that cards be submitted for reproduction, I have received quite a number during the past month, many of which will be used from time to time as space permits.

The two reproductions of post cards shown this month are certainly good evidence of the high quality of the work of our members. Lack of space prevents special mention of them, but all can appreciate their artistic merits.

INTENSIFICATION OF UNDER-EXPOSED NEGATIVES.

A note in Gaedicke's "Wochenblatt" gives a useful indication concerning under-exposed negatives. If an under-exposed and under-developed negative is intensified, the prints produced therefrom will be harsh in proportion to the amount of intensification; but, says the note in question, if the developer used be pyro and the intensifier uranium, this will not occur. Pyro hardens the gelatine as a result of its interaction with the reduced silver, and these hardening substances are most abundant where the silver is most reduced; that is, over the high lights. Now, the uranium intensifier has to penetrate this film of hardened gelatine, which is very thin over the shadow detail, very thick over the high light; therefore, the former receives the maximum intensification, and a negative of improved gradation is the result.

NOTES and COMMENTS

A Department devoted to the Interests of our Advertisers and Friends. In it will be found much that is new and of interest.

IN THE HIGH SIERRAS.

Dr. T. J. Patterson, one of our good friends at Visalia, this State, sends us a copy of the "Times" containing a most interesting description of his recent trip through the Kings River Canyon. The pen portrayal of the magnificence of this great gorge and its scenes is most realistic. Severe storms and their attending electrical displays are described; a great avalanche that swept from the summit of the Grand Sentinel is pictured, and less awe-inspiring, though equally impressive scenes, are recorded. Dr. Patterson carried an excellent 6½x8½ camera during the trip, together with a full developing outfit, and reports that he was successful in securing a large number of very fine pictures. His forethought in going equipped to do his developing upon the ground will be appreciated by those who have visited the location; the wonderful coloring and ever-changing atmospheric effects making the matter of correct exposure a very trying one.

SOUTHERN SCHOOL OF PHOTOGRAPHY HOLDS CLOSING EXERCISES.

We are just in receipt of a lengthy clipping of over a column in length, giving an account of the closing exercises of the last professional course at the Southern School of Photography. Handsome exhibits were made and these were judged by A. J. Thuss, Vice-President of the Photographers' Association of America, who also delivered a very instructive and interesting lecture at the close of the public reception. Edward A. Zoff, President of the Missouri Association, was in attendance at the school during the month of August and spoke in the highest praise of the special course taken by him. The present attendance at the school is double that of any year in its history and the management is greatly encouraged over the future prospects of its efforts to establish a school in the South that will be recognized by the profession as a place where practical photography is successfully taught, either to the beginner or to the worker who wishes special instruction. The location of the school is a delightful one and the rates of tuition most consistent. The school is located at McMinnville, Tennessee, and is under the direct management of W. S. Lively, ex-president of the Photographers' Association of Kentucky and Tennessee.

THE TIME IS SHORT.

There remain only October, November, and December for entries in Cramer's Amateur Photographic Contest, for best negatives made on Isochromatic plates. This contest is well worthy of our readers' attention, as it gives three hundred dollars in prizes, and the fall is the best time to show the values of Isochromatic plates. If you do not know about it, write for conditions to the G. Cramer Dry Plate Company, St. Louis, Missouri.

A MILLION HIGH-GRADE LENSES.

Even in this day of large things a million still carries with it an idea of magnitude. Who would have believed that so great a number could be truthfully applied to the quantity of high-grade lenses made and sold by a single company since the introduction of the Anastigmat in 1893? Yet a million Anastigmats, high-grade Portrait lenses, Rapid Universal and Wide Angle Anastigmat lenses have been constructed and sold by the Bausch & Lomb Optical Company, of Rochester, New York, since the above date. The million mark was passed in September.

Furthermore, since 1882, over fifteen million simple lenses for photographic purposes have been made by them, and an equally astonishing fact is that they have sold one

Vol. XV No. 12 DECEMBER, 1908 Price, 10 Cents

Camera Craft

San Francisco, California

"WHEN YOUNG SPRING FIRST QUESTIONS WINTER'S SWAY"
By WM. WHEELOCK GREYSTONE, R. I.

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor
CALL BUILDING, SAN FRANCISCO, CALIFORNIA

VOL. XV. SAN FRANCISCO, CALIFORNIA, DECEMBER, 1908. No. 12

The Amateur and the Post Card

By GEORGE R. BOSWORTH

AT THE OLD WELL.
1-25 sec., f-16, good light, medium plate

MY HOME town is, I suppose, a typical New England one, and has a population of between one and two thousand. It is about four miles from Montpelier, the capital; and, of course, I am personally of the opinion that it is an exceptionally interesting town, surrounded by pleasing scenery and inhabited by a charming lot of people. My own home is not even well situated as regards this small center of population, necessitating the use of a horse and buggy. And there are certainly thousands of like towns in this great country where the possibilities for the photographer are only slightly different and no doubt equally good. My fellow townsmen are not noted for their great wealth or reckless spending; and that leads me to believe that my own experience is not so nearly unique that it could not be duplicated in many other towns, and in some of them the slight effort required to work up a good business would no doubt bring even better returns.

1-2 sec., f-8, east light 3. p. m. August, fast plate

1-5 sec., f-8 subdued light 3 p. m. August, fast plate

1-2 sec., f-8 north light, 3 p. m. June, fast plate

THE CLASS OF SUBJECTS DIFFICULT TO GET TO A STUDIO.

About three years ago, when post cards came well into vogue, I was an ordinary amateur, picking up an occasional "job," but, in the main, using my camera as a source of pleasure by recording the best that I could find in the way of scenery and views in the neighborhood. I was well supplied with good negatives; and, although they ranged from 5x7 to 8x10, I was surprised to find that nearly all of them would give me prints on the ordinary post card that were even better than the full-sized prints; at least they were stronger from having less of that "all-out-doors" effect that the average amateur is prone to secure.

The postmaster in an adjoining town, who also deals in stationery, periodicals, and the like, suggested that I make him up three or four dozen post cards of local scenery, hoping he might eventually find a sale for them. He was somewhat doubtful, but this was soon remedied by the rapid sale of the cards, over one hundred dozens being required within the next few months. The following year this customer used over two hundred dozens, and he has slightly increased this sale the past year. This of course looks small to the regular producer of post cards who sells to dealers in the larger towns and cities; but, as an indication of what the amateur with some care and skill in his work can do, it is not a bad showing.

These cards being on sale and displayed at the postoffice brought inquiries as to the possibility of securing portraits, home groups, domestic animals, interiors, residences, and the like. I was of course adding constantly to my stock of view negatives in order to give the buyers new selections, and, in making these, I suggested, as opportunity presented, the making of such home pictures. This last work I found the most pleasing and profitable. My neighbors wanted pictures of the children, of the new baby, of Bruno surveying the front yard from the doorstep or porch. I made a price for these special-order negatives, allowing the customers to order the cards at the regular price. In other cases I made a price of one dollar and twenty-five cents for two dozen cards where the negative was made specially

1-5 sec., f-8, 5 p. m. September, medium plate

1-25 sec., f-8, 1 p. m., June, medium plate

1-25 sec., f-8, 11 a. m., July, medium plate

for the order. By making two or three negatives at the same time, I always secure an order for at least two dozen, and often for several additional, particularly if the negatives are different and all of good quality.

There are three nearby towns which I visit from time to time in order to make new negatives, and in each of these I have a dealer who handles my cards. These dealers also arrange for me to take these special negatives when I visit their towns, and in that way the demand for cards is kept up. A couple of summer boarding houses at the lake a few miles distant also give me orders for many of the cards during the camping season; and there is hardly a visitor but who buys several cards showing the building, and the selections of scenery around the lake and in the neighborhood find ready sale.

A quick cap exposure with portrait lens

1-5 sec., f-8, 9 a. m. Sept., medium plate

A quick cap exposure with portrait lens

To handle this business in other towns is a simple matter. I visit the town at intervals and make new negatives, often acting under the advice of the dealer who is handling my cards. Later he is shown samples, and he orders what he desires. These new cards are placed on sale and shortly demonstrate just which particular one is the best seller. This effort to secure something that will be found a good seller makes the work very interesting, both to the dealer and myself. It stimulates one in his effort to secure the best possible picture of an interesting scene or pleasing landscape. Going about after these new negatives invites orders for special work, and so the work is found to advertise itself very nicely and result in an ever-increasing number of patrons. A man in one town asked me to make him some five or six dozen cards showing his old home in one of the other towns. Another customer wanted me to take a picture of a certain valley, but a little different from my own view of the same location; he

These three are all ½ second exposure at f-5. 6, ordinary room lighting, 11 a. m. to 2 p. m., August, fast plate.

wanted it to show his own place in the foreground. It necessitated a two-mile trip, but the order was a good one and I found that the resultant picture was even a better general seller than the original picture of the valley.

As some of my cards bear my name and address in unobtrusive letters, I frequently receive orders from distant States. What more natural than that a resident should send a few of the cards to a brother or sister who has moved away? The recipient desires to have some of these cards showing the scenes about the old home, and the result is an inquiry by mail. Oftentimes the final order will be for me to go to such and such a residence and secure portraits of the family, the one ordering desiring pictures of those at home in their home surroundings. I always make it a point to send along one or two such samples when I judge that my so doing will suggest the making of like work that may interest the prospective customer. I take particular care with such work and use every resource to secure satisfactory results. Such things as silver and gold wedding anniversaries

A HAYING SCENE

THE BOARDING HOUSE

are not only interesting material, but good pictures are sure to have a large sale. On such occasions I use plates with a disregard of expense, that is, expense that experience has taught me is profitable. The principals are taken as a group of two, again with their immediate relations, and then again surrounded by as large a group of the friends as possible. Then several separate groups are taken, and possibly the same groups again, only the arrangement altered or the group changed from the porch or interior to a more outdoor location in the yard or garden. All kinds of family gatherings are worthy of recording. The simple group of the family itself is sure to be productive of an order. Frequently there are old people too infirm to get away to a studio, and a picture is desired. A picture with the home surroundings is always more pleasing to this class of sitters, and their near of kin are appreciative of the more natural results that can be obtained.

There is really very little to tell in the way of describing my methods of work. I take three of the best photographic magazines and read them carefully in my efforts to keep abreast of the work. I am sending the editor a number of cards and supplying him with full detail concerning their production. This data will be found below each of the prints reproduced. I do not claim any great artistic merit, particularly in the case of the specially made negatives; but my customers are not exacting in that direction, preferring to have good technical work produced with as little fuss and as much certainty as the rather varied and sometimes trying conditions will permit. The best landscape sellers are those that portray well-known spots such as the view from a certain turn in a road, the portrayal of a bridge from the point where it most naturally greets the eye, and the like. Artistically arranged compositions of landscape material from a point that is rarely

1-25 sec., f-11, 1 p. m., June, no sun, medium plate.

1-5 sec., f-8, at sundown, medium plate.

visited are of little value, except in some cases where the principal object is a well-known one and shows but little change with the unaccustomed viewpoint. Public buildings of a prosaic style of architecture can often be made quite interesting by watching for a pleasing effect of lighting and a good sky effect. One such building comes to mind as I write the above. It is the school house in one of my nearby towns. Only in the late afternoons of the longest summer days does the sun strike across its front. Coming upon it under these conditions, I secured a negative that was almost poetic in its beauty. The light just caught every projection upon the front, throwing long shadows that gave each bit of detail a most pleasing prominence. The sky was an admirable one, and the combination produced a picture that hardly seemed possible.

Last year I sold over sixteen thousand cards, and this year's sales will be at least one-third larger. I do all the work myself, am kept as busy as can be in summer, and in the winter find it far from difficult to keep my time fully occupied by a little hustling after these special orders for portraits and the like made inside of homes. In addition, snow scenes, particularly of views that will be in all their glory of beautiful foliage during the summer, make fine sellers, particularly as companion pictures to the summer views. From time to time there has been an effort made to introduce cheap cards turned out by various mechanical processes. These have never in any way interfered with the sale of my cards. The negatives were made by men who could only take such scenes as were thought desirable and take them hurriedly and without consideration of the lighting or the best possible viewpoint. Being constantly on the ground, it is easy for me to produce much better pictures; and my cards being actual photographs are more sought after than the other kind.

I am a member of the Photographic Post Card Exchange, and will be pleased to exchange with any reader of "Camera Craft" making good cards. I have, of course, many negatives, including the Vermont State house, that are of more general interest than those reproduced herewith.

The pleasure of art is sensual beyond a doubt, and sensual first of all inasmuch as it cannot exist except in adequate conditions of beauty; but if the pleasure it gives were merely sensual and nothing more, its domain would be indeed limited. Art speaks to the senses, but it speaks not less eloquently to the intellect, and it is on this two-fold condition that painting and sculpture take rank with poetry in the Palace of the Muses. Whatever the processes employed, all the productions of the imagination have emotion as their supreme end: melody of verse, charm of color, perfection of line are the means—and means that have a beauty of their own, worthy of admiration and capable of giving exquisite pleasure—but the noblest art captivates the ear or the eye only to reach the vestibule of the mind and thence to penetrate into the sanctuary of the soul.—Theodore Child.

Fireside Photography

By Walter Thurston

WHERE WINTER IS KING By OWEN DAVIS

MAINLY because the long winter evenings are practically upon us, I would like to impress upon the readers of "Camera Craft" the fact that, did they only appreciate it, a most fruitful photographic "season" is really at hand. It is true that, except in a few favored locations such as our own California, the summer-like landscape is, for the time being, out of the question. Nevertheless, we all have an abundance of such negatives, and, considering the relatively smaller interest which attaches to the average landscape picture, we can well content ourselves by producing a few negatives of a less hackneyed character. We can do this very easily, and, although the actual number turned out in any given period may be smaller than would have been the case had we gone afield with our camera well supplied with plates or films while nature smiled in her summer garb, the actual results will give more pleasure in proportion, as they will be somewhat different from the general productions of the average camera user.

There is, of course, a wide field at one's disposal through the employment of flashlight. But I will not dwell upon that subject, feeling sure that the space at my disposal can be fully occupied with an outline of other employment for one's photographic capabilities. A few years ago a title such as I have selected would have been followed by a series of suggestions as to making lantern slides, mounting prints in albums, and the like. The introduction of gaslight papers and the popularization of bromide enlarging has, of course, removed the necessity for suggesting photographic work suitable for evening occupation. On the other hand, the actual employment of the camera should have more attention.

To begin with, the worker, if he will but carry the matter in mind, will, from time to time, come upon etchings, illustrations in books, and the like, from which most useful negatives can be made. A few years ago I came upon a reproduction of an historical document quite interesting to

many of my friends who were residents of the town or descendants of early residents. A negative of this subject allowed me to turn out a large number of prints that were highly appreciated by the recipients. A series of quaint old etchings that I borrowed from another friend gave me a set of negatives for which I would not accept quite a snug sum. Printed in the center of large sheets of home-prepared kallitype paper that was afterwards stained a light brown with a strong decoction of coffee, these pictures closely resembled the originals and made up many a fine set of pictures that served as most acceptable gifts.

Such copying can be done much better by artificial light than in the ordinary way by daylight, for the reason that the light can be so much more easily controlled so as to avoid the grain of the paper. It simply requires a cardboard tube fitted to the lens so that the lamp used for illuminating the copy can be placed quite close without its image striking the lens and causing blur. A part of the exposure is made with the lamp on one side of the print being copied, and the remainder of the exposure with the light changed to the other side. If two lamps are available, so much better. Failing the cardboard shade on the lens hood, recourse can be had to a piece of card placed so as to screen the direct light from the lens. If much of this work is to be done, such as the making of a series of lantern slides, it is advisable that a copying board be fixed up perpendicularly at one end of a shallow trough made by nailing strips along the side of a board. The camera can then be fastened, by means of the tripod screw, to a skeleton box, the base of which is just large enough to slide in the space between the two side strips. This support for the camera should be of such a height that the lens is brought about level with the center of the board or easel upon which the copy is placed. If one can go further and fit a Welsbach burner to each side of the easel, with a reflector of tin between them and the lens, the maximum amount of convenience and utility will be secured. Such an arrangement should result in well-timed negatives with an exposure of about two minutes on a medium orthochromatic plate, using f-11, or U. S. 8. Using ordinary center-draft oil lamps, about ten times the exposure will be required.

In this connection I would like to call attention to a peculiarity of gas and oil illumination. The light itself contains so much yellow that it is unnecessary to use a screen in securing good results with colored subjects. In fact, some workers contend that by using an oil light and orthochromatic plates, much better rendition of color values can be secured than by the employment of orthochromatic plates with a color screen and daylight as the illuminant.

Gas or oil not being deemed convenient, the same good results, aside from the rendition of color values, can be secured by burning a few inches of magnesium ribbon at each side of the copy. The same necessity for protecting the lens from direct light of course maintains. The advantage of the magnesium lies in its added convenience and the shortening of the exposure. In my own practice I have used for reflectors the two halves of a large coffee can, cutting it in two perpendicularly at opposite sides. A bit of the top was left extending inward from the side of each half in the

DAFFODILS By A. H. COWAN

form of a tongue of tin. To these were fastened, by small lengths of wire, the requisite amount of the magnesium ribbon, and, after placing each reflector in position, the ribbon was lighted at the ends by means of a small alcohol lamp.

In the October issue of this magazine were shown some very clever pictures of lamplight effects produced by daylight. I have made quite a number of similar pictures by the simple expedient of burning a few inches, about three, if I remember rightly, of magnesium ribbon inside the shade of the lamp. I regret that it is impossible for me to show any of my results herewith, for the reason that all my negatives were converted into quite solid blocks of apparently stratified and dirty glass about April 19th, 1906. The use of magnesium ribbon in this manner will result in the appearance of a more or less well-illuminated stream of smoke from the top of the lamp. This can be prevented from showing in the negative or print by suspending a dark card or cloth above and in front of the top of the lamp. Firelight effects are also very easy to manage in the same way and the effect of the smoke then becomes but an additional element of realistic value. The ribbon can be cut into a still narrower strip and made to wind in and out along quite an amount of apparent fuel. If it is gathered into a bunch here and there, the effect will be more uneven and more nearly suggest the natural play of light emanating from burning wood or coal.

And this recalls another effect that I have long had in mind to work out with a suitable boy model or two. An ordinary pumpkin jack-o'-lantern would lend itself admirably to this plan of inserting a few inches of magnesium ribbon and burning it during the exposure. It should require but little skill to arrange a number of satisfactory poses; and, as for securing the interest and kind offices of several boys, the difficulty would no doubt consist in trying to limit the amount of available material.

Despite my intention to ignore flashlight work, I must mention two uses to which it can be put in the production of out-of-the-ordinary effects. The first is that of moonlight streaming through a, preferably, vine-covered window. One of my own efforts, and one that gave me a very satisfactory result, was produced by first draping a lot of ordinary pumpkin vines over a convenient kitchen window. My sister was then posed just inside the window, seated upon a low stool and gazing up through the window as if at the moon. At the moment of making the exposure, a signal was given and an assistant fired a charge of flash powder that had been placed just outside the window and high enough to give the required angle. The vines used were far from pleasing to the eye, but their outlines silhouetted upon the window as seen from the inside had a most realistic and charming appearance. The other application I wished to mention lies in the portrayal of a similar effect of sunlight shining into a room and falling upon the carpet. This effect is most pleasing if well handled, although the method is entirely different. The actual sunlight effect is photographed with an exposure made short enough to just secure the view outside the window, and the spots of light upon the carpet and any intervening furniture. The camera is then allowed to remain undisturbed until darkness comes on, when another exposure is made by giving a short flash at both sides of the room. If but one flash is made there will be a number of shadows falling towards the sunlit window, and this will be all wrong. Two flashes, one from each side, will result in no shadows, but their loss will hardly be noticed except by the most exacting of critics.

But let us take up the question of real moonlight pictures. If some care be taken to select a view in which the predominating shadows fall in rather inconspicuous portions of the picture or against dark masses of foliage, most realistic pictures can be secured. A large stop should be used, as fineness of detail is not truthful. The iris of the human eye opens to accommodate itself to the weak light afforded by the moon and, consequently, we do not see things with the same regard to detail as our eyes afford during the day. It is this lack of detail and corresponding appreciation of perspective which gives that weirdness to even the most familiar scenes when viewed in weak moonlight. With the lens wide open and using a fast plate, it is surprising how short an exposure will give the little detail that is required to portray moonlight. My own most successful effort in this direction was made by utilizing as a subject a partially opened whitewashed farm gate, the larger part of which the moon threw out in bold relief against a dark mass of foliage behind and to the side. Through the opening could be seen a snow-covered house and two or three stately poplars faintly outlined against a dark sky. The snow in the center of the road that passed through the gate came out splendidly white and in good contrast to the dark, dead weeds that bordered it so closely. The exposure was about forty minutes with the lens wide open.

This last, of course, is not exactly "fireside photography," but the selection and consideration of likely subjects for experiment can be made the work of Morris-chair study. The getting together of the camera and equipment can be gone about in comfort and the actual exposure need not take

one far afield or for longer than is necessary to increase one's appreciation of this same comfortable seat. And then there are street scenes at night; the kind that are made in New York and the kind that portray the more pleasing effect of village streets, where more varied outlines add interest to the results. There is hardly a town so small that it does not boast electric lights, and the combined effect of concentrated light, leafless trees, deep shadows, and white snow offers the worker a wealth of material upon which to exercise his power of selection

I trust the reader will pardon me for not showing examples of my own work along the lines suggested. My aim, however, is not so much to show what can be done and just how it can be accomplished, as to inspire in others a desire to try new fields, to the end that, later, they may be able to show their long-suffering friends some prints that cannot be catalogued as "the usual thing."

The Prints at Idora

ANNIE W. BRIGMAN

It is seldom, when viewing pictures in an art gallery of any kind, that I am not filled with the spirit of unrest.

IN ARCADIA By LAURA ADAMS ARMER

Of necessity, the pictures must be more or less crowded and deprived of that advantage of proper placing and light which is accorded them in studios or the home; for who, with taste, would place a somber, tragic subject in a joyous light, or vice versa?

But all this is a digression, since the wall space and lighting given the photographic collection in the Arts and Crafts Exhibition at Idora Park was unusually fine in the harmony of arrangement of its individual groups, in the harmony of work as a whole, and in the decided individualism marking the collection.

Arnold Genthe, dean of idealistic impressionism on this Coast, had in his collection an exquisite profile of Julia Marlowe and a fascinating foreign head.

PIPES O' PAN
Copyrighted 1908.

By ANNIE W. BRIGMAN

Oscar Maurer's "Mexican Doorways," old and majestic, are full of the spirit of days long gone. Charles Townsend has a print in his collection which looks as though it might be a fragment of Grace Church. Miss Gere, also, has a mission corridor, the doorways being their chief beauty.

I have seen sinister, low-browed doorways, and doorways high and majestic and as civilly indifferent as the marble columns that guard them; but these doorways are of the madonna type, arching, bending to receive you when you come to the journey's end.

THE MOON GODDESS By EMILY PITCHFORD

Adelaide Hanscom's Rubaiyat prints were there, beautiful as wash drawings; also a number of delicate mother and child studies by Blanche Cummings.

A spirited delicacy marks Emily Pitchford's pearly "Moon Goddess" and "A Modern Madonna," while Laura Adams Armer's work is strongly painter-like in quality and composition.

Edwin R. Jackson's "Vaqueros" is a strong, sunny, reserved piece of work. Francis J. Bruguiere showed a number of vigorous portraits.

F. E. H. Frost's landscapes were interesting, but marred by the title of the pictures being printed in ink on their surfaces.

In O. V. Lange's collection were several delicate gum-bichromates; and A. M. Sullivan's manzanita, fleur de lis, and dandelion puffs were of unusual beauty.

Miss Harvey's "Head of a Boy" is a fine sample of her marked progress.

Two of Myra A. Wiggin's prints were there. She invariably infuses her work with an atmosphere of tender sadness.

AN ILLUSTRATION TO THE RUBAIYAT OF OMAR KHAYYAM By ADELAIDE HANSCOM

Of the twenty-three fine studies by A. W. Rice, the one of the Berkeley Hills impressed me most, though his portraits are strong and delicately handled.

The collections of J. H. Dye, J. W. Garthwaite, Dora Jacobs, and H. S. Hoyt were neither numbered nor signed, so that I cannot speak of their work individually; but I found pleasure in all of them.

And my own group?

They are the partially realized fancies that flourished in the golden or thunderous days of two months in a wild part of the Sierras where gnomes and elves and spirits of the rocks and trees reveal themselves under certain mystical incantations.

Stevenson on Portrait Photography

In a letter to Trevor-Haddon, the painter, under date of July 5th, 1883, Robert Louis Stevenson wrote:

"I have no photograph just now; but when I get one you shall have a copy. It will not be like me; sometimes I turn out a capital fresh bank clerk; once I came out the image of Ranjeet Singh; again the treacherous sun has fixed me in the character of a traveling evangelist. It's quite a lottery; but whatever the next venture proves to be, soldier, sailor, tinker, tailor, you shall have a proof. Reciprocate. The truth is, I have no appearance; a certain air of disreputability is the one constant character that my face presents; the rest changes like water. But still I am lean, and still disreputable."

Photography in the Theatre

By H. Snowden Ward, F. R. P. S.

The photographing of stage scenes by means of the ordinary lighting of the theater, and without checking the action of the play, is a problem that has been attacked from two different directions by British workers. First, Dr. Grün, of Brighton, with his "liquid lens," that could be used successfully with the very great aperture of f-2, made many excellent snapshots of scenes during the actual run of plays, from the front of the dress circle. The Grün lens is indeed a wonderful thing, and has been used with as large an aperture as f-0.5, which means that a lens of three inches focal length can have a working aperture (diaphragm or stop) of no less than six inches. From the point of view of rapidity, this is all that can be desired, but the gain is recompensed by a loss in certain properties of definition, so that other workers attacked the same problem with the object of enabling quick exposures to be made with more ordinary lenses, having apertures of f-4 to f-5.6. To make this feasible, it was necessary to render plates abnormally sensitive to the artificial light that is available in the theaters, and to push the possibilities of development to the furthest limits. A leader in this work is Arthur Payne, of Newcastle-on-Tyne, the technical manager of the dry-plate works of Messrs. Mawson & Swan, from whose results I am privileged to reproduce a couple of stage views. A street

SCENE FROM THE "MERCHANT OF VENICE" By the F. R. BENSON COMPANY
Photographed during the performance with the ordinary theatre lights. By S. E. Bottomley

THE CHRISTMAS PANTOMIME By ARTHUR PAYNE
A stage scene during the regular performance.

scene by the same worker, not reproduced, is interesting as being, probably, the first actual snapshot made in the streets at night, as long ago as January, 1906. It has the lights of four enclosed arc lamps and an exposure of one-tenth of a second, with a Zeiss Planar lens working at f-3.6.

To render the plates very sensitive to yellow light, Mr. Payne takes almost any clean-working dry-plate of medium sensitiveness and bathes it in:

Orthochrome T solution	4 parts
Ammonia, .880 (ammon-fortiss)	3 parts
Distilled water	200 parts

The orthochrome T solution consists of:

Orthochrome T	1 part
Alcohol (90 per cent)	1,000 parts

Bathe until the film is thoroughly saturated. Wash in running water for three minutes, and dry in a drying cupboard or in a box with calcium chloride.

It is desirable to force development at as high a temperature as is possible without melting the gelatine of the plate, and without the "grainy" effect that is caused by such forcing with certain developers. For this purpose Mr. Payne uses an edinol developer, heated to seventy-five degrees Fahrenheit, and made up according to the following formula:

Sodium sulphite, crystals	5 ounces
Edinol	96 grains
Sodium carbonate, crystals	2 ounces
Water	20 ounces

The dishes, as well as the developer, are heated to seventy-five degrees Fahrenheit, and the plates developed for five minutes, then rinsed with water at about the same temperature and fixed in hypo, also at like temperature.

THE CHRISTMAS PANTOMIME By ARTHUR PAYNE
A stage scene during the regular performance.

This treatment generally gives a thin negative; wherefore Mr. Payne recommends making a hard transparency upon a very slow, photo-mechanical or slow lantern emulsion, plate, then a hard negative on a similar slow plate, and, from this, print upon one of the "hard" gas-light or slow-contact papers.

The two stage scenes reproduced herewith, photographed during the Christmas pantomime at Newcastle, had one-tenth of a second, with focal-plane shutter, and Zeiss lens at f-3.6.

S. E. Bottomley, principal of the Leeds Institute School of Photography, has done a good deal of work in the same direction, and adopts Mr. Payne's formula for sensitizing. He says that, of a number of English plates tested, he has found best results with the Lumiere Sigma, and that he has tested many sensitizers without finding any so satisfactory as the Orthochrome T. He bathes for three minutes, washes in running water for five, and lays great stress upon the importance of drying rapidly, in a well-ventilated drying cupboard. Spirit drying, which has been recommended, lowers the sensitiveness of the plate. Plates so treated keep in perfectly good condition for ten or twelve months, beyond which time they do not seem to have been tested.

Mr. Bottomley recommends ordinary pyro-soda developer—pyro, five grains; sodium sulphite, forty-four grains; sodium carbonate, forty-four grains; and water, two ounces, at a temperature of sixty-two degrees Fahrenheit, and with development for five minutes.

The field of work is fascinating. The experimenters from whom I have quoted have carried it far enough to enable pictorialists to add many night scenes to the field of their possibilities, which is large already; and they have left something further to be done in the search for a more sensitive emulsion, a more energetic sensitizer, or a more powerful method of development.

The Dressing of a Man or a Picture

By Henry Hall

There are "dudes" and "dolls" in pictorial work, just as everywhere in life; and just as in life we find many who give more thought to the outer covering than to the clothing of the inner man, so in pictorial work everywhere, but chiefly in pictorial photography, we find a tendency to rate technique and "dress" above the "picture" and the reading of the story.

This is a very old matter, and one that has been discussed in the magazines and elsewhere sufficiently to have made current a much simpler and more catholic style of mounting than seems to be still in vogue in cetain quarters, if only three had been given with the discussion of appearances, a rather more liberal discussion as to the making of pictures as such.

But this latter point seems to have been somewhat overlooked by the pictorially inclined amateur, who too often, these days, seems lost in a fog of technique and rules, to the end that, for him, pictorial photography has become more a matter of prettiness in the showing than of the actual making of pictures.

For, just as everywhere in life, while the prophet brings to men the Substance, the people receive only the Form; so, in pictorial photography, too often pictorial form is mistaken for pictorial matter, and the spirit is forgotten in the joy of polishing and embellishing the empty shell.

We may safely accept it as an axiom in pictorial work, that, if the mount is sufficiently attractive to call attention to itself, it has, in so much, usurped the place of the picture, and so has robbed it of its rightful due—the undivided attention of the lover of pictorial work.

The mount should be absolutely inconspicuous, either as to prettiness or as to lack of harmony with the print; and that will always be the best mount which is unnoticed until attention is called to it.

If the picture, by its nature, calls for "sounding brass and tinkling cymbal," then, by all means, let it be given; but, in that event, let us not imagine that it is much of a picture.

If the picture has any message worth the telling, give it a hearing by association with a silent mount.

And let us remember that, in the eyes of a picture-lover, a prettily insistent mount can more grievously wrong a print than anything short of absolute slovenliness can possibly do.

The masterpiece should appear as the flower to the painter—perfect in its bud as in its bloom—with no reason to explain its presence—no mission to fulfill—a joy to the artist—a delusion to the philanthropist—a puzzle to the botanist—an accident of sentiment and alliteration to the literary man.—James A. McNeill Whistler.

Cheap Trays and Other Hints

By Walter A. Scott

For trays 11x14 or smaller, have a planing mill get out several strips, 2x½ inches, twelve feet or longer, with a rectangular groove extending along its length near one edge of the two-inch side. The groove should be a little less than half an inch wide. At the same time procure some half-inch boards of the same material, surfaced on both sides, say twelve inches wide. To construct a tray for 11x14 plates or paper, it is only necessary to saw off four pieces of the two-inch material, of the proper length for the sides and ends, and one piece of the half-inch board for the bottom. Nail together two sides and one end, slip the bottom piece into the groove, and nail or screw the whole together. Two coats of asphaltum varnish or Probus paint will make the tray water-tight. If you wish to be very particular, you may coat the groove and the edges of the bottom with white lead before putting the tray together.

Do you use a wooden tray for developing? If so, when rocking or lifting it, your thumbs come on the inside, where the solution has a chance to flow over them; and, in lifting the tray, you must take a firm grip to avoid letting it slip. Buy from a woodworking mill a length of half-inch square material; saw off two pieces the same length as the ends of your tray, and by means of some short finishing nails, fasten one to each end of your tray, just flush with the top edge. Then when you rock or lift your tray, you simply place the ends of your fingers under these pieces at each end. Your fingers are kept out of the solution and there is no danger of the tray slipping.

In fastening bromide paper to the exposure easel, thumb tacks are objectionable, because each leaves a white spot on the development print where the head of the tack has intercepted the light, necessitating the trimming away of a considerable portion of the finished print. Glass push-pins are also undesirable, because, if the light strikes them, they are quite sure to reflect a beam of light across the body of the print, causing a dark streak. The steel pins with round, black heads, stuck in pasteboard cubes, and sold at dry goods stores, are preferable to thumb tacks or push-pins. They should be inserted at a considerable angle, so that the heads project beyond the edge of the paper. Each pin then leaves only a very narrow white mark at the edge of the print, and, if necessary, the marks may be touched out with a spotting brush and India ink. The only objection to the steel pins is, that they are brittle and may occasionally snap in two when being pushed into the easel. In this event, one's finger may be punctured.

If you have access to an emery wheel or grindstone, the best plan of all is to use steel wire box nails, about an inch in length. These have a considerably larger head than the ordinary wire nail of the same length. Purchase five cents' worth of them, and by fastening one into a small hand vise, or holding it between the jaws of a pair of flat-nosed pliers, the point may be held at a very acute angle against the face of the revolving emery

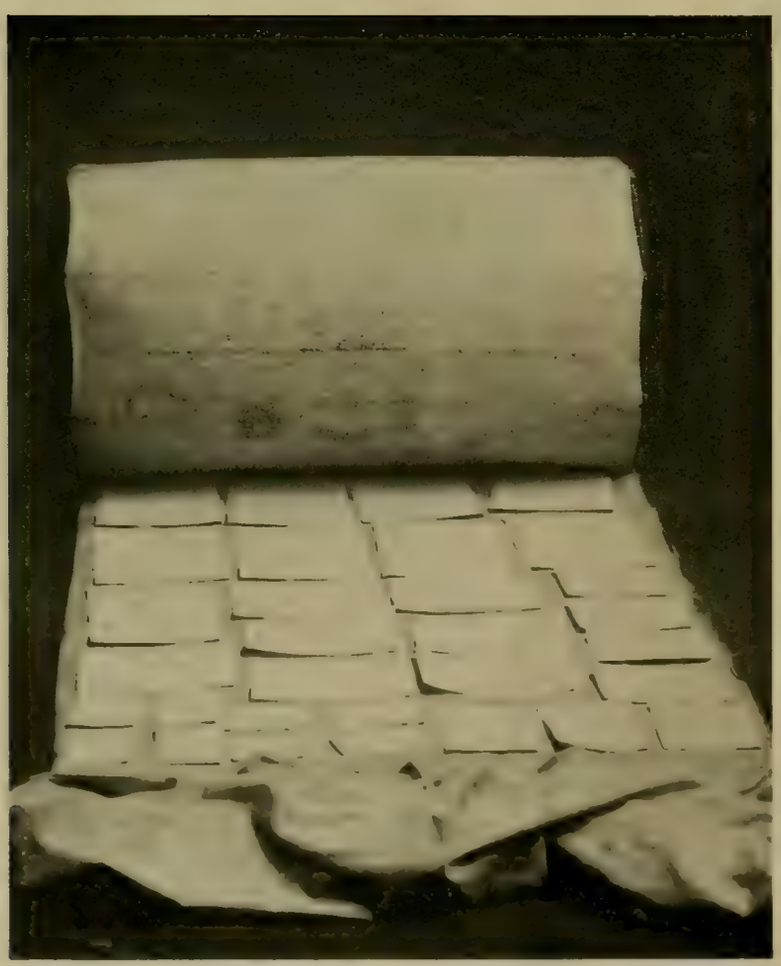
wheel; when, by steadily revolving the nail, it will be ground to a long, sharp, tapering point. The point will be so sharp and the head so large that it can readily be pushed through the bromide paper into the easel. A good plan is to insert the nail nearly straight, and, just before letting go of it, push the head outward beyond the edge of the paper. This final adjustment will draw the paper flat against the easel.

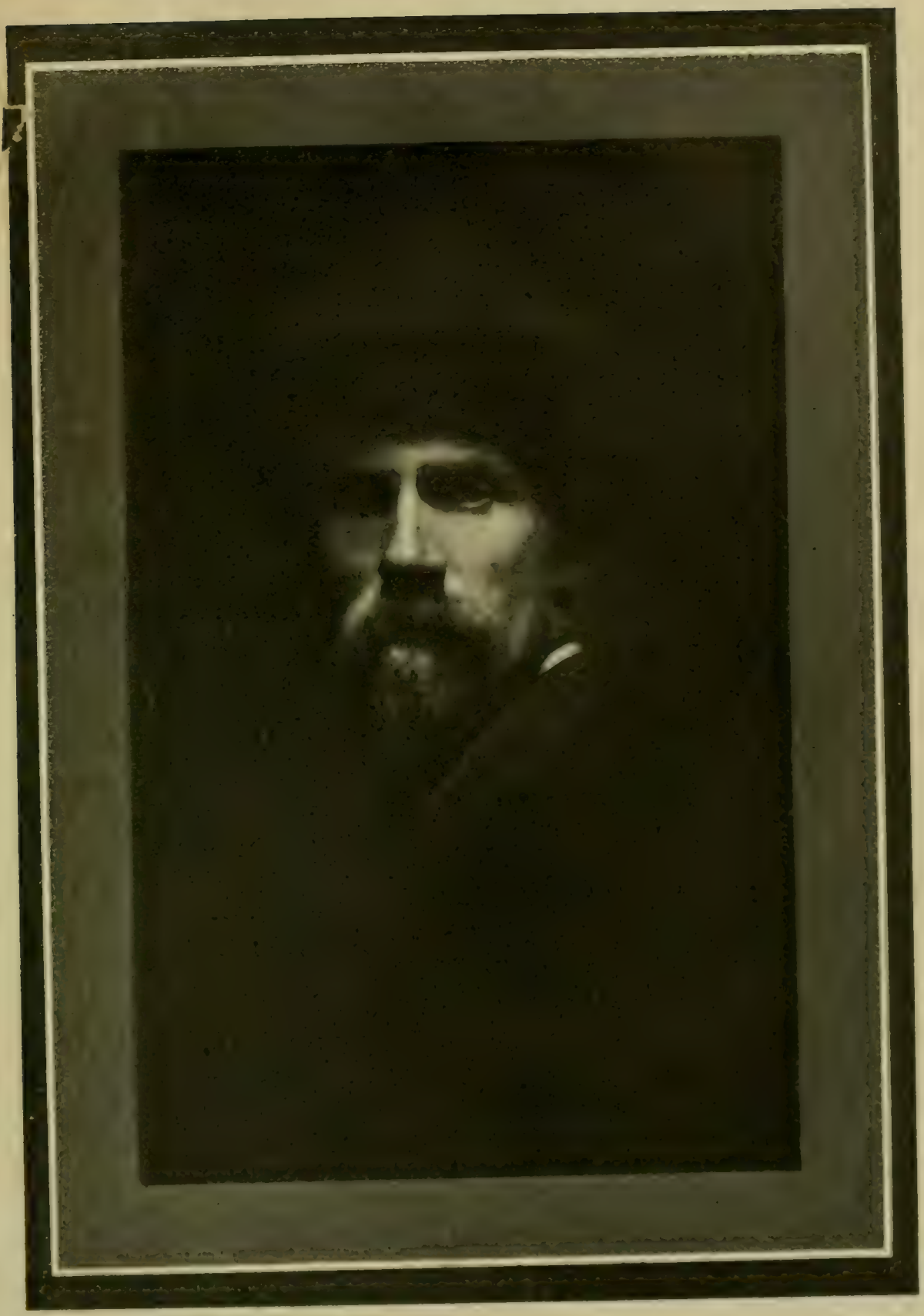
A Couple of Suggestions

By George G. Cantwell

I will give my fellow readers of "Camera Craft" a couple of photographic propositions that have been worked out here in Alaska and that will perhaps be useful to picture-makers in other parts of the country.

The illustration herewith shows a print dryer that is simple in construction, perfectly satisfactory in operation, and always ready for use. This one, which I have used for over two years, was made in half an hour. The ends are formed by the top and bottom of an old cheese box, and they are nailed together in barrel form by using strips of lathing cut thirty inches long. This length was decided upon because it is the width of ordinary sheeting. The strips were nailed on about every four inches around the end pieces and then covered with ordinary wire screen. Around the whole was then wound two thicknesses of white cotton sheeting, made fast by stitching, and a free end of ten or fifteen feet allowed, on which to roll up the prints around the drum. Some good-sized auger holes were bored in each end to allow a circulation of air and the contrivance was complete and ready for use. When about to dry prints, unroll the free end of the sheeting from the drum by rolling it along the top of a table or bench, getting the cloth smooth and flat. Lay the prints face down upon the cloth and then roll up around the drum by rolling the latter over and over. Place aside overnight and the prints will be bone dry, perfectly flat, and free from





MY FATHER
By A. W. RICE

blotter "whiskers" in the morning. The number of prints tha[illegible] on the one drum is limited only by your credit at the store w[illegible] is obtained.

After a good deal of experimenting on a white paste tha[illegible] I finally settled upon the following formula. It is one that ha[illegible] satisfaction:

Arrowroot, powdered	1 pou[illegible]
Dextrine, white, powdered	1 pou[illegible]
Gelatine	2 ou[illegible]
Alcohol, grain	10 our[illegible]
Oil of cloves, wintergreen or sassafras	½ ounc[illegible]
Water	1 gal[illegible]

Bring the water to a boil and then add the gelatine, which [illegible] ously been swelled in a little cold water. Add the arrowroot a[illegible] after each has been separately reduced to the consistency of t[illegible] with cold water. In a few minutes this will cook up heavy and t[illegible] Allow the mass to cool, but not so far that the gelatine becomes set; then add the alcohol in which the essential oil has been put. Adding this alcohol will turn the paste a lighter color and thin it down somewhat, and when cool it will be still whiter, but the dextrine will prevent the paste being perfectly white. The above amounts will make nearly two gallons of excellent paste, the amount of water determining the consistency of the finished product. It should finally be squeezed through two thicknesses of cheese cloth into air-tight glass jars.

"ME AND MA IN MONTANA." By LYNN W. SMITH

The Deadly "Home-Made" Flash Powder

By W. G. Earle

THE HUNTER By F. E. CRUM

A NEWSPAPER report advises that William White, a photographer at Three Rivers, Michigan, and Frank Schoonmaker, his assistant, suffered terrible injuries as the result of an accidental explosion of flash powder, on Thursday, October 8th. The account says: "The explosion occurred as the two men were leaving a drug store, where they had gone on business, Mr. Schoonmaker being in advance and carrying a bottle of flash powder which had been prepared for them by a druggist; and, as he passed out of the front door, Mr. White being close behind, the screen door accidentally hit the bottle containing the powder, when it immediately exploded. Mr. Schoonmaker's left hand was torn to shreds, and amputation became necessary; his face was terribly burned, his left side torn, and pieces of glass penetrated his left lung. At latest reports his survival was doubtful. Mr. White, although terribly burned, will recover."

Thus the list of horrors resulting from the recklessness of handling "home-made" flash powders is lengthened. And the almost criminal carelessness of doing so is most forcibly, though sadly, demonstrated.

The disaster raises anew the question as to why men will thus take their lives in their hands, either in compounding, or in having a local druggist do it for them, a number of chemicals that, combined, constitute a violent explosive, of the dangerous nature of which they are entirely ignorant. Even should they escape serious consequences, where is the gain which compensates for the risk? Is the saving of a few cents in the cost of making the limited quantity required by the average worker sufficient remuneration for the trouble required in the production of an article which, in most cases, is far inferior in quality, and which embodies unknown dangers, when it is possible to procure, ready prepared, an article of well-known merit and safety?

It is safe to say that, while all flash powders cannot be handled with equal safety, not one of the brands to be found in the photographic supply

stores would explode as the result of a jar, as did the package of "home-made" powder referred to in the report. In the case of Victor powder, for example, there is no instance on record, or known to its manufacturer, of its becoming ignited or exploding, either by friction or concussion. No doubt many other brands have as good a record for safety. It is entirely unnecessary for any consumer to endanger himself by making his own powder.

It is furthermore a question as to what extent the publishers of photographic literature have made themselves "accessory before the fact" to many of the accidents which have occurred. Many photographic annuals and periodicals have published formulas for flash compounds, merely giving the names and proportions of the ingredients required, but with no warning as to the dangers of combining them, or of the safest methods of mixing them. All of which indicates about the same consideration for the safety of their readers as they would manifest by giving their children gun powder and matches to play with.

A notable instance of this utter disregard for the safety of its readers occurred last winter, when a photographic weekly published an article in which the writer gave what he claimed was the formula for what was at that time probably the oldest and best known brand of flash powder on the market. Claiming, as he did, to have originated that particular brand, he could of course vouch for the correctness of the formula. Among the ingredients was a quantity of amorphous phosphorus, which he described as being, "if pure, about as harmless as so much sand." He also highly eulogized the quality of the completed compound, which, being his own invention, was of course quite natural. But, believing, in fact knowing, that amorphous phosphorus was both a very treacherous and sensitive ingredient, and that any attempt on the part of the average photographer to combine it with other ingredients to form a flash compound would, in a majority of cases, result in serious accidents; and also knowing that the compound, even if successfully made, would be vastly inferior to others on the market of later origin, the writer of this article at once sent an open letter to the same publication, calling attention to the danger attending the use of amorphous phosphorus, and also giving ample proof of the great inferiority of the compound, even if successfully made. My contribution, however, never appeared; leaving the almost criminally dangerous information uncontradicted. A few years ago, the man who was employed in making flash powder by the formula given in the article referred to, was killed by a quantity of it exploding; a few months ago, another man, who became his successor, was terribly injured in the same way, and the building in which he was working completely destroyed. How many others have been killed or injured in attempting to make flash powders according to this and similar formulae, is unknown. But there is no lack of mutilated witnesses to the fact that grave danger stares every person in the face, unless he is a thorough chemist, who attempts the compounding of flash powders; and furthermore, that no formula published, even if successfully and safely compounded, will compare at all in quality with the best compounds which may be procured ready made.

CAMERA CRAFT
A PHOTOGRAPHIC MONTHLY

VOL. XV. SAN FRANCISCO, CALIFORNIA, DECEMBER, 1908. No. 12

A Merry Christmas and a Happy New Year

What the Reader Wants

Publishing a photographic magazine is mainly a question of supplying its readers with the sort of reading matter and pictures that they want. But what do they want? Must the editor be content to guess, content to trust his judgment? A guess, and it becomes a matter of luck; judgment he can hardly employ, because there is so little upon which to make a deduction. The editor is hardly competent to say just what will be most likely to please the largest number of his readers. He has an article, let us say, on telephotography, and wonders if it will interest more than a fractional part of his readers. He leaves it out and later finds that, while it might not have interested all of his readers, it was just the kind of an article that quite a number were most anxious to have placed before them. He has an article covering the ordinary, every-day manipulation, let us say, of gaslight papers. He is afraid that it will be entirely too elementary for all except a few new subscribers who are still in the novice class. He leaves it out only to have it receive all kinds of praise when it is printed in another magazine. And so it goes. The editor is at a disadvantage. Suppose a dealer in groceries was asked to accept as customers a few thousand people in all parts of the country and told that he must cater to their wants by sending each a certain weight of foodstuff each month. You can imagine the perplexity that the conditions would involve as each monthly shipment of a uniform assortment came to be made up. Would not our grocer beg for the privilege of hearing from a few of his unknown customers? We think he would. We know that we would like to hear from a few of our subscribers each month; it would cost them only a postal card and a few minutes' time. Will each of you consider this as a personal request? If this particular issue pleases you, drop us a line saying so and explaining why. Tell us what articles have been most helpful and why you have found them so. If this particular issue disappoints you, write and say so, explaining why. Tell us just what its shortcomings are in your eyes. Do the same as other issues reach you. We will not have time to thank you personally for your kindness, but you will have our best thanks just the same. In addition, your so doing will permit us to give you more nearly just the kind of a magazine that will appeal to the largest number of our friends—our subscribers.

And There is Another Matter

Our readers could help us to make this magazine more valuable and, at the same time, benefit themselves by contributing articles covering their own methods of work. It is not necessary that they should have made a radical departure in their work. What we want are articles telling other workers just how some individual worker carries out some part of his photographic manipulation; articles telling beginners just how another beginner mastered certain processes or methods. The man who has just worked through, let us say, the carbon process, is much better qualified to advise and instruct a new worker in that beautiful printing process than one who long ago learned all about it. The latter will give a more academical outline of the process, but the former will remember his own difficulties and tell just how they are to be avoided or overcome. And do not refrain from writing because you "have never written for publication." We will attend to all that. It is but the work of a few minutes for our stenographer to run your article through the machine and make all necessary corrections in the style. Then the editor goes over all "copy," even his own, before it goes to the printer, and finally, an expert proofreader revises the printer's proof. So you need have no fear that your article will not be satisfactory; neither need you fear that your lack of experience as a writer will discredit your kindness in our eyes. One of the best articles we have published during the last few months was contributed by a gentleman whose early education was so sadly neglected that the most common words were misspelled. Strange to say, the corrections made, aside from the spelling, were trifling. The writer had something to tell and told it directly, using only the common words at his disposal. On the other hand, the same issue contained an article by one who had graduated years ago from one of our best colleges. His efforts to explain a few simple operations were so involved and wordy as to make the article quite lacking in clarity. Our own interpretation no doubt lacked the learned effect that the original possessed, but it was more in harmony with the rest of the magazine. Write out a description of your methods, send rough sketches or photographs illustrating them, and we will be more than glad to do the rest. The roughest of sketches will suffice, as even the best we receive are redrawn in order that they may be uniform in style. If you are still in doubt, at least make a trial and ask us to send you a proof of the matter before finally passing it to press. We want the kind of articles our readers can write, not those that are written by "professional" space fillers whose knowledge is more theoretical than practical. What we want is the simple, concrete outline of a process or method. The article that handles the subject in the abstract, with a few untried copied formulae thrown in, we do not particularly require.

The Photographic Post Card Exchange

Mr. Potter, the Director of the Post Card Exchange, being in the south on important business and copy not reaching us on time, his department is omitted this month. We trust this will not occur again.

PHOTOGRAPHIC DIGEST

Communications Concerning this Department Should be Addressed to its Editor.

Edited by
H. D'ARCY POWER, M. D.
Burlingame, California.

SOME APPLICATIONS OF OZOBROME.

The following suggestions by M. Coustel in the "Photo-Gazette" are decidedly worthy of trial, and considerably increase the usefulness of this process. If one has a thin negative that requires intensification, we can use the ozobrome process. A sheet of the pigment paper should be immersed in the sensitizing solution and squeegeed into contact with the negative. If the negative is somewhat hard, it is advisable to increase the strength of the sensitizer and reduce the time of contact. If, on the other hand, the negative is soft, then the sensitizer should be reduced in strength and the time of contact increased. When the carbon image has been developed, one may either dissolve out the original silver image or re-develop it. If the intensification given by the superimposed pigment image is insufficient, an easy remedy is to stain it with a dye, since this image is formed by varying thicknesses of gelatine. It is advisable to harden the negative in formaline first, so as to make it stand the hot water. (In my experience it is always necessary to redevelop the silver image; otherwise change of gradation and some loss of half-tones is pretty sure to follow. In place of dyeing the film, increased density is better obtained by immersing the ozobromed negative in a fairly-strong solution of potassium permanganate, which will build up the high lights to absolute opacity if left long enough.—H. D'A. P.) If, instead of using a carbon film on paper, a sheet of glass coated with plain gelatine and saturated with the sensitizing solution, is squeegeed into contact with a bromide print, the gelatine will be rendered insoluble, and can then be inked up with collotype ink and printed from as usual in a press. The advantage of this process is that the original print can be re-developed and used for making other collotype plates without the intervention of light, nor is it necessary to reverse the negatives.

DEVELOPMENT NOTES.

For some time past there has been shown an increasing interest in Amidol as an all-round developer. M. Baligny recently published an exhaustive examination of Acid Amidol to which I have already referred. In "Photography" of September 1st, W. Harvey declares for Amidol as the "Universal Developer." His words are worth quoting:

"The following is my method of working: All that is required is two ten per cent solutions, one of pure sodium sulphite and one of potassium bromide. My practice is to dissolve three ounces of the sulphite in a pint and a half of water, as the common pint-and-a-half bottle found in almost every household comes in handily. The bromide solution is made by dissolving one ounce of potassium bromide in ten ounces of water and bottling it off. For developing half-plates, I pour out five ounces of the sulphite solution and weigh out ten grains of dry amidol. This is added to the sulphite solution, and the mixture briskly stirred until it has dissolved. A few drops of the bromide solution are added. I generally use two drops to the ounce. The developer will then be ready.

"If the exposure is about correct, the high lights will begin to appear in about twenty seconds, and if factorial development is practiced, and good, plucky negatives are wanted, eighteen may be taken as the factor. For gaslight papers, sixteen or seventeen will do; but, as I use bromide paper, I keep to the higher factor.

"The same developer exactly is used for gas light papers. For bromide papers the five ounces may be diluted to seven or eight."

Another writer gives the following formula for obtaining strong contrasts:

Water	10 ounces
Amidol	24 grains
Anhydrous sodium sulphite	80 grains
Sodium bisulphite solution	1 ounce
Potassium bromide	20 grains

This is specially suitable for bromide paper.

Concerning Amidol, the "British Journal of Photography" of August 16th, gave an account of some experiments by which it appears that the developer ought not to be added in large masses to the sulphite solution, as under these conditions a sudden chemical change can occur, resulting in a loss of developing power.

To pass from the Amidol to one of the oldest developers, G. R. Henderson, in the last-named magazine, makes a strong plea for pyro-ammonia. It is admittedly a developer that is unsurpassed in detail-giving properties, and many professionals have never deserted it. But it causes green fog, which looks unpleasant, though it has no effect on the printing qualities of the negative—worse still, it rapidly oxidizes, and stains the fingers. Mr. Henderson shows that by using divided development one can gain all the good points and avoid the bad. You make a stock solution by dissolving an ounce of pyro in ten ounces of a ten per cent solution of meta-bisulphite (I take it that any other ten per cent solution of pyro would do). Then make another solution of one hundred and fifty grains of potassium bromide and an ounce and a half of strong ammonia in ten ounces of water. Development is effected by diluting three hundred minims of the pyro solution with ten ounces of water, in which the plate is immersed for four minutes; the pyro solution is poured off, and the plate covered with the ammonia solution diluted with ten volumes of water. At the end of four minutes it is transferred to the hypo. The result is a beautifully-graded negative with the maximum of detail, which the ammonia always secures; and, as the high lights cannot develop beyond the amount of pyro contained in the film, they are never dense and choked. Staining of plate or fingers is impossible. This sounds good, nd is true, for I have tried it, and like it so much that I have used it for every plate I have developed in the past month. I dislike complex formulae, and would simplify the above by saying that I develop one to four minutes in a one per cent solution of pyro and then transfer for a like time to a one and one-half per cent solution of ammonia, to which has been added one and one-half grains of bromide per ounce. This is easy to remember. Lastly, I note that Dianol—a close relative of Amidol, but less easily oxidized—is gaining ground.

ONLY ITS OWN PRODUCTS.

It will be of some interest to the trade to know that the Defender Photo Supply Company of Argo Park, Rochester, N. Y., has discontinued its middle-western stockhouse at St. Louis, only, however, insofar as the sale of sundries is concerned. It was only a short time ago that this company discontinued its eastern stockhouse in New York City, and this news item from St. Louis bears out the announcement made by the Defender Company at that time, to the effect that it would gradually withdraw from the field of sundries and confine itself to the sale of its own products. The New York office of the Defender Company, which had been located at 12 West Twenty-first Street, removed on December 1st to more suitable quarters at 35 West Twenty-first Street.

ENLARGING WITH A SINGLE LENS.

A reader asks if he can use a cheap single lens, which he has for enlarging from his 3¼x5½ negatives, upon 8x10 bromide paper. It does not matter how large may be the enlargements he wishes to make; they may be any size desired. The question is, will his cheap lens cover the 3¼x5½ negatives? If he can use the lens in the camera to produce a negative of that size that is sharp to the corners, the same lens will make an enlargement of any size from that negative or one of that size.

Being a single lens, it will, no doubt, require a much smaller stop than would an anastigmat or even an ordinary double lens, and, furthermore, the enlargements made with it will, no doubt, show more or less curvilinear distortion.

The AMATEUR and HIS TROUBLES

Conducted by
FAYETTE J. CLUTE

PERMANGANATE STAINS.

A local worker, in attempting to reduce a negative with the permanganate reducer, caused some very annoying stains to appear. Seeking advice, it was suggested that he try immersing the plate in a solution made by adding ten grains of oxalic acid to each ounce of water, and gently rock the dish until the stains were removed. This proved most successful. The cleared negative should be washed, on coming from the solution, before being placed aside to dry. It might be necessary to use a second portion of the solution to achieve complete removal of the stain in some cases, but the strength of the solution should not be increased, as frilling of the film would be invited.

EXPOSURE IN ENLARGING.

One of our readers contends that, in making an enlargement from a 4x5 plate to 8x10, the exposure would be just four times that required in making a print the same size as the negative, through the enlarging camera. Another reader claims that he is wrong, but is unable to explain just why. We have been asked to decide and explain. The first gentleman is wrong. The exposure is proportional to the times of enlargement only so long as the actual value of the stop is kept constant. Let us suppose that a lens of eight inches focus is being used. The stop with a diameter of one inch will be found marked f-8, but, copying same size, the lens is used at a focal length of sixteen inches, and the one-inch stop must consequently have an actual value of f-16. When enlarging four times, the lens is used at a focal length of twelve inches and the one-inch stop in that case becomes f-12. It is plain that any calculation with a view of determining the relative exposures must take into consideration both the area of enlargement and the relative values of the stop, as its normal value is altered by the change in the focal length at which the lens is used. This can be done as follows: Call the exposure, when copying same size, four. Then, in order to find the relative exposure, add one to the number of times any linear dimension of the original is contained in the corresponding portion of the enlargement and square the sum so obtained. In the case cited by our reader, any part of the original 4x5 negative image becomes twice as long in the enlargement. Two plus one makes three and the square of three is nine. Therefore, the relative exposures for copying same size and from 4x5 to 8x10 are as four is to nine, or, enlarging from 4x5 to 8x10 will require just two and one-fourth times the exposure required for copying same size, and not four times as assumed by our reader first mentioned above.

SWING-BACK AND RISING FRONT.

There are few users of a camera equipped with a swing-back who do not recognize the value of that movement in bringing vertical lines upright and parallel when the camera itself is tilted out of the horizontal. On the other hand, when one is trying to compass an interesting bit of foreground and a middle distance at the same time, without having recourse to a small stop, a swing-back can be made a great help. If its top is swung backward out of the perpendicular, it will be found that the focus has been greatly improved. The effect will be much the same as if the landscape itself had been tilted upward at the back. The rising front, as all camera users know, can be employed to secure the tops of high buildings that would be cut off were the lens used in the normal position, but there is another use for this utility. If the lens be raised to its greatest allowable height, it will be found that the point of sight rises in the resultant picture. Consequently, taking a street view up a hill for example, the uphill effect can be more truthfully rendered by raising the lens and using the camera low, than by using the lens in the normal position and holding the camera high. Where a long panel shape is in

mind for a certain view, trimming away a large portion of the foreground from the finished print gives the view the appearance of having been photographed by a pigmy with his camera near the ground. Raising the lens, so that the final trimming has to be done from the sky portion of the finished print, gives a much more pleasing result.

TIMING CARBON PRINTS.

It is easy enough to secure the right exposure for carbon tissue after a few experiments have been made to determine just how deep a piece of solio paper should be printed under a negative of the same average density at the same time the tissue is being exposed. The only chance of going wrong then lies in a failure to recognize the fact that a pyro developed negative with its olive-colored image may be a much slower printer than another of apparently the same density yet having an image of a blue-black color such as is secured with metal. If one is printing the tissue under a metal-hydroquinone negative it is advisable to use a like negative as the pilot in printing the strips of solio paper. Another point at which the beginner may go wrong is in failing to recognize the fact that red chalk and such like light-colored tissue requires longer printing. Calling sepia and brown the normal, black will require shorter and red chalk considerably longer.

OVER-DEVELOPED NEGATIVES.

A Washington correspondent has a number of negatives that are the results of his earlier efforts at photography, and, owing to his lack of knowledge at the time they were made, they are considerably over-developed. The remedy is reduction by means of ammonium persulphate. Taking it for granted that the negative was originally well fixed and washed, it should be first placed in a tray of water until the gelatine film becomes swollen somewhat. Then it should be immersed in a solution made by adding ten grains of ammonium persulphate to each ounce of water required. The dish should be rocked and the effect closely watched, as it starts slowly and acquires rapidity as the reduction proceeds. In fact, the negative should be removed from the solution a moment or two before the desired amount of reduction has taken place. From this bath the negative should go for about five minutes into another made by dissolving ten grains of sodium sulphite in each ounce of water. This is followed by a good washing. If the negatives carry any greasy finger marks or the like, these should be removed by swabbing with alcohol or benzine, otherwise the grease will repel the water in the softening bath and result in less action taking place at that particular point. The persulphate solution should be mixed up each time it is wanted and one portion used only for one negative.

RESTORING FADED PRINTS.

This can be done by converting the image into chloride of silver and then redeveloping it. Immerse the print in either of the following baths:

Water . . .. 1 ounce
Mercuric chloride ..... 5 grams
Hydrochloric acid ..... 1 minim

or

Water . . .. 1 ounce
Potassium bichromate ...10 grams
Common salt .....15 grams
Hydrochloric acid ..... 5 minims

Leave the print in till thoroughly bleached, wash well for at least an hour in running water, then expose to daylight, and redevelop with hydroquinone, metol, or one of the newer developers, and the result is a black image.

GOLD PRECIPITATING.

An Ohio correspondent complains that his combined toning bath suffers from precipitation of the gold, and asks if there is anything that he can add to the bath to prevent its so doing. The gold is precipitated because there are impurities in the bath. Either it was not made up with distilled water, as it should have been, or else repeated use has introduced organic matter by its being carried into the bath with the prints. Throw it away and mix up a new bath, using distilled water. Such a bath, if kept in the dark and not used, will keep for a long time without precipitation of the gold. If it is used a second time, or more, enough new bath should be added each time to tone the prints for that particular toning. Distilled water should also be used for your stock solution of potassium chloroplatinite, which has gone black for the same reason. The bottles used should also be perfectly clean from any suspicion of dirt.

International Photographic Association

OUR STATE ALBUM DIRECTORS.

This month I wish to say a few words to our Directors. To some of them I have been able to write long letters, and others I would like to; but time does not permit. What is wanted is a body of State Directors who will go right ahead and display all the initiative of which they are capable. We would be perfectly willing to have as many ways of handling the circulating albums of a State as there are State Directors. Later, we may get together and, from the experience of the several Directors, evolve a common method and supply all with printed album rules, route-sheet blanks, and the like. Let each State Director handle the album matter as he thinks best, and by so doing we will the sooner discover the most desirable plan. And we want each Director to secure the co-operation of a fellow-worker as State Secretary. It is, of course, desirable that the Director and Secretary be residents of the same town, and, of course, the larger the town the better, because still further assistance can be secured in getting out an album should the members throughout any particular State not show the interest expected. The importance in having two officers in each State, working together, lies in the fact that should one, for any reason, give up the work, the other could go on without causing any interruption. In one or two instances in the past, the members in a State have been subjected to much disappointment by having a Director give up the work, with several albums on the road and a more or less large number of prints in his hands, none of which were properly accounted for, all of which would have been obviated had two officers been familiar with the work. We want Directors in the States not represented in our list. Will members in such non-listed States please offer their services by writing Mr. Winchell concerning the matter? These will be supplied with a list of the members in their States, some application blanks bearing their names as State Album Directors, and sample copies of the magazine to be used in advising prospective members of the existence and purposes of the society.

OFFICERS OF THE I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director. R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 713-715 Call Building, San Francisco.

W. C. Marley, Director Stereoscopic Division, 149 Hillside Ave., Newark, N. J.

FOREIGN OFFICERS.

MEXICO.

Vice-President — Jose Ramos, 2a de Morelos 44, Morelia, Mich., Mexico.

Album Director—J. Jesus Martinez, Ap. 5, Morelia, Mich., Mexico.

ALBUM DIRECTORS.

Alabama—Richard Hines, Jr., 155 State Street, Mobile.

Colorado—F. B. Hinman, Room 4, Union Depot, Denver.

Illinois — Harry Gordon Wilson, 4950 Washington Avenue, Chicago.

Indiana — H. E. Bishop, 1704 College Avenue, Indianapolis.

Kansas—H. E. High, R. F. D. No 1, Wilson.

Maryland—E. G. Hooper, 218 East 20th Street, Baltimore.

Massachusetts—Mrs. Alice P. Damon, 50 Autumn Street, Lynn.

Michigan—W. E. Ziegenfuss, M. D., 327 West Hancock Ave., Detroit.

Minnesota — Leonard A. Williams, St Cloud.

Missouri—Wharton Schooler, R. F. D No. 2, Eolia.

Montana—Mrs Ludovica Butler, 932 W. Broadway, Butte

Nebraska—Miss Lou P. Tillotson, 1305 South 32d Street, Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor Street, Manchester.

New York—W. A. Van Wager, 536 Tallman Street, Syracuse.

North Dakota—Jas. A. Van Kleeck, 619 Second Avenue North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

Oregon—Leonard S. Hopfield, Box 622, McMinnville.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Utah—John C. Swenson, A. B., Provo.

Washington—C. L. Deyo, Ballard.

STATE SECRETARIES.

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

Kansas—H. H. Gill, Hays City.

Oregon—F. L. Derby, La Fayette.

NEW MEMBERS.

1771—Burton H. Albee, 140 State Street, Hackensack, N. J.
3¼x5½, 5x7 and 8x10 enlargements, on gaslight and bromide papers, of landscapes, genre subjects and portraits, for landscapes and genre. Class 1.

1772—Miss F. M. Roberts, 21 W. Main St., Hudson, Mich.
5x7 and smaller, on self-toning and developing papers, of Watkins Glen, Havanna Glen, Niagara Falls, Lake Michigan, the Northwest and Colorado, for fine scenery and historical subjects from all parts of the country. Class 2.

1773—W. J. Bundy, Aberdeen, Wash.
3¼x4¼ and 4x5, on developing paper, of landscape, marine, genre, nature subjects and portraits for like work. Post Cards preferred. Class 1.

1774—Charles Holm, 700 High St., Fruitvale, Cal.
3¼x4¼, on developing paper, of various subjects. In Class 1 for post cards.

1776—W. H. Bass, 308 S. New Jersey St., Indianapolis, Ind.
4x5 to 8x10, on developing paper, of Indianapolis and surroundings, for chiefly public buildings suitable for lantern slides. Class 1.

1777—Percy D. Booth, Box 17, Wellsboro, Ind.
4¼x4¼ and 4x5, on developing paper mostly, of flowers mostly, for post cards and prints of landscapes and the like, marines in blueprint paper. Class 1.

1778—George H. Brooker, Westfield, N. Y.
4x5, on developing paper, of landscapes and general views, for historical subjects and scenery. Class 2.

1779—Wilber Mondabaugh, R. F. D. No. 1, Box 11, Hancock, Minn.
3¼x3½ and 3¼x4¼, on developing paper, of child studies and landscapes, for like work. Class 2.

1780—John M. Townsend, 640 South 52nd St., Philadelphia, Pa.
4x5 and post card, on Aristo and developing papers, of landscapes and out-door views for same size prints. Class 1.

1781—W. L. Cornelius, Box 26, Westville, Ind.
4x5 and 5x7, on printing-out and developing papers, of landscapes, genre, architectural subjects and general views, for above sizes, post cards and stereo prints. Class 1.

1782—C. D. Wilson, Chitwood, Ore.
Up to 5x7, on printing-out and developing papers, of mountain, coast, marine, farm scenes, still life and the like, for historical subjects, natural scenery and park views, especially from foreign countries. Also post cards. Class 1.

1783—William R. Ordway, Box 112, Milton on Hudson, N. Y.
4x5 and 5x7, on developing papers, of landscapes and views of general interest, for views from different States, particularly California.

1784—John W. Stonie, Alma, Ills.
4x5 and 5x7, on developing paper, of various subjects for interesting subjects. Class 1 for photographic post cards.

1785—Charles J. Clarke, 432 Van Buren St., Brooklyn, N. Y.
4x5, on printing-out and developing paper, of street scenes, historical subjects, and the like, for same and athletic contests. Class 1.

1786—Addie C. Gilmore, Comb. Box. 164, Terino, Wash.
5x7 and 8x10, of industrial scenes, landscapes, and general views, for same size and post cards of interesting views of any kind. Class 1.

RENEWALS.

150—J. C. Shinkle, Woodland, Cal.
Up to and including 5x7, on developing paper and post cards, of street scenes, landscapes and California State Capitol, for other Capitols and interesting views. Class 1.

379—Ed. L. Graybill, R. F. D. No. 1, West Berlin, Ohio.
5x7 and stereos, on printing-out and developing paper, of landscapes, monuments, and buildings. Class 2.

438—W. D. Leonard, 519 W. Perkins St., Hartford City, Ind.
4x5 and 6½x8½, on developing paper of general subjects for like work. Class 1.

465—William Burton, Lock Box 807, St. Louis, Mo.
5x7 and post cards, on developing paper, of historical views, scenery, city views, sports and the like for same class of subjects. Class 1.

800—Benjamin W. Douglass, State House, Indianapolis, Ind.
Any size, any paper, any subject. Class 2.

880—C. E. Wenck, Farina, Ills.
4x5 and post cards, on developing paper, of landscapes, marines, dead game studies, and 1904 St. Louis Fair views. Class 1 for good work. Prints sent and received on approval.

1104—George W. Haynes, Box 276, Fremont, Ohio.
3¼x5½ and 4x5, on developing paper, general views and portraits. Class 1.

1172—R. Weaser, R. F. D. No. 1, Chenango Forks, N. Y.
5x7 up to 8x10, on developing papers, of landscapes, camping scenes, genre, and anthracite coal region scenes in regular stereo and post cards, of the best workmanship. In Class 1 with good workers.

1342—Otto Fulgraff, 326 Spring St., Indianapolis, Ind.
6½x8½ and smaller, on platinum and developing papers, of landscapes. Class 2.

1522—A. J. Manfeld, 223 N. Pennsylvania St., Indianapolis, Ind.
5x7 and smaller, on developing papers, of landscapes and the like, for the same. Class 2.

1572—Harry E. Bishop, 1704 College Ave., Indianapolis, Ind.
8x10 and smaller, on platinum and developing paper, of landscapes, for anything of interest. Class 1.

1628—Arthur Smock, 1131 N. New Jersey St., Indianapolis, Ind.
4x5 on developing paper, general subjects for anything of interest. Class 1.

CLUB NEWS and NOTES

Club Secretaries and others will oblige by giving us reports for this Department.

THE FIFTH AMERICAN SALON.

Just as we go to press we have a list of the pictures accepted from the Pacific Coast. The list is not a large one, but we did not submit a great number of prints. Of those accepted, C. George Bull, M.D., has two; F. J. Bruguiere, five; Dr. Pedar Bruguiere, four; Dr. Gustav Eisen, three; A. W. Rice, one; Walter A. Scott, one; Charles E. Townsend, one; and R. M. Weed, two. We will try and have our usual report of the Salon, together with reproductions of some of the pictures, in the next or an early issue.

THE VICTORIAN EXHIBITION.

Just a day too late for our November issue came the prospectus of the First Victorian Photographic Affiliation Exhibition, to be held the second week in February at the Victorian Artists' Society's Galleries, Eastern Hill, Melbourne, Australia. F. Dutton, Esquire, 120 Fenwick Street, Clifton Hill, Victoria, is the Exhibition Secretary, and all exhibits should be addressed to him, care of the Victorian Artists' Society's Galleries, as above. A fee of one shilling must accompany each exhibit and must reach the secretary on or before January 15, 1909. We have a supply of blanks and will be pleased to send them to any of our readers who may be desirous of sending pictures. The exhibition promises to be a great success and we trust will be repeated from year to year. Our only regret is that we cannot give our readers earlier notice, but have arranged so that another year we will be in a positon to give early advice concerning dates and the like. The exhibition is under the patronage of His Excellency, Sir Thomas Gibson-Carmichael, Bart., Governor of Victoria. The names of those on the exhibition committee are such that all confidence can be had in the success of the exhibition if skill and good management can make it possible.

THE YORK CAMERA CLUB.

The first annual exhibition of the York Camera Club will be held in the art rooms of Morgan Gipe, York, Pennsylvania, during the first part of December. The exact date has not been decided upon. About one hundred and ten prints will be exhibited by the club, and probably fifty or more by non-members residing in York. Displays by E. Goldenski of Philadelphia and Meredith Janvier of Baltimore are expected, although not positively assured. In case of refusal the club will request from other celebrities in pictorial work who exhibit the fraternal feeling. Rudolph Eikemeyer is also expected to exhibit. Six blue ribbons will be awarded by a committee composed of three prominent local artists, not photographers, viz.: Horace Rudy, K. J. Dempwolf, and Edw. Bosshart, the first a student of Henri, the latter a prominent member of the Charcoal Club of Baltimore. D. A. Dice, a well-known portrait painter of this city, will, on the last day of the exhibit, pass around the walls and criticise or praise the work shown in a purely impersonal manner, ending with a few words on art in general and composition in particular.

On the last day of the exhibition the annual election will be held and as my term of office will expire on that date I will have to leave reports of the exhibition to my successor. I, as well as other members, have worked hard and long to make a success of this exhibition, and we trust it will be the means of enlarging our membership to a point where we can rent and furnish our own club house. We are now confined to one room but we are young

C. W. HOFFMAN,
Secretary York Camera Club.

THE LAST "CAMERA WORK."

Number twenty-four of that beautiful publication, "Camera Work," reached us just too late for notice in our November issue. It is hardly worth while describing the contents of this, the last issue, for the reason that it is like all the former numbers, a veritable treat for the pictorial photographer or the photographer who hopes to produce pictorial work. What we wish to do is to call attention to a couple of matters that too many overlook. The first of these is in the nature of a misconception held by many, who fall into error in supposing that the publication is intended only for the fellows and associates of the Photo-Secession. If the edition were limited to these workers, each copy would cost almost one hundred dollars, roughly speaking, without knowledge of the actual cost. The other matter is in regard to what at first glance seems to be the high price of the magazine. Six dollars, or six dollars and fifty cents if registration is desired, seems a high price for four issues of a photographic publication. But is it? When one considers that only four issues will give him forty or more of the finest reproductions of the best that is done in photography, the question of actual cost seems ridiculous. The reproductions are all of large size, and by a process that gives, absolutely, the same in quality and feeling that the maker secures in his best prints. In fact, so sympathetic is the photogravure process, particularly when employed under Mr. Stieglitz' supervision, that only the high cost of producing the original plate prevents our best workers from using it in the production of their prints. And it is not alone the beauty of the process that commends the illustrations in "Camera Work." The reproductions, if reproductions they can really be called, are from originals that, in single instances, could not be purchased at many times the cost of a year's subscription. A file of our own magazine, for example, of course has some value; but the worker should ask himself how much more valuable would be a file of the kind obtained by subscribing to "Camera Work." If this is done, we feel sure that our handsome contemporary would enjoy more nearly the large subscription list which it so certainly deserves.

THE PHOTO-PICTORIALISTS.

A little more than a year ago there was held at the Albright Art Gallery an exhibition of artistic photographs representing the work of the society known as the Photo-Pictorialists of Buffalo. This exhibition was a great success from standpoints of interest, attendance, and sales. Considering this, the idea has been suggested that it might be well to hold in Buffalo an International Exhibition of Artistic Photography, organized on the same lines as the annual exhibitions of Selected Paintings by American Artists—each work being specifically invited. In other words, the plan would be to address an invitation to such artists in photography as have achieved international reputation to contribute to an exhibition (to be opened in Buffalo and thence, perhaps, transported in sequence to several other leading American art museums), such specific pictures as have elicited commendation from leading experts in the art. In addition, it is considered that there should be a section of the exhibition open for works contributed by any photographer whose productions might be deemed worthy of acceptance by a carefully-selected jury—the basis of admission being such quality as would show these works worthy to be hung with the acknowledged masterpieces of photographic art secured by invitation.

It is believed that the highest art expression in photography is quite worthy of association with high art expression in other lines of effort, as painting, sculpture, engraving, etc., and the principal object of the exhibition contemplated would be the hope of effectively exemplifying this idea. It is probable that such an exhibition may be organized to open at the Albright Art Gallery in the fall or winter of 1909.—"Academy Notes."

THE NEW AMERICAN ANNUAL.

Just as we go to press comes a copy of the 1909 American Annual of Photography. It is a decided improvement over the volume issued last year, both in subject matter and illustrations; this despite the fact that the last issue was by no means lacking in either good quality. The paper-covered edition sells for 75 cents, the cloth-covered for $1.25. Postage is 17 cents and 22 cents respectively.