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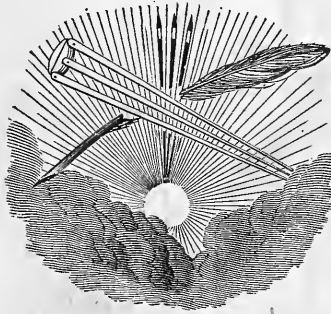
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THE
PHILADELPHIA
Photographer.

AN ILLUSTRATED MONTHLY JOURNAL,

DEVOTED TO PHOTOGRAPHY.

EDITED BY EDWARD L. WILSON.



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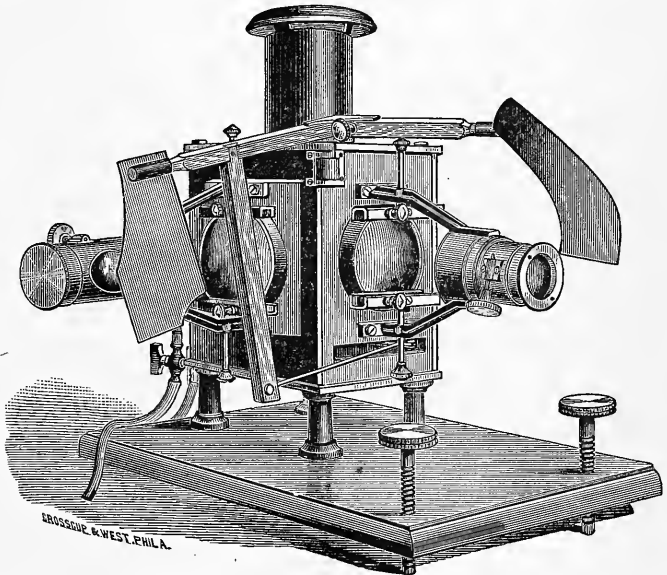
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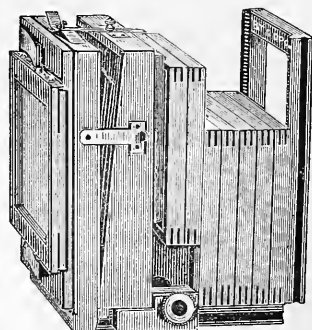
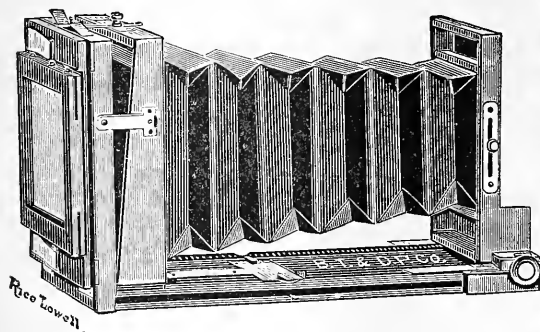
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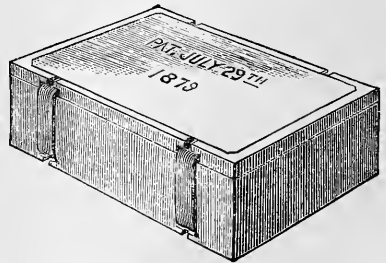
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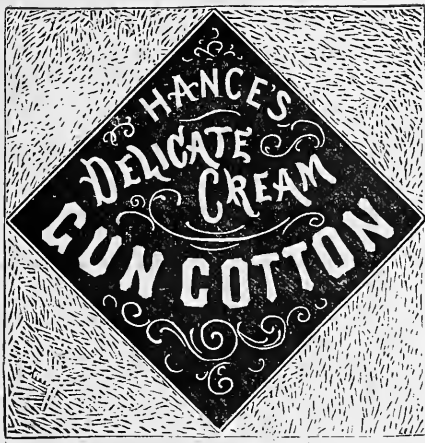
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- January.*—Studies. By H. P. ROBINSON, Tunbridge Wells, England.
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THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

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JANUARY, 1885.

No. 253.

A HAPPY NEW YEAR.

To our patrons one and all we wish a Happy New Year. The past year has not been one of which we could boast much. It was a year of great depression in prices, and consequently of business, and did not foot up very satisfactorily. And yet there were a good many cheerful things about it. Great progress was made in the production of work. There are a great many more able to master the intricacies of the new methods of working than there were a year ago. There are many more good photographers.

In some directions low prices have been systematically combated and beaten—better prices have been reached. In no direction do we hear of prices having become more depressed. We have held our own, and that is a good deal to be thankful for when the tendency of things is downward. Agitation of the subject has had somewhat to do with this, and we believe a reformation has started. Let us hope.

A few days ago, in conversation with an experienced newspaper publisher, he remarked how difficult it was now, in this age of competition and close prices, even to hold your own, to say nothing of securing new patronage. This is a fact. If business is to prosper, then extraordinary push must be given it by all the thought and effort in our power. So is it, if we would make aesthetic progress, we must think and prac-

tise, and push all we know how, if we would hold our own; and then we must do somewhat more if we would make any progress at all.

But cheer up, friends. There is every inducement to do all these things. We follow the most fascinating art there is. What in the world equals the pleasure of developing a plate? It is creation! Again the public is becoming more appreciative, and growing into a more intelligent idea as to the importance of our art, and *we* are growing. Take heart, then, and work away in the way you know is best, and we feel that "a good year" is sure to follow. Again, then, a Happy New Year to one and all for 1885.

A CONVENIENT DARK-ROOM.

DR. H. M. HOWE.

As most amateur photographers have experienced the inconvenience of attempting to use an ordinary bath-room as a dark-room for developing negatives, it may not be out of place to describe briefly how a very complete independent dark-room or house may be constructed. My own dark-room in the country is made as follows: It is built of matched boards—having a floor space of six feet square—and it is nine feet in height. Opposite the door is a three-light window, set with ruby glass, inside of which is fastened a piece of ruby paper further to modify

the light. Just beneath this window is a 2½ ft. cast-iron sink, with the waste pipe leading outside of the building. A shelf extends at the same height as the top of this sink—from it around the *sides* of the room—and one or two other shelves are placed on either side *above* this shelf. A convenient space on the shelf to the right of the sink, is covered with sheet lead arranged to drip into the sink, and a fender flashed with lead prevents splashing on the left. All the chemicals, etc., are kept on the right-hand side of the house, and fresh plates, and a convenient place for putting them into the holders may be found at the left hand.

The novel and most essential feature of this dark-house is the manner in which the roof is arranged. The finish of the house, at the top, is a broad cornice—and the floor of the roof is about 10 inches below the top of this cornice. The roof is indeed a large box or tank which is lined with roofing-tin carried over and tacked to the outer edge of the cornice. An inch lead pipe is carried from the *bottom* of this tank in a corner through the side below the cornice, by means of which the tank can be emptied. This is ordinarily kept corked. Another $\frac{3}{4}$ lead pipe, extending $\frac{1}{4}$ *above* the bottom of the tank is carried down into the dark-room to the right-hand side of the window—stapled to its frame. This is provided with two stop-cocks one of which carries water to a negative washing-box, which overflows into the sink—and from the other stop-cock the first washing is given the negative during the process of developing. At first water was taken to this tank from a neighboring roof, but it was found better to have it filled at will, by a pump in an adjoining barn. Of course, each one would adopt the most convenient method at hand of getting his water supply. A great advantage in this arrangement, apart from the convenience of having plenty of water on tap, is the fact that this sheet of water covering the top of the house helps very materially to keep the room reasonably cool in hot weather. This was further helped by making a light cover for the top of the tank of $\frac{1}{2}$ pine, which was made over a frame, giving the top a slightly arched form. By this

arrangement the water was kept cool, and insects and dirt were kept out of it. By having the drawing-off pipe extend slightly above the bottom of the tank, clean water is always had, as impurities settle below the mouth on the floor of the tank. The whole contrivance is quite inexpensive, and I have found it to be practically a very convenient developing room.

THE PLATINOTYPE, FROM AN ARTIST'S POINT OF VIEW.

To artists, and those possessing the art faculty to any considerable extent, there is no form of photographic reproduction yet introduced which possesses so many excellences for numerous classes of subjects as the platinotype. On account of its clear black tones and absence of gloss, it gives one at once the impression of an India-ink drawing—a mode of art which has always been highly prized—or, again, a mezzotint or aquatint engraving, processes of reproduction which have been favorites with artists on account of the beautiful way in which effects of light and dark are multiplied and given a permanent existence; and when one thinks of the hours of patient elaboration required to make a fine India-ink drawing, or the great expense of having an engraving in mezzotint or aquatint executed, and that by a trifling outlay any one may themselves be producing superb little works of art of the same character, one cannot be surprised that the practice of photography is every day becoming more universal. And there must be a rapidly growing preference for the platinotype-print. Indeed, people have been so long accustomed to the silver print on albumen paper that any change which seems a transformation of photography towards engraving, appears a startling innovation. But why should there not be more beauty in an engraving or analogous print than in the sharp brown or purple photograph, with its glossy, glaring surface, which must be held at a proper angle to be seen?

It is true that a negative of a certain kind is necessary to the production of a good platinum print, but those who are striving after excellence will find this an additional

incentive to the production of such work. In the first place, the subjects chosen should be good—remarkable for an agreeable proportioning of high lights and deep shadows, interspersed with a proper amount of half tones, and then with a good, reliable make of plates, and care about the exposures and development, there need be no difficulty in getting negatives that will produce beautiful platinum prints.

A still further and very important advantage in these prints is their susceptibility to receive retouching by artists or those in any degree skilled in the use of crayon or India-ink. In these days when art training, to a greater or less extent, is becoming so universal, what an important auxiliary this process becomes to hundreds who have been trained in the use of crayon or brush, and yet have not the time or skill to produce a work of art from beginning to end by hand and eye!

XANTHUS SMITH.

SAL-AMMONIAC AS A FIXING AGENT FOR SILVER PICTURES.

BY E. LIESEGANG.

WE have recently made some experiments with solution of sal-ammoniac as a medium for the fixing of bromide of silver gelatine plates. Plates which had not been exposed, when subjected to the action of the bath for several hours, lost completely the bromide of silver which they contained, in the film, and merely the pure gelatine layer appeared. The effect was more rapid when the plates were first treated with ammonia. Plates which had been developed with pyrogallie acid were slower in fixing under the influence of the sal-ammoniac solution than unexposed plates, but with a longer time the fixing was effectual. Plates containing iodide of silver in the film in connection with the bromide of silver, exhibited a trace of fogginess probably from the unaffected iodide of silver which did not injure them in the least and which entirely disappeared with longer treatment with the fixing bath, but the bromide of silver plates fix perfectly clear. We have not perceived in our experience any injurious influence of the sal-ammoniac solution upon the film with the

employment of plates prepared by the newer method with chrome alum. True, the plates assume in the bath a strong relief, and sometimes worm-shaped elevations appear, which, however, shrink up on drying and do not interfere with copying or in making transparencies. The tone of the picture is an agreeable brownish-black.

Old gelatine plates of Maudsley, prepared four years ago, did not comport well with the fixing agent; the gelatine softened very much and with slight rubbing separated from the plate; but with the new plates there is no such occurrence. Perhaps it would be advisable in such cases when we have to deal with soft gelatine to add alum to the fixing bath or previously to bathe the plate in solution of alum. When the plates had been developed with ferro-oxalate developer the relief was not great, but the plates did not fix much more rapidly than when pyrogallie acid was used as the developing agent. It is presupposed that the fixing should be done in the dark, inasmuch as the film acquires a color which is not got rid of during the fixing. These remarks perhaps, from a practical standpoint, are not of much importance inasmuch as the process requires several hours for its completion; but times may occur when it may be of advantage to use it in place of the hyposulphite of soda fixer. We have made experiments in fixing iodide of silver plates with sal-ammoniac, but so far our efforts have not been crowned with success. The iodide of silver seems to be much less soluble in this agent than either the bromide or chloride.

DOTS OF THE DAY.

TRY this—it will please you. My attention was called to the new intensifier as given by Mr. Gentile before the Chicago Photographic Association on November 5. I made solution as follows:

Bichloride of Mercury, . . . 2 drachms.
Water, 12 ounces.

I bleached my negative in this until it changed its color, when I washed and placed in this solution:

Sulphite of Soda, . . . 1 ounce.
Water, 10 "

At first the negative looked streaked, but this soon disappeared and became uniform.

I see that something similar was brought before the Amateur Society of New York, and reported in November *Times* and *Bulletin*.

It has supplied me with something of which I have felt the need, and I hope some other brother may try it and have like success.

I have recently been troubled with mottled effect on my negatives—sometimes so bad that I could not print from them. I was very careful to wash thoroughly—used Cramer's plate, and his late pyro and salicylic acid developer as given with every box of plates. I think perhaps it comes from using developer when getting a trifle old. It is more apt to occur with the second plate developed in the same solution. After fixing the plate in soda and alum, I wash well and then lay it in a solution of alum and oxalic acid, which generally removes the mottled appearance. If anyone has been troubled this way, and can help me to avoid it, I shall feel greatly obliged.

M. P. BROWN.

MEASUREMENT OF THE SPEED OF PHOTOGRAPHIC DROP-SHUTTERS.

BY W. H. PICKERING,

Photographic Laboratory, Massachusetts Institute of Technology.

THE usual method adopted for this purpose depends on photographing a white clock-hand revolving rapidly in front of a black face. The chief difficulty in the case is to maintain a uniform rotation at high speed. To avoid this difficulty, and to determine the uniformity of exposure of any particular shutter under apparently like circumstances, the following method has been suggested. In carrying out the experiment in practice, I have had the assistance of Mr. J. O. Ellinger.

A tuning-fork, B, with a mirror attached to the side of one of the prongs, is placed in front of the camera-lens. This mirror is so arranged as to reflect into the camera, c, a horizontal beam of sunlight, which

before reaching the fork, has passed through a hole in the screen, s, placed about ten feet distant. This produces on the ground-glass a minute brilliant point of light. If the fork be set vibrating, the point will become a short, fine horizontal line; if the fork be rotated about its longitudinal axis, the line will become a sinu-



soidal curve described on the circumference of a circle of long radius. A photographic plate is now inserted and the drop-shutter attached. On releasing the latter, it will be found that a portion of the sinusoid has been photographed, and the precise exposure may be determined by counting the number of vibrations represented on the plate.

The mirror employed should be somewhat larger than the lens to be measured, so as to cover its edges during the whole exposure. The mirror may be glued directly to the prong of the fork with strong carpenter's glue, after first scraping off a little of the silvering at the edges of the glass. The rate of the fork is then determined, by comparison with a standard fork, by the method of beats.

IMPROVED DEVELOPER FOR GELATINE PLATES.

At a recent meeting of the Society of Amateur Photographers in this city, Mr. H. J. Newton gave the following formula for a developer well adapted to bring out fully the details in a plate which has had a very short exposure:

No. 1.

Water,	1 ounce.
Carbonate of Soda,	15 grains.
Yellow Prussiate of Potash,	15 "
Sulphite of Soda,	5 "

No. 2.

Water,	1 ounce.
Chloride of Ammonium,	7 grains.
Pyro (dry),	6 "

Nos. 1 and 2 are mixed, and the whole poured over the plate. Development commences within a minute, and is usually finished at the end of three or four minutes. The proportions named above are correct for an ordinary drop-shutter exposure, but they are not arbitrary; they may be varied to suit different cases, as, for example, should the plate have been greatly underexposed, equal parts of Nos. 1 and 2 (with the pyro left out of the latter) may be added, a little at a time, to from three to four times the strength stated, until all the details in the shadows are brought out, without danger of producing green fog, which frequently appears from the excessive amount of ammonia sometimes used in the ordinary ammonia and pyro developer. In case of overexposure, half a grain to the ounce of developer of bromide of sodium is added, and the solution diluted with water.

Nos. 1 and 2 solutions may be kept in a more concentrated form, and diluted for use. The following are the right proportions for 10 per cent. solutions :

No. 1.

Water,	9½ ounces.
Carbonate of Soda,	480 grains.
Yellow Prussiate of Potash,	480 "
Sulphite of Soda,	160 "

No. 2.

Water,	9 ounces.
Chloride of Ammonium,	510 grains.
Solution of one drop of Sulphuric Acid in one ounce	
Water,	1 drop.
Pyro (one commercial ounce),	437 grains.

If No. 2 does not change from a purple color to a clear yellow color within an hour after mixing, one or two drops more of the sulphuric acid solution may be added.

To prepare a developer of the proper strength with the above solutions for the development of a 5 x 8 plate which has had a drop-shutter exposure take :

Water,	5½ drachms.
No. 1 solution,	2¾ "

Also :

Water,	7 drachms.
No. 2 solution,	1 "

Mix the two, and develop in the usual way.

The proportions given will be equivalent in grains to those stated in the first formula.

Mr. Newton described some interesting experiments, which substantiated very forcibly the value of the developer for instantaneous work. Two plates exposed precisely the same time, on the same object, were developed side by side, one with the developer as prescribed in the directions of the manufacturer of the plate, and the other with the above developer. With the ferrocyanide there was from a half to a third more detail brought out in the shadows, and development was completed sooner than with the prescribed developer; the negatives being more brilliant and vigorous.

Plates were shown which had been kept for some time, in which was seen the marking of the dividing mat, and a general foginess proceeding from the same cause. Mr. Newton had discovered that by adding a small quantity of bromide of sodium—half a grain to the ounce of the developer—all traces of foginess and all indications of metallic silver disappeared—the plates developing clear and free from such defects. He advised the use of the above remedy where plates affected as described were discovered. His theory of the developer was, that when the chloride of ammonium or No. 2 solution was mixed with No. 1, the chloride of ammonium was decomposed, ammonia being liberated, which, acting in conjunction with the yellow prussiate of potash and carbonate of soda, produced an extremely powerful developing agent, while the chlorine liberated from the chloride of ammonium acted or seemed to act as an agent to prevent the discoloration of the film.

Mr. W. E. Partridge showed two negatives which he had developed with the developer, which were very clear and of excellent printing quality. He was much pleased with the working of the developer. Mr. F. C. Beach stated that he had also tried the developer, with satisfactory results. It acted very quickly, kept clear, and was of a light straw color by daylight when first mixed, afterward turning to a cherry color. Free ammonia was easily perceived, showing that the action was similar to Mr. Newton's explanation.

Two negatives were shown by Mr. Beach

which had had extremely short exposures; one was developed with the formula as given, and was of a dense greenish-yellow color, the other by a modification consisting of the use of a sulphurous acid sulphite of soda solution of pyro in place of dry pyro, as advised in No. 2. It had a clear, grayish wet-plate appearance, and, in his opinion, developed up better, although somewhat slower. In each case an equal amount of detail was brought out in the shadows. A sample of the developer was shown, after it had been used in the development of two plates and had been standing for twelve hours; it was clear, but of a sherry color.

DARK-ROOM VENTILATION AND OTHER HINTS.

THE greater part of the chemicals used in photography throw off poisonous fumes when exposed to the atmosphere. The dark-room is generally the receptacle for these articles and where they are most used. Therefore, it should be well ventilated. I hear some say they have heard that before, and so have I. But you have not always had the plan put before you how to do it and not admit light. Have made two boxes two feet square, outside measure, and open at both ends. Have made three light partitions, two extending from one side six inches from either end, and twelve inches apart, extending to within six inches of the opposite side. Now from this opposite side and exactly between the two put another partition, extending to within six inches of the side to which the first two were attached. The partitions will best be fastened to the two opposite sides before putting the box together, but it is easier to explain it as I have attempted to do. Next fit the boxes in two openings cut at opposite points and next to the ceiling of your dark-room. Put the boxes in so that the air passes out at the upper side, as it is safest against defects or strong light this way.

Try making a good-sized head on a black ground with strong Rembrandt lighting. Print the negative plain and well in, and after mounting and burnishing in the usual way, cut with a sharp knife an exact circle, head nicely balanced. I use the cap

to my mammoth lens for a pattern to get the line. Now coat the back well with nice paste or glue and lay on a large panel mount, bevel edge, and you will find it to look quite pretty; put in your letter press over night and stand on an easel. Do not give your work away. And do not sit idle dark days when your accessories, chemicals, and screens, need fixing up. And read. Take THE PHILADELPHIA PHOTOGRAPHER, if you can't do more. It pays. Do not look on the fine artistic picture of some other photographer as a work of some genius. But look at it and say, "I can do that," and when you have tried, compare, and if it is not up try until it is. Make your own accessories and save your money, as well as train your genius. Keep the corners clean, fresh towels in your dressing-room, your entrance bright and attractive, and a pleasant smile to every one, and success is yours.

D. L. CORMANY.

OUR PICTURE.

IF we examine the works of the great masters of landscape-painting, we shall find that their preëminence consists in the power and beauty with which they embody upon the canvas some particular view in nature which has forcibly impressed itself upon their feeling and imagination, and not in the creation of a fanciful ideal scene which never had and never can have existence. It is no exaltation of their powers to make their genius independent of nature. Their greatness is in the measure of their adherence to the actual truth of nature, manifested to them in the power of selecting from the many phases that one which most completely expresses the idea dominant in their mind.

This power is not meted out in equal measure to everyone, but he who possesses it will find in nature the full realization of his most imaginative conception.

"There is not a moment of any day in our lives," says Mr. Ruskin, "when nature is not producing scene after scene, picture after picture, glory after glory, and working still upon such exquisite and constant principles of the most perfect beauty, that it is quite

certain it is all done for us, and intended for our perpetual pleasure."

Who can look upon the series of beautiful pictures which it is our delight to show the readers of our magazine, and not be candid enough to admit that, although actual transcripts from nature, they are pervaded with a refinement of sentiment, and a beauty and vigor in the expression of the idea intended, which only the highest of our modern landscape painters possess.

Truly the art is in the mind, but the realization of it is in the world about us.

"Wings have we, and as far as we can go
We may find pleasure."

But our art demands the service of a mind and heart sensitive to the beauties of nature, without which everything will be but as "blank ocean and mere sky."

Yet, with characteristic modesty, Mr. H. P. Robinson, the creator of these lovely views, tells us: "It is quite impossible for anyone who is in the habit of composing a picture to help getting them when he has such capital material to his hand. He scarcely requires to have ready-made ideas; ideas, as it were, jump upon him. Happy thoughts arise to him with the greatest punctuality. It often happens that a subject occurs, and is secured in a few minutes, with very little demand on the skill of the photographer. As an example, I will mention one subject, for which I can only take the credit of seeing it when it happened. One day, I could not have the keeper who usually attended me, and I had to take an undergardner. This man was a pictorial treasure. He was old, and had scarcely been further from the estate than Mold in his life. He was essentially a happy-looking old man, and full of native wit. I had been looking for a view some way off, and, returning, saw my old man setting upon a rail in the hedge, surrounded by the models, who were chaffing him, in Welsh and English. They made a picturesque group, and I heard one of them say, 'He never told his love.' Here were subject and title together, and were at once secured."

How many such kindred charming scenes are daily passed unnoticed by us who are not gifted with the same artistic feeling

which Mr. Robinson has in such preëminence.

Let us examine the individual beauties of these pictures, all of which breathe an air of pure country life. These scenes are laid in Gelli Gynan, in North Wales, a lovely spot, far away from the smoke and rattle of the railway train, surrounded with heather-covered mountains overlooking the poetic vale of Clwydd, and half-way up the mountain a wild-looking lake or tarn, the whole country filled with all the beauty which delights the artistic sense; added to all this is the charm of solitude, and freedom from those prying eyes so annoying to the votaries of our art.

Numbering from the upper left-hand corner across, the first picture is called "Come Along," representing two graceful country lasses, calling to their hesitating companion to wade across the little stream. Here is the cool freshness of a misty spring morning. The sky, the water, the clouds, the dim horizon—all convey the same feeling. The figures are so disposed in the foreground as to make them an essential part of the whole scene; they seem indispensable to the conception. We should miss much were they not just where they are. Yet there is no appearance of design; they seem casually to have stepped into the scene, are going about their own business, unconscious that any eye is gazing upon them with delight.

The next picture is called "Feeding the Calves." The fine gray tone and varying outline of the hills, the conception of motion in the trees that extend their branches in the air, the dark foliage contrasting with the broad, clear light of the sky, give a force and harmony to this composition which increase the pleasure the longer we dwell upon it. The beautiful pastoral occupation is in harmony with the rural surroundings.

The next picture is called "A Trespasser." We suppose these fair marauders have wandered upon forbidden ground; but we are delighted that they have thus transgressed, and given us so charming a picture. The distribution of light and shade is masterly. Note the beautiful atmospheric effect, and softness and variety of tones in the foliage and sky. There is a feeling of repose in this scene which is contagious.

The next is (first on second row) entitled "At the Mill-door," a scene familiar to country life, but not the less beautiful. The grouping here is just such grouping as we see in nature. There is no appearance of prearrangement, no set posing of lay figures. The subject flows naturally from the theme, and the eye is delighted with the unity of the design. The distance, too, is rendered with fine effect by the interposition of a single figure between the principal group and the far-off horizon, where the cow is quietly grazing beneath the shadow of the tree.

The next picture is "Reading a Notice in Welsh and English upon the Mill-door." One of the girls, who is evidently better initiated in the mysteries of written language, is explaining the purport of the message to her less gifted but equally inquisitive companion.

"He Never Told His Love," comes next. Mr. Robinson has told us of the genesis of this exquisite composition. This picture is like the beautiful glow of a calm summer noon. It is the rest after meal-time, and the old farmer sits upon the hedge to enjoy his hour with the sprightly girls who have gathered around him, telling of the love conquests of his youth. The eye seems to wander at liberty over the air-clad field to the heather beyond, and comes back as from a delightful journey to the group in the foreground, whose utter freedom from care, and abandonment to the delights of the moment, make us loath to depart. What can be more charming than the glimpse we have of the little stream upon the right, or more beautiful than the broken sky above the hills? The softness of the light in this picture is exquisite. The clouds are there for a purpose, and the softness of the light which is diffused over the whole landscape is in accordance. We have seen pictures in which clouds have been foisted in simply because the photographer deemed it necessary to have clouds, while the subject itself was bathed in the full light of a cloudless sun; but here, the light upon the scene is modified by the clouds which veil the sun. There are no broad, heavy shadows, but soft and imperceptible gradations in tones.

The next picture (first to left upon last

row) is called "A Chat with the Miller." It is a companion to the scene at the mill-door. The attitudes of the figures in the foreground are very expressive, and the good-nature of the miller, leaning out of the window for a friendly gossip, is admirably portrayed. There is much richness and warmth in the tone of this picture, and the detail in the foliage is perfect.

The next picture is called "Listening to the Song of the Birds."

"It seems a day—

One of those heavenly days which cannot die—
When everything is in that sweet mood
When Pleasure loves to pay
Tribute to Ease; and of its joy secure,
The heart luxuriates with every living thing."

This picture is poetic in its beauty. There is a harmonious blending of softness and vigor. The arrangement in the masses of the lights and shades is unequalled by any photograph we have ever seen. The reflected lights from the more highly illuminated portions of the picture mingle beautifully with the deeper shadows. The distance, and its relation to the far-off sky, is finely rendered. The figures have all the bloom of health upon them. Everything is so true and real, without being vulgar, so full of all the feelings and associations of country life, that we who pine, pent up in city walls, are drawn to such a scene with a feeling of affection.

The last picture is the "Gelli Gynan Mill," a quiet view, exhibiting a fine feeling for the proportions and conduct of light and shade.

The photographs from which these reductions were made are 12 by 15 inches in size. They have been sent to the New Orleans Exposition, where such of our readers who visit the great world's fair now opened may have the pleasure of feasting their eyes upon their beauties.

Mr. Robinson's negatives are upon gelatine plates. Our reproductions upon collodion, which, though diminutive, have faithfully translated the charms of the originals. The prints are upon that excellent brand of albumen paper, the N. P. A., of Messrs. E. & H. T. Anthony & Co., No. 591 Broadway, New York.

CONCERNING THE OLD SILVER BATH.

MR. E. L. WILSON.

DEAR SIR AND FRIEND: I see by way of your journal that the dear old "wet process" still has its friends in the metropolis of America, and that at a meeting of operative photographers in New York, November 5, 1884, they discussed the old subject of fog and acid, and I was somewhat amused by the contradictory character of the debate. I fear that none of them knew very much about the real secret of *chemical fog*, though some good guesses were made. I hope, therefore, a few suggestions and a few explanations from an old hand at the silver bath will be found useful. First, let it be known that nitrates are compatible; that a silver bath will do good, reliable work, if it contains a considerable per cent. of nitrates of ammonium, potassium, cadmium, sodium, lithium, cuprous nitrate, ferrous nitrate, or nitrated organic matter, or either, or all of them at once; and that a silver bath containing citric and nitric acids *sufficient to redden instantly* blue litmus paper will work in every way better than a nearly neutral one, and with any collodin that will work in any bath, except one made alkaline perhaps. Second, that the less doctoring you give a bath, the better. Third, the silver bath is the most stable and reliable agent known to photography. Why? The nitrates of the baser metals harm a bath only by deceiving the operator as to strength when present in any rational quantities, because they do not *require* any *nitrogen* to *complete* their composition, and *cannot act* as a reducing agent.

Free organic matters, as albumen, for instance, will cause fog, because they assist the developer and produce a *rapid* reduction of silver, which is precipitated nearly evenly all over the plate. But when organic matter has *absorbed* sufficient nitric acid to complete a simple nitric compound, the same as with the ammonium or cadmium, it *no longer* causes fog, and furthermore, from long observation, I am convinced that it *adds* to the sensitized plate a *quickenning power* without the defects of organic matter in the *developer*, quite extensively used fif-

teen years ago. Do you ask why plates continue to fog—if my position or statement is true? Well, it is because too *few* baths are used, and too small baths; so that organic matter is introduced much faster than the nitric acid can combine with it, and so render it *compatible* with the *silver*, and the *more* so the nearer neutral the bath is, and the remedy is obvious. Use two to four gallon baths, and enough of them; the amount of work required is the only gauge I know. In my practice I find one bath of one gallon one pint, and one of two gallons, worked in conjunction, to give me constant good work for more than six months at a time without even filtering, or the addition of a drop of anything except plain silver solution (not iodized), forty grains to the ounce, to keep up quantity.

When a bath becomes charged, as it will in time, with too much alcohol from the collodion, it will begin to work *unevenly*; the bath *balks mechanically*, that is, the water of the bath no longer sufficiently absorbs the alcohol and ether from the collodion to allow the complete formation of the haloid salts of silver, and that spongy porous structure of the film so favorable to development through and through. Such a bath needs treatment to expel the alcohol. Take it out of the holder and filter it, to remove the insoluble matter collected at the bottom or in suspension, and evaporate in a *porcelain* dish over a kerosene or gas stove to one-third of the original bulk; cool, and add pure water to reduce to forty-two grains to the ounce by hydrometer test. It will become somewhat milky, and should be filtered through Lawton filtering cotton, packed in the neck of the funnel, close enough to secure perfect transparency of the filtrate, and to which should be added sufficient uniodized silver solution, forty grains to the ounce, of pure water (I use that from melted transparencies kept bottled for the purpose), to fill the holder; and if you have not neutralized the bath before boiling, or after, nor at all—for it never should be neutralized—it will work the first dip splendidly; though if the quantity of fresh solution added be quite large, it may show a tendency to fog after a few plates have been sensitized. If so, add a few drops

of citric and nitric acid; and, after the acid has had *time* to act, it will probably work well and regularly until again surcharged with collodion solvents.

I have never succeeded in getting the finest results from an *all new* bath; I like best an old one remodelled as described. I believe that some organic matter incorporated (not mixed) with the silver serves a beneficial purpose.

I do not know how much free acid my bath contains, but I do know that it will redden blue litmus quick. I think Mr. Black used as much as an ounce to the gallon of bath, but he substituted chloride of calcium or magnesium for the usual bromide in his collodion—about one grain of the chloride to the ounce of collodion; and such a collodion will work with surprising results in a bath only slightly acid. I prefer dried chloride of magnesium one grain, iodide of cadmium two grains, iodide of ammonium three grains, alcohol half an ounce, ether half an ounce, and about five grains Anthony's cotton for such a collodion.

To keep a bath perpetually in reliable order, it is only necessary to drain off the alcohol by evaporation as often as needed, and to keep up the quantity by addition of fresh solutions. Add acid in sufficient quantity if bath fog should occur, but be *sure* it is the fault of the bath; it may be collodion or developer. I make developer twenty to thirty grains of iron to the ounce, according to the *temperature*, 60° to 90° F., using the stronger for the lower temperature, and one fluid pound of developer should contain one and a half to two ounces of acetic acid. For under-exposures, add a little plain stock solution of iron, made sixty grains to the ounce; or warm the thirty-grain developer to 100° F. for over-exposures, dilute with water, and add a little acetic acid. I am using a modification of the formula for collodion sent with Shering's celloidin:

Iodide of Ammonia, . . .	48 grains.
“ Cadmium, . . .	32 “
Bromide of “ . . .	24 “
Anthony's cotton, . . .	72 to 80 “
Alcohol,	8 ounces.
Ether,	8 “

Mix strictly in the manner of the printed formula sent with each package of the cel-

loidin, which can be procured of Mr. D. Bachrach, Baltimore, Md.

The modification above is for use with Anthony's cotton, and only relates to the proportions of the salts. Shering's formula should be in every studio, as it gives the best manner of incorporating the potassium salt I have ever seen. I prefer to make it eight or ten days before I need to use it. It keeps splendidly, and he is doing a small business by the wet process which cannot use a half gallon lot to the last ounce.

F. M. SPENCER.

MANSFIELD, PA., Dec. 11, 1884.

GERMAN CORRESPONDENCE.

Photography in Germany—New Photographic Tracing Process—Enlargements on Emulsions—Enlargements on Canvas with Emulsion—Standard Sizes of Plates and Plate Holders—Obernetter's new Enlarging Process.

FROM letters received from America, I perceive that the photographic tracing process is very generally employed. There are four or five processes. One of the most interesting is Chennevier's, a combination of the ink process; and the Arvan process, by which positives are made direct from positives. Albumen paper is sensitized by washing the back with a brush, dipped in a solution of six parts of bichromate of potassa in one hundred parts of water. To diminish tendency to rolling, allow a free margin around the border. It is then dried, and, if properly done, presents a golden-yellow color. Of course, this is all to be done in the dark. If this paper be kept some days in a dark, dry place, it is all the better, inasmuch as the albumen upon the paper acquires a more invaluable character, which condition is more favorable to the process. But care should be taken not to carry this too far. The original from which the copy is to be made must possess a certain degree of transparency; for example, similar to prepared drawings upon paper. The exposure is done in an ordinary copying frame. First, the original is laid down, then the sensitive paper upon it. The exposure is continued

until the image appears upon the back side of the paper. After exposure the copy is carried into the dark and put in water—river or rain water—to dissolve and wash out all the remaining soluble albumen. The copy is dried with blotting paper, and washed over whilst damp with a brush and ordinary ink, the border being left again free. Do not be too slow about this operation, or the ink will dry during the coating. Whilst still wet, wash off the ink by means of a stream of water, or a brush dipped in water, suspending it during the operation at one corner. The ink is easily washed away from the portions affected by the light; but the parts where the paper has not been affected by the light, which is indicated by the depressions, allow the ink to take, and present a copy of the original finally. The copy is laid in water to dissolve all remaining bichromate of potassa.

The emulsion process has been applied in a variety of ways to the positive process. Up to the present all pictures which I have seen have a somewhat gray tone, which does not hurt them when designed for painting over. Enlargements on camera are here prepared. Herr Halwas, for this purpose, has found it practicable to rub over the canvas with citric acid, and then with bromide of silver gelatine emulsion, which is best effected by means of a brush. Upon this emulsion the image, if the negative is large enough, is improved by contact in a copying frame and exposure to the flame of an ordinary coal-oil lamp, the time required not being more than ten seconds. Herr Jopp has in this way also achieved excellent results. He recommends, however, the following method to deprive the canvas of all substance of a fatty nature, and to make it dull for the reception of the image: First of all, rub it with ammonia, then wash and apply the citric acid, again wash, and finally apply the emulsion. If it is desired to have a strong image—which, by the way, is not necessary if it is intended for painting, being rather a disadvantage—the chloride of silver emulsion should be used.

Last year English manufacturers proposed uniformity in the stops of lenses and threads of the objectives. A like awakening to

the importance of a uniformity in sizes of plates is at present here occupying attention. At the meeting of the Association of German manufacturers and dealers of photographic articles, it was determined unanimously to adopt the following sizes for dry plates as normal: 9 x 12, 12 x 16, 13 x 18, 13 x 21, 18 x 24, 24 x 30, 30 x 40, 40 x 50, 50 x 50 ctm. Each maker and dealer shall make it his duty, upon the sale of any new camera, or repairing of apparatus, to urge the selection of kits adapted to the above sizes, so as to supplant gradually the old styles. Until this ideal is attained, of course it will be necessary to make the usual sizes; but to establish in some measure a uniformity, the following intermediate sizes may be made: 10 x 13, 16 x 21, 21 x 27, 26 x 31, 29 x 34, 39 x 39, 39 x 47, etc. A uniformity in sizes of plates is a consummation devoutly to be wished for, but photographers in general will not be disposed to exchange their present holders for those of the proposed new sizes, and it will last so long as the uniformity is general.

The latest novelty of the day is Obernetter's (Kupfer licht Drucke), a photo-engraving process, which produces the most beautiful pictures or half tones, and in the simplest manner. It resembles the celebrated photographeur process of Goupil, but has nothing in common with it, Obernetter etching his pictures like Klio in Vienna. The Obernetter process differs from this, inasmuch as it does not require any especial etching liquid, but effects the etching by the galvanic battery directly in the copper. The pigment process is not used at all. The gelatine negative is in a very simple manner detached from the glass, and by immersion in a chloridized bath converted into a chloride upon the copper. The effect is surprising. I witnessed an operation in Obernetter's gallery; the whole was complete in an hour. The degree of depression which can be obtained by the baths is astonishing, amounting to one mm. The new photographeur process occupied the attention of the discoverer more than a year, so now he makes it public, having overcome all the little obstructions which the practical working of any new invention

necessitates. The plates can also be made in steel, and from fifteen to twenty thousand impressions struck off. Obernetter will not sell the process, but supply plates, which may be printed from by any copper-plate printer. A plate 5 x 8 sells for 50 marks (about \$12). Yours truly,

H. W. VOGEL.

MOSAICS FROM MOSAICS.

Good gentlemen and ladies, we come to you once more with our annual presentation of useful matter for your help, under the cover of *Mosaics*. It is its twenty-first appearance. It is more than usually good, we believe, and you cannot afford to do without it. The pieces of color, and form, and help of which it is composed average smaller in size than heretofore, but there are more of them, and, therefore, the whole work will be found more attractive. This is all the more certain, because the skilled workmen who formed the pieces are of unusual talent, and have produced their best.

In photographic history there is no instance recorded where so much has been given for so small a sum as is given in *Photographic Mosaics*—144 pages for 50 cents. A sort of base is given for the work in the *Pot-pouri of the Past*, and then the *Mosaics* is formed and completed by articles on almost every process or question liable to come up in the practice of our art and our business. A few gems are picked from the rest—copies merely—and given below; but to get their full value you must see them in their original form, and to accomplish that, as an addition to your library, as a daily dark-room companion, we are sure you will find *Mosaics* for 1885 indispensable. It is now ready. See the list of articles in the advertisement, and secure a copy before the edition is exhausted. Nearly three thousand copies were sold before the work came from the bindery.

Having seen how rapid plates can be made, we may next inquire how rapid they should be made for portrait and landscape work? It must never be forgotten that exquisitely sensitive plates can only be handled safely in perfect darkness. No matter what ill-informed persons may say to the contrary,

there is no light before which such plates will not rapidly fog. Therefore, for general use, less sensitive plates, say from thirty to fifty times as rapid as the ordinary wet plates, are far more useful.—Prof. H. D. Garrison, Chicago, Ill.

Nothing succeeds so well as success; he who is doing well can easily do better; people are naturally willing to help those who can easily help themselves; the next best thing to a real, thriving, rushing business is the outward appearance of such.—R. E. Wood, St. Helena, Cal.

I have found that good prints may be obtained by using for a sensitive bath

Nitrate of Silver, . . .	3 ounces.
Nitrate of Soda, . . .	1½ "
Ammonia, (more in winter) 1 or 2 drops.	
Water,	30 ounces.

Keep the bath constantly up to full strength by adding, from time to time, from a sixty grain solution to the ounce.

For toning, use thirty grains of acetate of soda to every grain of gold. Keep it ten days before using. Never filter, but let it settle, and decant the clear portion for use.—H. K. Seybold.

I use a sponge to spread the paste instead of a brush, as it seems to make smoother work; and after placing the print on the mount I cover it with blotting paper and roll it a couple of times with a wooden roller covered with cloth. Of course, these details are "old stories" to the professional photographer, but they may help some brother amateur a little on his way.—Dr. G. F. H. Bartlett, Buffalo, N. Y.

Here is one thing artists are often called to do, mount photos on cloth and burnish them. I spoiled a large number before I got the process down fine, so will give the best way I have found: Take a wide board, cover it with cloth or paper, then stretch the cloth (bleached is the best) you wish to mount your print on, evenly tacking it in place; mount your prints on that, leaving an inch or so of spare cloth at one end of each print; let them dry; then trim, leaving the inch of spare cloth on the end; take a cardboard larger than the picture, lay the cloth side on the cardboard; double the inch of cloth over the edge, holding well in place until you get it started in the burnisher. With careful

work, you will not lose one in fifty.—J. C. Moulton, Fitchburg, Mass.

If photographers in general would use a little more judgment in the development of dry plates, there would be fewer complaints, fewer failures—more profit and greater satisfaction to all, from the plate-maker to the customer who gets the photographs. It will never do to condemn a plate because it does not happen to give satisfactory results by the same development and treatment that another one gives all that can be desired by.—James Inglis, Rochester, N. Y.

Now ask a good, living price, strictly in advance, subscribe for THE PHILADELPHIA PHOTOGRAPHER, or some other good book, and, at the end of six months, if you don't think more of yourself, do better work, and have a better patronage, I will never climb under the focussing cloth again.—E. E. Van Epps, Hanover, Mass.

It is perfectly reasonable to suppose that the dry-plate manufacturer wishes his patron to succeed in the use of his plates. It is equally reasonable to presume that he will tell him what developer will give the best results. Then why not use the best developer? Why pay dollars for plates and begrudge the few cents and the few minutes that are required to furnish the best developer?—Dry-plate Maker.

Another excellent method for reduction of intensity I have found to be a mixture of ferricyanide of potassium (red prussiate of potash) and hyposulphite of soda. I think it was first recommended by Farmer, of England.

Both solutions are of equal strength. About one ounce of ferricyanide to sixteen ounces of water, and the same strength of solution for hypo. The reduction is effected gradually and entirely under control. It has also the advantage of being employed as a local reducer; for this purpose all that is necessary is to pour over the portion requiring reduction with the ferricyanide and then subject it to the hypo bath. I have also read in THE PHILADELPHIA PHOTOGRAPHER, of the same solution being used for reducing over-printed paper photographs with great success, without affecting the tone of the print in the least. I found it to be true.—H. K. Seybold.

This is an epoch of great advancement in photography. Our journals are kept alive by articles and communications which tend to improve the quality of photographic work, but I cannot remember having read anything relating to the improvement of photographic honesty, and I think that needs looking after quite as much as the quality of the work—perhaps more, for, before gelatine plates came in, photographers were making good pictures, but the honesty and respectability of most of the profession was not of the tintype standard, and without honor no man can ever hope to make his calling respectable, no matter how much so it may be with other men; in his particular instance it will be degraded and dragged down to his level.—Harry C. Platt, Nantucket, Mass.

Not long since a gentleman wrote to me inquiring how he should proceed to blacken new stops for his camera. As it is a neat workshop recipe, which many an ingenious photographer may like to use sometimes, I will jot it down for his benefit and Mosaics:

First clean the brass by dipping it in dilute aqua fortis. Rinse off the acid and immerse in the following solution:

Water,	3 ounces.
Arsenic,	120 grains.
Protosulphate of Iron,	120 “

Dissolve the arsenic by the aid of heat; add the iron. Let the brass article remain in the solution until sufficiently blackened. Rinse, and then immerse in a solution of sulphuret of potassium. Rinse again and dry in sawdust. Varnish with brown shellac varnish and heat as hot as the varnish will stand. If a mat surface be preferred, the varnish may be omitted.—W. H. Sherman, Milwaukee, Wis.

A paste for sticking positive prints:

Arrowroot, 1st quality,	3½ ounces.
Water,	28 “
Gelatine, in sheets,	¾ “
Methylic Alcohol,	2 “
Concentrated Phenic Acid, 12 drops.	

Mix the arrowroot with seven ounces of water, so as to form a paste, then add the complement of water and gelatine; boil, and finally add the phenic acid and alcohol.

Stir until a perfect mixture is obtained.—Old Graybeard.

There are plenty of cheap hands to take the places of skilful workmen, when the latter will no longer be trod under by the devil—*low prices*. If this beloved art of photography is made to descend to the depths of a mere matter of rivalry of rates, then we had better look elsewhere for our daily bread. Give your years, the best part of your life, friend workman, and have the heart's blood wrung from you by the outrageous wretch—*low prices!* Discouraged? Find me a single workman who is not discouraged as much, if not more, than the proprietors, and I'll point you out a modern saint, who is willing to be imposed upon, trod to the dust, and lie there like a shackled slave, not daring to lift his voice for *Mercy, sweet mercy, sirs!*—H. S. Keller, Utica, N. Y.

In the first place, avoid scattering subjects. By this I mean subjects in which there are a great number of objects spread out, all of about equal consequence or interest, and all receiving an equal amount of light and shadow. In such a scene the eye is distracted when it comes to view a representation of it on a flat surface, owing to each part claiming equal attention. The observer is robbed of the pleasure resulting from contrast, the repose of one passage, and emphasis of another.

In selecting bits, as artists call portions of pictures, picturesqueness, or some striking or peculiar character, is an important essential. People generally overlook, as common or vulgar, many capital subjects, objects which time and weather and wear and tear have angled and furrowed into pictures, and which if caught under some grouping, or effect of light and shadow peculiarly essential to them, or most to develop their peculiarities, arrest the attention at once when conveyed to paper.—Xanthus Smith, Philadelphia, Pa.

While imperfect washing may be the cause of some stains, yet I am satisfied that the imperfect fixing is the prime cause. Imperfect washing of plates is the cause of stains on albumen paper, we having lost several batches of prints before we found the cause. A number of negatives were brought by an

amateur friend to be printed from (unvarnished), and many of the prints coming in contact with those from these negatives were green with soda stains. Washing boxes should be built of wood and made with as much space below the plates as is occupied by the racks of plates being washed. This allows the hypo to fall to the bottom; and if a siphon is used to draw away the solution from the bottom a more thorough washing takes place than by any other way. A stream of water running on a plate will not wash it a tenth as well as if the plate is placed in a dish or box of water and left to soak, changing the water occasionally and adding fresh thereto.—William H. Rau, Philadelphia, Pa.

The preëminence of the great masters in art, whose works still live to delight us with their freshness—for nature is never old or stale—depends not on any fantastic excellency having no existence but in their own minds, but in the vigor of selection and the embodiment of some particular phase of nature which has impressed itself upon their feelings.

Such work has a cool, refreshing air, which stimulates the mind to an activity of thought and feeling akin to that which engendered it.

Taste consists wholly in the possession of this feeling, this sense of the beautiful. It is not vouchsafed to everyone. He who possesses it will find its full realization in nature, and not in the depths of his own consciousness; and he who has it not will wander over the universe, and yet be shut up in a nutshell. Certain forms in nature embody certain characteristics, as of strength, activity, grace, repose, etc., and the artistic sense is the exercise of the mind in the selection of any particular embodiment of the idea.—John Bartlett, Philadelphia, Pa.

Some practical body has proposed that when great uncertainty as to exposure exists, the shutter of the dark slide be pulled out an inch at a time, so that one end of the plate receives more exposure than the other, with gradations between. We can heartily commend this plan for all such subjects as are not liable to great fluctuations of light. And so, to answer the question with which we began, we say that a properly timed negative is one where the light has so acted

that the application of the developer gives a negative with a perfect *seale of tone*, from clear glass, in the darkest parts, to chemical opacity in the high lights.—Ellerslie Wallace, Jr., Philadelphia, Pa.

Professionals, amateurs, laymen, when worn with fatigue, nervous from much confinement at the treadmill desk, before the brain fires, or softens; when the poisonous drug and deadly revolver begin to crowd themselves upon your notice as possible friends, put on your hat, shoulder the seductive camera, and take a stretch over the fields. Swallow some country air; take a health lift for the weary brain such as the doctors cannot give.—J. F. Ryder, Cleveland, Ohio.

What developer shall we use? The ammonia is the nearest in point of time and action to the wet process, but it is such uncertain working, no two days alike. To-day we can work, say, three minims to the ounce of developer with fair results; perhaps tomorrow it may demand five; then look out for foggy times.—George Ennis, Philadelphia, Pa.

The artistic quality of the picture also depends upon the proper rendering of the foliage. Nothing can be so unsightly in a picture as a dense mass of foliage, without any detail or half tones. It offends the artistic eye, and will ruin a view, no matter how beautifully rendered may be the sky or the rest of the picture. Indeed, there are certain devices by which badly taken skies may be remedied, but there is no cure for ill-defined and flat foliage. To secure good results with foliage, a perfect calmness of the atmosphere is demanded; the wind must be still. A scene such as Keates describes would make a beautiful photograph:

"No stir of the air was there;

Not so much life as on a summer's day

Robs not one light seed from the feather'd grass,

But where the dead leaf fell there did it rest."

—An Old Amateur.

STUDY YOUR PATRONS BEFORE SITTING THEM.

BY L. M. RICE.

As a rule, it may be truthfully said that nine out of every ten photographers make one sitting, at least, for each patron before *thoroughly* taking into consideration the case in hand. The old plea, as an excuse for hurrying up, to save the plate before drying, will hardly be offered in these gelatine times, and the artist may now take ample time to adjust the hundred and one things that go so far in the patron's mind toward giving satisfaction.

Does your sitter require a shadow or a plain lighting? or a side or a front view? Determine this before sitting. Is the patron an old man? Do not lose his individuality by placing him in some doubled, twisted position, or attempt a lighting for which he is poorly fitted. *Study to preserve what belongs to him.*

Is the subject a young lady? Well, this is something different, but no less a care for previous study. Do not get so completely inflated with the idea that if you get an excellent chemical effect, and what you conceive to be a fine attitude, that the result *must* necessarily please her and her many friends. Remember that this lady has some ideas of her own, and it is not necessary to make a sitting or two before learning this fact. A stray lock of hair, or an unbecoming wrinkle in her dress—both of which the artist *should* have seen and adjusted before sitting—oftentimes calls for a resitting. The most natural expression is the one that comes to all subjects without thought of effect, and is the one the photographer should seek to obtain by appearing easy and natural himself.

Is the subject a baby? Study to approach the little one carefully, and in a way that shall win, not only the child, but the mother too. Do not forget that where the babies are well handled, the parents are sure to go. The littles ones have natures to study, and the better we understand them, the more captivating will be our success. Remember that it is not on the *surface* of things we find our highest success, but we should study, study *deeply*, for these we shall find our reward.

MR. LEWIS H. BISSELL, of Effingham, Ill., Mr. C. O. SMITH, of Saybrook, Ill., and Messrs. C. HEINBERGER & SON, of New Albany, Ind., received honorable mention in the local papers of their respective cities for the excellency of their work.

SOCIETY GOSSIP.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Stated meeting, held Wednesday evening, December 3, 1884, at No. 31 S. 15th Street. The President, Mr. Joseph W. Bates, in the Chair.

The minutes of the last stated meeting having been read and confirmed, the Secretary read a report from the Executive Committee, announcing that the old quarters of the Society, at No. 520 Walnut Street, which it had occupied for twenty-two years, had been vacated December 1, and that a lease had been secured for the new room in which the Society was assembled, in accordance with the resolution passed at the last meeting. Certain expenses for removing partitions, plumbing, carpentering, etc., had been incurred, and more would be necessary to furnish the room properly so as to make it convenient and attractive to the members, in order to meet which, and avoid as much as possible drawing on the funds of the Society, it was recommended that each member contribute to a fund for this purpose such amount as he felt willing to pay.

On motion of Mr. Coates the report was accepted, with a vote of thanks to the committee for their labors, and authority was given them to proceed with the furnishing of the room according to the suggestions made in their report, and in case the necessary amount was not raised by subscription, to draw on the treasury for what might be lacking.

Messrs. F. Francis Milne, James Bramble, and Frank G. Cauffman were elected active members of the Society, and two names were proposed for election at the next meeting.

The President announced the death of Mr. Robert W. Leaming, an active member of the Society, which occurred November 9, and Messrs. John C. Browne, David Pepper, and Charles A. Pancoast were appointed to draft resolutions of regret for transmission to the family.

Mr. Browne, in view of the growth of the Society, moved that the Executive Committee be directed to consider the advisability of its becoming incorporated; to ascertain the cost thereof, and to report as soon as possible. Carried.

A question in the box asked, "In using gelatine plates, is it better to use very rapid plates for all purposes, or to use plates of different rapidities—that is, slow for landscapes, and quicker when required?"

Mr. Wood advocated very quick plates, on account of securing quickly changing effects in landscapes and figures, and saving time with poorly lighted subjects.

Mr. Rau, though preferring slow plates, used quick ones very largely, thereby obviating the difficulty of motion in foliage.

Mr. Bell recommended the use of slow plates as giving richer and more brilliant results, and claimed that even with foliage, by capping the lens during puffs of wind, and making the exposure by instalments, what motion did show would be less in proportion to the whole exposure than was likely where a very short exposure, with a quick plate, was given.

Mr. Corlies used quick plates almost entirely, and showed a number of studies of figures and flowers which indicated that they were equal to slow ones.

Mr. Carbutt thought that if the emulsification was not carried to such an extent that density in the negative was lost, that quick plates were equal to slow, but on the whole would recommend for most purposes those about as rapid as his B plate.

Mr. Browne showed some highly successful pictures of animals, mostly dogs and cats, taken by Mr. W. W. Whiddit, of Newburgh, N. Y., which were much admired.

Messrs. Wood, Bement, and Edge exhibited some good pictures, those of the latter of children in various interesting attitudes and occupations, showing excellent artistic work.

On motion of Mr. Browne, it was decided hereafter to hold informal conversational meetings, at which no business should be transacted, on the third Wednesday evening of each month, beginning in January, 1885, and the Secretary was instructed to include notice to that effect on the cards sent out for the regular meetings each month.

The President announced the appointment of the following gentlemen on the Committee on Election of Members: Messrs. H. T. Coates, Frank Bement, Jo-

seph H. Burroughs, Frederick A. Walker, Edward W. Keene, William L. Springs, Galloway C. Morris, Charles R. Pancoast, and William A. Dripps.

Adjourned.

Sixty-seven members and visitors were present.

ROBERT S. REDFIELD,
Secretary.

ROCHESTER PHOTOGRAPHIC ASSOCIATION.—At the semi-annual meeting, held November 3, 1884, the following officers were elected for the ensuing six months:

President, S. D. Wardlow; Vice-President, S. Miller; Secretary, J. M. Fox; Executive Committee, Frank Knapp and W. J. Lee; Finance Committee, Fred Stone, George Bacon, and Willis Bannister.

W. H. LEARNED,
Secretary,

PHILADELPHIA AMATEUR PHOTOGRAPHIC CLUB.—A regular monthly meeting was held at their rooms, 907 Filbert Street, December 15, with Mr. H. Pusey in the Chair.

The usual routine business was hurried through rather more quickly than usual, in order to witness some fine lantern slides brought by Mr. Pusey from England. He also showed a novel metal tripod, the legs being telescopic, and extending in a manner very like a twisted paper lamp-lighter. When folded, the legs and top could be packed in a case not much larger than that required for an opera glass.

Among the slides were some by Mr. Taylor, which were from negatives made without the use of camera or lens. His "apparatus" consisted merely of a cigar box, with a pinhole at one end and a dry plate fastened at the other. Considering the means by which they were produced, the negatives were remarkably sharp.

Mr. Walmsley exhibited some fine English photographs of children at the seashore, and a group of hay-makers.

The Executive Committee announced for the next meeting that Mr. Carbutt had kindly consented to deliver an address on "Dry Plates."

On motion, the meeting adjourned.

W. WEST RANDALL,
Secretary.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS, 392 Bowery, December 3, 1884, President Buehler in the Chair.

Minutes of previous meeting read and approved. Journals received, with thanks.

A paper was then read by Mr. Duchochois.

Mr. Duchochois: I think you will have to read this paper in print before you understand it. It is very long and tiresome; but you will find a great deal of information in it. After reading it, you can take any book on chemistry and be able to understand it. If the beginning were not known, it would be impossible to understand it. If the beginning were not known, it would be impossible to understand the rest, and I was obliged to make a long paper.

Mr. Schaidner: It seems absolutely necessary that we take the different journals to follow what has been said at the different meetings. It would be impossible to sum up what has been said to-night.

Mr. Hallenbeck: I think the lecture has been of great benefit to the members of the Society, as it has started them into looking into these matters more than heretofore. I understand the subject much better than I did before.

Mr. Forbes: I move that a vote of thanks be tendered to Mr. Duchochois for his able paper.

Mr. Roche: This paper to-night is merely an introduction or explanation of the material we use. I think this is a very valuable one, and I would second the motion that we give Mr. Duchochois a vote of thanks for that which has been read before us to-night. Carried.

Mr. Cooper: I have with me some negatives which I showed to the photographic section of the American Institute last night, demonstrating a new method of development which I consider of great importance in securing the best results from extremely rapid exposing, and it is in the line of a theory that I have hitherto mentioned, viz., the action of light on the bromo-gelatine film. This action has the effect of liberating the bromine and leaving the silver in a partially oxidized state. In pursuance of this theory, I concluded that, as there was free bromide present, and as we all know bromide or bromine has a tendency to retard

development, the sooner we get rid of it the better, either by washing the plate very thoroughly previous to development, or by using ten grains of monohydrous carbonate of soda. That which is crystallized at the boiling point, and containing one atom of water of crystallization to the atom of soda forms, as I believe, bromide of sodium, which is very soluble in water, and is readily removed by a slight washing. These pictures were all made with the drop shutter, and on a day when there was no sunlight—nothing but diffused light. One plate was treated with the ordinary soda developer, the other with the solution of soda as described, and subsequently masked and developed. The thinner one of the two took twice as long to develop as the other. I made up ten ounces of the normal developing solution, putting five ounces in each dish. The first plate was treated with the soda, then washed thoroughly, and placed in one-half of the solution. The second, not washed, was developed in the other. The latter required twice as long to bring out the image, which is much thinner.

Mr. Buehler: In any case when the exposure is a little short, you would advise us to put the plate in this solution first, in order to get rid of the free bromine?

Mr. Cooper: With my short exposures, I let the plate remain in the solution longer, and wash thoroughly, in order to preclude the possibility of doubt in regard to my theory. I exposed a plate, putting half of it in the strong soda solution previous to development; kept it moving for about thirty seconds, washed it very thoroughly, and then developed it. (Plate shown, one-half possessing far greater strength and detail than the other.) These plates (two more) demonstrate two things. First, that it is possible to develop a plate with pyrogallie acid, so that experts cannot tell whether pyro or oxalate has been used. Here is one developed with pyro and one with oxalate. Both of these also are drop-shutter pictures. One had the full power of the oxalate developer, with no restrainer. They are absolutely similar as to color, but that treated with pyro is much superior in delicacy of detail. In the case of a negative

that is under-exposed, I weaken the developer one-half with water, and proceed slowly. Prolonged washing under the tap will effect the same result as treatment with soda, but is necessarily much more tedious.

Mr. Roche: Mr. Cooper showed me these negatives, but I could not believe that they were made with the drop shutter until I proved it. They are all negatives of the roofs of buildings of dark-brown color, and therefore difficult to photograph. I exposed a plate, and forced the development so far with ammonia that it was covered with green and red fog. I then fixed and washed it. Mr. Cooper exposed one under the same condition; and, although it took a little longer to develop, he brought the negative out with complete detail. (This negative was also shown.)

Mr. Buehler: I would like to know, Mr. Cooper, whether you give the preference to the oxalate or pyro developer?

Mr. Cooper: I would say that, under certain conditions, either the oxalate or pyro developer will afford excellent negatives. It is a matter of judgment on the part of the operator. In bringing out unusually fine results, you cannot, I think, operate as successfully with oxalate as with pyro. It is not possible to go beyond a certain point with the addition of iron; with the pyro you have unlimited power. The pyro developer is much more potent; an ounce of it will go as far as a pound of iron.

Mr. Buehler: In case the development has been short, cannot the oxalate developer be used by adding a little hypo as successfully with pyro?

Mr. Cooper: I can accelerate with pyro just as well as with oxalate, but I never do so, for the reason that the action which takes place seems to be somewhat uncontrollable. Putting in one drop of hypo, I obtained a greatly accelerated image. All conditions being equal, that is, the hypo solution being of exactly the same strength, a small drop entirely reversed the result. Instead of a negative, I had a positive.

Mr. Hallenbeck: I would like to know why this is so.

Mr. Cooper: The chemical change I do not understand. I will leave that to those who are better acquainted with them. With-

out question, that is the objection to the addition of hypo to the pyro developer.

Mr. Hallenbeck: I would like to know the reason it should not be used.

Mr. Cooper: I can give you no better reason.

Mr. Roche: A standard formula for the use of hypo in connection with the ferrous oxalate developer was some time ago published by Dr. Eder. A later one is as follows: Water, one hundred and twenty-five ounces; hypo, one drachm; citric acid, three drachms. The plate is immersed in this solution for one or two minutes previous to developing, affording exceedingly good results. I had a negative by Sarony to make a transparency from. Some of the oldest photographers in the city have seen it, and all thought it a wet plate; but it is a gelatine negative, developed with ferrous oxalate developer. The only way by which I could tell was by the peculiar greenish color. We all have our favorite modes of working. When full time can be given, I prefer to use the iron developer.

Mr. Power: The other day I received a duplicate order for some imperials. When the negative was taken out, I found it had turned yellow and was non-actinic. What was the cause of this?

Mr. Roche: The negative was not properly fixed. If it had been the fault of the development, the plate would have been entirely fogged.

Mr. Forbes: The plate may have been taken out in the light before it was fixed.

Mr. Power: When they were printed six months ago, the negative was clear.

Mr. Hallenbeck: I have seen the same effect by using bichloride of mercury.

Mr. Cooper: The plate may not have been thoroughly fixed, or it may not have been quite thoroughly washed.

Mr. Hallenbeck: Hyposulphite would show on the varnish.

Mr. Cooper: It has always been my idea that hyposulphite of silver, formed by the solution of bromide of silver with hypo, if not properly washed out, would become discolored by light; not immediately, perhaps; but it would continue after being once exposed. I have found negatives entirely destroyed when that was the case. Nega-

tives not properly fixed, on turning them over and looking at the back, generally show a whitish effect. Although three months old, the fixing bath removed this discoloration.

Mr. Duchochois: Mr. Cooper is quite right. The instability of hyposulphite of silver is well known.

Mr. Buehler: There is no reason why it should not come from the prints being made on damp paper. If you print on paper immediately after removal from the fuming box, there will be a deposit of nitrate of silver on the negative which causes it to turn yellow.

T. W. POWERS,
Secretary.

PHOTOGRAPHY AT THE NEW ORLEANS EXPOSITION.

WHAT a wondrous change has taken place in the World's Industrial and Cotton Centennial Exposition since our last notes from there! A world, indeed, has grown up here. At first it was like one grand, undeveloped photographic plate. The management had the result obtained very fairly planned in their minds, and now it has been developed by the joint application of effort from every State and Territory in the Union, as well as by almost every land in the universe. A marvellous picture has grown up which will astonish the world for many a long year.

The grand affair is not fully developed, however. Each day it is being strengthened and intensified and new beauties added, until—well, it will not stop growing beautiful and wonderful for two months yet.

The buildings are not so fine as those of 1876 in Philadelphia, but they are far more vast. The Main Building is the most stupendous mass of sawed timber ever gotten together. Several forests, indeed, were made to bow and bend and yield to the axe and saw before they could stand erect again under the hands of the architect and builder. But here they are covering the most magnificent collection of all things ever gathered together.

At this writing the photographic section is not ready for the public. Neither will it

be for opening day, we fear. The cause is an apparent one. The management have more than they can attend to, and photography must wait. But it is not alone, for the doors of the grand Art Hall will not be unfastened on opening day. By the time this is read, however, both collections will be arranged in all their splendor.

The gallery of the Music Hall, where our blessed art is to be honored, may be compared to an inverted letter Ω . Standing at the mouth of the letter, photography would be on the left side and reach back and around to the right side, including the whole of the bend of the U. Through the centre of the gallery a line of tall posts supports the roof. They are thirty feet apart. Between them, leaving an occasional space, the uprights, upon both sides of which the photographs are to be hung, are arranged, twelve feet in height.

Additional space is provided by the sides of the arches which support the roof of Music Hall, and by the roof supports of the Main Building on the left, all admirably lighted. In addition, cross sections may be run from right and left of the posts. While these lines are being written, the noise of the workmen is heard placing these uprights and opening the cases of gems of our art, some of which arrived several days ago. A list of the exhibits, or any comment upon them, would be out of the question until they are properly installed in their places. There will be a most interesting variety and a great quantity, more systematically arranged, perhaps, than is possible at our national exhibitions.

Many who exhibited at Cincinnati are represented here by new and beautiful things. Mr. C. W. Motes, Atlanta, Ga., would not let such an opportunity of honoring our art go by, and is finely represented. Mr. A. G. Blanks, Vicksburg, Miss., has been devoting his skill to "quick" landscape work recently, and has a number of fine things here. Messrs. T. Lilienthal and G. Moses, of this city, rival one another in their displays. The group of the members of the Cotton Exchange of New Orleans, by Mr. Moses, one of the first pictures hung, attracts a great many visitors. Mr. F. Gutekunst, of Philadelphia, who seldom

fails to hold up the hands of our art on such occasions, makes a superb display of portraits, transparencies, and phototypes. Mr. I. W. Taber, San Francisco, Cal., astonishes everybody by his grand collection of portraits, marines, and landscapes.

Here are solar prints by E. Long, the well-known veteran in our art, at Quincy, Ill.; by T. H. McCollin, Philadelphia, and others. W. H. Jackson & Co., Denver, Col., probably will have no great rival of their superb collection of landscapes from new negatives. What marvels have been made possible by "the delectable dry!" Well, next month you shall have a detailed list of what is hung by that time.

We are permitted to say that exhibits will be received during January, since it is impossible for some photographers, driven during the holiday season, to get their exhibits here in time. As the Superintendent of this department, we want to see our art *more* than honored, and hope generous photographers will strive yet to win medals and diplomas for the honor and fame of photography.

The amateur effort must not be overlooked. Mr. F. C. Beach, of New York, has worked up a very creditable display from among the societies, and it makes a grand feature in the Exhibition.

But, as I said in my last, photographic representation is by no means confined to this special section. When visitors come here, they will see photographs to the right of them, photographs to the left of them, photographs to the front of them, in all directions. Sometimes one party is found represented in two or three sections.

For example, our friend Mr. Thomas Pray, Jr., of New York, has some pictures in the collection of the New York Amateur Society. Some of his views are in the Tennessee State exhibit, and some of his microscopic photographs are in the exhibit of the Smithsonian Institution, showing cotton fibres in detail. In several of the State exhibits, photographers well known to us all have very fine collections.

To close, the following extract from a daily local paper, *The Times-Democrat*, will be found interesting, as showing how much our art has done to make the Expo-

sition a success; and yet a tithe has not been told:

"In the Government collection, the fourth division will comprise an exhibit of methods employed for the systematic treatment and study of the diseases and injuries of soldiers, with a view to their more efficient treatment. Photographs of surgical cases in the various stages will be shown, also specimens from the Army and Medical Museum and photographs of skeletons from the same source, photographs of crania, casts of stumps, crania complete, photo-micrographs, by Dr. J. W. Draper, taken in 1851-52; solar enlargements of photo-micrographs, by Dr. J. J. Woodward, surgeon of the United States Army. Sixty transparencies on glass from photo-micrographic work by the same. Also sixty transparencies on glass from photo-micrographs by Dr. George Sternberg, United States Navy. Fifty transparencies on glass from photo-micrographs made at the Army Medical Museum. Twenty-four microscopes from the Army Medical Museum, illustrating the latest improvements in this instrument. There will be two hundred microscopic slides accompanying the above. Two of the microscopes will be handsomely mounted and placed in the office of Surgeon McEllery, where gentlemen of the medical profession will be permitted to experiment with same. There will be microscopic sections on glass by Prof. His, of Germany.

"In division five will be placed photographic portraits of distinguished surgeons of the United States Army. In the Medical Department there will also be exhibited, and daily operated, an anthropometric laboratory, occupying a space of 36 x 6 feet, arranged by Sir Francis Galton, F. R. S. The object of this anthropometric laboratory is to show to the public the great simplicity of the instrument and methods by which the chief physical characteristics may be measured and recorded.

"Prof. Koch's culture apparatus will also be exhibited, as well as samples of microorganisms, growing on various media, to illustrate culture methods."

HAVE you secured a copy of *Mosaics* for 1885?

HOW I KEEP MY PRICE UP.

BY O. PIERRE HAVENS.

WHILE it seems to be quite a serious matter with the photographer generally, yet it is one of the least of my troubles. Let us look at my business a few minutes, and start off with the help. There are seven of us all told, of which Mrs. Havens and myself are the head, she attending to the sales, and I the operating. No gallery can succeed without a first-class retoucher. He, I consider, is your principal man. Have him the best you can get. Then a printer is needed who can get all there is in a negative, and pay him well. Then a boy to do nothing but keep the place clean, and if he attends to his work he will earn all he gets. These I consider important help, even the boy. Now the next is your doorway, or entrance. You can't spend too much money or attention on it. Here your boy comes in nicely. I have just had show cases removed that cost over a \$100, and put in the back yard, to be replaced by bent glass ones costing over \$350. Even the patterns had to be paid for extra to bend the glass over. You might say this is useless expense. I don't think so. It's one of the ways of advertising. Why, as luck would have it, one of the large bent glasses got cracked on the passage, and everybody that came along said, "Oh, what a pity to have the glass broken." Hardly anybody thought of the elegant cases. It was the broken glass they were looking at. The consequence was I got about one hundred dollars worth of advertising for one broken glass. I have just put up at the entrance a splendid lamp to burn all night, and a mirror full length, where the whole city know they can step in to see how their hat looks. So that my outdoor show has cost me over \$1200. You will say I have said nothing about prices I don't intend to say much. I also make a change at the door every few days, and keep it clean; have brussels carpet from the street to the operating room. It's all advertisement.

Now, what did I hear only a few days ago? A lady was telling another, "I have got to have some photographs taken to exchange with John, and as he had his made

by 'Havens' I suppose I will have to do the same, as I can't give him a picture made by the 'cheap process' in exchange for one of 'Havens's' pictures." Another told, where I could hear of it, that she had no use for "Havens's, but it was the only place where you could go to and sit down in comfort, showing in this case that the boy who cleans up the place was the responsible party in her case. I had probably looked cross at the baby. But these are all advertisements. Have your retouchers where your customers can see them, and, if possible, let them see the printers at work, or see you develop the plate; that takes a big hold of the ladies. Keep your dark room so that a lady with a satin dress can see a development without danger of getting it soiled. Have your printers and the room just as clean as your reception room, and then you can take a pride in showing your customers around. Spare no money in keeping your place respectable, and don't let a teaspoonful of dirt be found in the place. Show your work framed in gold frames, and have your furniture plain and rich. Don't think you can do all the work yourself and save the retoucher's wages. Very few photographers are retouchers. Buy the best of materials, and plenty of them. Keep your work up to highest price. The brightest thing a country artist did, who came here for a while in opposition to me, was to charge two dollars a dozen more than I did, making his price \$10 a dozen for cabinets. While I make cards, I never show them unless asked for. You look at the class of customers in the show case of a cheap John gallery, and you will see the kind of trade he invites. The best class would not go there, and some one must have a place where they can go, and why not you? If you have your place inviting, and charge more than any of your opposition, you are bound to get the trade. Take great delight in telling a cheap customer that may come in that you have not made a tintype in years, but that so and so makes them for twenty-five cents around the corner. I have been here twelve years. My price was \$8.00 a dozen then, and has *never been changed*. I have plenty to do, and no gallery for sale, in the face of \$3.00 a dozen and \$2.50 for clubs all around me.

Yet I have the reputation of being the highest priced artist in the State, and I try to keep it. So you see I cannot afford to reduce. I sometimes tell a customer it will be just impossible to sit her to-day, as it will be several hours before I will be ready, and appoint a certain hour for her the following day. She goes home saying "What a business he must be doing." All these things keep your name before the people, and if you can get that you are all right, even if you have to smash your own show case on the sly and then offer a big reward for the scoundrel. While I have not said much about prices, yet I have given some hints how I keep mine up by having the reputation of being the highest priced artist in the State, not forgetting to have the work fully compare with the price, a thing no one man can do alone and think he is saving the wages of good help.

THE CONVERSION OF THE SILVER IMAGE ON THE NEGATIVE.

BY L. BELITZKI.

By the above title I wish it to be understood that I mean the changing of the metallic silver images, evolved during the process of development, into a chloride of silver deposit.

Now, at first sight, the advantage of this may not appear, and I may be accused of resorting to a species of legerdemain to entertain my readers, but let me assure you that, with a few exceptional cases, it is of the greatest value, and one which I can highly recommend to my colleagues, especially as it is not only simple and sure, but has the great advantage over most processes, as it cannot in the least injure the negative.

Our experience with gelatine negatives, especially when they have been strengthened, is that they may look beautiful and clear when looked through, but when printed copies are made from them there appear ominous spots upon the paper, which necessitate a good deal of touching up to make them presentable, which, consuming valuable time, is a great drawback to the photographer, especially when a great number of copies is needed.

Now, if such a negative is carefully ex-

amined we shall perceive weak spots of a yellow color corresponding to the white spots upon the printed copies. No doubt, as some have remarked, these spots are to be traced to the insufficient washing of the negatives, which make their appearance on intensifying, the hypo not being thoroughly eliminated from the film. Or it may arise from imperfect fixing, or in not sufficiently moving the intensifying fluid during the process of strengthening, causing, in addition to these spots, cloudiness.

Sufficient care, of course, will prevent the occurrence of such phenomena, but in practice it is not always convenient to work undisturbed upon any one subject, and when the spots do come it is well to be able to know how to attack them. Moreover, when the originals from which the negatives are taken are weak it is often necessary to subject the negative to a sort of inquisition; to torture it until it becomes better and has the requisite strength. Now these processes frequently give the negatives a color and tone so very bad for copying purposes, that any means to improve them will be thankfully received.

Now let me here say, in treating such spotty negatives the process of changing them to a chloride of silver is of the highest value, inasmuch as the spots will entirely disappear. Proceed in the following manner: The intensified or not intensified negative is laid dry in a dish and covered with the following solution:

Five per cent. Alum Solution, .	1 litre.
Bichromate of Potassa, .	10 grains.
Chemically Pure Hydrochloric Acid,	20 "

These chemicals may be dissolved in pure water instead of the alum solution, but then there is danger of producing frills from the acid.

Allow the negative to remain in this solution until it becomes thoroughly yellow, which usually occurs in a few minutes. Wash next thoroughly under a cock until it becomes colorless; when looked through appears gray. Next carry the negative into the light room, or, best of all, in the sun, and let it be exposed a few minutes. If now the chloro-silver image is laid in the oxalate developer it will become black in a few

minutes, because it is reduced to the metallic state, and all the green spots will disappear. The subsequent washing is effected in a quarter of an hour.

The chloride of silver solution gradually weakens, and, in consequence, works slower and slower, or not at all, in time; but it may be freshened up by the addition of bichromate of potassa and muriatic acid.

Although the transformation of a silver image into a chloride of silver image is not exactly new, I have not found it to be a process generally employed, but I think such remarks will not be found superfluous.

EXHIBITION OF THE BOSTON SOCIETY OF AMATEUR PHOTOGRAPHERS.

BY OUR SPECIAL CORRESPONDENT.

THE idea of holding a competitive exhibition of photographic work produced by amateurs originated, so far as this country is concerned, with the Boston Society of Amateur Photographers, one of our oldest non-professional organizations. The merits of such a step are quite obvious, and much credit is due to the projectors. The movement was inaugurated a year ago, and in that friendly contest the Bostonians were beaten on their own grounds, the majority of the awards going to contributors from a distance—the gentlemen from Philadelphia decamping with most of the honors. The second exhibition, in some respects more creditable to the Society than its predecessor, was held in the elegant and spacious gallery of the Boston Art Club, November 24 to 27 inclusive. The total number of prints was roughly calculated at twelve hundred, many exhibits being tastefully framed, the rest mounted and suspended in the usual manner. The standard of merit of the average exhibit was very high, but many entries, especially several labelled as prize pictures, were much below the average, and quite a number displaying the greatest possible excellences received no official recognition whatever. There were twenty-five classes, with but one award for each, so that all were on an equal footing, the prize consisting in the diploma of the Society.

Landscape.—P. Mawdsley, Rochester, N. Y. A framed collection of $6\frac{1}{2} \times 8\frac{1}{2}$ views of England and Wales; fine subjects taken from most effective points of view. These were striking for wealth of detail, surpassing delicacy, and remarkable softness; but the last feature was carried so far as completely to sacrifice detail in the high lights—the only fault in the otherwise perfect display. It was whispered that this exquisite porcelain effect was produced by some secret process, this suspicion being partly attributed to the fact that the large mat covering the edges of the prints, concealed the manner in which they were mounted. Ross lens and Mawdsley plates.

Cloud Effect.—George E. Cabot, Brookline, Mass. A bold and massive cloud, only a narrow strip of the landscape being visible. Very excellent, but the same cloud appearing in a number of views of the same exhibit, showed, perhaps, a lack of fertility. 8×10 Allen & Rowell plates, Ross lens.

Snow Effects.—W. G. Reed, Boston. A bush with icy vestment, surrounded by desolate country. 5×8 Cramer plate, Eury-scope lens.

Surf.—Dr S. J. Mixer, Boston. Four $6\frac{1}{2} \times 8\frac{1}{2}$ views in a frame. Most superbly rendered in every way, and fully deserving the award. Morrison lens, Rockwood plate.

Sail.—E. H. Lincoln (professional) Cambridgeport, Mass. Twenty-four framed specimens of his well-known skill, peerless in execution, valuable studies, and, above all, hard to beat. No particulars regarding materials employed, but plates probably Eastman's.

Portrait (Full Figure).—Wm. P. Brigham, Boston, first President of the Society. An excellent (back) view of a well-built young man standing on a rock, with hands raised, ready to dive. Fine gradations of light and shade, giving the true values of the anatomical features. There was no class for this sort of work, and this picture well deserved an account; but why it should have been accepted as a "full length portrait," when proper specimens of this class were available, remains to be explained. Euryscopic lens, Carbutt plates.

Portrait (Head).—E. E. Belinfante, Philadelphia. Laughing girl, quite natural, but

possessing no other merit. Waterbury lens ("\$10 outfit"). 4×5 Carbutt plate.

Portrait (Group).—Percival Lowell, Boston. A pleasing group of half a dozen Korean youngsters, grouped on the brow of a hill. Technically not very meritorious, but one of a large series of views taken in Corea under the direct auspices of the court.

Animals.—J. C. Lee, Boston. A yoke of oxen attached to a cart. Very well done. Eury-scope lens, 5×8 Eastman plate.

Flowers.—George B. Wood, Philadelphia. A very excellent platinotype of Hollyhocks, but not superior to "Apple blossoms" in the same collection; both showing an artist's hand and mind.

Trees.—Wm. R. Cabot, Brookline, Mass. A very inferior group of trees; no attempt at composition. Size, about 8×10 .

Transparencies.—J. M. Jordan, Philadelphia. 8×10 view on the Wissahickon. Full of detail, rich and warm in tone, and subject well chosen. Carbutt "A" plate. No other transparencies were visible, no arrangements having been made to display them.

Lantern Slides.—E. F. Wilder, Boston. Twenty-four specimens of the usual size in four frames. By direct inspection they appeared to possess all the merits of a first-rate slide. The only entry. Carbutt's "A" plate.

Microscopic.—Wm. H. Pickering, Boston. Five specimens of diatoms, twenty (?) diameters. Beck lens, Allen & Rowell plate.

Stereoscopic.—Wm. P. Brigham, Boston. A frame of three dozen prints, therefore not available for critical inspection through a stereoscope.

Machinery.—George H. Eaton, Boston. A 5×8 view of a locomotive. Very ordinary, indeed. Darlot R. H. lens, Carbutt plate.

Manufactured Objects.—Edward Cohen, Philadelphia. Bric-a-brac, one of an exceedingly interesting and clearly executed series. Beck lens, 4×5 Monroe plate.

Copies.—E. H. Wilder, Boston. A superb enlargement of the "Natural Bridge, Virginia," from a 5×8 negative, a print from the latter being in close proximity. Eury-scope lens, Beebe plate.

Architecture (Exteriors).—Wilfred A. French, Boston. A 5 x 8 view of "Chetwood," a beautiful villa at Bar Harbor, Maine. Technique faultless, and picture effectively composed. This was one of a framed series of twelve Mt. Desert views, forming a most attractive display. Wide angle Euryscope lens, Carbutt plate.

Architecture (Interiors).—Arthur S. Johnson, Boston. A very ordinary 5 x 8 view of an elegantly furnished room. Showed lack of technical and chemical experience. Darlot wide-angle lens, Eastman plate.

Compositions (Hay-making).—George B. Wood, Philadelphia. A little girl reclining on a mass of hay, her right hand holding a rake. A most charming composition.

Happiness.—George B. Wood. A couple leisurely walking along a wooded path, and engaged in a lively flirtation. Their heads are shaded by a parasol gallantly carried by the swain. Mr. Wood is an artist.

Indecision.—George B. Wood. A boy reaching out his hand to a girl companion, both on the smooth pebbles of a brook, but *she* undecided whether to cross or not. The idea is a good one on the part of the artist, but the execution far from good. No lens or plate given to above three pictures.

Entire Collection.—Wm. P. Brigham. Eight frames, embracing prints of a great variety of subjects, including flowers, athletic studies, and Guatemala views of much excellence.

We cannot close this notice without referring to a number of exhibits, which, with few exceptions, possessed even greater merit than the "prize pictures." It would be difficult to overpraise the exhibit of Mr. J. E. Dumont, of Rochester, N. Y. One frame contained seven $6\frac{1}{2} \times 8\frac{1}{2}$ views, scenery of Northern New York, which were rendered with exquisite delicacy of effect, rich and well-defined detail, transparent shadows, and no loss of texture in the high lights. A second frame displayed a series of skilfully executed instantaneous views, surpassed by none in the hall. Of a high but different style of excellence were two frames of superb 5 x 7 views by R. S. Redfield, illustrating the attractions of Seal Harbor (Mt. Desert) and Atlantic City. The microphotographs of Dr. R. R. Andrews, Cam-

bridge, Mass., were the finest on exhibition, and among the best we have ever seen. They represented vascular dentine—the various stages of the development of a human tooth, magnified from 400 to 1000 diameters. Miss E. L. Coleman, Boston, contributed a very large collection of unmounted specimens, ranging from 4 x 5 to $6\frac{1}{2} \times 8\frac{1}{2}$, and covering nearly every field in photography. They fully exemplified her skill, taste, and enterprise, and were we personally well acquainted with the lady, we could form no higher opinion of her mental and executive abilities. Mr. F. A. Greenleaf, of Montana, served up the wonderful scenery of the far West in a most attractive and exhaustive manner, gaining abundant applause for his taste and skill. One of the gems on exhibition was a 11 x 14 print of the "Waverly Oak," effectively and appropriately framed, by Wilfred A. French. Its delicate, yet sturdy beauty, touched not the hearts of the jury. A collection of "Old Homesteads," dating from 1628 to 1775, by the same gentleman, proved a most interesting and attractive feature. The value and excellence of this series were the subject of an article in the November issue of this journal. The exhibits of C. R. Pancoast, Frank Bement, S. F. Corlies, J. M. Jordan, and J. C. Bullock, all Philadelphians; also of J. C. Lee, A. L. Plympton, E. A. Josslyn, and Miss Isabel R. Hooper, of Boston, deserve the highest praise for their many and varied excellences, but we regret not having the space they richly deserve. We hear that the Society will continue these interesting exhibitions, and we are convinced that, as experience is the best teacher, the third of a series so well begun will leave nothing to be desired as regards the selection of a more competent jury.

ABOUT PORTRAITS.

SUCCESS in photography does not depend solely upon technical skill. If a picture is sharp all over, full of detail, well lighted, and of a good tone, it is too often pronounced by the photographer perfect, while to the artist it may be soulless and of small

worth. Something more is demanded than technical excellency, and we rejoice daily that photographers have come to a realization of the artistic demands of a good picture. These demands are great, we are willing to admit, but that they can be met we have abundant proof in the beautiful work which photography has accomplished.

How shall the photographer acquire the power of mirroring in the face of his sitter the passions and emotions of the soul, without which the features are expressionless and tame. He must exercise his power of invention in the same manner that the painter does. We believe that those photographers who stand the highest in the profession to-day would have stood equally as high had they devoted their energies to painting. The instruments they employ may be different, but the artistic spirit which guides both is the same. The one, indeed, may require greater mechanical skill, but the inventive power is identical.

It is not necessary to have beautiful subjects to create great work; beauty and grace of figure heighten effect in portraiture, but are not essentials. Expression can be called forth in the plainest face, and the photographer need not urge as an excuse that his subjects are common-place and very prosaic people. We care not who the subject may be, it can and must be interesting if the photographer have the genius to make it so.

There is a picture by Rembrandt which I remember. It has a very prosaic title, and the subjects represented are not remarkable for their beauty or grace. It is called "A Woman Consulting with a Lawyer." The expression of the two heads are earnest and serious, and no one can look upon it without turning to it again and again.

The closer the photographer and the painter cling to nature the greater their work, but both alike must seize that moment of time when the subject is in the proper mood.

The photographer to be successful must be a student of human nature, and must use his art to "print the mind's discernment on the face." If he cannot do this, he has mistaken his calling, and had better

sell his camera and engage in some handicraft. He will only lower our art to his own level, just as the mediocre artist demeans art by his inferior productions. The subject must be studied. I think one reason why many photographers succeed so admirably in depicting child life is that they enter into the feelings of their little patrons so heartily; the good nature and naïvete of a little child are contagious. The infection being caught, the photographer is not satisfied until he makes a counterfeit presentment or bodies forth the feeling which he himself has. The thoughts and feelings of a child are easier fathomed than the deep sea of the passions and emotions of grown folks. Because the task is more difficult the photographer believes it to be outside the limits of his art, and allows the painter to take possession and to triumph over the profession.

I have seen thought and sentiment as truly conveyed by a photographic portrait as I have in painting.

The eye must be quick to perceive the instant when the soul within looks out. Lessing, the great German philosopher and poet, declares that greatness in art is the power by which the painter or sculptor seizes that instant of time when the idea is in its perfection. Its duration is but for an instant. It exists in the subject and not in the mind of the artist, and the power of grasping that expression is no more denied to photography than to painting. Indeed, photography has the power of seizing this instant more accurately than art. Memory must supply to the painter what the sensitive film treasures for the photographer.

The power of expression is not confined to the face. All the members of the body coördinate to express any idea or feeling; everything is in harmony. Too often the photographer is content to secure a pleasing expression upon the face and neglects the proper part to be played by the hands. We have seen many an excellent photograph marred in this respect. The photographer has tried to improve upon nature and to arrange the hands in a manner deemed by himself beautiful. The proper disposition of the hands does indeed call for the greatest amount of judgment. Too often the ar-

angement gives the impression that the photographer was wofully troubled with these unruly members, and would fain, because they offended him, have cut them off and cast them into outer darkness. But they cannot be got rid of so easily; their absence would perhaps do as great harm as their ungracious presence. We should remember that they are there, and should be there, and the photographer should not grieve over their presence, but rather glory that he may labor more abundantly to achieve greater results in the end.

The proper disposition of the hands in a picture is often a test of the artistic feeling of the operator.

The hands in Rembrandt's portraits, as in those of Holbein, do everything required of them in the most natural and expressive way. But Vandyke gives an affected grace to the hands.

The photographer, like the portrait painter, is often called upon to represent personal defects. Great skill is here demanded, more by the photographer than by the painter, because the brush can tone down these flaws in nature. So can the pencil of the retoucher; but if you value expression do not smooth away entirely the defects.

Reynolds was not afraid to show that Baretti was near-sighted, but he has made this near-sightedness an essential phase in the delineation of the peculiar character of the individual. Baretti is represented by the great painter as reading, strongly marking thereby the literary man. No doubt Reynolds abated whatever malformation might arise from peculiar defects without destroying the individuality of the subject. Harshness of feature, or even positive ugliness, may be softened or diminished without destroying character.

We frequently hear the photographer accused of idealizing his subject to such an extent as to destroy the true likeness of things. The accusation is often well founded. The maiden lady, fair, fat, and forty, is sometimes retouched into a blooming girl of eighteen summers. This is not within the bounds of nature. We may soften down the asperities of features, but we dare not obliterate them. We must consider them factors, and

our ability will be measured by the skill we employ in accommodating them to positions they are to occupy. It is perfectly legitimate to call to our service all the aid which skill in the distribution of light or management of angle of vision, may afford to make the whole subject pleasing and harmonious.

We may urge, in conclusion, the photographer to be not afraid of nature. Do not think her too crude for presentation. Do not try to dress her to advantage. Do not look at her through a glass darkly, but face to face.

There is a little picture by our own great painter, Benjamin West, which seems to me more effective than the great paintings on which he trusted to rest his fame. It represents the visit of the painter's father and brother to his young wife after the birth of her second child. They are Quakers, as you know. They have those very unpicturesque stiff-brimmed hats peculiar to their sect, but they are veritable men—nature's noblemen. Nothing could be more beautiful than the expression of motherly love upon the countenance of the young mother bending over the babe calmly sleeping in her lap. She, too, is in plain attire. Her little son, her first born, is leaning upon the arm of her chair. West himself stands behind his father, with his palette and brushes in his hand. There seems, to be a soft stillness diffused over the whole scene. The colors are sombre, but the distribution of the light and shade surpasses the grandest conception of his imagination.

In this picture are represented infancy, youth, prime of life, and old age, but with a harmony and beauty which is effective, not from any intention on the part of the painter (for we know that he did not value this production very highly), but simply because it is true to nature. Had West set himself down to the task with the intention of depicting these stages of man's life he might have labored more abundantly and consumed greater time, exhausted greater energy, and produced a more ideal picture; but I doubt whether it would have been as pleasing compared with this *commonplace* as true to nature, and, let us add, *as great*.

ON THE REDUCTION OF OVER-STRONG NEGATIVES OR PRINTS.

THE necessity of reduction too frequently presents itself in the course of our experience with gelatine plates. Sometimes they almost defy all coaxing, or even more vigorous treatment, to tame them down to the condition of respectable and law-abiding negatives.

Among the many methods recommended I have found the following to be the most effectual in abating excessive energy, especially when the density is the result of over-exposure :

It consists of a mixture of ferricyanide of potassium (red prussate of potash) and hyposulphite of soda; both solutions are of equal strength, and are used in equal quantities. About one ounce of ferricyanide to sixteen ounces of water, and the same strength of solution of hyposulphite of soda. The reduction is gradual and entirely under control.

Now another advantage of this mixture is that it can be used as a local reducer. All that is necessary is to paint over with a brush the dense portions, and then immerse the negative, after a little while, in the hypo wash and dry. If the reduction is not sufficient, repeat the process until you are satisfied. The beauty of this method is that it may be applied to the reduction of over printed paper-pictures. Use it in the same way. The tone of the paper photograph is not hurt in the least, and the whole picture much improved.

THIN NEGATIVES.

BY L. REGNAULT.

GELATINE plates have many virtues, but associated with these virtues are a few failings, one of which is that they will sometimes, in spite of all the care spent upon them in developing, yield thin and ghostly images. This tendency is greater in proportion to the rapidity of the sensitive surface, as it is difficult to intensify the weak productions without clogging the shadows and destroying the half tones.

I have had very little success with the

use of mercury as an intensifier, and the use of the pyrogallate of silver and the ferricyanide of potassium and uranium are out of the question. I prefer the use of the old method of intensifying with dilute hydrosulphate of ammonia or solution of sulphide of potassium. These are not the most delectable compounds in the world, nevertheless the photographer should not abandon them on that account.

By the use of either of these chemicals there will be no danger of destroying the nice gradations of tone on the negative, a danger frequently encountered with the use of the well-known intensifiers.

The solution must not be too strong, and it does not make any difference whether the plate has been developed by pyro or oxalate. Neither is there any necessity of so thorough a washing of the plate as is demanded when we make use of mercury for intensifying.

GLEANINGS.

FOR some time past it has been proposed to make use of fish eggs for the preparation of albumen on a large scale. The eggs of the cod and of the mackerel may, it is said, be used for this purpose. As soon as the fish arrives the eggs are removed, separated from the membrane, and then submitted to pressure in special apparatus; the liquid that runs off is filtered and reduced to the desired consistence in a vacuum evaporating apparatus, heated to about 45° C.—*Paris Moniteur*.

It is known that India-rubber tubes, so much used in workshops, laboratories, etc., are not impervious to illuminating gas. The rubber, vulcanized or not, becomes loaded with hydrocarbons, and the tubes not only give out a disagreeable odor, but they allow the gas to escape and vitiate the air of the room. Mr. Fletcher, the skilful chemist and engineer, of Warrington, has just produced a rubber tube lined with a thin sheet of tin-foil, which will remedy this very serious evil.

The collodion film, as is well known, may be perfectly fixed to the plate by the

application of a coat of varnish around the edges, but the same operation done with the gelatine film is not successful; the gelatine swells and raises the varnish. According to Mr. Sebastian Davis, this may be overcome by passing, by means of a brush, around the edges of a gelatine film, a saturated solution of chrome alum. After this very simple treatment, the film will never raise nor detach itself from the edges.

A NOVEL APPLICATION OF PHOTOGRAPHY.—In France, railway companies require the photographic portrait of the purchaser to be placed on the commutation ticket-books, and the post-office has published a notice that in order to obtain registered letters, it is sufficient to prove identity by showing a photographic portrait, authenticated by the mayor or by a police magistrate. This is another step made by photography in our social and administrative customs.

DEVELOPMENT WITH SODIC SULPHITE AND CARBONATE OF SODA.—Mr. Bassano says he is well satisfied with this developer. After having plunged a plate in water for a minute he covers it with 48 cc.m. of water containing 0.4 gramme of hypo, and 3 grammes of sulphite. After about a minute he adds 6 grammes of anhydrous carbonate of soda. The image is rapidly developed, having all the qualities possible, and presents the appearance of a negative made by the wet process.

DURABLE SENSITIZED PAPER.—A fact not sufficiently known by amateurs, is that the tone of the print depends in a great measure on the character of the negative. Although this truth applies in a less degree to all photographic printing processes, we will speak here only of silver printing on preserved paper. We wish to-day to obtain violet tints, because we believe that these tints are more durable than the brown ones. This purple tone can only be given by strong negatives, sharp in the shadows. It is true, however, that some papers lose this tone in the fixing, even with the best negatives. In this case we would have a right to complain. Durable paper

is so convenient for amateurs, that notwithstanding these objections it will still continue to be largely used. It is easy to obtain darker tones and more rapidity with several kinds of these papers, by suspending the sheets in a damp place at the moment of using. Their acidity is neutralized afterwards, having removed the nitrate of silver by washing, by plunging them for a few minutes in a dilute alkaline solution of carbonate of soda or carbonate of ammonia.

In the establishment at Marseilles, of Mr. Cayer, one of the most progressive printers of that city, very curious applications are made of a process for reproducing old prints or any sheet printed with fatty ink, made at any time, by inking the original and transferring it to stone. In the process employed by Mr. Cayer, both sides of the sheet may be used. Another happy idea has also been put in practice in this establishment. We know what are the tinted papers used in typographic prints. They consist of sheets of laid paper on which are printed black parallel lines, very fine and very close. A network formed of sunken lines cuts, at right angles, these black lines. The drawing upon this paper, made either with pencil or ink, can only be reproduced by the aid of photography—it cannot be transferred directly to stone. Mr. Cayer prepares a similar paper, the black lines on which may be transferred, so that when the drawing is finished an immediate transfer on stone can be made without having recourse to photography; we thus have a plate for lithographic printing, and even for typo-engraving. This idea is an excellent one. We are assured that these tinted papers thus prepared preserve their transfer properties for several months. This improvement deserves the attention of all designers for typo-engraving and lithography.

No one can state with any degree of certainty how long a time, after exposure, one of our modern plates may be kept, but the time is evidently very considerable. Dr. Berwick shows a view of a cathedral from a plate which he had exposed in July, 1880,

and which he only developed in July, 1884. This print leaves but little to desire.

A NUMBER of *genre* photographs have made their appearance. That of the "Whist Parly," by Mr. W. Coatesworthe (whose name appears for the first time), indicates a veritable progress. In general our best productions in this line are spoiled by the introduction of too many characters—the eye wanders from right to left to the detriment of the principal subject. This is an artistic error from which even our painters are not always exempt. In landscape photography this is not remarked, here it is nature itself that forms the group, and the result is always perfect. It is sometimes difficult to distinguish these *genre* prints from those which are good reproductions of paintings.

THERE is again question of photographically reproducing some of the rare manuscripts preserved in the British Museum. It is much to be regretted that this useful work has not yet been pushed with more energy, especially when we think of the enormous sums which have been paid for these literary treasures. Hardly a year ago £40,000 were paid for the manuscripts known as the "Stowe Papers." These manuscripts offer, no doubt, great historical interest, but nobody ever sees them, whereas if photography placed them, and at small cost, within reach of the studious public, men of letters would not fail to derive great advantages from them. It is, therefore, with much pleasure that we at last see it announced that there will shortly be, for this purpose, a photographic establishment specially attached to the British Museum, if the government is willing to listen to the voice of the directors of that important establishment.

THE new photographic lens of Mr. Thomas Furnell is now attracting much attention, especially from amateur photographers. In the reproduction of landscapes, houses, or groups of persons, it is necessary to use lenses having a different focus. For example, for buildings or groups of animals

which are near the photographer, we require a short focus lens, whilst for objects further off and which include a larger field, it is necessary to use a lens with a longer focus. Between these two extremes we have, as we all know, medium lenses. Now, Mr. Furnell wishes to place in the hands of amateurs a lens which in itself embraces all these conditions, that is to say, whose focal distance may be made to vary considerably by means of a very simple contrivance. In this lens we have on the front a combination of two lenses; the outer one is made of crown-glass, convex on the exterior and plane in the interior, and the other made of flint glass, plane inside and concave on the back. The flat sides of the flint and crown are cemented together with the aid of Canada balsam. Back of this combination, at a distance equal to about its diameter, is a double-concave flint lens. At a short distance behind this is a plano-convex lens of crown; three other lenses of different focus complete the system. By using any one of these three back lenses, or by removing them entirely, we obtain, with the half-plate lens, focal lengths of seven, eight, nine, or fifteen inches, as the operator desires — *Paris Moniteur*.

At a recent meeting of the Edinburgh Photographic Society, Mr. H. Brehoner gave the results of his experiments with the hydroquinone developer. He asserts that it is necessary to use at least two per cent. of this substance (two instead of one-half of one per cent., as has been advised) in the developing bath, so as to bring out the details. By using a still greater quantity, say from four to six per cent., the time of exposure may be considerably reduced. The author is of the opinion that hydroquinone permits very short exposures, that negatives of great density and fine quality are obtained, but that their reddish-brown tone, although attractive in itself, is not suitable for hastening the printing. On the other hand, Mr. Lang, of Glasgow, declares that hydroquinone will never be largely used by professional photographers, because its action is slow in comparison with that of the pyrogallic acid universally

used. But hydroquinone presents advantages to the amateur, because it does not require the use of a bromide as a retarding agent. The operation, therefore, is more simple.

THE process most often used here for intensifying negatives is based upon the use of bichloride of mercury. It consists in plunging the unvarnished and well-washed negative in a bath composed of one ounce of mercurial chloride, one ounce of chloride of ammonium (ammoniacal salt), and forty ounces of water. In this solution the image becomes gradually white. When this operation is ended the plate is washed, first under the tap, then by allowing it to remain in several successive waters; everything depends upon a thorough washing. The plate is now passed through a solution of ammonia (one-half ounce of liquid ammonia and twenty ounces of water). In this solution the image becomes black rapidly, the maximum effect being apparent usually in about five minutes. Nothing now remains to be done but to wash and dry.

THE German papers inform us that the paper, the pulp of which has been treated with sulphites, and which is used for metallic plates, etc., may give rise to a slight disengagement of sulphurous acid, or else to a deposit of sulphur upon the articles thus packed, which consequently are injured.

A PHOTOGRAPHIC NOVELTY.—Mr. Marco Mendoza has just introduced a new photographic camera formed from a hat having a hole in the top, to which a lens may be fitted. An oval frame, fitting exactly the interior of the hat, forms the camera at the posterior part, and this frame has in it a groove in which slides the ground-glass or the negative-frame. An ingenious nickel-plated stand is enclosed in a bamboo cane, to which the hat is attached by means of a screw, and fixed upon the oval frame in the salient part on the interior edges of the hat. This apparatus gives prints 9x12 centimetres. The double frame takes but little room, and may easily be carried in the pocket. The hat, which is made to measure, is sold at ninety francs.—*Paris Moniteur*.

Editor's Table.

PICTURES RECEIVED.—From the CENTENNIAL PHOTOGRAPH COMPANY, New Orleans, a number of beautiful stereoscopic views of scenery in the immediate neighborhood of the Exposition, also views of the Main Building, Horticultural Hall, and CENTENNIAL PHOTOGRAPH COMPANY'S studio. These views display much artistic taste in the selection, are beautifully lighted, and possess a richness in the gradation of tone. The groves of gigantic live-oaks, luxuriant with foliage, and the velvety lawns, add greatly to the charm of these pictures. We are waiting anxiously for other views from the same source, when the great Exposition shall be presented in its full glory. From Mr. CHAPMAN, 153 Eighth Avenue, New York, several well-lighted and beautifully

posed heads and full-length figures; very soft and pleasing in tone. From Mr. JOHN REID, Paterson, N. J., a number of instantaneous views of civic processions remarkable for the beauty of detail and sharpness.

WE have received some fine plates from the HELIOTYPE PRINTING COMPANY, 211 Tremont Street, Boston, Mass., made by the photo-caustic method. These plates can be made from ordinary negatives or from large photographs. This Company is prepared to produce photo-mechanical and lithographic work of all kinds by the best methods. Fac-similes of medals, coins, ancient manuscripts, autographs, views from nature, etc.

MR. S. T. BLESSING, of New Orleans, sends us his fine catalogue of artist and photographers' requisites, and judging by the variety and number of the objects depicted there is ample field for all to select from. Messrs. MULLET BROS., of Kansas City, Mo., also send us a ponderous volume forming their catalogue of everything that a photographer could desire. They display many new and beautiful designs for moulding for picture frames, backgrounds, photographic albums, and studio furniture. We are struck with the variety and taste in the compiling of this catalogue of requisites, which seems not to have forgotten anything a photographer might wish for. We have also been favored with the catalogue of Messrs SMITH & PATTISON, Chicago, finely illustrated, and full of particulars of value in the selection of photographic articles.

REMOVAL OF THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—The Photographic Society of Philadelphia has moved into its new and beautifully arranged rooms at No. 31 South Fifteenth Street, the great increase in membership having necessitated more accommodations than the room they formerly occupied could supply. It is the intention of the Society to furnish their new quarters handsomely, and to adorn the walls with productions of the photographic art, and altogether to make it a social rendezvous for the members to meet and discuss matters of photographic interest.

OUR contemporary, the *Photographic Times*, edited by Mr. J. TRAILL TAYLOR, and published by the SCOVILL MANUFACTURING Co., New York, has extended the sphere of its usefulness by appearing conjointly in a weekly and monthly form, thus furnishing its readers with photographic matter of a practical character which cannot fail to be of interest.

WE have received from Mr. EDWARD LIESE-GANG, of Dusseldorf, the *Photographischer Almanach*, for 1885, embellished with a portrait and a memoir of Mr. JABEZ HUGHES. It is well stored with useful information upon every branch of photography, forming a handy little volume for reference.

MESSRS. W. C. GIBBS and SANFORD ROBINSON, members of the Pacific Coast Photographic Association, send us a remarkable photograph which is in reality a novelty in the art, and a foreshadow of the marvels our modern dry plate will ere long be capable of achieving. It is a print from a negative representing a night-

blooming cereus taken by artificial light, not the powerful electric arc, but the rays emanating from two ordinary coal-oil reading lamps. It is remarkable for the softness of the shadows, and the detail is presented with much accuracy. The plate was the celebrated Passavant C. I. P., the time of exposure seven minutes with the No. 2 stop of a Dallmeyer Rapid Rectilinear Lens. The developer employed was the pyrogallic acid and carbonate of potash.

MR. C. W. MACFARLANE, of this city, having spent several months, accompanied by his camera, in the marvellous country of Mexico, has returned laden with a number of beautiful views of grand scenery from the peaks of the Popocatepetl, Orizabo, Iztacsihuatl, and the other mountain heights of the twentieth parallel of latitude. He was also diligent in collecting scenes from the social and domestic life of the inhabitants of that strange country, altogether forming an unique and valuable collection of negatives.

VOLUME IX., No. 2, of the *Journal and Transactions of the Photographic Society of Great Britain*, comes to us with a superb photo-engraving by Messrs. ANNAR, of Glasgow, of the distinguished President, Mr. JAMES GLAISHER. The journal contains a number of valuable papers by eminent scientific men.

A *Arte-Photographica*, No. 9, has been received. Our Portuguese contemporary may well be proud of the beautiful phototype landscape, which luxuriates in a wealth of half tones, and in a vigor in the deep shadows.

MR. JOHN CARBUTT, whose excellent brands of dry plates has gained for him a wide reputation amongst photographers, has removed to his newly built factory at Wayne Station, near Germantown, Philadelphia, where he has every convenience, both from space, situation, natural water supply and mechanical contrivance, to maintain the high standing of the plates, and better to supply the constantly increasing demand for them.

NEW CAMERAS AND HOLDERS.—The SCOVILL MANUFACTURING COMPANY announce that they have devised of late a line of new cameras and holders more compact than any yet made for the accommodation of gelatino-bromide of silver films. They also announce that they have a stock of these films on hand ready for the market.

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Business Manager.

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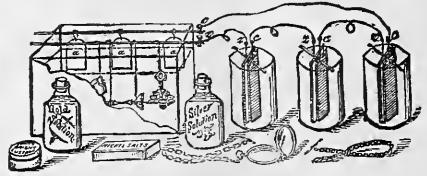
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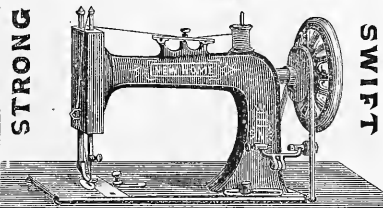
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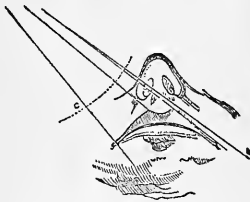
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It leads the nose right, and presents to the eye "a perfect cyclopædia of photography."

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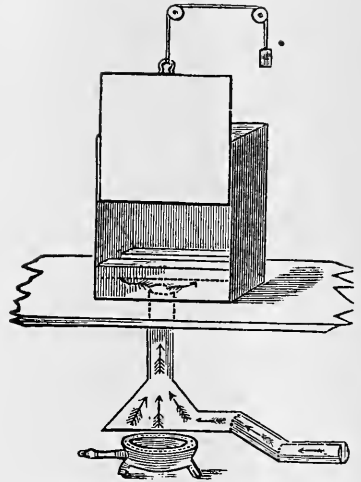
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8. *Cabinet, lady (bust).*
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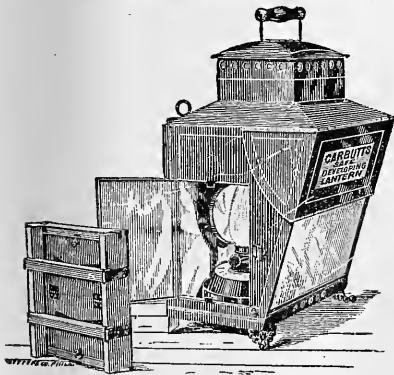
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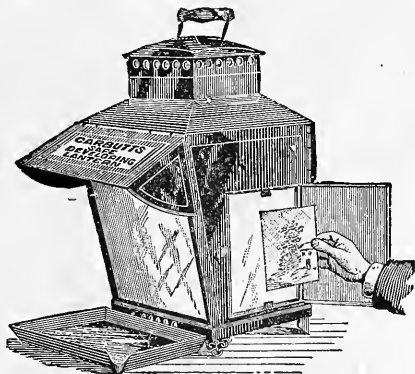
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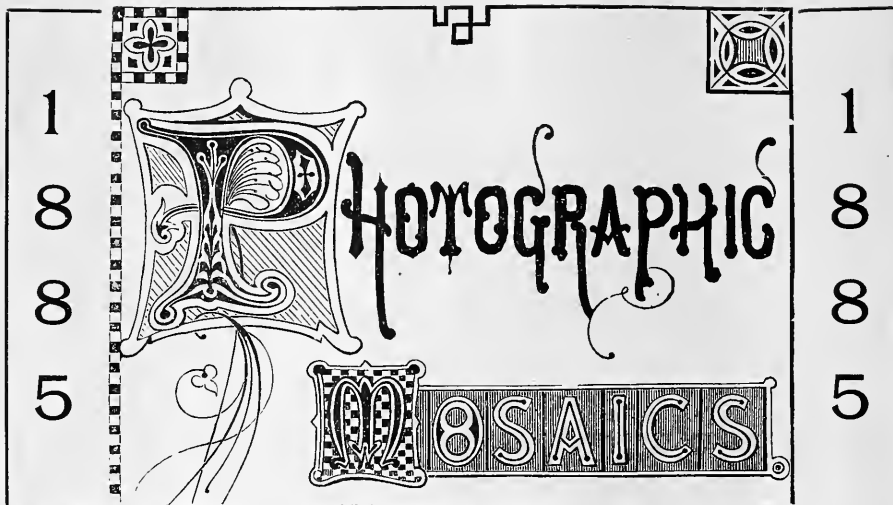
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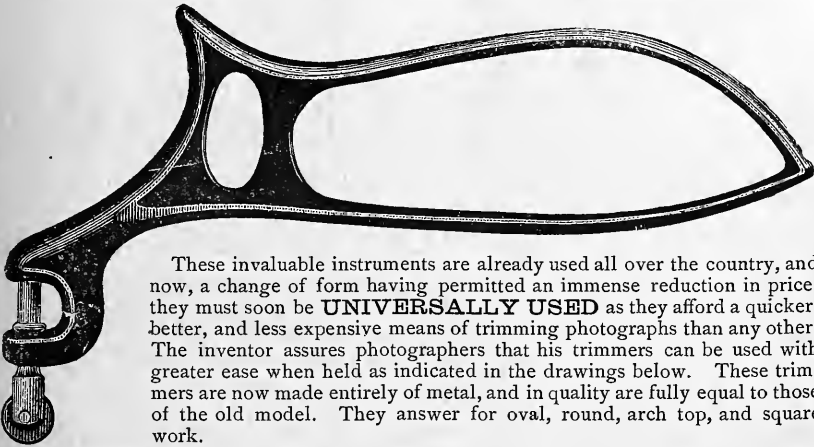
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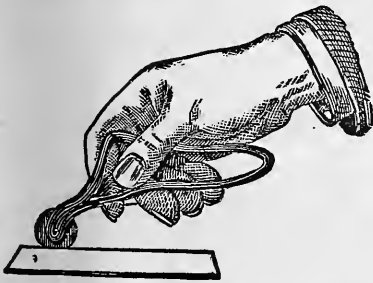
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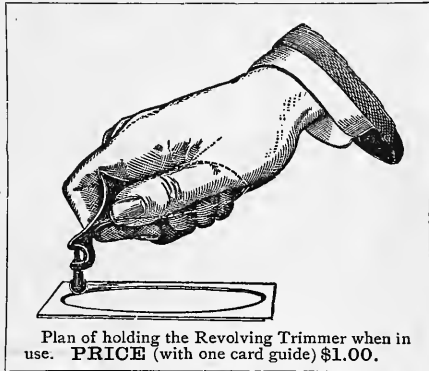
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2 $\frac{3}{4}$ x 3 $\frac{3}{4}$	4 x 5	5 $\frac{3}{4}$ x 7 $\frac{3}{4}$	7 $\frac{3}{4}$ x 9 $\frac{3}{4}$
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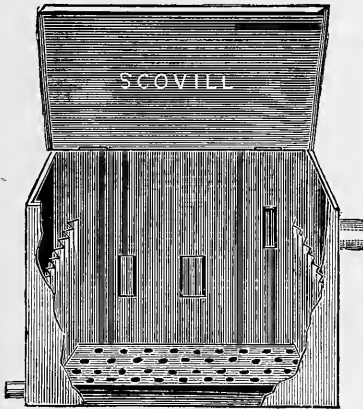
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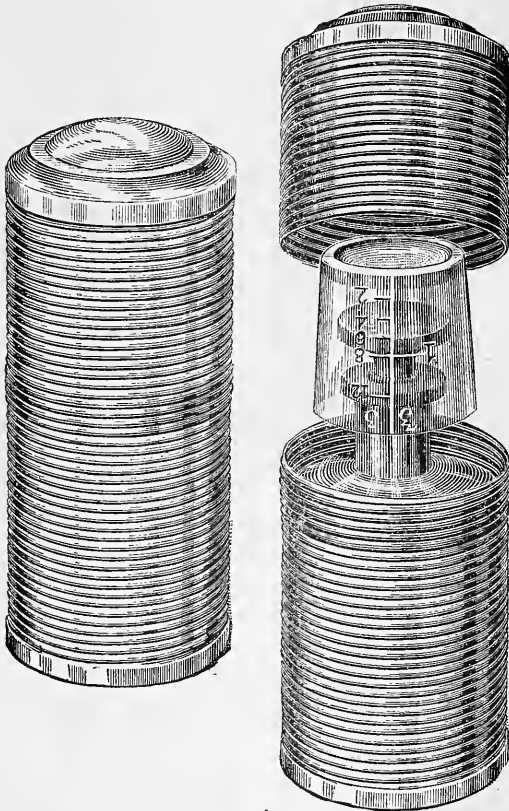
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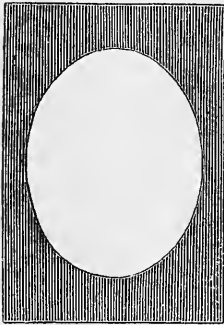
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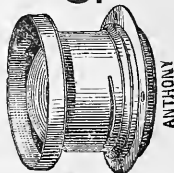
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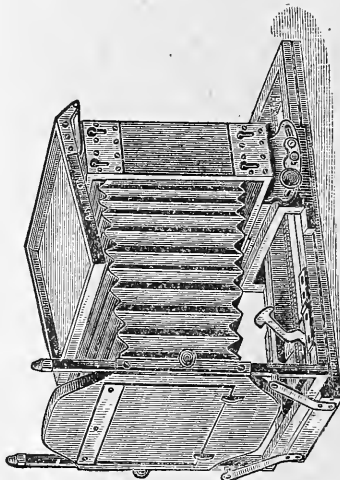
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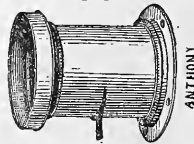
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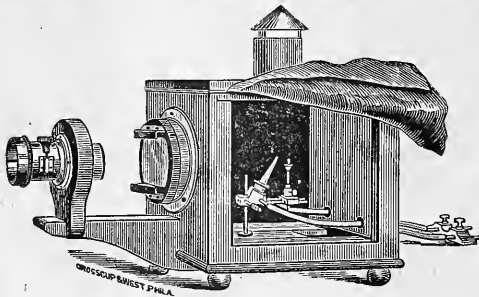
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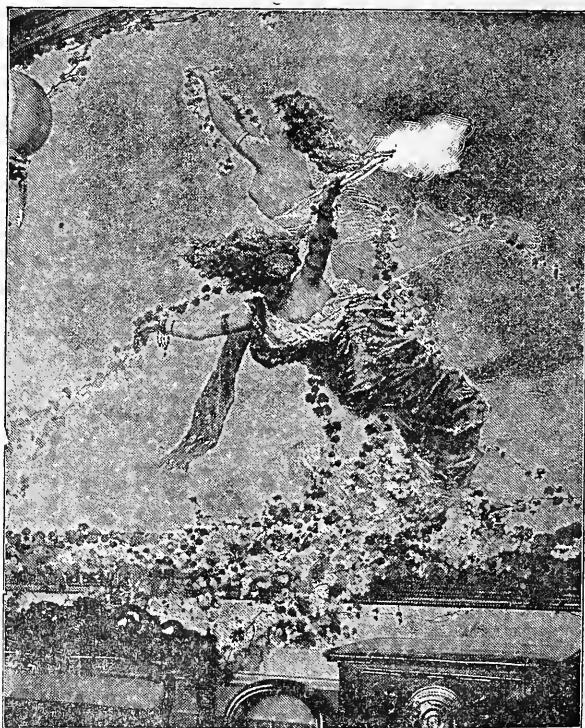
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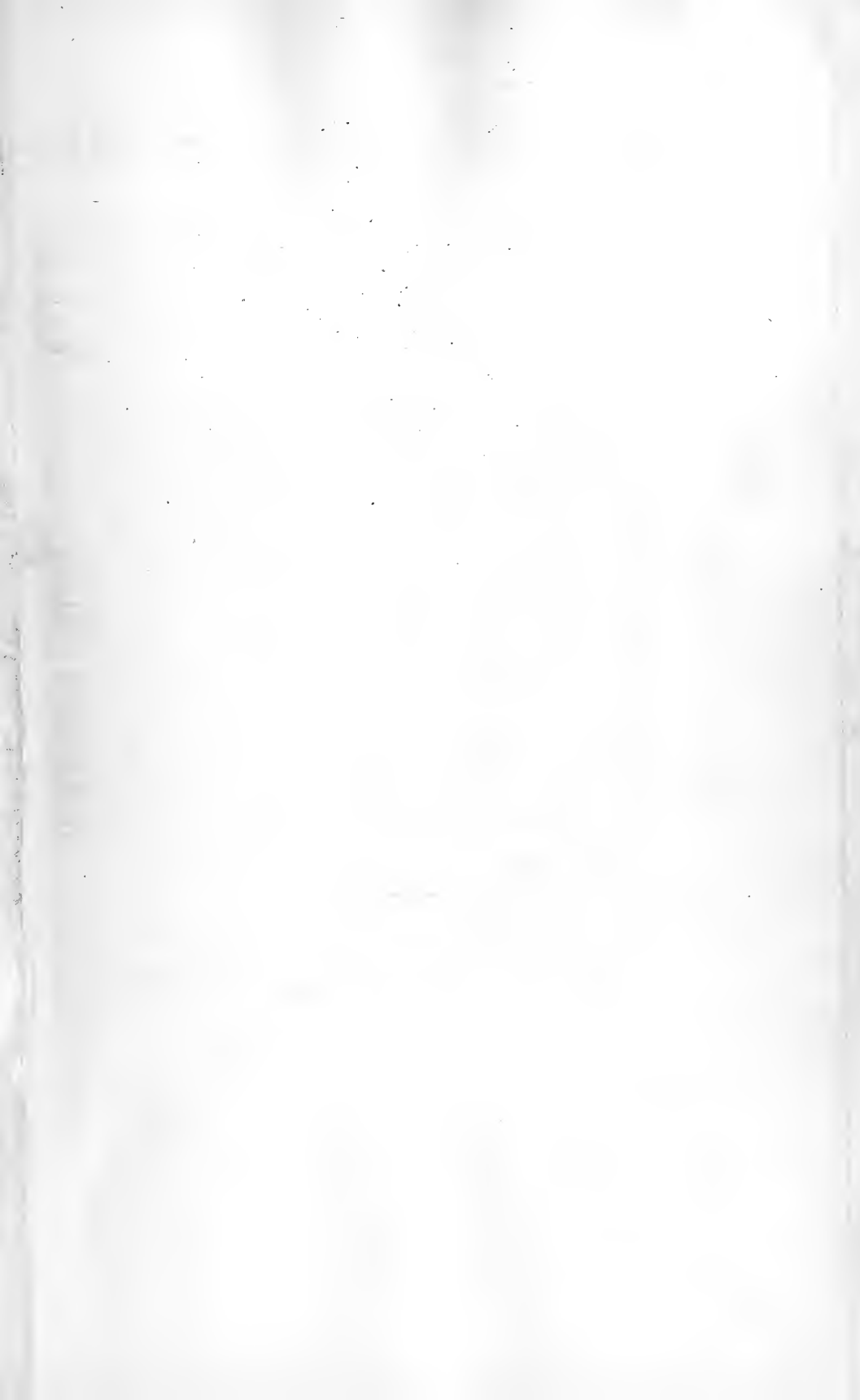
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Vol. XXII.

FEBRUARY, 1885.

No. 254.

**PHOTOGRAPHY AT THE NEW
ORLEANS EXHIBITION.**

STILL the work goes on. The pounding and the fixing continue, and the work of preparation is not ended. Long since was the World's Industrial and Cotton Centennial Exhibition completed according to the ideas of the originators, but so swollen has it been by additional application for space, and for the display of new and interesting departments of our country's products, that the work of the laborer here has been more than tripled, and consequently delay in completion was inevitable. At this writing, however, the work is almost finished, and in a few days announcements will be made, even before this meets the eyes of our readers, that the grand exposition is *a feat accomplished*. By that time, too, the stormy and unphotographic weather which has been reigning here for nearly a month, will be ended, sunshine will once more rule, and happiness reign.

A good many ask, "How does this exhibition compare with the Centennial?" It is about as difficult a question to answer as the one we often hear asked of the European traveller, "Which cathedral do you think the finest, that of St. Peter's at Rome, or the splendid marble structure at Milan?" for really there is no comparison. In many respect it must be acknowledged that this Exposition is far inferior to the Centennial. Its buildings are of wood, as

it comes from the saw-mills, while those at Philadelphia were of iron. Its exhibits, however, are in many respects superior to any ever before seen, because people improve as they have experience, and improve very rapidly. There will not be the beautiful variety of fine art-productions here that there was in Philadelphia, although the exhibition will be fine. But when we come to the Government and States' department, where almost every State of our Union rivals its neighbors in exhibiting its resources and products of all kinds, from the tiniest seed to the grandest railway enterprise, and where the parent government makes a magnificent display of the work and results of its many departments, it exceeds all. Photographically speaking, some of these exhibits are most picturesque. The grains and grasses of our land have been made to cover pagodas, pyramids, obelisks, and what not, under the careful hands of artists who have certainly exercised great care and skill in their arrangement. They are almost indescribable. We see wheat, oats, and barley arranged in mottoes and varieties of designs almost without end, and corn as well, made to assume more picturesque shapes and patterns than one can ever imagine possible. Not only are these forms beautiful, but they are arranged with excellent taste and startling effect. Our readers will see the proof of this presently in pictures which

will appear in our magazine. When we go out of doors, what was once a flooded desert-looking plantation, almost always under water, has been transformed into a fairy garden. Here we see, even now, growing with all the force of springtime, the beautiful plants, shrubs, and trees, from the tiniest cactus of Mexico to the colossal groves of live oaks which are to the manor born. The scene is a striking and beautiful one—one not possible to observe combined in any other part, for many of these plants and shrubs have been brought here from distant lands and sections, transplanted and made to grow in this wonderful soil and beneath this genial sunshine. It is a marvel indeed. But what has all this to do with photography, except to suggest to the minds of our readers how numerous and beautiful are the subjects for the camera hereabouts?

As to the display of our art productions, it is immense, and almost past finding out. This last assertion is literally true, for as I stated before, in a previous letter, the tardiness with which the management responded to our offer to work up and superintend a photographic display, caused a good many photographers to fear that they would miss the opportunity of displaying their work here. Hence, being invited by the commissioners from their several States, yielded to the invitation to make their display in the State Departments, and so our photographic section proper was robbed of many of its excellent exhibits. So we hardly expect that the collective display will be as fine as that at Philadelphia—a natural result. But if it were a collective exhibit it would far exceed anything ever seen on the face of the earth in the line of photography. Some most marvellous things are here. The display of transparencies is particularly wonderful, and we understand it is to be largely increased. Landscape photography never had such a showing as it has here. Industrial photography is represented to a wonderful degree. The amateur societies have responded nobly to the request for exhibits from their members, and the collection is very beautiful and gratifying. Photo-mechanical and photo-reproductive processes are also splendidly repre-

resented by various firms, and in almost every State and in every department of the Government, we see photography represented or made use of for some excellent purpose. Thus, a true lover of photography is made very proud of his art, and goes about with a happy heart, with strength and full of hope for its future.

Among the landscape photographs, the collection of Mr. W. H. Jackson, of Denver, Col., may be classified as one of the best. Mr. Jackson has two opportunities here for displaying his talent and art—one in the department of the Baltimore & Ohio Railroad, in the Maryland State Section, and another in the regular photographic department. The former collection is intended to illustrate the picturesqueness of the railroad named, and embraces some magnificent views. One of these is a panoramic view in five sections, which is a marvel of careful negative making, artistic choice, and beautiful printing. Others represent the gaps, horse-shoes, valleys, the streams, and the natural curiosities along the Baltimore and Ohio Railway, and are superb. We ought not to leave this fine display without mentioning Mr. Jackson's frames. They are very appropriate, being of broad, flat wood, as a rule, and decorated with emblems of the products of our country, such as grains, grasses, fruits, etc.—a capital idea. Mr. Jackson's exhibit in the Photographic Department proper embraces a fine collection of his superb views of Colorado, Arizona, New Mexico, and old Mexico. Many of his life groups in the latter collection are exquisite, and give us better ideas of the people than any that have been produced.

Next to Mr. Jackson in the State exhibits we may mention the display of Mr. F. Jay Haynes, of Fargo, Dakota. His pictures are largely of the National Park or Yellowstone country, and are truly magnificent. Our readers are already familiar with the pictures of this wild and picturesque region, so that we need only add that the work of Mr. Haynes is first-class photography, and equal to anything else in the Exhibition. Mr. Haynes and Mr. Jackson were both here in person a week ago superintending their exhibits and

seeing them hung. In the Photographic Department proper, hung upon the alcove next to Mr. Jackson's is the display of Mr. I. W. Taber, of San Francisco. Mr. Taber's display is very much the same as that made by him at the Louisville Exposition, and includes not only a very fine line of portraits, but a magnificent collection of landscapes, made on his own plates, in the Yosemite Valley, of the Bay of San Francisco, of the City of San Francisco, and other California localities—a magnificent display, indeed, to which we may have to revert again presently. Next to the exhibition of Mr. Taber is that of Mr. L. W. Blanks, of Vicksburg, Miss., whose exhibit of quick work of river scenery, Southern views, and other picturesque bits are very creditable to him. Following these are long lines of landscapes and portraits, which are being hung at the time of this writing, and which we cannot catalogue until our next letter.

There is a very fine display here of photographic material and apparatus also, but as it is also incomplete, we may only allude at present to two or three of the collections. That of the Air-brush Manufacturing Company is, of course, fine; no one would expect anything else. It is superintended personally by Mrs. Walkup (the wife of the secretary of the company), who demonstrates the use of the air-brush to the public from day to day, and explains the splendid specimens which hang near her, produced by the instrument. Mr. E. K. Hough also demonstrates the use of the air-brush at the same locality. The case of card-mounts exhibited by Messrs. A. M. Collins, Son & Co., of Philadelphia, is a wonder of its kind. We were never so impressed with the wondrous growth of styles and quality in this direction as we were in looking at this case soon after it was opened. Every size, color, shape and form invented for the use of the photographer and the amateur artist are here displayed in beautiful designs and combinations. One of the latest novelties that we noticed was that of a cabinet mount with an irregular edge, curved or corrugated, as you please. The centre of the case contains a novel and original design in the shape of an arch, whose keystone is a beautiful card-mount labelled "Penn-

sylvania," and around the stop and down its sides are tiny cards of various colors, with the names of our States and Territories printed thereon. It is quite ingenious. Near here Mr. T. H. McCollin, of Philadelphia, makes a grand display of solar prints and blue prints which are very creditable to him. It was prepared at great expense, and has been arranged with great care by his representative, Mr. Janes. We notice in this neighborhood exhibits under way from the Scoville Manufacturing Co., Messrs. E. & H. T. Anthony & Co., the Blair Tourograph Co., Mr. W. F. Ashe, and many others, all of which we must catalogue at another time, since our space is coming to an end.

While the photographic department is a little behindhand, it is no more so than many of the others, and by the time the flood of people interested in it arrives there, it will be in good trim, and will make a creditable appearance. We trust that photographers will visit it and understand its advantages, and come away from it after they have done so, with strong hearts and improved minds and resolutions to elevate and dignify our art as long as they have connection with it. We had it on our mind to describe some of the novelties of the work-rooms of the Centennial Photograph Company, but as we shall next month, or soon after, present to our readers a few pictures of the grounds, made by this Company, we defer the descriptions referred to until that time. Meanwhile, we extend a cordial invitation to all photographers who visit the Exposition to come and see for themselves.

THE CORRECT WAY OF MIXING THE POTASSIUM SALTS IN COLLODION.

BY D. BACHRACH, JR.

MY attention was called to an article by Mr. Spencer, in the January number of this journal, in which allusion was made and commendation given to a formula which we send out with Schering's celloidine, for which we have the agency. Mr. Spencer failed, however, to give the formula (which is not Schering's, but my own) as he might

have done, it being open for the benefit of the craft. The following is the recipe in full, so it will not be necessary to buy the article from us in order to get the formulæ.

Two formulæ are here given, No. 1 (the old formula) that is more ripe and will work at once, and, as will be seen, is somewhat thinner than No. 2, which is a good keeping collodion. For immediate use No. 1 is perhaps the best, while some prefer a mixture of the two. For microscopic work celloidine is far preferable to pyroxline, on account of its fine film.

No. 1.

Alcohol (Atwood's Patent),	. . .	40 ounces.
Ether (Concentrated),	. . .	40 "
Celloidine, . . . . .	. . .	1 package.
Iodide of Ammonium,	. . .	360 grains.
Iodide of Cadmium, . . . .	. . .	120 "
Bromide of Cadmium, . . . .	. . .	40 "
Bromide of Potassium,	. . .	80 "

No. 2.

Alcohol (Atwood's Patent),	. . .	36 ounces.
Ether (Concentrated),	. . .	36 "
Celloidine, . . . . .	. . .	1 package.
Iodide of Ammonium,	. . .	216 grains.
Iodide of Cadmium, . . . .	. . .	216 "
Bromide of Cadmium, . . . .	. . .	60 "
Bromide of Potassium,	. . .	40 "

Dissolve the iodides of ammonium and cadmium in eight ounces of the alcohol, then dissolve the bromide of potassium in as small a quantity of water as will dissolve it, by grinding in a mortar with the addition of half an ounce of alcohol, and then add to the other eight ounces of iodized alcohol. Then add the latter to the remaining ether and alcohol gradually, shaking up meanwhile to avoid a precipitate. Then add the celloidine and shake up the mass. It will have to be agitated repeatedly during one or two days to dissolve it completely, and it will make a collodion free from sediment, which can be used at once, and will keep a long time.

This, it will be seen, differs from the old formulæ in this particular—a smaller quantity of the bromide salts, and the method of mixing them. I will here mention that but for this modification the celloidine of Schering would never have been introduced into this country, and used so largely, as

the agents had samples here two years before we got hold of it, and the article was condemned by those who tried it (by the usual formulæ, of course), but noticing its extreme sensitiveness and fineness of film, I experimented with it until the present formula was perfected, which insured its success.

Now, under the old formula the desirable qualities of bromide of potassium were introduced into collodion somewhat after the following fashion: Iodide of ammonium, two and a half grains to the ounce; iodide of cadmium, two and a half grains to the ounce; bromide of potassium, two and a half grains to the ounce. These were added to the alcohol and ether (the potassium salts being first dissolved in water), the precipitate which formed being filtered out before adding the cotton. This formula was always considered excellent, but few knew the *real* reason. Had *all* the bromine contained in the potassium salt been freed and absorbed, as was claimed by the pseudo chemists, its popularity would never have been very great. But it was not, as every one with a knowledge of the simplest elements of chemistry must know, and all over about one grain to the ounce was simply thrown away. After many patient experiments, I found the above-mentioned method of making a solution of potassic bromide in ether and alcohol without precipitation, and that is why this formula has been found so good.

By the old method there was no absolute certainty of obtaining the same amount of bromide in solution twice in succession, hence it gave variable results. It would be well, even by those who are most brilliantly successful in the art, to know something of the *science* of chemistry before giving a *priori* chemical reasons for formulæ. I know that a good many enthusiasts of the new dispensation will laugh at this subject as an "old foggy" affair, but they would not laugh so loud if they knew the number of the very best photographers who still use and will continue to stick to their old friend, collodion. It is the latter who laugh when they save money by using wet plates for sizes up to 8 x 10 inches; they laugh still more when they see the results as compared with the average dry plates; their printers

laugh at having negatives that print quickly and are not ruined by a little overprinting, or the contrary. And yet these old fogies manage to use up a good many dry plates on babies and large difficult work without ostracising either the old or new dispensation.

A METHOD OF MEASURING THE ABSOLUTE SENSITIVENESS OF PHOTOGRAPHIC DRY PLATES.

BY WILLIAM H. PICKERING.

WITHIN the last few years the subject of dry plate photography has increased very rapidly; not only in general popularity, but also in importance in regard to its applications to other departments of science. Numerous plate manufacturers have sprung up in this country as well as abroad, and each naturally claims all the good qualities for his own plates. It therefore seemed desirable that some tests should be made which would determine definitely the validity of these claims, and that they should be made in such a manner that other persons using instruments similarly constructed would be able to obtain the same results.

Perhaps the most important tests needed are in regard to the sensitiveness of the plates. Most plate makers use the wet plates as their standard, giving the sensitiveness of the dry plates at from two to sixty times greater; but, as wet plates vary quite as much as dry ones, depending on the collodion, condition of the bath, etc., this system is very unsatisfactory. Another method employed largely in England depends on the use of the Warnerke sensitometer. In this instrument the light from a tablet coated with luminous paint just after being exposed to a magnesium light, is permitted to shine through a colored transparent film of graduated density upon the plate to be tested. Each degree on the film has a number, and, after a given exposure, the last number photographed on the plate represents the sensitiveness on an empirical scale. There are two or three objections to this instrument. In the first place, the light-giving power of the luminous tablet is liable to variations; and, if left in a warm, moist place, it rapidly deteriorates. Again, it has been shown by

Captain Abney that plates sensitized by iodides, bromides, and chlorides, which may be equally sensitive to white light, are not equally affected by the light emitted by the paint; the bromides being the most rapidly darkened, the chlorides next, and the iodides least of all. The instrument is therefore applicable only to testing plates sensitized with the same salts.

In this investigation it was first shown that the plates most sensitive for one colored light were not necessarily so for light of another color. Therefore it was evident that the sun must be used as the ultimate source of light, and it was concluded to employ the light reflected from the sky near the zenith as the direct source. But as this would vary in brilliancy from day to day, it was necessary to use some method which would avoid the employment of an absolute standard of light. It is evident that we may escape the use of this troublesome standard, if we can obtain some material which has a perfectly uniform sensitiveness. For we may then state the sensitiveness of our plates in terms of this substance, regardless of the brilliancy of our source. The first material tried was white filter paper, salted, and sensitized in a standard solution of silver nitrate. This was afterward replaced by powdered silver chloride, chemically pure,—which was found to be much more sensitive than that made from the commercial chemicals. This powder is spread out in a thin layer, in a long paper cell, on a strip of glass. The cell measures one centimetre broad by ten in length. Over this is laid a sheet of tissue paper, and above that a narrow strip of black paper, so arranged as to cover the chloride for its full length and half its breadth. These two pieces of paper are pasted on to the under side of a narrow strip of glass which is placed on top of the paper cell. The apparatus in which the exposures are made consists of a box a little over a metre in length, closed at the top by a board, in which is a circular aperture 15.8 cm. in diameter. Over this board may be placed a cover, in the centre of which is a hole .05 cm. in diameter, which, therefore, lets through .00001 as much light as the full aperture. The silver chloride is placed at a distance of just one metre

from the larger aperture, and over it is placed the photographic scale, which might be made of tinted gelatines, or, as in the present case, constructed of long strips of tissue paper, of varying widths, and arranged like a flight of steps; so that the light passing through one side of the scale traverses nine strips of paper, while that through the other side traverses only one strip. Each strip cuts off about one-sixth of the light passing through it, so that, taking the middle strip as unity, the strips on either side taken in order will transmit approximately,

1	2	3	4	5	6	7	8	9
2.0	1.65	1.4	1.2	1.0	.85	.7	.6	.5

The instrument is now pointed toward the zenith for about eight minutes, on a day when there is a bright blue sky. On taking the apparatus into the dark room, and viewing the impression by gaslight, it will be found that the markings, which are quite clear at one end, have entirely faded out by the time the middle division is reached. The last division clearly marked is noted. Five strips cut from sensitized glass plates, ten centimetres long and two and a half in width, are now placed side by side under the scale, in the place of the chloride. By this means we can test, if we wish, five different kinds of plates at once. The cover of the sensitometer containing the .05 cm. hole is put on, and the plates exposed to sky-light for a time varying anywhere between twenty seconds and three minutes, depending on the sensitiveness of the plates. The instrument is then removed to the dark-room, and the plates developed by immersing them all at once in a solution consisting of four parts of potassium oxalate, and one part of ferrous sulphate. After ten minutes they are removed, fixed, and dried. Their readings are then noted, and compared with those obtained with the silver chloride. The chloride experiment is again performed as soon as the plates have been removed, and the first result confirmed. With some plates it is necessary to make two or three trials before the right exposure can be found; but, if the image disappears anywhere between the second and eighth divisions, a satisfactory result may be obtained.

The plates were also tested using gas-light

instead of daylight. In this case an Argand burner was employed, burning 5 cubic feet of gas per hour. A diaphragm 1 cm. in diameter was placed close to the glass chimney, and the chloride was placed at 10 cm. distance, and exposed to the light coming from the brightest part of the flame, for ten hours. This produced an impression as far as the third division of the scale. The plates were exposed in the sensitometer as usual, except that it was found convenient in several cases to use a larger stop, measuring .316 cm. in diameter.

The following table gives the absolute sensitiveness of several of the best-known kinds of American and foreign plates, when developed with oxalate, in terms of pure silver chloride taken as a standard. As the numbers would be very large, however, if the chloride were taken as a unit, it was thought better to give them in even hundred thousands:

SENSITIVENESS OF PLATES.

Plates.	Daylight.	Gas-light.
Carbutt Transparency, . . .	.7	
Allen & Rowell, . . .	1.3	150
Richardson Standard, . . .	1.3	10
Marshall & Blair, . . .	2.7	140
Blair Instantaneous, . . .	3.0	140
Carbutt Special, . . .	4.0	20
Monroe, . . .	4.0	25
Wratten & Wrainwright, . . .	4.0	10
Eastman Special, . . .	5.3	30
Richardson Instantaneous, . . .	5.3	20
Walker, Reid & Inglis, . . .	11.	600
Edwards, . . .	11.	20
Monckhoven, . . .	16.	120
Beebe, . . .	16.	20
Cramer, . . .	16.	120

It will be noted that the plates most sensitive to gas-light are by no means necessarily the most sensitive to daylight; in several instances, in fact, the reverse seems to be true.

It should be said that the above figures cannot be considered final until each plate has been tested separately with its own developer, as this would undoubtedly have some influence on the final result.

Meanwhile two or three interesting investigations naturally suggest themselves; to determine, for instance, the relative actinism of blue sky, haze, and clouds; also, the relative exposures proper to give at different

hours of the day, at different seasons of the year, and in different countries. A somewhat prolonged research would indicate what effect the presence of sun-spots had on solar radiation,—whether it was increased or diminished.

[By courtesy of the author, from the proceedings of the American Academy of Arts and Sciences.—Ed.]

“FOREWARNED IS FOREARMED.”

BY C. R. PANCOAST.

THE author of this trite saying was, perhaps, one of the greatest scientists of his day; and, although the art of photography was unknown to him, yet, had he been aware of its peculiar characteristics, he could not have originated a maxim more to the point. Photography, even in its simplest form, is a complex undertaking—a chain of wheels working with each other, where the slightest derangement of one necessitates the stoppage of the whole. Practice and experience alone give that facility of execution which is so desirable, and distinguishes the expert from the novice. Beginners, as a rule, by devoting their whole time and attention to the chemical portion of the work, often give themselves endless trouble and annoyance by omitting some of the minor yet important mechanical details; which, if properly arranged, could be made almost automatic. For the amateur to remember everything is next to an impossibility; therefore, the best plan is so to arrange the apparatus that it is practically impossible to omit any important part. In this respect the English cameras are preëminently good, being entirely self-contained, no loose pieces or screws to become lost or mislaid. A very simple, yet, oh! how important member of the photographer's kit, is the thumb-screw for securing the camera to the tripod. The number of times this has been lost or forgotten is beyond calculation, while a very simple mechanical contrivance will so secure it to the tripod that it at once becomes a part of that instrument. It is well to have this screw of a standard size. (The manufacturers of cam-

eras seem to delight in furnishing screws of very odd sizes and threads, which are to be obtained nowhere outside of their shops.)

A very convenient size and one suitable for cameras up to 8 x 10 is the $\frac{5}{16}$ '' standard bolt thread. This can be obtained in any machine or blacksmith shop. The great advantage of a standard thread is that where the screw is lost, or broken, there will be little or no delay in replacing it, providing, of course, that a spare one is not carried in case of an emergency. In arranging apparatus for travelling, it is well to provide against every contingency. A few moments spent in a careful inspection will never be regretted, and frequently reveal a defect which might result disastrously. In this connection I might mention an instance of what seemed a case of unpardonable stupidity. A celebrated English photographer, desirous of making a series of pictures from the car of a balloon, engaged the services of an aeronaut, and preparations were made for an ascension. Upon reaching the proper elevation, imagine the disgust of the operator when he discovered that his instantaneous shutter was out of order and failed to work. He knew, or should have known, that *all* depended on that shutter, and should have seen that it was in perfect order, and of a pattern not likely to become deranged, or else provided himself with a spare instrument. Perhaps a few minutes spent prior to the ascent in overhauling his apparatus would have revealed the fact that the shutter was not in working order, and thus the waste of time and money in making the fruitless expedition would have been saved.

Perhaps the most vulnerable part of a camera is the ground glass screen; therefore it is well to have a spare one convenient in case of accident, or else be provided with a small phial of an opalescent varnish or “ground glass” substitute,” with which an excellent substitute for a ground glass can be prepared in a few moments. A small pocket screw-driver and an assortment of screws are well-nigh indispensable, especially if one is photographing in a rough country, and where the camera is likely to be knocked about. In some places it is impossible to have any repairs made, other than what the photographer is able to do himself. Where

one desires to use a number of lenses on the same camera, the most convenient plan, if properly arranged, is to have the largest flange permanently attached to the front board of the camera and use a series of "adapters" to suit the smaller lenses. Unless these are properly made, they are a great annoyance. Where the smaller lenses are in a variety of sizes, each should have its adapter permanently attached to it, and not loose, as then the liability of its becoming jammed in the larger flange is greatly lessened. An admirable plan consists in having one or two standard flanges for all cameras (according to size), and make all the lenses and their adapters interchangeable.

In the anxiety regarding the chemical work, one is apt to overlook the many little conveniences which facilitate the field work and add so much to one's comfort. Now a few words on the subject of packing. A sole leather case for the camera and lenses is certainly the most desirable, as it is in a measure waterproof, and will stand a vast amount of hard usage. It should be constructed so as to contain, besides the camera, lenses, and plate holders, a spare pocket, in which can be carried a variety of "supplies," such as extra screws, ground glass, adapters, extra fronts, and such other items as are apt to become lost or broken. The additional weight is very little, and the surest way to prevent accidents is to be provided against them. Plates should always be packed so as to stand on edge and thoroughly wedged in with some material to prevent jostling. The following plan adopted by the writer in a recent foreign tour gave great satisfaction. Having prepared a number of thin card-board frames the exact size of the plate, I placed one between each film surface. By cutting these in one piece, although wasteful, an even bearing is obtained for each plate, and a much firmer package made, than when these frames are made of narrow strips pasted together at the corners. To avoid any possibility of dampness, I thoroughly dried them by heat before placing them between the plates. After wrapping several thicknesses of non-actinic paper around the plates, I put them in card-board boxes, giving these several folds of heavy wrapping paper. Of the large number of

plates packed in this manner, not a single one was either broken or scratched.

VICISSITUDES OF GELATINE.

BY R. DOUGLAS.

IN spite of what information we have about gelatine, it seems to delight in baffling science at times. Will some practical man explain away satisfactorily why plates will at times be full of dull-looking spots before development, which become intense spots after development, very often ruining the negatives? They cannot be from fatty or greasy matter, whose behavior consists in giving blurred roundish spots, repelling the developer. It seems to me to be caused by something we don't know of. I have observed that keeping of emulsion for at least a week, partially does away with it. I am certain to get these spots in fresh emulsion. One time I made a batch of emulsion and put it away a full month to ripen; the result was complete absence of spots. Lately I used an emulsion less than a week old, and got a good many spots on each plate. Next experiment: I kept it about ten days in very cold weather, still spots came, but fewer in number. Probably the excessive cold prevented the full ripening. At any rate, when emulsion is given plenty of time to ripen in normal temperature, the spots don't come. I am often surprised to see many give recipes, and direct using emulsion fresh. I would like to know if they do not get the spots in question. If they do not, will they please show us the way they prevent them? Washing the gelatine, before use, probably rids it of grease; at any rate, it is to be recommended. Will some one enlighten us on the subject of spots?

A good deal is said of deterioration of plates by reason of the pasteboard separators. This is not to be wondered at. Even a good albumen print pasted on common straw board is not slow in fading away. If separators are to be used at all, why not have them cut out of No. 1 photographic cardboard, as is supplied by all stockdealers. This is probably the purest substance known, and ought not to act injuriously on plates. I have not had occasion to demon-

strate this theory, for I use up quickly all I make. For boxes to keep plates in I use tin boxes, made at a tinshop, taking as a pattern a sample of the pasteboard box in which plates are packed. These are more handy and convenient than pasteboard, and practically damp-proof.

In early days of dry plates I thought that I hit on a good way to pack plates. I made envelopes of orange paper, and put each plate in its own envelope. After the plate was exposed I wrote the memoranda on the envelopes, and returned the plates in them. The plan worked well for a little while, but after I had occasion to have plates in their envelopes for a month or so they were ruined. There were large insensitive spots on the plates which refused to develop. These insensitive spots and patches were undoubtedly caused by the paper.

I have lately made some curious observations on the boiling process. I use bromo-iodide emulsion, which gives far better effects on views than pure bromide alone. By boiling half an hour I get practically as quick plates as ever with very good gradations and plenty of density. By boiling one hour they are about as quick as Carbutt's specials, with as good density as in half-hour boiled emulsion: both were free from blurring. Boiling one hour and a half, still more rapid, good density; plenty of details, but bordering on blurring. Two hours' boiling gives still more rapid plates—in fact, twice as rapid as one hour's boiling, but blurring is more decided. Still these plates were very good for portraits, giving soft and harmonious effects. As viewing is my specialty, I conclude that emulsion boiled for one hour gives me the most desirable plates.

Iodide allows the boiling to be prolonged without fogging. Half an hour gives dense, yellowish-red plates. One hour, a trifle less decided color. One hour and a half, still less. Two hours transmits grayish light, thinner, and more transparent. It coats far fewer plates than less boiled emulsions do. I don't use cold emulsion process, so I don't know much about it.

Silicate of potash seems the best for a substratum. I think it should never be

allowed to get frozen, judging from a bottle of that stuff which was ruined beyond restoring lately in my hands. I could not redissolve it, though it willingly thawed out the ice.

WE ARE ASKED TO PUBLISH THE FOLLOWING.

BOSTON, MASS., Dec. 22, 1884.

LEO. WEINGARTNER,

Secretary of the P. A. of A.

DEAR SIR: I have patiently waited a reply to my letter of 29th of October, explaining the non-appearance of our name in the list of contributors to the Cincinnati Convention, but have up to date received none. Since you assumed the responsibility of writing the Company of which I am Treasurer, urging them to forward their donation to you, I must, as a brother member, insist that you give proper account of the same, either through the Treasurer of the Association or to us. The writing of this letter is an unpleasant task, but I am confident the members of the Photographers' Association of America would not countenance your discourteous treatment of contributors to their fund. We do not wish to pose as croakers, but, since we asked a civil question and received no reply, we must insist upon having it. Yours, very truly,

T. H. BLAIR.

*To the Members of the Photographers'
Association of America.*

In connection with the above, I trust it will not be considered that I have resorted to unbusiness-like methods for advertising purposes, but during my late tour through the different States, I have heard several complaints similar to my own, and the majority has ended with the remark that the Association had received its last dollar from that source. I do not say this. I have faith in the majority of its members.

The photographers of America cannot afford to allow this Association bearing their name to sink into disrepute; the manufacturers and dealers cannot afford to lose this opportunity to bring their wares before the intelligent photographer of the country.

They appreciate the advantage, and a glance at the list of contributors must convince any one that they are willing to pay their share. Furthermore, the dealer and manufacturer depend on the photographer for their support. When the latter is in a prosperous and happy condition, the former is more likely to be; therefore I believe I am echoing the voice of the latter class when I say we are willing to help support that which will promote the welfare of photographers.

This may be presumption on my part to predict that the Association will die. Be it so or not, I say, without a doubt in my mind, that, if the follies of last year are repeated, the Association has but few years to live; but, on the other hand, if we are willing to be taught by experience, we are the more able to conduct the coming one successfully. The condition of the country from a photographic point of view to-day is a gloomy one. The Photographers' Association of America can be of vast service in bringing about a better condition of affairs, but its Convention must be different, and some of its officers different from those of last year. We should spend less energy in getting photographers to the Convention, and more to provide for becoming entertainment while there.

Our Secretary, whom I have seemingly criticised so severely, worked energetically for the Association. This I witnessed personally, but it is my belief that his efforts were not directed with the best judgment and for the best interest of the Association, under whose banner he transacted the business. The acceptance of the office he holds is a pledge that he will attend faithfully to its duties. This I believe I can be upheld in saying he has not done. It is not alone in matters similar to that embodied in my complaint of which I speak. I have been shown letters simply asking after lost goods, to which the writers were unable to get even an acknowledgment. Shall we quietly sit back and allow this to continue? As a member, I do not feel disposed to, and trust there are more of a similar mind.

Fraternally yours, T. H. BLAIR.

MOSAICS for 1885 is immense.

ON STAMP PORTRAIT PATENTS.

HAVING received a card from Tensfield & Kuhn, of the West End Gallery, 1513-15 Olive Street, St. Louis, Mo., advertising the stamp photograph, claiming to be the original inventors, and having applied for patent, etc., threatening also to prosecute parties making or dealing in them, now, while we have no objection to the gentlemen making some money out of the stamp photograph, we have objections to their claiming priority of invention, unless their introduction antedates 1858. I have objections also to their attempt to intimidate the fraternity for making or dealing in the same; and through your most valuable paper I would like to inform the art fraternity, as well as the gentlemen themselves, that, between the years 1858 and 1862, I made and sold over 300,000 stamp photos, and have machines yet in existence that would produce, under a condensing lens, 100 in ten minutes. The gentlemen perhaps think they have struck a mine that has never yet been prospected, but in this they are mistaken; and, if there is any doubt about the matter, reference is here given to Frank Leroy, Youngstown, Ohio; J. F. Ryder, Cleveland, Ohio; J. W. Gould, Carrollton, Ohio; and many other parties whose names I have forgotten, all of whom, except J. F. Ryder, purchased machines of me for their production. Respectfully submitted,

A. R. GOULD.

INTENSIFYING NEGATIVES.

BY XANTHUS SMITH.

THERE seems to be a want of knowledge about intensifying negatives with many amateurs, or perhaps it is often a fear of destroying what they already have obtained, which deters them from venturing upon the operation. It is a matter well worthy of their attention however, for many negatives which are valueless even for the production of silver prints, can be made to print well upon platinum paper. A few suggestions may, therefore, not come amiss to some who may wish to experiment on unsatisfactory work.

In the first place, it is useless to attempt

the intensification of a fogged negative. An over-exposed and fogged plate may be considered past doing anything with, and, on the other hand, little or nothing can be done with an under-exposed or under-developed plate, where no detail has been brought out. But it sometimes happens that a plate comes out of the fixing bath clear in the shadows and full of the proper details throughout the rest, but wanting in sufficient intensity to make a good print, and these are the cases in which intensification comes so well into play.

The process is extremely simple, but at the same time one requiring a certain amount of care and cleanliness, for the principal agent used is the bichloride of mercury, a potent chemical, tending to inequality in its action, unstable, and highly poisonous. Of the different formulæ given, I have found that of mercury, in conjunction with cyanide of silver (which will be found in the directions accompanying Carbutt's plates), the most reliable and satisfactory—not only for dry but also for wet plates, and although a negative may be very satisfactorily intensified after it has been dried, I think the most perfect and certain results are to be obtained immediately after the final washing (the plate having, of course, been submitted to the alum bath) and before drying, and in the case of negatives that have already been dried, they should be thoroughly moistened again in clean water before treating, and in both cases the superfluous water should be drained and carefully blotted from the surface. When this has been done, pour a sufficient quantity of the mercury solution into one of your glass or porcelain developing pans to cover the bottom to the depth of a quarter of an inch or so, set the negative perpendicularly into this and lower it on to the solution, face down, with an even motion and without pausing; in this way the solution will flow equally across, air bubbles will be forced out, and streaks and lines will be avoided. A scrap of glass or rod should be used to keep the face of the plate from touching the bottom of the dish, and it will, by serving to raise the plate out of the solution, save the fingers, the mercury being very destructive to the skin. When the image has become equally and thoroughly whitened,

the plate should be removed and well washed and drained. The next solution, the cyanide, is best applied by having an abundance in a pan, so as to be sure of thoroughly covering the plate, and dropping the latter in, face up, as in developing, and keeping the pan in motion so that the solution will flow back and forth from end to end. In a few moments the whitened image of the negative will be turned to a clear deep brown, and when the change has taken place equally and completely, the plate may be removed and well washed and dried. The whole process may, of course, be conducted in open daylight. Always return the solutions immediately to their respective bottles, and wash thoroughly the pans; cleanliness is essential to the success of the process, and also important on account of the poisonous nature of the solutions used.

Negatives that have been successfully intensified and which it is desired to preserve for any considerable length of time, should be varnished. Intensified wet plates are particularly liable to change, returning unequally to the bleached condition, and my experience has been that varnishing effectually prevents any change; and although I have not as yet noticed instability with the dry plates, yet from the nature of the chemicals used, good negatives (intensified), which I wish to preserve, I varnish as a matter of thorough precaution.

HOW MOSAICS MADE THE MILLIONS.

BY DR. STERNBERG.

I HAVE enjoyed photography for many a long year, and, if such a thing is allowable, I am a *veteran amateur*. I photographed when carrying a much heavier camera than we get now, with a dark tent, which meant something, and I love it yet. I am ashamed that I did not sooner do something more to encourage the editor of *Mosaics* than I have done. My first contribution appears in the issue of 1885. The real truth is (and they say "an honest confession is good for the soul"), I thought I "knew it all," and I was too conceited to read anything that was published, and too indifferent and selfish to give any of what I knew for the benefit of the craft.

The dry process converted me. I wanted to "know it all," and I began to search the records for information. *Mosaics* came in for its share of handling, and when I saw how much others had done to contribute information, I softened, contributed an article, and began to reform. *I read it first* this year, of course, and then, well pleased, read the ripe notes contributed by others. Why, I am perfectly charmed. The little fifty cent book is worth its weight in nickels and gold. *Mosaics?* "Why, there's millions in it." The more I study it the better a photographer I become, and the more I enjoy my hobby. I do not find the large, long, windy articles (though few they are), of most benefit to me, but *the little bits* which I pick out here and there. For fear some of these may be overlooked by the careless reader, I have made a collection of some of the best. I append them, and beg you to publish them, that our hasty workers may have them in a concentrated convenient shape. Here goes, for a lot of little things, some of which we are apt to forget when performing some of the simplest operations in our work, and all of which are worth remembering. I give them a marginal number, the page on which they are found, followed by the name or subject of the article:

43—"My Developer." I only wish to call attention to the advantage of adding the silver dry. The idea is to form the bromide of silver at as near a temperature of 140° as possible.

As the hot gelatine dissolves the silver, it is converted into bromide much more evenly than can be done from a solution of the same.

45—"Under- and Over-exposed Plates." I have found the following admirable for over-exposed plates:

I first put the plate in a bath of bromide of potassium before development, the strength of the bath being about one part to one of water. In this solution it is allowed to remain about one minute, then taken out and, without washing, transferred to the ordinary developer. I prefer the oxalate to the pyro, but I add about six drops of a fifty per cent. solution of citric acid.

You will be surprised at the result—a brilliant negative, clear and full of detail.

50—"Photo Experiences." A convenient rule for amateurs, not always given in the hand-books, is that one grain of chloride of gold will tone one sheet of paper 18 by 22 inches, and one ounce of hypo *crystals* will fix three sheets of paper.

53—"Development." Although a strong developer will compensate for a shorter exposure than a weak developer, yet even in the wet process, with the exception of some peculiar cases, a weak developer is to be preferred.

Above all, a weak developer works more clearly and uniformly than a stronger one, and requires less skill in manipulation. This is especially apparent in the production of large photographic landscapes, without which it is almost impossible to represent an atmospheric effect with success.

The image produced by a weak developer is more harmonious in its general character.

92—"Home-made Plates." Common china or earthenware pots are very handy for coating, as they tend to hold back any froth or bubbles, which are the sorest nuisance in emulsion work. Don't use heat in drying plates after coating. Let them dry spontaneously in a cool and well-ventilated room. In the absence of such a room, get a large, light-tight box, or chest, and put the plates in, and several saucers of chloride of calcium, which will absorb the water from the plates: they will dry in about two days. Put in plenty of the chloride of calcium. You need not waste it, as it can be dried again over a kitchen stove and used again and again.

96—"A Workmen's Idea." In regard to what artists call effect, which relates to peculiar arrangements and contrasts of light and dark, a great deal is said to be attained by a proper attention to getting large and well-formed masses. It is a good plan to look at a subject which you contemplate taking with your eyes nearly closed, so as not to see any of the detail. If, when viewed in this way, it resolves itself into a mass of confused spots, do not attempt it. But, on the other hand, if you find it having a mass of quiet shadow, or half shadow with some deeper tones in it, and the rest

half light concentrated by some very high lights, if the objects composing it are at all interesting and well formed in their outlines, you can scarcely help having an agreeable picture. A picture composed solely of high light and deep shadow is harsh in its contrasts, and wants softness, and one without either high light or deep shadow is flat and wanting in spirit. Generally it is better to have the light falling at right angles to your view or nearer. In looking towards the light you get too much flat back shadow unbroken by detail, and when looking in the same direction with the light there is too much glare, and objects look flat, losing their roundness, and you have a pale, weak picture. Of course, there are exceptions to this, certain subjects requiring a deviation from such rules, and the artist must rely on his judgment as to whether the effect strikes him as agreeable or not. Try and get the backgrounds of objects which you are taking varied in light and dark; not small spots, but masses. A figure posed against an all light background, if dressed in light, loses itself and looks flat against it; and if dressed in black is too harshly relieved from head to foot. If you can get the dark part of an object to come against a light part of the background, and the light portion against the shadow, you will have an agreeable effect at once.

109—"The Delectable Dry." Perhaps it may be well to mention that dry plates offer a means of reproducing negatives never before placed in the hands of photographers, and although requiring great skill and considerable experience, yet can be made the means of improving many negatives that have been considered worthless. With dry plates as with wet, although the developers may be modified to suit the exposures, over-exposure counteracted and under-exposure forced up, yet a properly timed negative stands out alone against the numbers of badly timed plates, for it must be understood that although the modification of developers may bring a negative nearly equal, yet a plate properly exposed and developed with a normal developer will surpass them all.

115—"Exposure." Bromide of silver, whether in collodion or gelatine, manifests

a tendency to "blur" or allow the light to spread beyond the point at which the camera image stops. There are many negatives giving pleasing enough prints to the ordinary observer that would by no means stand the scrutiny of the focussing-glass if applied in search of "halation." It is a well-known fact that the least over-timing increases this defect in a marked manner, and frequently we see pictures which remind us of a conflict between the spirits of light and the spirits of darkness, so bitter is the discrepancy, and so hopeless, apparently, the reconciliation between the deep, black patches crying aloud for detail and the feeble, muddy lights burnt out from over-action. And we feel safe in saying that this defect is more common now than in the days when iodide of silver was the salt used—its yellow color going far towards limiting the action of light to its proper boundary.

What, then, is the cure for this trouble? There are two, in fact. First, the careful lighting of the subject, whether portrait, landscape, or anything else. Second, the proper exposure. In the days of collodion, under-timing was dreaded more than the opposite. At present, while an under-timed, patchy negative is not a jot more desirable than ever, still we may say that over-timing is rather to be avoided, from the fact that an over-timed gelatine plate is most unmanageable in every respect, flashing up quickly under the developer, so that it is perforce removed from this fluid before there has been time to create the necessary printing density, which is lost in fog and halation.

120—"Nothing to say." Ninety out of every hundred negatives or plates destroyed by "fog" could be saved if a few simple precautions were observed, viz.: Use a weak developer. Do not rush the image out in too great haste. Have a great volume of light (non-actinic) in your developing room; you should be able to see the formation of the picture in all its different stages of development, so as to be able to note the least trace of "fog," and *stop developing instantly* when such is the case, and finish with Hall's intensifier. Any quantity of light (non-actinic) may be

allowed during development, in fact, the room should *not be a dark one*, for you should be able to *see plainly* every article therein without straining the eyes. The quickest working plates do not always produce the best results.

124—"What is Art?" Who then is the greatest artist but he who in the least time produces the most natural result?

We find our query admirably answered in a poem by the late Mr. Longfellow, which is as follows:

"Art is the child of Nature; yes,
Her darling child, in whom we trace
The features of the mother's face,
Her aspect and her attitude,
All her majestic loveliness
Chastened and softened and subdued
Into a more attractive grace,
And with the human sense imbued.
He is the greatest artist, then,
Whether of pencil or of pen,
Who follows nature. Never man
As artist or as artisan,
Pursuing his own fantasies,
Can touch the human heart, or please,
Or satisfy our noble needs,
As he who sets his willing feet
In Nature's footprints, light and fleet,
And follows fearless where she leads."

We used to be told, by old-time operators, when we asked how to get certain results, as follows: "Put in some brains." A better answer might be, now, "Practise art in all your manipulations and operations." And I would add, if you want to know what art is, *read Mosaics for 1885*, and *understand* what thou readeth!

OUR PICTURE.

THE photographer, no doubt, frequently asks himself the question, "Can there be any such thing as originality in photography, or, especially, in portraiture?" Do we not all make use of the same element of light to call forth the image upon the sensitive plate? Is not the same object before us? And yet there is a difference in the work produced; a vast difference, not depending alone upon technical skill.

If we consider what constitutes originality, we shall find that it is not a fanciful

deviation from actual nature, a sort of eccentricity or singularity of posing or lighting, but a simple rendering of that which is true to nature, and at the same time novel.

When we are shown an exact likeness of a face, we naturally credit the artist or photographer with skill in translating the original; but we think any one who has eyes may paint a face or focus it upon the ground-glass of the camera. We imagine one person sees it just like another person, and if there is any deviation we lay it to the charge of fancy, thus making ourselves the standard of taste. Yet we may have eyes and see not. Until one examines a human face, he can have no idea what a complex subject it is. It is an ever-changing mirror, wherein are reflected the thoughts and feelings of the soul.

The mind of the painter or photographer must be susceptible to these varying phases, or his eyes may "behold and see not what they see," and "what the best is take the worst to be." He must view things in their "gayest, happiest attitudes."

Rembrandt did not invent the wonderful arrangement of his light and shade. No; he was the first to perceive the beauty in it. Nature, in this peculiar mood, had shown herself to thousands before him. He was the first who had a mind capable of perceiving and appropriating it. This is originality, true to nature, yet novel. And so others see grace and loveliness where the tasteless eye sees but a "blank of things."

It has been said of Raphael's paintings, that the women in the streets of Rome seem to have walked out of his pictures in the Vatican. His faces seem transcripts from actual faces; and so they are; but they possess, in addition, that beauty of expression which was visible alone to the mind of Raphael.

The objects of our study, then, exist in nature, but the power of perceiving beauty comes from the mind. Hence, the reason why one painter or photographer excels another. "They know what beauty is, see where it lies."

Mr. P. H. Rose, of Galveston, Texas, though a photographer, is possessed of this

artistic sense; hence, the excellency of the work which we present our readers this month. He is not content with mere posing or judicious lighting of his subject. He has seized the expression *en passant* in a state of progress not fixed and stereotyped. Thus he has secured an animation of countenance and peculiar sweetness in the moulding of the features which are in perfect harmony, not discordant. The eyes are soft and capacious as a cloudless sky, whose azure depths no doubt their color emulates. The arrangement of the costume is such as to give the appearance of natural negligence, and there is a softness in the blending of the lights and shades which bears witness to a conscientious regard for detail, which seems always coupled with artistic feeling.

The negatives are upon dry plates, and the prints upon the excellent brand of N. P. A. albumen paper of E. & H. T. Anthony & Co., New York.

ON PHOTOGRAPHING UPON CANVAS.

BY J. B.

PERHAPS nothing in the way of photography is more desired by the portrait painter than a quick and trustworthy method for making direct photographs upon canvas for the purpose of painting in oil. A great deal has been said of the superiority of art over photography.

In the higher sphere, art does, indeed, transcend the works which the sun's pencil may draw; but, as photography lays no claim to inspiration, she contents herself with being the handmaid to art. I think no portrait painter, unless he have the genius of a Rembrandt or Reynolds, will refuse her aid, and rely upon his own abilities to portray the beauty of expression in a human face. To such, therefore, the following hints may be of service. It is not our intention to enter into the artistic feeling to be produced in a picture, but merely to give a few practical hints how to prepare the canvas, etc., leaving the laying on of the paint and the manipulation of the brushes to the artist.

There are many methods which have been suggested, but it must be remembered that

the essential is one which insures a total freedom from all scaling of the film from the surface of the canvas. I do not think any one would be ambitious to have his work present, at so early a stage of its existence, the appearance of an antique.

Either the substance employed must penetrate the fibres of the canvas, or, if superficial, stick with tenacity to the exterior. I do not advocate direct printing from large negatives, because, as a member of the fraternity, I know the trouble and risk—not mentioning the expense—entailed in the production of large direct negatives. Therefore I have compassion on my fellow-workers, and say, use your ordinary cabinet negatives, and enlarge the picture upon the canvas to the size you require or your artist may desire.

The great thing in the preparation of the canvas is to wash it thoroughly clean. Get all the grease out of it, for there is plenty of this distracting element imprisoned in its fibres; liberate by both the hot and cold water treatment; then dry the canvas, and treat it to a bath of iodide and bromide. Take either

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|--------------------------|-----------|-----------------|
| 1. Bromide of Potassium, | | 2 ounces. |
| Bromide of Cadmium, | | $\frac{1}{2}$ " |
| Water, | | 120 " |

or

- | | | |
|--------------------------|-----------|------------------|
| 2. Bromide of Potassium, | | $1\frac{1}{2}$ " |
| Iodide of Potassium, | | $\frac{1}{2}$ " |
| Bromide of Cadmium. | | $\frac{1}{2}$ " |
| Water, | | 120 " |

The canvas is drawn through this solution, which is supposed to be in a tray a trifle larger than the piece of canvas. Now hang it up to dry again. When dry, it is sensitized upon the following bath:

- | | | |
|--------------------|-----------|----------------------|
| Nitrate of Silver, | | 2 parts. |
| Citric Acid, | | $\frac{1}{2}$ ounce. |
| Water, | | 70 ounces. |

Again dry the canvas. The exposure may either be made by an ordinary solar camera in sunlight, or by artificial light. A good method for the latter I saw in the PHILADELPHIA PHOTOGRAPHER for last year, which consists in the use of a sort of magic lantern for projection upon the surface of the canvas. A good way to support the canvas after it has been sensitized is to

fasten it by means of clips to the four corners of a flat board. In its position upon the board it can be handled at will. The exposure varies. It is better to give plenty of time, and the subject is ready for development. The developer consists of a mixture of citric acid and pyrogallic acid and water; about—

Pyrogallic Acid, . . .	5 ounces.
Citric Acid, . . .	22½ "
Water, . . .	205 "

It is best to apply the developer slightly warm. Let the exposed canvas lie in the bath until all the detail comes up; the time necessary to effect this varying from five to ten minutes. The print is then washed thoroughly, and, if necessary, it may be toned with the ordinary gold solution used for paper prints. The fixing is accomplished likewise as with ordinary paper prints. After washing, the canvas may be stretched upon a frame, and is ready for the artist to display his genius and inspiration upon.

German canvas seems to be better adapted than our own for the purpose, as it seems to be freer from grease; or, at least, the foreign substances in it yield more readily to the hot and cold water. It is best also to have an assistant to aid in drawing the canvas through the sensitive bath. It is first dipped in the bath; then drained by running over a glass rod. In this manner the canvas is thoroughly saturated, and all excess of liquid cleared from the surface.

No especial care is needed in handling the canvas after development. Indeed, it may be crumpled up and washed like an ordinary dirty piece of goods intended for the laundry. Don't be afraid to use plenty of water. At this stage the print has a red appearance; if this is not liked, it can be subjected to the toning process mentioned above. Both the toning and fixing require less time than with paper prints, because the chemicals permeate the canvas more readily. Don't fail to wash the canvas thoroughly after the fixing. Go at it with all the vigor of a washer-woman.

After the picture is complete, and dried upon the stretcher, it presents rather a woe-begone appearance; but don't despair; this is merely caused by the minute particles of

thread which have escaped their moorings and stand up like quills upon the fretted porcupine. A little wax transforms the whole into a thing of beauty. The wax is applied in a semi-fluid condition and well rubbed in, heat being used in the process. This not only gives brilliancy to the surface, but affords a transparency to the shadows.

When finished the picture is really beautiful, and hardly deserves to be tortured with the paint of the artist. But, as the artist demands them, and the public are not high enough in art culture to appreciate them without color, and with the nice gradations of shade, let the artist have them. But, as you value your art, try to persuade him not to destroy, with unsightly blotches of opaque color, the transparent shadows and the beautiful high lights which you have made for him with toil and sweat.

DEATH OF MR. HENRY GREENWOOD.

ALTHOUGH photography does not owe its birth to Englishmen, yet it has received greater nurture from British scientists than from any other source. Especially in late years they have had almost entire possession of this field of important discovery. It is therefore with great regret that we hear from time to time of the going out of the great lights which have guided its steps. Last year it was our painful duty to chronicle the names of those who are "hid in death's dateless night; and now, at the beginning of the new year, we must record the death of another eminent man—Mr. Henry Greenwood, of Liverpool.

Mr. Greenwood's name is familiar to every intelligent photographer as the able publisher and manager of the *British Journal of Photography*. His efforts were untiring for the advance of the art, the best talent in editorial and experimental work being associated with him. From a mere local society organ, he elevated his journal to a world-wide known medium for the advancement of photography, which now is a monument to his energy, zeal, and broadness of view.

MOSAICS for 1885 is rich in suggestions.

SOCIETY GOSSIP.

THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the regular meeting held Wednesday evening, January 7, 1885, the President, Mr. Joseph W. Bates, in the Chair.

The minutes of the preceding meeting having been read and confirmed, the Executive Committee made a report in favor of the incorporation of the Society, and Messrs. Samuel Sartain, John C. Browne, and Jos. H. Burroughs were appointed a committee to revise the Constitution and By-Laws, preparatory to applying for an Act of Incorporation.

The committee to draft resolutions regarding the death of Mr. Robert W. Leaming offered the following, which were unanimously adopted:

“The Photographic Society of Philadelphia, having heard with deep regret of the death of Robert W. Leaming, one of its oldest members, the following resolutions were adopted:

“That, in the death of our valued friend, this Society loses one who has given much of his time and abilities to advancing the art of photography. As an artist, he enjoyed a distinguished reputation among us; and as a man, his excellent qualities were highly appreciated. Lamenting his sudden death, we respectfully offer our heartfelt sympathy to his sorrowing family.’

“Resolved, That this minute be entered in the records of the Society, and a copy be sent to the family of our deceased member.”

Messrs. James Mapes Dodge and David J. Hoops were elected active members, and two names were proposed for election at the next meeting.

Mr. John G. Bullock offered a resolution that a committee of three be appointed to consider the feasibility of holding a photographic exhibition during the fall or winter of 1885, which, being carried, Messrs. John G. Bullock, Frederick Graff, and Robert S. Redfield were so appointed.

Mr. Browne proposed a series of rules governing the lantern exhibitions of the Society, with a view to making them representative of the work of the members, and

Messrs. William H. Rau, Frank Bement, and Galloway C. Morris were appointed a committee to superintend such an exhibition.

A question in the box asked, “What is the reason that the albumen apparently washes entirely off the paper while floating on the silver bath? I have been told that the bath being too alkaline would produce this result; but in this case, plain water has the same effect.”

Mr. McCollin said it might be caused by a weak bath, or by cold weather. The albumen not being coagulated, would be dissolved by the excess of alkali.

Mr. Browne had never known it to happen with a bath as strong as seventy grains to the ounce.

Mr. Gilbert had studied the trouble for seven or eight years, and attributed it to several causes. An alkaline bath would cause it, also floating on the bath too long, or using a weak bath. If the albumen was old and thin, a strong bath would cause it.

Mr. Rau had cured the trouble by adding one ounce of alcohol to each quart of bath, or a lump of alum would sometimes overcome it.

Mr. Bartlett called attention to a change of form of crystallization which he had noticed in certain salts when mixed with colloid substances.

Mr. Samuel Sartain had heard Prof. Mor-ton speak of the same phenomenon as shown by polarized light, the crystals being flattened in form when mixed with certain gummy substances.

Mr. Corlies showed an instantaneous view of a horse and rider leaping a hurdle, taken at the Pennsylvania State Fair, by Mr. John Moran. The original picture, 3 x 2½, and an enlargement, 7 x 4½, were shown.

A number of pictures which had been sent by members to the late exhibition at Boston were hung on the walls of the room, and attracted much attention.

Adjourned.

Forty-six members present.

ROBERT S. REDFIELD,
Secretary.

THE ROCHESTER PHOTOGRAPHIC ASSOCIATION at their meeting, held December 15th,

discussed the question, "What developer gives the best negative?"

Mr. Inglis desired to substitute as the subject for discussion the following: "What constitutes one developer better than another?" Agreed to.

Mr. Wardlaw: My opinion is that it is the best printing negative which shows what is the best developer.

Mr. Inglis: You do not take into consideration the time consumed in bringing the negative to that state, nor the expense.

Mr. Wardlaw: Yes; that which is the best developer irrespective of cost and everything else.

Mr. Lee: I understand the question to be, Which is the best general developer for dry plates—that is, what developer would give the best results? My experience is that it is plain pyro and ammonia.

Mr. Inglis asked why.

Mr. Lee: Because I can obtain as good a quality of negative with it as with any other, and, as far as economy is concerned, I think it is as cheap.

Mr. Mawdsley: Other means of making alkaline are better in some cases. I find that pyro and ammonia is the best developer in my experience.

Mr. Lee: I have heard a great many things said in favor of pyro, and alkaline, and oxalate, but in my experience I can do better with the old Edwards formula, and I find it produces a better negative than with any of the new ones.

Mr. Inglis: In discussing this question we may all differ and contradict each other, but still we may be in the best of harmony. I never yet saw such a contradiction as there is in dry plates, but I find it an apparent contradiction, and can be easily harmonized; that which is good for one thing under certain circumstances is very bad for another under other circumstances, and we are all speaking of things as we have found them. Now, to put a little spice into the question under discussion, I have found the potash and soda developer far better than the ammonia.

Mr. Lee: I would like to ask Mr. Inglis if he can develop a plate which is a little under-timed and obtain as good a negative as he can with pyro and ammonia?

Mr. Inglis: In my experience I have obtained one much better.

Mr. Lee: I have not been able to develop with soda and get a negative of it at all under-timed.

Mr. Inglis: I will give my reasons why I prefer potash and soda to ammonia. I have used ammonia and thought it was exceedingly good, and nothing could be better. If I have an under-timed negative, I find that with the potash and soda I can bring it forward gradually, but with the ammonia it seems to come to an end at once.

Mr. Lee: In my experience, when my negative is fixed it would be very dense and hard, and would be a slow printing negative with a soda developer, after carrying it as you say.

Mr. Wardlaw: I have used plates that have been recommended to be used with the soda developer, and showed a trace of green fog or film; it developed hard, but there was so little of it that it did not appear at all in the printing. I obtained much nicer high lights than I did with the potash developer.

Mr. Dumont: I have used the potash developer and the high lights seemed to come up all at once. I did not get the gradation that I did with ammonia, or with the Edwards developer.

Mr. Inglis: That may be. I know a brand of plates that the soda developer is recommended to be used with, but I found it did not work well; they would become a dense white. I will admit that I am perfectly unable to make every batch of emulsion alike. I obtain them in a general way. There is considerable range between each kind; one batch will be better with ammonia and one with another alkaline. If I could only tell the photographer to modify his developer in such and such a way, he would obtain much better results.

Mr. Wardlaw: I suppose, then, that I am perfectly safe in using ammonia on all plates?

Mr. Inglis: I think ammonia will give good results on all plates that are offered for sale.

Mr. Wardlaw: In using the ammonia developer on an under-timed negative I would use less of the bromide solution, and

when I get enough detail, instead of adding pyro I would add a little bromide and get the strength, and in that way if I found the green fog coming on I would use a smaller quantity of ammonia.

Mr. Inglis: That shows the beauty of the dry-plate process; one man can take the ammonia and work it to his satisfaction, and another can use these other developers. It shows what a latitude there is in the dry-plate process, and how much photographers have in their hands to produce good work.

Mr. Wardlaw: I think there is no question at all in the superiority of dry plates.

Mr. Inglis: While it shows that, it also indicates how necessary it is for a photographer to use his brains in manipulating dry plates, because from what I have already said the manipulation of one plate is the ruination of another. The photographer, I am afraid, will be very apt to throw the blame upon the plate, whereas it is in himself in not manipulating the developer to the particular kind of plate.

Mr. Pomeroy: As far as my experience has gone I prefer the potash developer. I think that Mr. Inglis is right. What will work well with one plate will not with another.

Mr. Inglis: After you have sifted this all out, the best developer is the one that will give the best results.

Mr. Larned: I think that could be decided in the same manner as the make of plates. I think it shows that all of us are speaking of a developer in conjunction with different grades of plates.

Mr. Wardlaw: I stick to ammonia for all brands of plates, and find I can do better with it. There are other things besides time to be considered; there is the developer which will give you the proper light on your negative the same as that which you see on your ground glass. The best developer for use is the one which produces the same effect on the plate as it does on the ground glass.

Mr. Dumont: I am accustomed to the ammonia developer, and obtain the best success with it.

Mr. Rannister: My experience has been rather limited. I have always preferred the ammonia developer.

Mr. Larned: I think those who use a particular developer are prejudiced against the others, and will not give a fair test to the opposing ones.

Mr. Inglis: It is evident that the preponderance of evidence is in favor of ammonia, but I think those who are in favor of it have been more accustomed to it. I have tried the ammonia, prejudiced in its favor as against potash, and, therefore, I am the best one to pass judgment upon it. I was in favor of ammonia, and it was very much against my will, or desire rather, that I changed from ammonia to potash. I did a few weeks ago endeavor to make myself see better results from ammonia than I had from potash, but I failed to do so, and, therefore, became doubly satisfied that potash is the best, and my advice to you all is to try it.

Mr. Wardlaw: I was prejudiced against the ammonia developer and in favor of potash and soda, because I could keep my hands cleaner.

Mr. Inglis: You mentioned soda. I did say that I found the quality that I liked in the soda developer, which was the density, but in obtaining that I lost the fine delicacy that I got with the potash, and when you come to the final finish of a negative that is the thing which makes it superior to another.

A SUMMER IN KENTUCKY WITH GELATINE PLATES.

BY WILLIAM BELL.

JOHN R. PROCTOR, Director, Kentucky State Geological Survey, besides his geological work, used photography to illustrate his State's productiveness, and honored myself with a position on his survey as photographer. The work consisted in visiting one county, then another, and so on, until nearly all the counties in the State had been photographed. Mr. Proctor had several operators and they were placed in given districts to obtain the views, which consisted of farms, stock, cattle, timber, farm scenes, ploughing, sowing, reaping, threshing, etc. The size of the plates used was from 5 x 8 to 8 x 10, and from these, enlargements on glass 22 x 24, 18 x 22, and 11 x 14 were

made by the best artists in Kentucky, such as Mullen, of Lexington, Klauber, of Louisville, and Fox, of Danville. One who has spent most of his lifetime in the North, as I have, is not very well prepared for the surprises that await him in the blue grass region. Fine farms, wood-like groves, no underbrush, but all in grass, and being pastured with cattle whose price is almost fabulous, a group of eight or ten being valued at \$80,000, on the Alexandria Farm of 3000 acres and so well kept under the superintendence of Mr. Brodhead that it excels the famous parks of England. And then the stables, and the noted horses practising on the farm track—I confess my inability to describe them, so will not try. Having always relied upon wet plates for fine work, I had my doubts whether any could equal wet-plate results, and *I still have them*, but the great difference in the ease in using the two processes makes one lean toward the dry, and forget that they are not up to *the standard*, besides many subjects were had that would have been impossible with our old friend collodion.

I found my greatest trouble in changing the Ex. plates. Photographers kindly gave me their dark-rooms on asking the privilege, but I used them with dread, as in most of them the light used was through several thicknesses of yellow tissue paper, but by getting into a corner and shielding the plates with my body, did not have them fog. The photographer in Paris, Ky., smiled at me and wondered why I took such precautions, as he used the same light to develop his plates by, and truly his developed negatives had not the slightest trace of fog. I could only say wonderful. Had they been fogged all over I would not have been surprised; it shows the great latitude in dry plates. I used Carbutt's special and Cramer's plates (I did not have a bad one in hundreds used); Hoover's developer. Used the citric acid and alum bath between developing and fixing, as by its use I found that the plates needed but little washing before putting into the fixing-bath (wells had given out and all water used had to be carried in buckets to the third story). A lump of ice was kept in the fixing-bath, and in the water that the plates were soaked in

before the final washing. It might be said that this using ice was not necessary; well, when it was not used the gelatine on the plates *simply melted*. In the water in which the plates were soaked I also put chrome alum. One cannot be too careful, as the Ex. plates had cost time and money, and if lost by frilling, it would have been by the operator's carelessness. Exposures ranged from cap on and off up to twenty seconds. No register was kept, but by commencing with the old developer and watching the plate, one knew whether to let it remain or remove it to a fresh developer.

Having commenced with pyro development I stuck to it, but was often tempted to change to ferrous oxalate, Mr. Mullen's result with that developer being so superior, its use easy, and the color of the finished negative better than the pyro, even after the decolorizing bath had been used, sometimes taking away strength along with the color. I did not have a plate "light-struck," as I was careful to keep the camera covered with the head-cloth (no matter how good the camera and plate-holders were), and never drawing the slide or closing only under the cover. I had no losses from that cause, and altogether was very well satisfied with the summer's trip with gelatine dry plates, and should any of your readers visit the New Orleans Exposition, if they will search for the Kentucky State exhibit, they will see the glass house made up of enlarged transparencies, and be able to judge of their use and value, and feel grateful to Mr. John R. Proctor, of Frankfort, Ky., who has used photography, making it honored as well as useful.

I would say a few words to my brother photographers. It is not the ten-dollar outfit worked as a machine that we need fear, but the ten-dollar outfit worked by an artist. While he produces a negative very seldom technically as perfect as we professionals, yet his poor photograph is more acceptable than our finer results. We need not seek far for the cause—want of artistic perception on the part of the professional. Artists in wet-plate times avoided photography; it was too hard work, fearfully dirty, etc. But these being removed

by the dry, artists, in large numbers, are using photography, and producing work that makes a candid operator wish that his work had more of the artistic element than photographic excellence.

I hope that we all will improve in that particular in which we are most deficient.

PERTAINING TO THE



CINCINNATI, Jan. 17, 1885.

TO THE PHOTOGRAPHERS OF AMERICA.

It is scarcely five months since the Photographers' Association of America held their fifth annual convention at Cincinnati, and we have now commenced to arrange for what will be the model convention in the life of the Association. The Executive Committee have had a meeting at Buffalo, and were in session for three days, accomplishing considerable work in making several important changes in its management. The beautiful city of Buffalo, with all the advantages it possesses, should entitle it to be called the convention city. We have secured its immense Music Hall for the display of photographs, apparatus, and accessories; the stockdealers have expressed themselves that their department will excel all former efforts; the light for the exhibition will be perfect. We have also secured, for business meetings and demonstrations, the concert hall in the same building, considered one of the finest in the country for its acoustic qualities. Our energetic local Secretary has his plans all made, and the photographic fraternity can confidently look forward to an instructive exhibition that will outstrip its predecessors. Many papers of practical value will be read, besides demonstrations given of all that is new in our rapidly advancing art.

One of the features of our Convention will be an excursion to the famous Niagara Falls, and those who wish to linger until evening at this world's wonder will have an opportunity to see it illuminated by electric light, a sight that will never be forgotten. It is the duty of every photographer to attend this Convention, and, moreover, it is necessary for each member to make an exhibit of his best efforts; there will be plenty of room for all, and I would most earnestly urge you to show the world that we are progressing. The public generally are not fully aware of the magnitude of our industry, and we must *impress* them; let our art be shown in all its branches and indicate our individuality; there is an unlimited field from which we can gather; let us show our good taste in the selection of subjects. I would suggest that we illustrate a thought, a sentiment, or story. *Genre pictures are always full of interest*; let our aim be for high art. Send us artistic portraits, beautiful landscapes, and skilful architectural photographs.

The chemical and scientific part of our profession is making rapid strides, but we do not want it to outrun the artistic.

Fraternally, J. LANDY.

GENESSEE HOUSE,
BUFFALO, N. Y., Jan. 12, 1885.

Executive Committee meeting called to order. W. A. Armstrong elected Chairman; Joshua Smith, Secretary.

Present: J. Landy, W. Armstrong, Joshua Smith, Leo Weingartner, H. McMichael, J. F. Ryder (by invitation).

Mr. Armstrong stated that he had received a letter from W. H. Sherman in regard to his report as Secretary of this Association for the year 1883. Mr. Sherman stated that he sent Leo Weingartner his report. Mr. Weingartner said he had no recollection of receiving said report.

Mr. Smith made a motion, which was carried, that Messrs. Landy and Weingartner be appointed a committee to look up this report and make proper acknowledgment to Mr. Sherman.

Mr. Armstrong reported the total receipts for the year 1884 to be \$3792.80, expenditures, \$3200.86. Balance on hand, \$591.44.

Mr. Weingartner said he had in his possession \$10 received from Mr. Spurgeon, which he turned over to Mr. Armstrong, increasing balance on hand to \$601.44.

Report of Mr. Armstrong accepted.

In the itemized report of the Treasurer there was an omission of the names of several of the largest contributors to the Association Fund, among them Mr. G. Cramer, Mr. L. W. Seavey, The Blair Tourograph Company, Mr. J. C. Somerville, Mr. G. Genert, Mr. Hyatt, and Mr. Gustave Bode.

Mr. Weingartner stated that the contributions of the above gentlemen were included in the \$840.00 turned over to the Treasurer in bulk, and all contributions for advertisements in the book were his own individual property.

Mr. Armstrong reported a bill from the Scovill Manufacturing Company of \$55.00 for damage to camera box, and asked for action. Mr. Landy was appointed a committee to investigate this case, and learn, if possible, by whom the box was broken, and if the Association be found responsible for the damage, to order the bill paid.

Adjourned.

January 13th. Meeting called to order. Full Committee present, including G. M. Carlisle, who had failed to receive a notice of the meeting until the 12th, but arrived this morning. Minutes of last meeting read and approved. Mr. Leo Weingartner tendered his resignation as Recording Secretary of the Association. Resignation accepted.

President Landy appointed H. McMichael, of Buffalo, his successor.

It was decided to fix the date for the Convention, July 14th to 18th, inclusive, at Music Hall, Buffalo, New York.

By vote it was ordered that \$150 be placed in the hands of the Secretary, to commence the duties of his office.

The amendments as passed at Cincinnati were placed in their respective sections in the Constitution, and 3000 copies ordered printed.

The Treasurer was instructed to mail to each member a notice, asking payment of annual dues.

The matter of securing badges was entrusted to the Secretary.

Instead of receiving contributions from stockdealers and the manufacturers of accessories and appliances pertaining to photography, it was determined to charge 15 cents per square foot for all space in the centre of the main hall, and 10 cents per square foot for all space outside of the main centre.

Meeting called to order. Minutes read and approved.

Resolved, That the stockdealers of the country be asked to cooperate with the Executive Committee of the Association in securing reduced rates from railroad and steamboat companies for transportation to the Convention at Buffalo. *Passed*.

Moved and seconded, that Mr. McMichael be constituted a Committee on Hotel Accommodations.

Moved and seconded, that Mr. Smith be empowered to secure the services of a stenographer. *Passed*.

Resolved, That each of the Executive Committee furnish a practical paper upon the subject of photography, or procure some competent person to present such paper, the reading of which shall not consume more than ten minutes. *Passed*.

By Mr. Landy: *Resolved*, That Messrs. Joshua Smith, of Chicago; G. Genert, of New York; and J. F. Ryder, of Cleveland, be a committee to solicit an exhibition of foreign photographs for the Buffalo Convention. *Passed*.

By Mr. Armstrong: *Resolved*, That to secure a proper attendance at the morning sessions, it will be necessary to close the stock department and the exhibit rooms between the hours of ten and twelve o'clock, A. M.

PROGRAMME.

Tuesday, July 14th, 10 A. M.

Morning Session.

- Address of Welcome by the Secretary.
- Introduction of the President.
- President's Address.
- Reports of Committees.
- Appointment of a Committee to nominate officers and location for next Convention.
- Miscellaneous Business.
- President's Annual Report.

Afternoon Session.

Reading Papers pertaining to the interest of Photography.
Discussions on Practical Photography.

*Wednesday.**Morning Session.*

Report of Nominating Committee.
Paper on Prices, by the President.
Discussions.

Afternoon Session.

Opening of the Question Box.
Five Minutes Discussions.

*Thursday.**Morning Session, from 9 to 11 A. M.*

Report of Committees.
Papers on Dry-plate Photography.
Ten Minutes Discussions on Dry Plates.

Afternoon Session.

Niagara Excursion.

*Friday.**Morning Session, 9 A. M.*

Election of Officers.
Miscellaneous business.

Afternoon Session.

Discussion on Prices.
Evening reception, open to the public from 6 to 11 P. M.

*Saturday.**Morning Session.*

Closing Ceremonies.

Resolved, That a copy of this report be sent to each of the different photographic publishers simultaneously.

Adjourned.

JOSHUA SMITH,
Secretary.

REVIEW OF PHOTOGRAPHS IN PHILADELPHIA PHOTOGRAPHER FOR 1884.

(JANUARY, FEBRUARY, MARCH, APRIL,
MAY, AND JUNE.)

BY CHARLOTTE ADAMS.

MODERN photography, in its artistic aspect, may be resolved into two elements, the subjective and the objective. In dealing with the human subject, subjective photography gives us the physical charac-

teristics with all due completeness, but it gives something more—namely, the mind, brain, heart, and soul of the individual. It concentrates them all in the simple external rendering of form, and makes of the fleshy envelope a medium for the translation of the intellectual and spiritual side of the subject upon the photographic negative. This quality of subjectivity may be co-existent with the most realistic treatment of the human subject, but it subordinates matter to mind, and never allows the balance of proper relation between expression and the idea expressed, to be altered by so much as the turning of a hair.

Objective photography, on the other hand, is chiefly concerned with the decorative and pictorial aspects of the subject. It treats humanity, landscape, or still-life in the same unimpassioned manner, and from the same standpoint of purely external availability. The judicious balance of two lines, the nice adjustment of relative curves, are of more importance in the scheme of objective photography than any higher sentiment or significance in humanity or in nature. Decorative photography is generally purely objective. The photography that aims at pictorial composition and effect seldom does more than transfer outward forms to the plate. This kind of work, is, at its best, remarkable for exquisite mechanical execution and keen appreciation of the value of artistic principles, but of that rare artistic quality, which is higher than mere principles, it shows no comprehension. Any one possessing a fair understanding of the intellectual and artistic application of the terms objective and subjective, can find in every photographer's window excellent illustrations of one kind of photography or the other, and possibly of both. On these two broad general distinctions rest the higher artistic claims of all photography.

Admirable examples of subjective and objective photography are offered by the illustrations in the PHILADELPHIA PHOTOGRAPHER for January and February, 1884. In the January number, we have a full-page head and shoulders of a distinguished-looking man with white hair and moustache. This plate is a superb piece of subjective photography, in which the method em-

ployed is, however, purely realistic. It is also valuable as a specimen of American portrait-photography.

First of all, may be noticed the noble simplicity of treatment. No accessories or theatrical methods of lighting or posing are employed. Unfortunately, the unity of the composition is marred by the white spot at the left and the darker patch at the right-hand corner. These spots do not explain themselves. They are possibly part of a chair, but there is no excuse for their existence. They represent nothing, they mean nothing, and the only ground for their being where they are is the supposition that the photographer intended them to carry out the whites and the half-tones of the head, according to the principles of decorative composition. Herein, he made a mistake. Such fine, intelligent work as is shown in this head could have dispensed with ordinary pictorial requirements.

The constructive element of this head is remarkable for its vigor. The osseous effect of the skull is rendered with masterly firmness. The modelling of the face, with its strong, healthy tissues gathered in fine corrugations, merits great praise. The reproduction of the white hair and moustache, so delicate that one can almost count the hairs, shows how successfully details may be treated by a skilled photographer, without interfering with the breadth of impression so desirable in an artistic photograph. The precise, sharp, clear-cut effect of the *ensemble* and of the details of this head cannot be too highly commended. The flesh-texture is given with truth and exactness. No attempt has been made to soften the ruggedness of the skin. Had it been re-touched away, half the value, subjective or realistic, of the plate would have been lost. As regards judicious balance of masses of light and dark, that primary contingent of photographic artistic success, nothing could be more desirable than the relative delicate whites of hair and moustache, and the positive white of the collar seen against the different darks of the face and neck and above the dark space of the coat. The tones of the face and neck are beautifully graded. One of the strong points of this plate is the admirable management of the

lighting which focusses the light full on the white head. The manner in which the head and the background are harmonized and balanced, without undue abruptness or sharpness of contrast, is very creditable to the artistic instincts of the photographer. This head is a fine piece of photographic impressionism. Here we have not only the external representation of the man, but the man himself as he actually is. There is no idealizing process visible in this plate. The subject has been placed fairly and frankly before us, and it is for us to see and recognize the inner and higher man, the man of the heart and brain, as well as the man of flesh and blood. In tone and color this plate is also satisfactory.

The individuality of the photographer betrays itself in his choice of method as in his treatment of subjects. To produce a plate like this portrait, demands a high order of photographic intelligence and general mental and artistic cultivation. Such work as this means photographic art with an added literary quality.

The objective school of photography finds an admirable exponent in the four reduced plates forming the full-page frontispiece of the February number. We are here shown work that is delicately and exquisitely artistic. It is ideal in intention and effect. But it deals only with the external qualities of the subject. The plate gives us two of the beauties of the American stage, Miss Lilian Russell and Miss Mary Anderson. They are not, however, presented to us as women, but as beautiful human decorations, stage pictures by a masterhand.

These plates belong to a school of photography which will always be popular, because it appeals to an audience which demands idealism, refinement, and a certain dainty sensuousness in art. One might call it the Christmas card school of photography. In these portraits of Miss Anderson, we do not find Mary Anderson the genius, the woman of exceptional character and independence. We find only a beautiful piece of *plastique*, an exquisite lay-figure, an artist's model. Miss Anderson is a subject from whom an intelligent, subjective photographer could evolve new and unexpected results. But in

the portraits under consideration we find simply a charming objectivity.

The first plate is a half-length of Miss Russell, dressed in a white gown with a large quaint white bonnet. Two braids of fair hair hang down her back. Her profile is seen rather dark against a white background. This plate might be termed a photographic study in whites. It is pitched in a very light key, the face and hair forming the darks of the scheme. The rendering of the texture of the hair is excellent. The treatment is very simple, and harmonizes well with the ingeniousness of costume, face, and pose. This plate is a photographic idyl, and a lovely bit of decoration. The decorative quality is strongly felt in all these photographs.

The next one at the top represents Miss Mary Anderson in a rich bodice, with a wide standing lace collar about her beautiful shoulders leaving her throat and neck bare. This plate is especially noticeable for subtle effects of light and shade. The figure is seen more than half in light. It is lighted from the left side, and the shadows are gracefully graded until the right side of the head and body is seen in delicate half-tones. The background is dead-black. This arrangement of black and white in a sliding scale of tone is of a piece with the extreme cleverness of the whole plate. The hair is skilfully treated, though with an eye to stage effect rather than truth to nature.

In the third plate, which represents Miss Anderson as Galatea, we have about as skilful a piece of technique as purely plastic photography can show. The pose of the figure is admirable. The long lines of the back, from the neck to the knee, the beautiful curve of the shoulder, are a delight to the eye. The lighting is not only remarkably good in itself, but it is what gives to the figure the statuesque character that it possesses. The balance of light and shade produced by the method of lighting is very like that seen on antique casts in museums and art schools. The effect of relief and roundness visible on marble and plaster figures is singularly well suggested in this photograph. The small crimped folds of the drapery are rendered with an accuracy that is far from being merely mechanical.

The modelling of the figure is not that of human flesh and blood, but of marble or plaster. The artistic and technical knowledge required to produce this quality of effect is of the highest order.

This plate gains much from the manner in which it is accented. In the foreground we have a sharp black shadow which throws the space of light formed by the steps into unmodified prominence. Beyond the steps is another black shadow which divides them from the figure thus forced into relief. The half-tones of shadow at the back of the figure serve the purpose of concentrating the artistic interest on the beautifully moulded shoulder, which one feels instinctively to be the leading idea of the composition. The background is judiciously kept midway between the lights and darks of the rest of the plate, and consequently lends to it an effect of delicate unity and symmetry which could be easily destroyed by the employment of a stronger or more abrupt contrast of tone.

The photograph of Miss Anderson is pitched in a lighter key, and is much less complex in conception and treatment. The accents are very happily placed. They are formed by the beautifully poised head and by the dark space under the foot. They balance admirably and whether they exist by intention or accident are highly desirable as artistic components. This is a plate more than ordinarily noticeable for artistic quality of the decorative order. The face and part of the throat are kept in shadow in order that the darks of the hair may not be too obtrusive, and may be gradually merged in the full light of the dazzling white neck and drapery. The profile appears to greater advantage through this arrangement of tone being seen in crisp and sharp relief against a background rather light than dark. The subtle luminosity of this background adds greatly to the artistic value of the photograph. The draperies are very well handled, and if the folds and lines are not developed with the precision and accuracy seen in the other plate, one feels that the change in method is intentional. The photographer has aimed at breadth of treatment. The operator who could so skilfully treat a head, as in this instance, carrying it out in detail, giving every individual roll and curl due

attention, while keeping the whole sufficiently broad, and rendering the firm, bony feeling of the skull as few painters could do, was not the workman to slur over the lines and forms of the drapery from carelessness or accident. If he has not worked it up in detail, it was because he had good artistic reasons for not doing so. He has made us feel the figure through the folds of the garment, which he rightly considers an accessory. He has handled the drapery impressionistically, knowing that so large a mass of white, full of long curves and lines, required heroic treatment, and that attention to detail or the sharpness of line and contrast, which is apt to give a belittling effect, would be out of place in this noble scheme of drapery. The photographer has here followed the method pursued by modern impressionistic portrait-painters, who carry out the head much farther than the rest of the figure.

Here we have a conspicuous instance of the value of a knowledge of art-principles to the photographer. All four plates show the influence of modern French art in conception, treatment, general style, and in their appreciation of outward forms for outward form's sake, which so many painters are apt to miscall art for art's sake. Something more than approximate perfection of technique or even the highest appreciation of the external possibilities of a subject is required to make an artist, be he painter or photographer, but those qualifications may be regarded as forming his equipment for the journey towards his goal. Persons who are interested in the development of the plastic side of photography cannot do better than study carefully these two statuesque figures of Miss Anderson. In one, we have the subject subordinated to the scientific interest of the treatment, and we realize at a glance that the *tour de force* was of more importance to the operator than the object upon which it was exercised. In the other, the method is forgotten in the absolute beauty of the subject, and we feel at once that it exists only to the end of setting before us this lovely piece of living plastic.

In the PHOTOGRAPHER for March is offered a full-page plate entitled "A Nubian Landscape," which unites the subjective and

objective elements of photography. An admirable rendering of the external features of the landscape is combined with a translation upon the plate of the inner spirit and significance of the scene. We have, first of all, an excellent impression, treated in a broad free manner, of a subject full of complex detail and suggestion. To appreciate fully the truth and unity of this impression, the spectator should half-close his eyes and look steadfastly at the photograph. In this way the details of the landscape disappear, and the composition resolves itself into broad masses of light and dark. The salient features of the landscape are preserved and fall readily into their relative positions. This is a very skilful piece of composition, technically and artistically. Light and shade are here evenly distributed and balanced with perfect judiciousness. As an example of brilliant, strong, sunlight-photography this plate cannot be too highly praised, and no portion better illustrates the skill of the operator in this respect than the large, ruined temple. Good effects of sunlight and shadow are visible in the mass of low ruins in the middle of the composition. A capital effect is offered by the small fragment of a temple at the left, with its white walls and columns and its dense black shadows, full of depth and suggestion, sharply contrasted with the sunlit architecture, and repeated in effect by the dark mass of feathery palms rising above the ruin. This is a striking bit of artistic composition. Notice the decorative effect and value of the feathery palms, which add the crowning touch to the group of lines and masses to which they belong, break the monotony of the long stretch of the river, and form an important accent in the composition as a whole, as well as a beautiful arrangement of curves in themselves. They come sharply against the mass of dead white formed by the steamboat or yacht moored at the opposite bank of the river, producing a singularly artistic effect. This group of palms may also be taken as a mass of dark separating two masses of light, namely, the boat and the ruins at the left of the foreground.

Peculiarly noticeable in this composition is the horizontal division of light and shade beginning in the middle distance with the

long half-tone sweep of the river. Parallel with this runs the line of the bank, a trifle darker than the river and agreeably relieved by the white mass of the boat. Then comes the long line of darks formed by a grove of palms, excellent in technical rendering, both as to impression and detail. Above this extends the long slope of the hills, full in sunlight and yet so skilfully treated as to be subordinated in the matter of light to the stronger lights in the foreground, in which the artistic interest is focussed. One peculiarity of this composition is the almost exclusive employment of angles and horizontal and vertical lines visible in it. The only curves are those of the palms, and of the capitals of the columns. Whether this be the merit of nature, of Egyptian art, or of American photographic skill, it is equally striking and artistically admirable. The lines of the architecture exactly repeat the lines of the natural objects. Going back to the work as an impression, let us notice the advantageous manner in which the right of the foreground is kept in strong shadow, in order to force the ruins, especially the large temple, into greater prominence. This plate shows beautiful work in the minor details of the architecture and natural objects. A quality of what might be called realization is another of its merits. One can imagine that one is gazing at the actual scene, and not at a mere photographic representation of it. This quality is rarely present even in good photographic work. The sentiment and spirit of ancient and modern Egypt are here evolved from the material objects before the camera and imprisoned upon the plate in a manner which has hitherto been considered the prerogative of creative art alone. The opinion widely prevails that photography can only act within certain limits, that the external features of a landscape may be correctly rendered by the photographic process, but that its higher significance, its sentiment and feeling cannot be reproduced or suggested by so mechanical a method. This is a mistaken idea. A photograph may possess the creative quality in as high a degree as an oil or water-color picture. It is the brain behind the camera that calls from its slumbers the soul of the landscape. There are many so-called "pictures" that

completely lack the creative quality and there are many photographs in which it forms an important element. Whatever be the medium employed, the artistic spirit will always assert itself emphatically.

In the PHOTOGRAPHER for April, May, and June, we have three plates of an analogous character, which belong to an entirely different school of photography, not as artistic or scientific as that just considered, but meriting serious attention and respect. The worst thing about the two plates containing groups of young people is their title. "A Wild Weird Tale," probably refers to the character of the story being read by one and listened to by the others. But there is nothing visible on the unimaginative, undramatic, stolid little American countenances to indicate anything like wildness or weirdness in the impressions in course of transmission to their well-regulated little brains. Putting this aside, the idea of the two groups is good enough. In the plate accompanying the April number, we see a young woman seated, reading from a book, a little girl standing behind her, while a small boy with the conventional, pious, having-his-picture-taken look on his face is posed at the right.

The photographer has, in this group, given us, faithfully and unconsciously, three representative American types. Photography is sometimes an important factor in the study of ethnology. This group perfectly represents the domestic life of the average respectable American family. It might be called an example of American photographic impressionism, using the word in a literary sense. Artists and critics who insist upon the value of American realistic subjects, in building up a school of national art, would do well to turn their attention to photographs like this which may be seen at every turn, and which reflect so absolutely the every-day life of the country.

Such work as this must be judged by itself, and not according to arbitrary standards. In one sense it is far from artistic, in another it is artistic in the highest degree, and it requires the greatest artistic cultivation to appreciate it properly. The mind that can find pure pleasure in the study of Mauet and Degas, can realize the value of

such apparently inartistic ideas as are embodied in this photograph. Technically, it is rather above the average. The pyramidal composition is rather an original idea, and artistically admissible. The head of the little girl in the middle forms the apex of the pyramid. The faces are good in the modelling, and the hands are well rendered, although a little obtrusively. In fact, there are too many hands in the composition. The four hands in the foreground are almost on a line, and the dark hand seen against the white dress-texture impresses one rather unpleasantly. Things which may be good in themselves are not always relatively good. The modern mind perceives the fallacy of the conventional statement that truth is absolute. Truth and particularly artistic truth, is relative. The white jacket of the older girl and the white frock of the younger are sharply contrasted with the dark clothes of the boy. The tone, halfway between light and dark, of the older girl's skirt, is balanced by the space of background in semi-tones. The dark book at the left repeats the darks of the boy's figure and rounds off the composition harmoniously. The texture-rendering is sufficiently good. Altogether this is a work which reflects considerable credit on the photographer.

The group of children seen in the frontispiece of the May number, repeats in conception the story-book idea, and in composition the pyramidal. In the conventional artistic sense, it is a better piece of work, although the figures have much less individuality, and are by no means as characteristically American. We have here also very judicious distribution of masses of light and dark. The principal white mass is the frock of the child on the right. It is repeated and well balanced by the white of the children's cravats, collars, and cuffs, as well as the interior of the book. The dark cover of the book composes very well with the two masses of white formed by the page and the boy's cuff. The darks of the composition centre in the boy's figure, and about the chair. The carpet, with its small accents and general effect of half-tones, repeats very justifiably the space of wall above the children's heads, and also the corner of the chair at the boy's shoulder, the balustrade at the

right and the gown of the children's mother or attendant seen at the right. The introduction of this fragment of a feminine person is rather a novel idea. It lends suggestiveness to the composition, and gives an air of domesticity and naturalness to the group of children. The little faces are pleasingly treated, all the unformed plumpness and *naïveté* of expression peculiar to children, being rendered sympathetically. The hair, with all three heads, is well given and impresses one at first sight, though without obtrusiveness. It is particularly good in tone and in effect of reflected light. The texture-rendering is excellent throughout the composition. The velvet of the boy's coat, the laces, the delicate white muslin of the child's frock is especially noticeable in this respect. In the foreground, the woodwork of the chair and the boy's boots shine altogether too much, and detract from the unity of the composition. The interest of the spectator should be centred on the children's heads. In a photograph, as in a picture, accessories should never be allowed to overweight principals. Surfaces strongly reflecting light are often difficult to handle in themselves, and are especially so relatively to other surfaces. In this photograph the hands are more skilfully treated than in the other. They are smaller to begin with, which is, of course, an advantage. They are in better photographic proportion, and are better composed. The boy's hands are only vaguely suggested, and the four hands of the smaller children are gracefully disposed. The attitudes of these three figures are easy and natural.

The most noticeable thing about the photograph in the June number, which shows a three-quarter length of a child, is the admirable work in the textures. At a glance we receive the impression that the photographer cared more about the child's clothes than he did about the child. Here again, we have an extreme example of objective photography. The moral and intellectual qualities, even the ordinary child-nature of the youthful subject, are subordinated to the skilful representation of its externals of dress and feature. The little face is sufficiently well modelled, the hair delicately and effectively handled. The reflected light of

satin could scarcely be better given than here. The dark velvet preserves all the richness and quality of light-absorption of the fabric itself. Every mesh of the lace collar is given with remarkable precision. No fault can be found with the technical side of this figure, but it lacks the artistic quality. The drapery at the left does not explain itself. One cannot tell whether it is intended for a shawl, a table-cover, a portière, or a sofa cushion. Then again, it is broken up into small masses of light, dark, and medium tones which belittle the composition, especially when taken in connection with the broken masses formed by the book on which the child's hands rest. These hands are the best things in the photograph, artistically. They are human, expressive, lifelike, and well modelled. The book-idea is a good one, but it is not well applied in this instance. Besides the unexplained broken effect of the cover, the full-page illustration of a Savoyard with a marmot on his shoulder takes off from the attention which should properly be concentrated on the head and hands. The projecting sofa corner with its obtrusive brass nails is not the most graceful thing in the world. In this photograph, we have a case where the head and hands are equally important, without producing an effect of obtrusiveness as regards the latter. It is, of course, much easier to dispose of two hands than of four or six, but in any case much depends upon the science of the photographer.

The problem of hands is one that troubles not only photographers but artists. It is a well-known fact that there are few American artists whose treatment of hands is entirely satisfactory. There prevails great diversity of opinion as to the treatment of hands in portraiture or general composition. Some artists simply block them in, and indicate them as accessories; others finish them conventionally. Others again treat them realistically, and throw into them all the individuality of the subject. In any case hands are difficult things to manage, and it is not to be wondered at that photographers sometimes fail to give them their due significance or to dispose of them to the best technical advantage. It is a good plan to follow nature as closely as possible, but where six

little dingy hands appear in a row, that photographer may be pardoned who gently but firmly suppresses half of them, and ignores nature to assist art.

(To be continued.)

GERMAN CORRESPONDENCE.

Photography in Germany—The Photographer and his Patrons—Art and Business—Study of Art for Photographic Pupils.

NOR long since a photographer complained to me of the ill-humor of the public, coupling with his complaint the remark that nowhere else but in a photograph gallery were people so disagreeable. There, especially, is that peculiar weakness of the race, personal vanity, manifested.

As soon as the public is aware that the photographer has not the necessary independence of character, not knowing himself what he desires, it at once takes advantage of his weakness. The artist must make it evident that he, at least in his own domain, is lord paramount, and that his ideas in matters of art are superior to theirs. I know a very pretty miss who was told by an ardent admirer that she resembled the world-wide known beauty, Mrs. Langtry. At once she possessed herself of the photograph of this fair Briton, and demanded to be photographed in a similar pose. The obliging photographer did what was asked of him, but alas! no Mrs. Langtry. Much vexed, she sought a second time to realize her ambition, and even a third, but always with the same result. At last she was told to go to the celebrated Mr. X. He at once comprehended the situation of affairs, and declared that he would not take her in a pose similar to Mrs. Langtry. "Why not?" asked the fair damsel. He gallantly replied, "Simply because you are much fairer than the latter, and I would consider it much more in accordance with good taste should Mrs. Langtry apply to me to be photographed like yourself." Ah! that was the right string to pull. The lady felt herself so much flattered that she could not gainsay his argument, and in all patience allowed herself to be posed in a manner that did not necessitate the slightest approach to Mrs. Langtry. The photogra-

pher succeeded by his tact; the picture was a success, and the lady was pleased and at the same time cured. But the photographer is not always so fortunate in the disposition of such matters. I know of many instances of happy mothers who, accompanied by two or three babies, from three to five years old, have desired to be taken a la Raphael, with their squirming wriggling pieces of humanity—let me be explicit—yes, naked, and in the exact position of the two cherubs, at the feet of the Madonna, in the Sistine Chapel at Rome, if possible, even with wings. This idea is widespread. I have seen pictures of the kind in the new as well as the old world. Such a mother once came to one of my acquaintances, accompanied by two of her little cherubs, and made known her desire to be photographed as Madonna. The artist replied that the thing was impossible. "Allow me, madam, to show you. Here is an engraving of the Madonna. I acknowledge your children are indeed charming, but they have not such marvellous bodies as the cherubs of Raphael have, such full swelling bosoms, such round and fleshy arms and hands, and how am I to secure, at the moment the exposure is made, that celestial expression upon their countenance which you here see upon the face of Raphael's children." This was too much for the vanity of the fond mother, who naturally considered her babies far more beautiful than the chubby boys of the Prince of Painters. In haste she departed, and betook herself to another photographer, who satisfied her lofty ambition. I know the picture well. It is terrible. Oh, those bony arms and the collapsed bosoms. One of them, true to the ideal, has his eyes directed towards heaven, but alas, not with that serene and beautiful expression, but as if the poor creature was eagerly imploring some divine power to put some clothing upon its meagre, shivering body. Indeed, it would be a merciful dispensation to clothe such bodies, and hide their glaring imperfections. But the picture hangs in the show-case, and, as I hear, it has been as a bait with which the photographer has successfully angled. Many mothers have been caught with their hopeful offspring. For a good remuneration he converts them into

angels, some with wings, some without. It is not very difficult to satisfy the exacting demands with single portraits, but the case is worse when groups are required. The photographer may call to his aid artistic arrangement, and dispose of his figures, but this does not satisfy the individual taste of each one composing the group. Each member naturally thinks that he or she should be the chief object of attraction. If this is accomplished the picture meets with grace and favor, otherwise not. Nevertheless, the principles which govern art must be the guides to direct the photographer. It is only by their observance that photography is elevated above the position of a handicraft. But he who wishes to carry these principle into operation must have an artistic education himself, and must inspire esteem by his artistic knowledge.

But I am inquired of from all sides, Whence shall I acquire this artistic knowledge and ability? I am told that schools of art for photographers do not exist, but I fear if they did exist they would not be patronized. The retoucher, Janssen, some years ago opened a school here for retouching, but only a few availed themselves of the opportunity, and Jansen died in the most miserable condition. His successor, Herr Kopske, has been more fortunate, but the results do not meet my expectations. I must conclude therefore that the artistic needs of the younger photographers are not very great. Many may lack the means of study, but not a few want the desire. Many trades and occupations engage apprentices for three years, and pay them a salary according to their abilities, and increase as they advance. By degrees the photographic apprentice learns by observation from his master and associates. He learns glass cleaning, collodionizing, silvering, etc., and finally posing, lighting, and retouching. Thus is he gradually advanced to a full-fledged operator. When at the end, if he is skilful, he may make one hundred marks a month, without any one asking him whether he ever went to an art or retouching school or not. It is not to be denied that such often are skilful and practical workers, but anatomy, the art of costuming and draping, perspective and

art history are not learned with these practical instructions, and the artistic education of the young photographer cannot be otherwise than wanting in many particulars. I venture the assertion that opportunities are not wanting for securing artistic culture, but that the desire to take advantage of these opportunities is wanting, and that a photographic academy, if it were to start up into existence, would not directly alter the condition of things. In America I have found a greater desire to learn than here, perhaps because there, in consequence of the greater competition, the expectations are greater. The struggle for existence, according to Darwin, perfects the race, the imperfect inevitably succumbing. Many help themselves by self-instruction. I remember with much pleasure the evening of instruction in drawing which the sixty year old photographer, Petsch, in connection with his colleague, Loescher, and several young artists held weekly in his gallery. Many of these associates have since risen to fame. I mention only the name of the sculptors Encke and Schaper. The drawings were made from life—one taking the other. Works of art and artists were discussed, and all profited by the intercourse. Petsch later conceived the idea of establishing in Berlin such an institution for the advance of photography. Unfortunately the scheme was not carried into execution.

I wish we had more of such men, their example inspires others. What have we to do with drawing? I hear many exclaim. To be sure, the camera does the drawing, but unfortunately it draws only optically and perspective, and the judgment of the correctness of a drawing is to be obtained only by one who is familiar with the principles of drawing, that is, who understands it, and has cultured his eye and feeling for boundaries and lines. How is the young photographer to be animated to a study for art. It was hoped that the establishment of an examination for operators as was conducted in France would increase the inclination to study, and there is no question that a shining diploma has charms for young folks, and helps progress. In France, however, the young people who applied to the examining board were precious few. What are twenty young people in comparison to six thousand operators.

I believe that only when higher artistic excellence is demanded by proprietors that the inclination to study will increase. Perhaps the amateur will give an impulse here, at any rate it will necessitate higher abilities on the part of the photographer that he may overtop the amateur. May the new year bear, in this respect, good fruit for our scholars.

Yours truly,

H. W. VOGEL.

Editor's Table.

OUR NEW YEAR.—Our readers must not suppose that because we are *old* we have lost either our courage or enterprise neither must they suppose that we are disturbed by the announcement of the more frequent issue of our contemporaries—one weekly and the other semi-monthly. Do not be alarmed. Remember that the publishers of the other magazines alluded to have their reasons for issuing more frequently than we, because of their interest as dealers in photographic material. They undoubtedly understand their business best, and are the best people to judge when their special interests or those of their readers require a more frequent issue of

the journal which they publish. Our readers will observe, however, and agree that we have no other interest than theirs to take care of or to cater to. *Our magazine is published for the good of the practical working photographer*, and especially for those who have to struggle for a livelihood. We think we have given plenty of proof of our interest in them, and our desire to subserve their interest, and this shall be continued. When we think the time has come for the more frequent issue of the PHILADELPHIA PHOTOGRAPHER, our patrons may be assured they will receive it. But never shall a more frequent issue occur at the expense of quality, care, and

desire to minister thoroughly to the interests and welfare of its readers. For twenty-one years the PHILADELPHIA PHOTOGRAPHER has always been *the leader* in matters photographic, and it intends so to continue. We ask a careful reading of the reasons which we give on the third page of our cover for expecting the interest and coöperation of the whole working fraternity in our behalf, and in the support of a first-class photographic journal clipped of all interests in manufacturers and private business further than is necessary for informing our readers of what it is to their interest to know, viz., where and how to buy the supplies necessary for the conduct of their business. Having established our integrity in this direction, we believe that nothing will occur that will prevent us from asserting truthfully, as we have been able to do for many years, that the PHILADELPHIA PHOTOGRAPHER has the *largest circulation* of any American magazine; that it is the *best for practical readers*, and the very best and cheapest method, all things considered, which manufacturers can employ for making known their desires to the consumers of their productions. In this belief we go forward in our work, promising again and again that *no pains or expense shall be spared to make the PHILADELPHIA PHOTOGRAPHER all that any practical reader can desire in the way of a photographic journal.*

DR. G. F. H. BARTLETT, of Buffalo, N. Y., writes: "I have just received *Mosaics* for 1885. Many thanks. It is the best number I have seen—brimful of good points. By the way, there is an error in my article, on page 49, the fourteenth line from the bottom; *thick* hinge should be *third* hinge. It would spoil the apparatus to use a *thick* hinge in the position where the printer has kindly placed it.

Very truly yours,
G. F. H. BARTLETT, M.D.

In connection with this we would like to call attention to an omission in the formula for development, on page 105, No. 2, bottom of page, given by Mr. W. H. RAU. It should read: Water, 10 ounces; citric acid, 60 grains; sulphite of soda, 2 ounces; carbonate of potash, 4 ounces. By accident the carbonate of potash was omitted, without which the formula would be worthless.

In the notice of "Our Picture," in the December number of the PHILADELPHIA PHOTOGRAPHER, for 1884, the whole credit of the making of the excellent negatives of "Little Wee Wee" was inadvertently accorded to Messrs. ARTHUR

& PHILBRICK. The honor should have been equally divided, as we are informed by Messrs. ALLEN BROTHERS, between the above gentlemen and Mr. F. N. TOMLINSON, of Detroit. We are sorry that Mr. TOMLINSON was not mentioned in connection, but take this opportunity of rendering honor to whom honor is due.

PICTURES RECEIVED.—From Mr. W. O. LUKES several stereoscopic views of scenery in the Rocky Mountains, principally of waterfalls in which the character of the water is beautifully rendered. From S. M. ADAMS, Elgin, Ill., a novel style of photograph representing smiling faces breaking through an envelope, greeting the beholder with a Happy New Year. From Mr. A. B. THOM, stereoscopic views of scenery along the Canadian Pacific Railroad. The subjects are artistically chosen, and the details of the shadows in the foliage are well rendered. From Mr. THOMAS S. STEELE, Hartford, Conn., a 5 x 8 photograph representing President-elect CLEVELAND, Dr. WARD, and Mr. STEELE seated upon the porch of the Derby Prospect House, Adirondacks, N. Y., taken with the electric drop-shutter.

PROF. CHARLES F. HIMES has been suffering from a severe attack of inflammatory rheumatism for more than two months. We have, in consequence, been disappointed in a contribution to the PHILADELPHIA PHOTOGRAPHER, promised by him, and he has been altogether prevented from acting as chairman of the sub-committee on the photographic display at the New Orleans Exhibition, embracing its history, educational aspects, and literature. We are glad to say that he is now rapidly convalescing.

THE PHILADELPHIA PHOTOGRAPHER for January presents a beautiful set of nine photographic compositions by Mr. H. P. ROBINSON, of Tunbridge Wells, England. The originals, of large size, are now on exhibition at New Orleans. The copies, though very small, look as though they were originals, and are beautifully printed. The articles in the PHOTOGRAPHER are of great technical interest. There are good suggestions for both amateur and professional photographers, and reports of discoveries and inventions that are likely to be of use. Dr. VOGEL'S German correspondence is particularly rich in such reports and suggestions, and the proceedings of the various societies, with their debates on topics of interest, make up a magazine of useful information that no progressive photographer can afford to be without.—*Philadelphia Public Ledger.*

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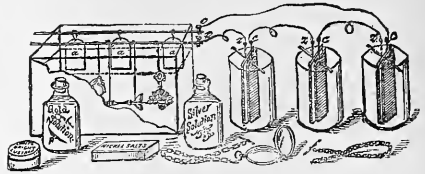
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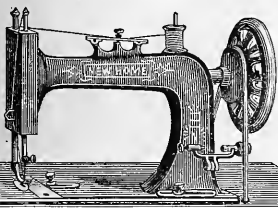
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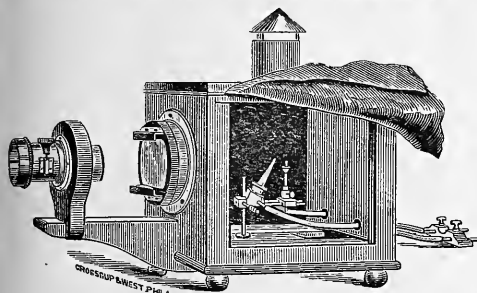
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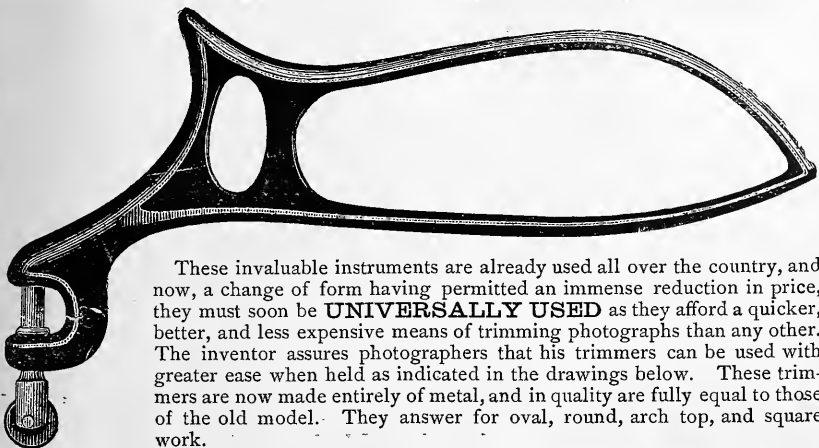
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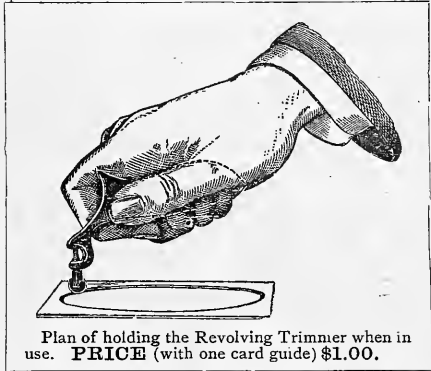
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2 $\frac{1}{8}$ x 3 $\frac{1}{8}$	3 x 4	5 $\frac{1}{8}$ x 7 $\frac{1}{8}$	2 $\frac{1}{8}$ x 3 $\frac{3}{8}$	2 $\frac{5}{8}$ x 3 $\frac{3}{8}$	2 $\frac{3}{8}$ x 4 $\frac{1}{8}$
2 $\frac{1}{8}$ x 3 $\frac{1}{4}$	3 x 4 $\frac{1}{4}$	5 $\frac{1}{8}$ x 7 $\frac{1}{4}$	2 $\frac{1}{8}$ x 3 $\frac{3}{8}$	2 $\frac{5}{8}$ x 3 $\frac{3}{8}$	2 $\frac{3}{8}$ x 4 $\frac{1}{4}$
2 $\frac{1}{8}$ x 3 $\frac{3}{8}$	3 x 4 $\frac{3}{8}$	5 $\frac{1}{8}$ x 7 $\frac{3}{8}$	2 $\frac{1}{8}$ x 3 $\frac{3}{8}$	2 $\frac{5}{8}$ x 3 $\frac{3}{8}$	2 $\frac{3}{8}$ x 4 $\frac{1}{2}$
2 $\frac{1}{8}$ x 3 $\frac{1}{2}$	3 x 5 $\frac{1}{8}$	5 $\frac{1}{8}$ x 7 $\frac{3}{4}$	2 $\frac{1}{8}$ x 3 $\frac{3}{8}$	2 $\frac{5}{8}$ x 3 $\frac{3}{8}$	2 $\frac{3}{8}$ x 4 $\frac{3}{8}$
2 $\frac{1}{8}$ x 4 $\frac{1}{8}$	4 x 5 $\frac{1}{8}$	5 $\frac{1}{8}$ x 7 $\frac{3}{4}$	2 $\frac{1}{8}$ x 3 $\frac{3}{8}$	2 $\frac{5}{8}$ x 3 $\frac{3}{8}$	2 $\frac{3}{8}$ x 4 $\frac{3}{4}$
	4 x 5 $\frac{1}{4}$	5 $\frac{1}{8}$ x 7 $\frac{3}{4}$	2 $\frac{1}{8}$ x 3 $\frac{3}{8}$	2 $\frac{5}{8}$ x 3 $\frac{3}{8}$	2 $\frac{3}{8}$ x 4 $\frac{3}{4}$
	4 x 6 $\frac{1}{8}$	6 x 8	2 $\frac{1}{8}$ x 3 $\frac{3}{8}$	2 $\frac{5}{8}$ x 3 $\frac{3}{8}$	2 $\frac{3}{8}$ x 4 $\frac{3}{4}$
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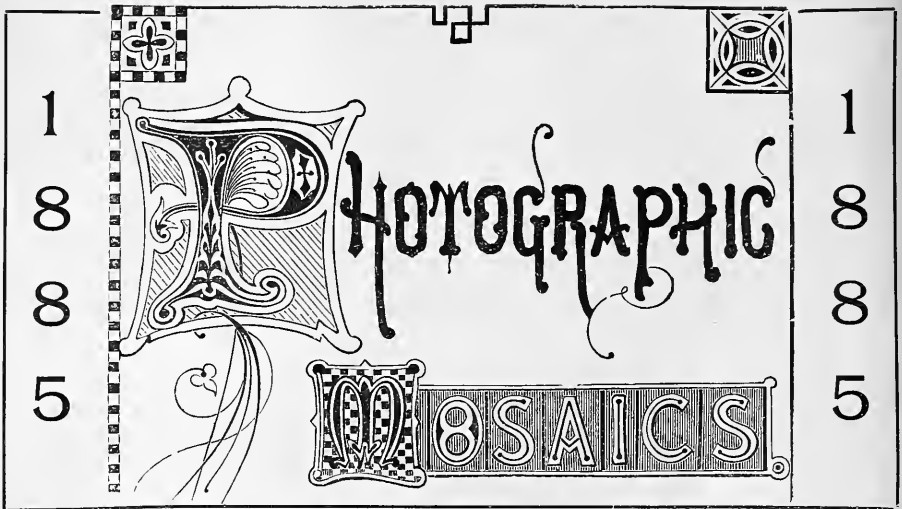
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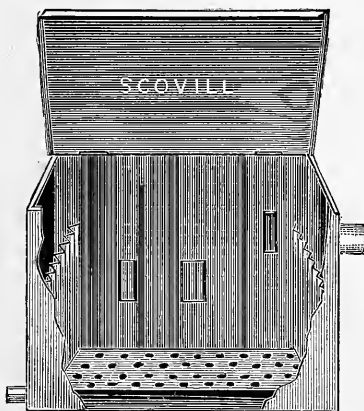
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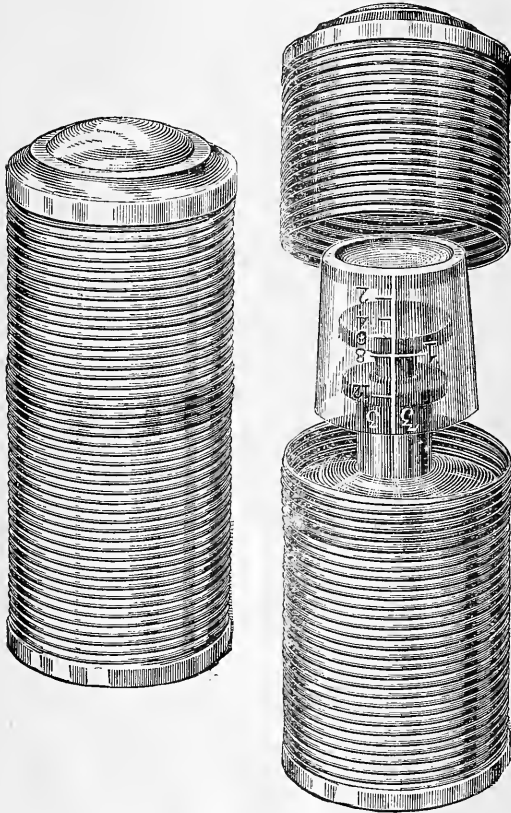
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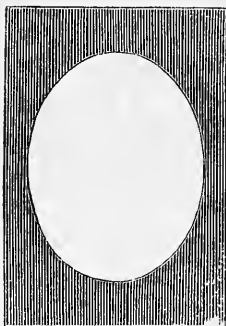
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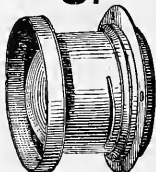
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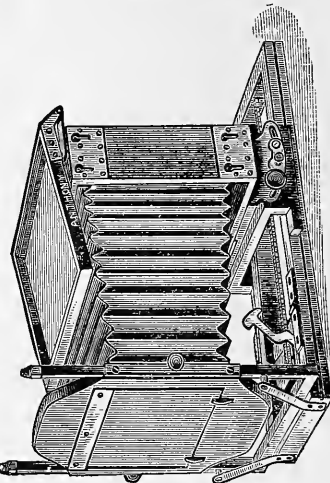
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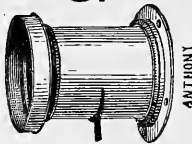
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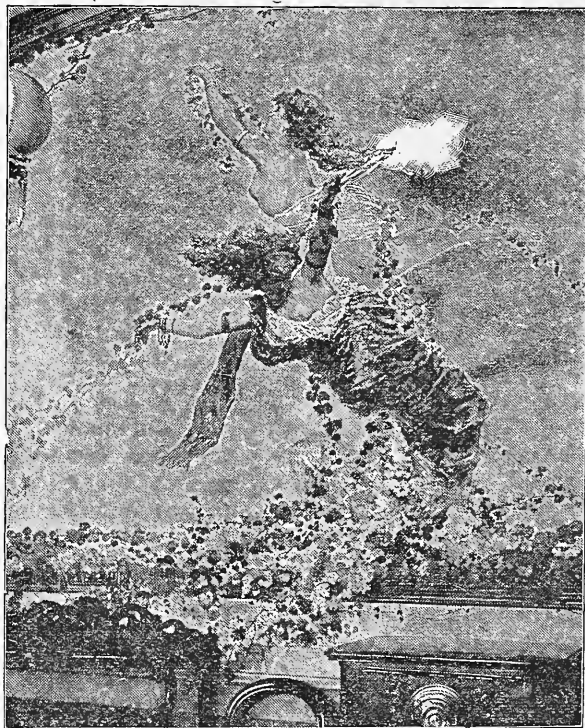
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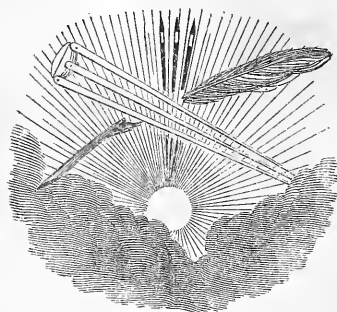
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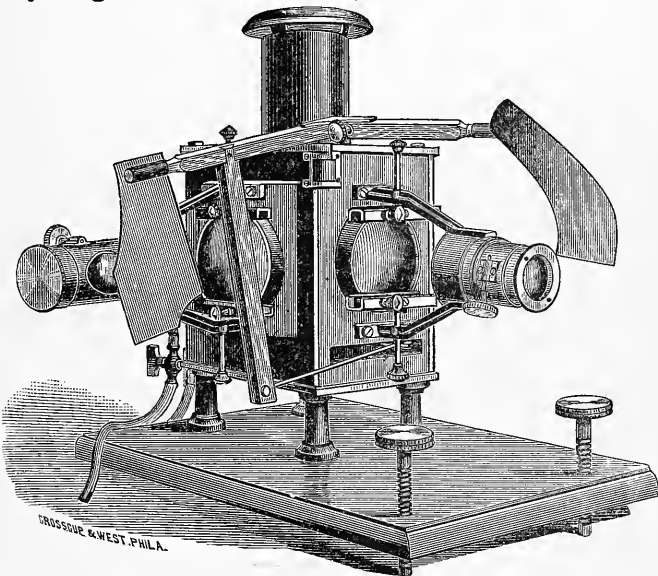
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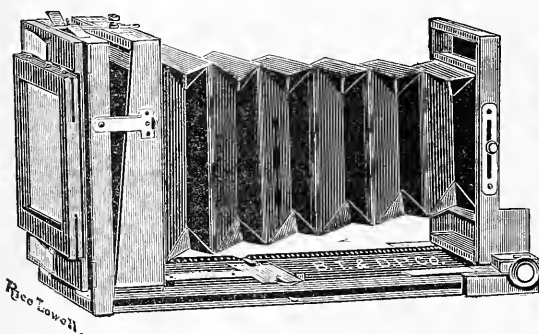
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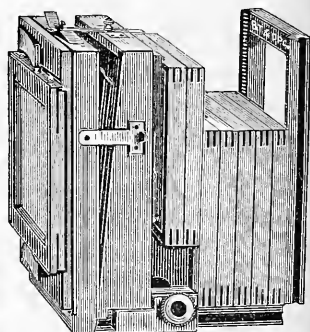
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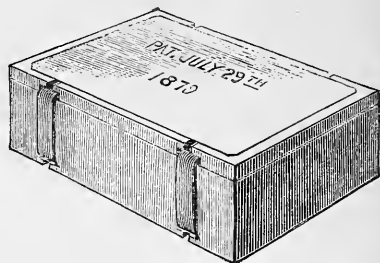
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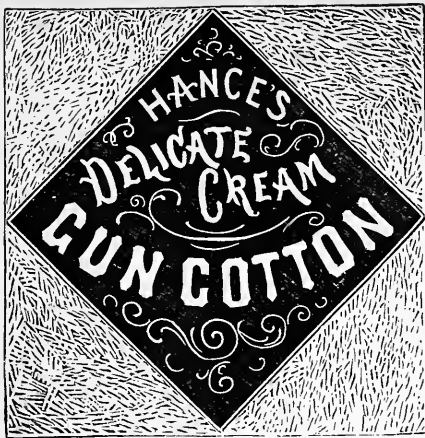
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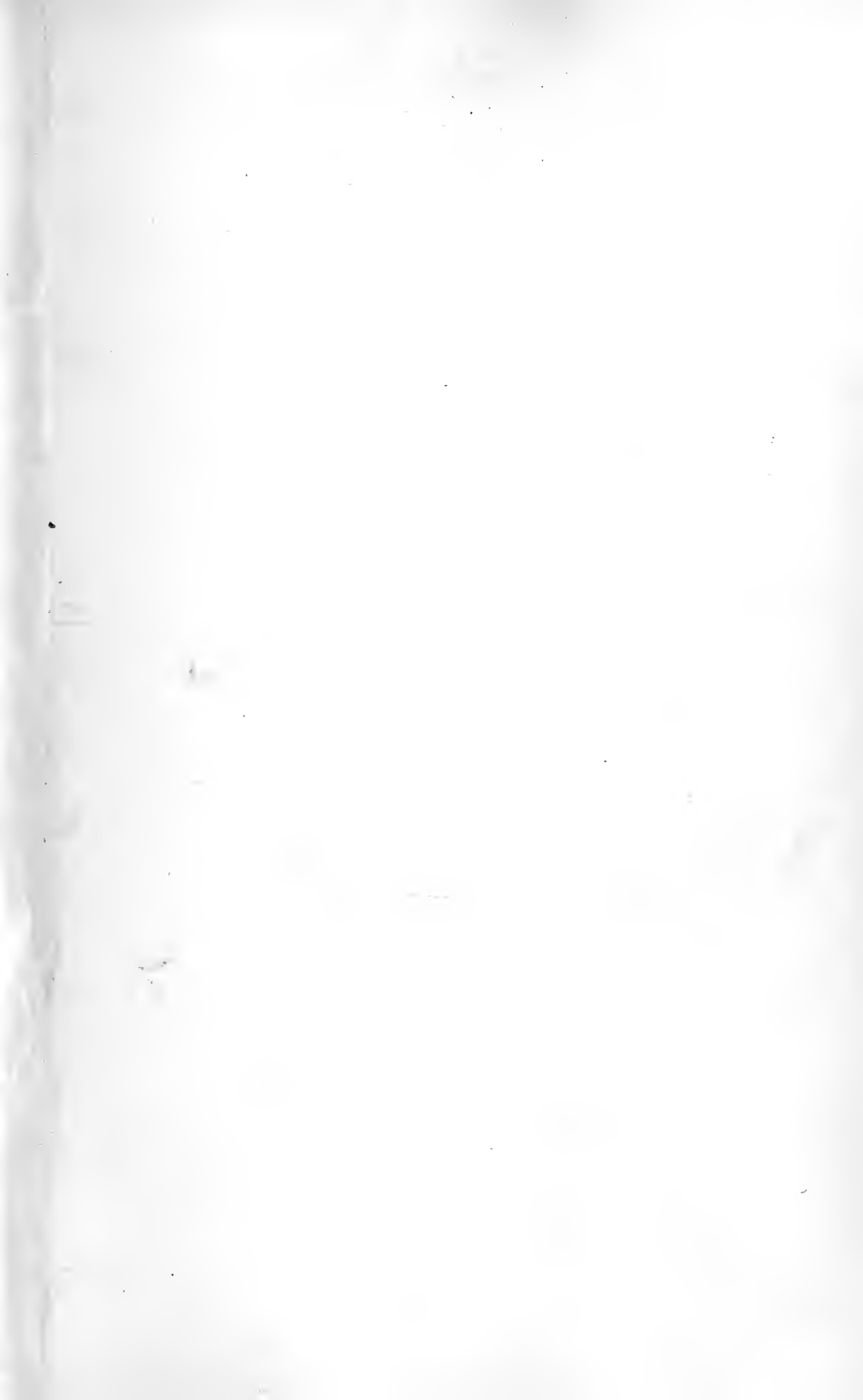
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THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XXII.

MARCH, 1885.

No. 255.

PHOTOGRAPHY AT THE NEW ORLEANS EXPOSITION.

If we are slow in giving our readers the promised list of the photographs of the Exposition, we trust we shall not be censured for a delay caused entirely by a power higher than we. Too much has been said about the embarrassments of the management to leave any one in ignorance concerning it.

The photographic department, among other interests, suffered from the aforesaid embarrassments, and its ready and willing Superintendent had to defer hope for some weeks before he could carry out his ambitious desires to see our art well presented. First, none of the promised uprights for hanging was supplied. Then, after they were placed, no covering was forthcoming for them.

Advice was asked from some of the exhibitors, which was answered by a contribution of twenty-five dollars from Messrs. A. M. Collins, Son & Co., Philadelphia, and another of the same amount from Messrs. E. & H. T. Anthony & Co., New York, both of whom are exhibitors, and who were prompted to make their contributions by their interest in the profession, and a desire to see the photographic exhibit so placed as would inure to the credit of all interested. Is it not delightful to know that we have such warm friends in our business always

so ready to give a helping hand? We believe there are others who will follow them.

Now the hammer is actively at work again, and at this writing the exhibit is rapidly drawing to completion. Our readers, rest assured, shall know all about it, and have some sketches from it. Indeed, through the kindness of Mr. John Durkin, the talented artist of *Harper's Weekly*, we are enabled even now to give pen drawings of some of the pictures on exhibition.

The first of these is from a 14 x 17 transparency, one of a magnificent collection, by



Mr. John A. Scholten, of St. Louis. The group is lovely in pose and lighting, and, in our opinion, the gems of Mr. Scholten's collection, though by no means the most pretentious.

We all know that the only thing that makes us feel repaid for our trouble in care-

fully developing our plates; the only thing that heartily responds and answers back to our desires, is a glass transparency. It gives us all we can see in our negatives, and sometimes a little more. To say, then, that Mr. Scholten's collection of transparencies is exquisite is only faint praise. There is nothing here to equal it. The positives are on dry plates, made by Mr. G. Cramer, St. Louis, who chooses thus to make his exhibit in conjunction with his friend, fellow-citizen, and amiable co-worker. Long may they live to delight us with such treasures. We shall refer to them again.

The second drawing is of a Mexican water carrier, from the collection of Mr.



Wm. H. Jackson, of Denver, Colorado, to which we have before alluded. It is one of the large collection of gems collected by our talented friend during his recent visit to the land of the Montezumas, and could scarcely be more picturesque. Mr. Durkin has preserved the drawings of the original with consummate skill.

From the collection of Mr. I. W. Taber, San Francisco, which hangs next to that of Mr. Jackson, Mr. Durkin has selected a view of Castle Rock, on the Columbia River, Oregon. It is magnificent, and well worthy of careful study.

Unconsciously, in the trio selected, we have chosen subjects which the readers of chapters of *Photographics* will recognize as representing the three great forms of com-

position—*i. e.*, the diagonal, the pyramidal, and the circular.



While directing the "hangmen" on the day of this writing, we were much charmed by the amateur exhibit; but of this and many other novelties, more anon.

The United States Government, in its building, makes great use of our art. One of its newest applications has been to the study of craniology, by means of the "composite" photograph process, suggested some time ago by Mr. Francis Galton, of England. The experiments were made by Surgeon John S. Billings, U. S. A., Curator of the Army Medical Museum. The plan, as you have already surmised, is to make negatives of several crania, of, say, the same tribe of Indians, and then print them one over the other. Some exceedingly interesting results are shown, as will be well understood from the partial list which I give below:

List of Composite Photographs of Crania from Army Medical Museum.

Nos. 1, 2, 3, 4, and 5 were prepared by the ordinary wet process, with strong-working collodion, under an exposure of seventy seconds to each cranium.

Nos. 6 to 18 inclusive were taken on Beebe's gelatine dry plate. The exposure of each cranium in Nos. 6 to 13, and No. 16, was three seconds; in Nos. 14 and 15, only one and a half seconds; in Nos. 17 and 18, one second.

No. 1. Composite photograph of seven adult male Esquimaux skulls, side view.

No. 2. Composite photograph of seven adult male Esquimaux skulls, front view.

No. 3. Composite photograph of seven adult male Sandwich Islanders' skulls, side view.

No. 4. Composite photograph of seven adult male Sandwich Islanders' skulls, front view.

No. 5. Composite photograph of seven adult male Sioux Indian skulls, front view.

No. 6. Composite photograph of seven adult male negro skulls, side view.

No. 7. Composite photograph of seven adult male negro skulls, front view.

No. 8. Composite photograph of seven adult male Apache Indian skulls, front view.

No. 9. Composite photograph of seven adult male Apache Indian skulls, side view.

No. 10. Composite photograph of eight adult male Ponca Indian skulls, side view.

No. 11. Composite photograph of eight male adult Ponca Indian skulls, front view.

No. 12. Composite photograph of seven adult male white skulls, front view.

No. 13. Composite photograph of seven adult male white skulls, side view.

No. 14. Composite photograph of eighteen adult male Cheyenne Indian skulls, front view.

No. 15. Composite photograph of eighteen adult male Cheyenne Indian skulls, side view.

No. 16. Composite photograph of seven adult male Sandwich Islanders' skulls, base view.

No. 17. Composite photograph of seven adult male Sioux Indian skulls, base view.

No. 18. Composite photograph of seven adult male Sioux Indian skulls, side view.

We shall not, however, secure negatives of these antique skulls for our picture. Micro-photography and photo-micrography are also largely represented by our Government.

To speak of the uses made of photography by the Exposition management and by exhibitors, etc., would be to fill many pages.

The superb moresque building being erected near the printing windows of the Centennial Photographic Company has been photographed every Monday since the last of November. One set of prints goes to the Director-General, and a second series to the

contractors and founders, the Keystone Bridge Company, Pittsburg, Pa. The latter are thus enabled to direct the artisans, Mexican and American, who are yet busy constructing the building.

A motley crew of all nationalities has poured into the Centennial Photographic Company's studio lately by the thousand for photographs for their passes. It was a sight.

We are making some interesting experiments with electric light photography here, with marvellous results. Record shall be presented concerning them presently.

Do not come down here if you expect to die soon. They huddle one into the above-ground sepulchres astonishingly quick, merly tacking a notice of your demise and funeral to the telegraph poles nearest your last breathing place. Here is an example:

"Died, on Sunday, at 7.30 p. m., John Felix Voisin, aged fifty-three years. The friends of the Voisin, Livaudais, Charleville, and Trudeau families are invited to attend the funeral from his late residence, corner Valence and St. Charles Avenue, at four o'clock, this Monday evening, February 2, 1885."

A funeral suggests bells. While I write the old Liberty Bell is near me, guarded by that trio of giant policemen, Sergeant Edward W. Malin, and officers John Patton and Thomas Neuman. It was received with great ceremony, and was abundantly photographed all along the route. And now good-bye until soon again.

DEVELOPERS—OXALATE OR PYRO?

BY WILLIAM BELL.

It has been said that all makes of plates ought to be able to be developed by one's favorite developer (it being a good one). Many do not follow makers' instructions. One would suppose that the manufacturer publishes the developer that suits his plates best. Operators think and act otherwise, and often condemn plates because they do not get results hoped for, whereas fine results would have been obtained had makers' instructions been followed. Experience has taught the writer that the developer that

comes nearest to a standard developer is the ferrous oxalate. All makes of plates in his hands, with this developer, have given fine results, and he has come to the conclusion that the only plate that can be called a "bad plate" is one that cannot be developed by ferrous oxalate (provided always, that proper exposure has been given, and the developer properly restrained with citric acid and bromide). In giving lessons to begin I always teach the use of ferrous oxalate, as by its use it simplifies my labor, and the student progresses quickly and acquires skill. I will give an instance wherein had I not used it I should have had to condemn plates furnished by a well-known and successful manufacturer to an amateur. Both pyro and ammonia and ferrous oxalate developers accompanied said plates. Before my arrival at his residence, the amateur had the pyro and ammonia carefully compounded by a chemist. We exposed No. 1 plate on street view, sunshine, twenty seconds (the plates had not been issued as rapid ones). Development commenced as per directions; some minutes passed; no sign. What do you do in this case? Exposure too short; need of more ammonia in developer; but we must be very careful or we will raise up the "veil." What's that? Why, green fog. Never heard of a green fog; it's something new to me, says the beginner. Ammonia and bromide were added by drops at intervals. It was only until four times the amount the directions called for that the image began to show, and six times the amount was used before development was finished. Plate was washed and fixed and brought out to white light for inspection. Green fog, rendering the plate useless. Explanation to student: too short an exposure; too much ammonia used in developing. Try again. No. 2 exposed thirty seconds; developed; same results as No. 1 plate. Advised the use of ferrous oxalate; it was compounded. No. 3 plate exposed 10 seconds; developed with ferrous oxalate, well restrained, but the plate was so overtimed it was useless. No. 4 plate exposed 12 seconds; same developer used. Result: excellent negative, good density, time, clear shadows, also color. This ended instructions on that

day. On second visit to same party the remainder of the plates were exposed five to fifteen seconds (according to subject), developed with ferrous oxalate, and excellent results obtained. Here was a stock of plates that pyro and ammonia *could not*, and did not, develop, and yet with the ferrous oxalate gave negatives that made it a pleasure to expose them. The demand for extra rapid plates that will develop without the use of a restrainer is so great that a really good plate is often condemned because it does not give the results it would have given had a restrainer been used. To me it is the same as to try to use the protosulphate of iron developer without using acetic acid; for both plates negatives have been obtained without its use, and with very short exposures, but they had very little printing qualities. In a prominent gallery here I saw a favorite plate developed, and the user praised it highly. No bromide or citric (pyro, sulphite, and soda was the developer). The negative seemed perfection. Calling at the same place at another time, saw plates developed (pyro, bromide, and ammonia developer). "Is this the plate you used when I was here before?" "Oh, no; this is an English, Birmingham, England, plate." "Why, I thought you liked the other plate so well?" "So I did; but they do not always come the same—thin, no body. Now, these Birmingham ones are so round and full of detail." I firmly believe that had the pyro, sulphite, and soda been used with a restrainer, and a trifle more time given, that the favorite plate would have been as round and full of detail as the foreign plate.

I have been led to these remarks, as I have devoted time and money to endeavor to make emulsions of uniform quality and developable with any published formula that photographers are more conversant with, and do produce plates that develop with most of them, but very seldom with the developer without a restrainer, and I judge that the prominent manufacturers of the country will coincide with me, viz.: that all plates can be developed with ferrous oxalate, bromide, and citric acid restrainer, but not always with pyro, no matter what alkali be used unrestrained.

WHAT IS A "STUDY?"

SOMETIMES it takes a great deal of the "King's English" to express an idea, and at other times we find a single word as full of meaning as the Arabic word "Tyeb" (good).

Such is the case with the significant word "*studies*." In commenting upon the lovely pictures of our good friend, Mr. H. P. Robinson, in our January issue, we called them "*studies*." For this we have been "wondered" at, good naturedly, by the talented master, who writes as follows:

TUNBRIDGE WELLS, ENG.,
January 24, 1885.

MY DEAR SIR: I am much obliged for the copies of the PHOTOGRAPHER you have been so kind as to send me. The pictures have been admirably copied, and look very well, and I cannot help feeling much flattered by the very kindly notice you have written of them.

It is not a matter of much consequence, but I wonder why you called the pictures "*studies*." They are not studies for anything. My intention was (and I thought I had succeeded as far as the art will allow) to make complete pictures. A study is, in art, a preliminary sketch, or part of a whole. The pictures are a result of study, but not studies in themselves. In another way the word study is used as an excuse for not doing your best. Whether I succeed or not, I always do my best.

I have the PHOTOGRAPHER, and am glad to see it keep up its character. It is certainly the best of the American journals. One reason is, that it is not so full of barefaced puffing as the other journals. How Americans believe, as they must, so much in advertisements and crude puffings, not even slightly wrapped up, puzzles me. You must be a simple people.

I hope you will make a success of the New Orleans Exposition. Thank you for sending my pictures there.

Yours, very respectfully,

H. P. ROBINSON.

We can readily understand Mr. Robinson's views from his standpoint, but the good-natured, generous man has forgotten to view the matter from our standpoint, as

the editor of what we like to call an educational magazine.

Mr. Worcester, in his compact volume, defines a "study," among other definitions, as follows:

"4. Subject of study or attention.

"6. (Fine Arts). A finished sketch from nature, generally intended to aid in the composition of a larger and more important work, or as a memorial of some particular object for future use, or to facilitate drawing or composition."

Now, our standpoint is according to No. 4, and Mr. Robinson's a "study" from No. 6.

We offer the pictures in our magazine *always as helpers*, as educators to the fraternity photographic; therefore, they are to us, and become to our readers—"studies."

To the gentlemen who produce them, and especially to the master to whom we so often take off our hat, they are not "*studies*," but most assuredly "*finished*" according to Worcester, though that great sage knew nothing of modern photography. And, nevertheless, we do not believe our good friend ever made one of his admirable compositions without feeling that they were to "*facilitate*" in the very way we hoped for when offering them to our readers as "*studies*."

We know we have his pardon, as he would not use such graceful words concerning our magazine.

We can only say, as to that, oh, thanks, they are only "*studies*," and may our work continue for a long time to serve as such in behalf of the most wonderful art on the face of the earth.

GERMAN CORRESPONDENCE.

Whiteall's Sensitizer—Hypo as a Resensitizer—Photography at Night—Notices of Isochromatic Processes

As long as I have been engaged in photography, men have been zealous in their attacks of secret processes; but the evil has not, for all that, been eliminated. Year in and year out new secret processes emerge, and, though totally worthless, are well paid for. To this class belongs that of Prof. Whiteall's sensitizer, which, strange to say, has been brought into commerce, not by an

English firm, but by a French firm. It costs three dollars per litre. It is a fluid, and the plate is to be dipped in it, by which means the sensitiveness is said to be increased threefold. To such a boon would every photographer turn with pleasure, if such a degree of sensitiveness were to be obtained, for a threefold sensitiveness of our European plates would be an inestimable treasure for the dark days of our winter weather. After exposure, which may be reduced one-third, the plates are dipped into the solution contained in a shallow dish of porcelain or rubber. After thirty seconds—during which time the developer may be prepared—the plates are taken out carefully and drained off, washed on both sides, and developed as usual. The image appears immediately. White specks, which present themselves at first, gradually disappear. Care must be taken not to suffer the plate to remain too long in the developer, or it will become too intense. Now I resolved, in the first place, to determine whether the fluid had these virtues. Accordingly two plates were exposed at the same time in a stereo camera, and equally lighted and exposed; one three, the other nine seconds. The short exposure was subjected, according to directions, to the sensitizer, and both plates uniformly developed with ferrous oxalate. It is true that the short exposed plate came up very rapidly long before any sort of an image could be seen upon the long exposed plate, but the development stopped short with the short exposure—that is, no further detail could be evolved; but upon the other plate the image showed itself gradually, and the details built up slowly but fully; so that, at the conclusion of the development, the details in the shadows were far in excess of the under-toned sensitized plate, although this latter remained alongside the fully timed one in the developer all the time. The experiment was repeated, and with the same results: the sensitized plate developing rapidly; the other slowly, but showing greater detail; so that the boasted increase of sensitiveness is not worth speaking of. Now I tried the other plates in the same manner, with five and ten seconds exposure, the one with five seconds exposure being

treated to a bath of the sensitizer. The results were the same as with the former experiments—that is, the sensitized plate rendered the impressed image more rapidly than the other; but the latter gave much more detail in the shadows. Moreover, the sensitized plate always showed a light fog. It follows, therefore, that the sensitizer does not increase the sensitiveness even double. I next tried the experiment of developing the sensitized plate without washing the sensitizer first; the result was just the same. I next went into an investigation of the nature of the fluid. It had an odor resembling acetic acid and thyme oil, gave no precipitate with sulphuretted hydrogen; with sulphide of ammonia a slight precipitate, and showed with nitrate of silver a reaction which was very striking. A precipitate was formed, first white, then yellow, then brown, then black. This phenomenon indicated a hyposulphite salt. The thought occurred that we had here to do with a weak solution of hyposulphite of soda. Indeed, the fluid discolored the iodine solution, so that 1 ccm. of the iodine (1:150) needed 65 cc.m. of the Whiteall solution. In spite of this striking reaction, there was no proof of any trace of hypo, for there was no turbidity or heating with an acid, as is the case with dilute solutions of hypo. Evaporation of the fluid gave a small quantity of an amorphous deposit, which had no resemblance to hypo.

The more striking was the resemblance to hypo with the development. A solution of hypo (1-1000) was made without the addition of an acid, and used as above. The result was that the image appeared just as rapidly and with just about the same amount of detail as with the use of the Whiteall liquid, but there was a tendency on the plate towards a positive in the shadows. At any rate, we can, if we desire, compound a fluid that will work as well as the so-called "sensitizer" of Whiteall, and for much less than three dollars a quart. Whether the hypo has sufficient effect upon the sensitiveness of the plate, we will not discuss; but surely it is, under certain circumstances, of advantage in the development. It has, in the proportion of 1-1000, been recommended to quicken development and bring out more

detail. I have used it with advantage to get greater contrast, and to obtain softer, more harmonious negatives. For instance, in an exposure upon an oil painting by Sichel, where the face was remarkably lightly modelled, in using azaline plates the high lights were found to be always too intense in relation to the shadows, giving a very hard image. Longer exposure did not mend the matter. The lights became very strong, before the shadows made their appearance, and hence were very intense. Here the use of a dilute (1-1000) solution of hypo gave excellent results. The plate was put into it for one minute, and then, without washing, developed with oxalate. The lights and shadows came up together and strengthened uniformly. At first the image appeared very intense, even in the shadows; but on the transparent portion, thin. But if the development is allowed to go on, the negatives become stronger in the transparent parts. The right degree of intensity can be judged of by the ruby light, when the development must at once be stopped by thorough washing. By this means I gained a beautiful, soft, harmonious negative, uniform in lights and shadows.

Several years ago, my scholar, Mr. Jahr, succeeded in taking a photograph of the Garfield Monument at Cleveland by the light of the moon, confirming the view that the full moon had sufficient actinic power to impress an image upon a sensitized plate; but no one, I think, has imagined that the dark vault of the sky has also actinic power. That such is the case, Fol and Sarasen have shown. They sunk in the Lake of Geneva a waterproof case, containing a dry plate at different depths. The plate was covered by a glass plate, upon which letters and figures were painted with a black varnish; on opening the case, and with the presence of light, the designs were copied upon the plate lying beneath. The exposure was effected by a mechanical contrivance, and the time given was ten minutes. The apparatus was also employed during a moonless night in open air, the plate receiving ten minutes exposure. It showed a visible effect. The experiments at Geneva gave, with 232 metres deep, no effect; but an effect at 120, where the amount of light was about equal to that

of a clear moonless night. In September, with obscured sky, the light penetrated deeper into the water than with clear sky in August.

Under the title "Silver Lakes for Emulsion Plates," I find in *Anthony's Bulletin* a valuable article from the pen of our highly honored colleague, Mr. Carey Lea. He speaks of my discovery of making photographic films sensitive to red, yellow, and green, by dyeing with certain colors. He says: "The plan of dyeing the films is far from being new; and, if I am not mistaken, I was the first to advocate it sixteen years ago. The next experiments with stained films were made by Major Waterhouse and Dr. Vogel. The latter affirms that each the color increases the sensitive of the plates to those rays which the coloring matter absorbs," etc. These notices make it appear as if my worthy colleague, Mr. Lea, had been my predecessor in the discovery of the color-sensitive process. Fortunately, he declares positively that he by no means intended by dyeing the films to secure a color sensitiveness, but that his object was merely to prevent blurring. Against this I have nothing to say, but I do not think it exactly correct to mention me in the same breath with Mr. Waterhouse, even placing Waterhouse first. In opposition to this, I remark that, as early as 1873, in December, my results with isochromatic plates were published, and that Waterhouse did not begin his experiments in the same direction until 1878. On the occasion of our meeting on Nicobar Island, during the eclipse of the sun, I showed him photographs of the spectrum, made with my color-sensitive plates, and urged him to continue the experiments. In conclusion, my worthy colleague turns against my theory, saying, "the results obtained by myself were contradictory, and seemed as often to oppose the theory as to support it." I must observe that, ten years ago, I pointed out the fact that his experiments afforded no proof, inasmuch as he had not experimented with the spectrum, and his experiments without the spectrum cannot gainsay my experiments with the spectrum. One thing is certain: that all plates hitherto prepared with dye stuffs to render them sensitive to the im-

pression of colors must conform to my established laws. If, therefore, practical photography has got over this most difficult problem, it will have to thank me for the laws which I have discovered.

H. W. VOGEL.

BERLIN, January 30, 1885.

**ANSWER TO THE AUTHOR OF
"VICISSITUDES OF GELATINE."¹**

MR. E. L. WILSON,

DEAR SIR: In reference to the article by Mr. Ranald Douglas, in No. 254 of the *PHILADELPHIA PHOTOGRAPHER*, entitled "The Vicissitudes of Gelatine," I would like to say a few words, if you would accord them space in your journal.

Those flat, dull-looking, opaque spots of which Mr. Douglas complains I have had experience with, in my practice of emulsion making, but only when more hard than soft gelatine was employed in the making of the emulsion. For instance, if two parts of Heinrich's hard gelatine and only one part of Nelson's were employed, these spots invariably made their appearance. Less frequently with Simeon's gelatine, but mostly when the gelatine was watery.

I have found that with the use of two parts of soft gelatine and one part of hard the spots were less liable to appear.

If the emulsion be cooked at a high temperature rapidly the spots are more likely to appear than when the temperature is lower and the digestion slower.

I do not think that the spots would not make their appearance by keeping the negatives a long time after making, but I cannot say this from experience, since I always use my emulsion in a fresh state, not longer than two days after its making.

I have found the best plan to get rid of these spots is by the addition of a weak solution in proportion, 1 to 4 or 1 to 7.

As I have said, I have had but little bother with these opaque spots, because, for the sake of brilliancy, I use soft gelatine. I digest the emulsion with Heinrich's hard gelatine, and then add, according to the season of the year, soft gelatine; usually three parts soft to one part hard. If this plan is pursued, I

am confident the spots will not show themselves.

In the hope that my few remarks may be of use, and in the expectation of seeing them published in your excellent journal, I remain

Yours,
JOS. DOELLA.

N.B.—As I cannot well express myself in English, I have been obliged to write this in German, in the hope that you would have it translated.
J. D.

**A PROCESS-MONGER AGAIN ON
THE TRACK.**

THE tactics of this journal have been for open war upon all process-mongers. As they always advance under cover of deceit, flaunting attractive circulars, to catch the eye of the unsuspecting and too easily gullible, it needs but little expenditure of common-sense ammunition to scatter their high-sounding pretensions and to route them completely.

We have received one of their heralds in the form of a circular, claiming to revolutionize the whole course of photographic experience.

This wonderful fluid which the inventor tells us, for sake of a name, he has called Liquid Lightning, is the cheapest ever gotten up, costing only thirty or forty cents for material to prepare one dozen 8 by 10 plates. It is also the simplest and easiest to prepare. Any one who can make a silver bath, or a batch of collodion, can make and work liquid lightning with absolute certainty of success.

It is perfectly uniform; of any degree of rapidity. You need not bother yourself about long or short exposure. Timing is a matter of no consequence. It will make a strong or weak negative, as you desire, full of contrast and detail. You may make your plates very slow or very quick. In brief, it is the *simplest*, the *cheapest*, the *quickest*, the *surest*, the *best*.

With a sense of the eternal fitness of things, the discoverer has aptly called his great discovery Liquid Lightning, for its course will be as brief as the "collied lightning in the night."

Mr. R. E. Wood writes:

EDITOR P. P.: For fear that you might

¹ Translated from the German.

not be so lucky as myself and receive direct from headquarters the valuable knowledge contained in the enclosed slip, I hasten to forward the same, that you may the sooner know of the great revolution that is to take place in the emulsion business. "Liquid lightning;" how expressive; how it will shatter the many dry-plate factories, and rip their ads from the pages of the P. P. More, it may shatter the whole concern, for what use is it to have any more literature in the business. "Liquid lightning, with absolute certainty of success," is all that can be desired. Oh! Vogel, oh! Eder, oh! all you great experimenters and scientists, the great thunderbolt of Missouri is about to hit you. Well, such is the life of man; history but repeats itself in this, your sad experience.

PHOTOGRAPHIC VISITS TO SOME OF OUR BATTLEFIELDS.

BY WILLIAM H. RAU.

I MUST confess that, in accepting the invitation of some gentlemen who had participated in the late war of the rebellion to pay a visit to the battle-ground of Fredericksburg, I did so more from a desire to see the land of Virginia and its people than from any interest in connection with the battle. I had with me a 5 x 8 outfit, with dry plates, for the purpose of making such views as my companions might select, as they had studied up the points, and knew the locations and incidents that made the places historical and interesting. We left Philadelphia on a midnight train, and at nine o'clock the next morning arrived in Fredericksburg. We were met by a gentleman who had participated on the other side in this particular battle, and could point out the exact location of the troops, batteries, etc. He introduced us to Manuel, a colored hackman, whom we found an excellent guide. We drove rapidly through the nearly deserted streets to the bridge, and crossed the Rappahannock, and soon arrived at the Lacy House, directly opposite the town. This commands a fine view of the place, and afforded an excellent panoramic shot for our camera. Going now to the Lacy House, we enter, and find rooms, the floors of which were saturated with blood from the wounded and dying, carried

here during the siege. The building is so densely covered with foliage that we can scarcely get a view of it, excepting at an angle. Everything looks so quiet and peaceful that one can scarcely realize the tremendous slaughter that took place here and in the immediate neighborhood. Turning back, we drove a mile or two to the headquarters of General Burnside. The house that formerly stood here is entirely gone, and only a few mounds of earth show where it stood. Standing on one of these mounds, we get a magnificent view of the lay of the land in all directions. The situation is elevated, and was well chosen to overlook all that was transpiring. The view was too distant to make a good photograph, but the atmosphere was so clear that every house in the town could be distinguished on the negative.

We now turn up the river and reach the Scott Mansion, near which was planted the famous Massachusetts batteries that fired shot and shell into Fredericksburg. The earthworks are still there, although much lower than during the war, and the breaches for the guns plainly indicated, so pictures showing these were made, to lend point to which, I had my companions place themselves in various positions and attitudes along and on top of the earthworks; one with a field telescope, another pointing in the direction of the town, etc., bringing their figures prominently against the sky, giving the whole a certain amount of life, which it needed. We made a group of the family living in the mansion, with their servants. Nearly all of them had lived here during and since the war. They related with animation the dreadful scenes that took place before them while living here. Their plantation had been a rich one, but it was very poor now; in fact, the whole country around about seems asleep, and needs awakening.

We caught a characteristic negro group near the house of an old colored man, and a young boy drawing water from a well. We next passed through a group of houses, one of which was General Sumner's headquarters. It is a frame building, and looks none the worse for wear. This we made a negative of, after which we crossed back over

the river to the town side, and reached a spot where the Federal troops crossed on a pontoon bridge. The place is plainly indicated on both sides of the river where the ends of the pontoons were landed, it being the narrowest part of the stream. The foliage here is luxuriant and quiet, and gave us more of a picture than any we had yet made.

Immediately back of Fredericksburg, or, more properly speaking, in the suburbs, away from the river, we were pointed out the house in which Washington's mother lived during her residence here. She is said to have taken many a stroll to a clump of trees a few hundred yards back of the house, where she read or knit, and spent pleasant hours. This being her favorite spot, she was buried there, and a monument was begun, but never finished, as the huge obelisk that was to cap the structure has never been raised to its place, but lies, chipped and neglected, on the ground. Every part of the monument, and brick wall near it, is covered and scarred with bullet marks. We obtained several good negatives of the tomb and surroundings.

The country seems rich, yet it is miserably poor. No enterprise, no ambition, and evidently very little money. We were shown the location of Stonewall Jackson's headquarters, from which point we made a very fine landscape view in the direction of Fredericksburg. We met here a rebel private who had served in Stuart's cavalry, and knew every inch of ground, on which he delivered quite a discourse. The saddest of all sights is the National Cemetery, where nearly twenty thousand Union soldiers lie buried. Acres of dead; many of them unknown; over whose graves floats the flag they fought under, and, fighting, fell. The graves are arranged in terraces, with granite head-stones marked, and every honor paid them that our Government can give. From this beautiful cemetery hill we go to the Confederate cemetery, where the Southern people have done the best they could with the means at command. A fine granite monument, erected by Southern ladies, graces the centre, around which are arranged wooden posts, which mark the graves of the Confederate soldiers—most of them marked with that sad word, "Unknown."

Turning with a sigh from this spot, we visit Marye's Heights, where the most bloody part of the battle was fought. The mansion is beautifully located on the crest of a hill, surrounded by fine trees. Along the road at the bottom of the hill runs a stone wall, in front of and near which we are assured fifteen thousand men were killed, mostly Federal soldiers. The slaughter was fearful. This, although not a picturesque view, was duly photographed.

Leaving Marye's Heights, we make our way back towards the river, and visit the ruins of one of Virginia's grandest homes, the Bernard mansion. The house itself is almost gone; only a few piles of stones still in place project above the heavy foliage. One of the out-houses, the servant's lodge, perhaps, still stands, with its walls intact. Immediately in front of the house General Geo. D. Bayard was killed. This place afforded us much pleasure, as it gave some idea of the grandeur and wealth of the Virginians before the war. Far down behind the house we could still trace pathways, steps, romantic glens, and arched-over springs, that made us wish to have seen them in their days of glory. Some of these paths led down to the very banks of the winding river, where perhaps a landing place was built for boats. Next to the ruined plantation lives a brother of the former owner. His house is of wood, and contains many fine pieces of furniture and silver that were saved when the original stone mansion was destroyed during the war. It affords the grandest view of the Rappahannock River and Fredericksburg through the trees that we had as yet seen; and gave us, too, an excellent idea of the locations of both armies. It made a choice picture framed in with foliage.

Climbing down the hill to the river, we were shown the last crossing made by the Federal troops in their retreat. A pier of wood and stone reaches out into the river, and helps make a well-composed picture. It being nearly dark, we returned to Mr. Bernard's house, where we were entertained by the host, who seemed glad to talk with Northern men about the condition of the country before and since the war. He had a fine farm of nine hundred acres, and a

good location on the river, etc., yet he barely made enough to support his small family. We returned home with a complete set of plates of all we had seen that was interesting to photographers, not having missed a plate, and feeling well repaid for the knowledge gained about the battle of Fredericksburg.

(To be continued.)

PHOTOGRAPHING THE NEW ORLEANS EXPOSITION

BY G. HANMER CROUGHTON,

Superintendent of the Centennial Photographic Company.

In my last communication (see PHILADELPHIA PHOTOGRAPHER for December, 1884) I said I should have more to say about experience with American dry plates. The two months which have passed since last writing have been busy ones, and some thousands of gelatino-bromide plates, of various makers, have passed through my hands, and this, my first experience with American dry plates, has been most interesting and instructive.

The location of the Centennial Photographic Company in the Main Building of the World's Industrial and Cotton Centennial Exposition is one well suited to the business to be done, being in the south-east corner of the gallery. We have both an east and south light. The location was chosen, and a rough draft of the work-rooms, etc., made, by Mr. Wilson, and the system of working determined upon before I left Philadelphia last October. Like a general planning a campaign, it was for him to plan; it was left for his officers to carry out that plan. It is a proof of his foresight and experience that the original plan has not been modified in any one particular.

The plan or system upon which we work is peculiar, and at first sight it would appear that it was not well suited to get the best quality of work, nor a great quantity of it, but in practice it is working splendidly; it is as follows:

The operators do nothing but make the exposures; the developers nothing but developing. In the morning it is the duty of the Superintendent to have all the various

apparatus ready, holders filled with plates, etc.; the exhibits, views, etc., arranged for the time of day most suitable for them; and the lenses of the most suitable length of focus for each. The operators take their various apparatus and appliances and go to the places assigned them; and here let me say that this work of making photographs of exhibits is an experience by itself. It not only requires a man to be a good operator, but he must combine with it something of the gymnast; and also he must be ready to defend himself from attack on the part of other exhibitors who may be next the exhibit. He has to talk, for sometimes the owner of the exhibit does not want any portion of an exhibit (frequently of the same class of goods) next him to show in his picture, and so screens have to be arranged between them to block out the rival's goods or signs. Frequently our men had to climb like cats to drape windows, or cover up obnoxious signs; and then the owner of the covered-up sign will come along, and then—there are words. It not unfrequently takes hours to arrange for an exposure, blocking out light from windows, which would cause halation in the picture, or putting up dark screens to prevent reflections from the glass in the show-cases; and then the exposures are so different and difficult to determine. Plates which work out-doors in from one to four seconds are exposed upon exhibits in the building from one to forty minutes.

When the operator has finished his exposure, the holder is taken to the changing room, another holder is given him, and he goes off to make another exhibit, while the exposed plate is taken to the developing room to be developed. Here a system of developing has been adopted which is most successful in its results. We have found that, for uniformity of result, the potash developer is the best, and it is worked thus.

In all cases the operators are instructed to give enough time. An over-exposed plate can be made to produce a good printing negative, but an under-exposed plate is fit for nothing; so we commence with the idea that all the plates are fully exposed, and to commence with half the amount of potash required to make up the normal de-

veloper. If in this the negative should come up too quickly, there is a dish of bromide and water into which the plate is put, and development stopped at once; while a developer weak in potash, and restrained very much with bromide, is used to finish with. A plate must be very much over-exposed which does not produce a good negative by this treatment.

If, on the other hand, the plate is slow to develop in the first developer, potash is added, a little at a time, and very cautiously, till the full normal developer is upon the plate. If it does not develop with that, a first-class negative cannot be expected.

The arrangement for washing the plates is new to me, and is very successful. A sloping board runs the whole length of the sink twelve feet. This is about thirty-six inches wide, and has a narrow slip nailed upon its lower edge. Upon this sloping board the negatives of all sizes, from 20 x 24 to 5 x 6, lie flat; while a stream of water from a pipe perforated with small holes (which pipe runs the whole length of the board) keeps a constant supply of fresh water running over the surfaces of the plates. We wash for about an hour.

We have used here some six different brands of plates, and I must confess that, for quality, all have been equal to the best brands of English plates; although, with one exception, they are, as a rule, slower than the best English plates. This exception is a well-known plate in the American market, which is extremely rapid; so rapid that our operators have not been able to expose upon buildings and ground quick enough without some sort of shutter; so that we have lost a considerable quantity of plates from over-exposure, with all the care taken in development. With the smallest stop in a 4-inch Morrison wide angle lens (used for stereo work) in a good light, an ordinary drop shutter gave an over-exposed plate. It was so difficult to hit the exposure with these plates that the operators did not care to use them, and we now only use them for dimly lighted exhibits, where they produce results which I believe no other plate produce; and, to give some idea of the difficulties of this work, I may mention that these same plates, to which we could

not give little enough exposure in the open, have been exposed as much as fifteen or twenty minutes upon badly lighted exhibits in the interior of the building, the resulting negatives being very fine indeed, showing detail in the very darkest corners. These extremely rapid plates are more free from halation than the slower kind.

The plate most in favor with our operators is one which is known and liked by every one who has used it. It is moderately quick—quick enough for all ordinary work—always good and uniform in quality. We have lost less of these plates than any other, because of the latitude in exposure, and the ease and certainty in development. When I say moderately quick, I mean that in a good light, views of grounds and buildings are made with the smallest stop of a Morrison wide-angle lens in from one to four seconds. The same maker sends out a quicker brand, but those we have not tried here. Take them altogether, I am much pleased with the American plates, which appear to me to be more uniform in quality than English plates.

Although to a certain extent I have become a convert to the potash developer, I still remain true to my first love (ammonia); and when a more than ordinary difficult thing has to be done, I use the developer described in my last in preference to any other. But in the developing room here, the potash and soda developers are used right along. Either of these requires less experience and close attention during development than the ammonia; therefore they are better for general work, particularly where the one who develops is not the one who exposes.

I have mentioned the Morrison lenses. It is the first time I have had any experience with lenses not of English make, and I like these lenses very much indeed. For flatness of field, and uniformity of illumination, they are as good as can be. I have used them here of all sizes, from stereo to 20 x 24, and all are equally good, and quite equal to the higher-priced English lenses. They are extremely rapid, too, for their focal length.

The camera boxes are also novel to me. They are the revolving back-folding cameras

of Scovill's make. There is only one improvement I could suggest, and that is, that the bottom should be panelled, instead of open; for, when focussing, the light gets through the gridiron bottom, and you cannot well shut it out. The revolving back is a great convenience, and quite makes up for the extra weight and size of the camera box.

The developing room and changing room are lighted by the same lamp, which is hung in a passage-way made between the two rooms. Thus there is one uniform light all day; the windows have, next the light, ground glass; and inside the room, ruby glass. The light is soft and abundant.

The printing rooms are large, and face the south. There are about 1000 square feet of space in these rooms. There are six windows, each eleven feet wide, from which the printing is done. On the upper floor are the silvering rooms, the toning, washing, and mounting rooms; while on the same floor are the developing and changing rooms, one varnishing room, store room and finishing room, and large store or sales room, 160 feet long by 22 feet wide. At the end of the sales room, in the tower at the south side of the south-east entrance, are the offices for the cashiers, and Mr. E. L. Wilson's private office. Altogether there are about 7000 square feet in this corner of the building devoted to photography.

Now about the work done here, and how it is done. Photography about the grounds here is a great treat. Nature has been most bountiful, and art has done much also to make this park a most delightful place to ramble over. The grand avenues of live oaks, with their dark green glossy leaves, their massive limbs, draped with the long gray moss, which hangs in long trailing masses and festoons from branch to branch, are the principal attractions to Northern visitors, and form splendid subjects for the camera; but the moss is so light that it is set in motion by the lightest breath of air, and we have only had two days in as many months that have had the required combination of light and stillness necessary to getting good photographs of these avenues. Standing like sentinels at the end of the avenue nearest the river are two giants, of

immense girth, and covering a large extent of space with their gigantic limbs. These two trees Mr. Wilson has christened the Monarch and the Mammoth, and they well deserve their names. We have some fine stereos of these avenues and trees; we have yet the pleasure in store of making larger pictures of them.

Horticultural Hall is a store-house of pretty and curious vegetation, from all parts of the world. Rearing its graceful head high into the central tower is the cocoanut palm, with its great clusters of fruit hanging from it. Smaller palms of various kinds are clustered round the fountain; while bananas, palmetto, cacti, and other tropical plants, form a bewildering vista from the centre outwards. A large number of negatives has been made in this place, and a still larger number remains to be made.

Many views of the exterior of the Main Building have been made, the prettiest of which are those where peeps of the building are obtained through the trees. The same may be said of the Government Buildings.

It is when we get into the interior work that the pleasure becomes a toil. There are so many windows that it is almost impossible to get one view of the interior without some amount of blurring; and in making views of exhibits, this necessitates in many instances the draping round three sides of it, to cut off light, which would otherwise fog the picture; and then the building up of platforms, and standing upon ladders to focus, and other acrobatic feats, make this part of the work anything but pleasure. And yet I should not say so; for, after all, there is a great pleasure in producing a good result, in spite of such difficulties. We have one 8 x 10 photograph which well illustrates this difficulty. It is taken from the floor of the Government and State Building. It shows an erection of plants and roses on the top of one of the pavilions of a State exhibit, this rough platform being from twenty-five to thirty feet from the floor. On the top of this are set the legs of a nine-foot tripod stand, on top of which is the 20 x 24 revolving back camera box. Two operators are upon this very unsafe looking platform, receiving directions from

Mr. E. L. Wilson, who is upon a ladder some feet below them. This photograph was taken while they were making ready to take a 20 x 24 of the State seal of Minnesota, supported on either side by two deer; and, as I said before, well illustrates the difficulties of some of the inside work.

The Government and States Building is rich in material for the camera. Each State has done its best to outdo the other, and some of the prettiest and most artistic combinations of the different produce of the various States are to be seen here. Corn in ear, corn in section and in grains, is formed into flowers and all kinds of decorative designs. Grasses, moss, and straw play their part; and minerals and woods take their places in the great show of the different States' resources.

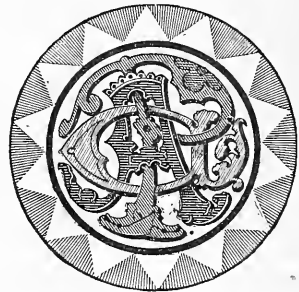
While a great deal of work has already been done on the grounds, and in the Exposition Buildings, the town of New Orleans itself has not been passed over. Characteristic street scenes, views of the cotton levee, steamboats loaded with cotton, etc., have been secured, and the old or Creole town is full of quaint old-time huts, which delight the artist. There are the many-galleried Creole houses, with their large cisterns for catching the rain water (almost the only water supply of New Orleans). Then along Royal Street (the Rue Royale of Cable's novel) there were many ancient-looking French and Spanish houses. Jackson Square is one of the queerest combinations of tropical vegetation, with Old World dilapidation, it is possible to conceive. In the centre of the square is the statue of General Jackson, surrounded by beds of roses, and glowing shrubs of all kinds; while palms, bananas, palmettos, the sago palm, and other tropical plants, form a rich backing. Behind these are the crumbling old Spanish houses, the old court-house, and other buildings falling into ruins, giving to the place quite an Old World character. This is one of the most unique sights in New Orleans.

There are many interesting places outside of New Orleans. West End and Spanish Fort are among these. A few views have been made at Spanish Fort, but we are waiting till the short Southern winter is

over, and the spring, with its abundant vegetation, shall come, before making more.

I finish this somewhat rambling article, after having made some very successful negatives of the Liberty Bell, which is here from Philadelphia, in charge of three of her most gigantic policemen. This bell has been a great attraction to the visitors from all parts, and it was most difficult to keep the people out of the picture. Just as we were getting into despair, an engine came into the building, and ran the bell, truck, and policemen out into the grounds, where, in the sunshine, and away from the crowd, we made exposure after exposure, instantaneously, till all the holders were exposed, and we came back rejoicing. I hope in my next to be able to tell you about the great Southern festival, Mardi Gras, which takes place this month about the 17th. We are preparing for a grand field day with the camera on that date.

PERTAINING TO THE



BUFFALO, N. Y., February 10, 1885.

In the February number of the PHILADELPHIA PHOTOGRAPHER, is a letter written by T. H. Blair, addressed to the members of the P. A. of A., sharply criticising the actions of some of the officers of the Cincinnati Convention.

From what I can learn of the manner in which the business was transacted by some of the officers last year, Mr. Blair has just cause to complain, and no one feels more keenly the dark cloud that hangs over the Association, caused by the follies of the year just past, than do the officers upon whom the responsibilities of the coming convention depend.

None has worked more faithfully to

prevent a repetition of those objectionable features than the Executive Committee, who met in this city the twelfth of last month.

So far as I am personally concerned, I know but little of the past history of the Association or its manner of doing business, as no books, papers, or records of any description have come into my hands from my predecessor.

But there will be a record of the convention of '85" that the officers will not be ashamed to turn over to their successors, and that record will contain all their business transactions during their term of office.

PLAN.

Instead of asking for contributions from the different manufacturers, dealers, etc., we have adopted a plan founded on business principles.

I presented to the Executive Committee a diagram of the hall where the convention will be held. In it we have found about twenty thousand square feet reserved for exhibitors of photographic goods of every description. By charging ten or fifteen cents per foot according to locality, an amount will be realized which in addition to dues will probably pay all necessary expenses. No one can reasonably find fault as every one will then be on an equal footing, and a few will not be paying the whole expense of the convention, while others who pay very small amounts have the same privileges and the same room for exhibits.

I will guarantee that any man who sends me an order for five hundred or a thousand feet will receive a copy of the diagram of the hall, and his space marked on it. The same will also be reserved on the original, which I will keep. When that man comes to the hall to look for his space promised, he will not find it occupied by another.

A number who have become familiar with our manner of carrying on the coming convention have ordered space, some taking over a thousand feet. It will be well for those who contemplate an exhibit to apply for space as early as possible, as there is a good prospect of its being taken rapidly. Every photographer anticipating to attend the Sixth Annual Convention, will know be-

forehand how he will be entertained during his stay.

The business meetings, and those for the discussion of photographic subjects, reading of papers, etc., will be separate one from another.

On the first afternoon there will be papers read and discussions on practical photography. The evening of the same day will be devoted to an exhibition of lighting and posing by artificial light. All arrangements have been made and subjects secured as well as parties capable of managing them. This will be done without any expense to the Association. On the afternoon of the second day, a question box will be provided, and any one who wishes to ask questions on the subject of photography can do so. Five minutes only will be allowed for answering such questions.

On the afternoon of the third day there will be an excursion to Niagara Falls, where the photographers of America can sit together for their picture with the grandest background on earth, and, in the evening can view the great falls lit by electric light, showing all the colors of the rainbow.

The afternoon of the fourth day will be devoted to the discussion of prices, and, in the evening, there will be a grand reception for the public. Saturday, being the last day, will be spent in closing up business.

All this will be carried out, as we have been promised papers from some of the most scientific photographers in the world whose names will be published in due time.

In addition to this, we are promised large exhibits from some of the most eminent photographers of New York, including Sarony, Mora, Anderson, and others, who have already engaged space.

I have no doubt Boston, Philadelphia, Chicago, Cincinnati, St. Louis, and their sister cities will contribute liberally as they have done in the past.

A committee has also been appointed to solicit exhibits from Europe and the convention will present a collection of artistic work from both the old world and the new, never before seen at one time.

The photographer who does not embrace the opportunity of attending this meeting will always regret it.

WHO WILL HELP?

To the Editor.

DEAR SIR: Will you kindly publish the enclosed letter in your next issue, and assist us in placing our plans fairly before the photographers of America, and oblige,

Yours fraternally,

H. McMICHAEL,

Secretary.

We have received a letter from Mr. J. Landy, full of good suggestions for making the next convention one from which those who cannot come as well as those who can come shall receive great benefit.

An exhibition and "a good time" are not enough, as experience has taught us. To be sure, we cannot come together without mutual benefit. One will have some idea or notion which he will tell in a friendly way to some one else, and thus much valuable information will be circulated, and we are convinced, though the last convention was not just what it should have been, our meeting was not without its good effect. But I am also thoroughly convinced that the convention might be made of much more value and interest to all. It must not be suffered to degenerate into a sort of scientific picnic, but must have the character of a scientific assembly, and be conducted throughout on scientific principles. There will be plenty of opportunity for the "good time."

I think Mr. Landy's idea is a most excellent one. He proposes that papers should be read or lectures given on a variety of subjects connected with our profession. Such subjects as dry plates, photographic chemistry, expression in portraiture, lighting and posing, printing and toning, on the use of lenses for different kinds of work, business management, etc.

We shall use all our influence to get this done. Let all who read this take the hint, and prepare themselves to give the fraternity the benefit of their knowledge.

The programme as published is not quite complete. The committee intends to perfect it by degrees, and to publish it in detail later.

For the sake of our art and our honor, gentlemen, put your hand to the lens, and focus sharp.

OBITUARY.

WILLIAM H. RHOADS.

ONE of the gentlest, kindest members of our fraternity has been taken from the camera to go where the sun always shines, and where the prospect is more beautiful than here. William H. Rhoads, of Philadelphia, died at Melrose, Florida, Tuesday, February 2d, of chronic bronchitis.

Many of the older members of our fraternity knew him well, and highly esteemed him. Though only about fifty years of age, he was one of the earliest photographers in this city, and one of the best. He was a regular attendant upon the N. P. A. Conventions, and Local Secretary of the one held in this city in 1872. His pleasant manner made him a great favorite. Alas! too close attention to business broke down his health, and he was compelled to dispose of a fine establishment, and fly to Florida to recuperate. He recovered his health partially, but a return to this city caused him again to break down, and again to appeal to a warmer clime for help. It was too late. He passed away gently—conscious to the last—and a great gap is left in our circle of warm, personal friends, and our art has lost one of its best men. Mr. Rhoads leaves a wife, son, and daughter.

DOTS OF THE DAY.

AMONG the new artistic ideas to be noted are what are called "At Home" pictures. People nowadays feel that their rooms are really part of themselves, or that they are part of their rooms, whichever you prefer. So now, instead of coming to the photographer, the photographer goes to them. He takes with him a supply of instantaneous plates, poses his subject in his or her own particular armchair, and with good taste and judgment in the arrangement of the light and pose, he is likely to secure a result far removed from the conventionalities of the "gallery" picture. The cost is not great, and I find there is a growing demand for this form of portrait. I am educating my artists to the work, and occasionally go myself.

I hardly think the growing taste for pho-

tography among amateurs hurts the regular business much. On the contrary, I think we owe much to the amateurs. The number of them is rapidly increasing, and the work of some of the more experienced compares favorably with that of the best professionals. In fact, some of the most charming novelties come from the patient, intelligent, leisurely work of the amateurs. They have an advantage over the professional artist, both in the choice of fine subjects and the pursuit of scientific experiments, for their time is their own. Their society here has a large membership, and is much respected in England, where their work goes in exchange for that of the European societies. Both here and in England the most aggressive experimentalists are scientific amateurs.

G. G. ROCKWOOD.

OUR PICTURE.

THE eyes of the nation are now turned towards the World's Industrial and Cotton Centennial Exposition, now open at New Orleans. Many of our readers will visit it, but many more will not be able to do so. What a blessed thing, then, is, photography! When the people cannot go to the Exposition, then photography stands ready to bring the Exposition to the people.

Our connection with the 1876 Exposition and with this one is well known. The work desired from us in neither case was strictly that of a photographer. More service than that has been exacted from us. Managers of Expositions well understand the value of photography as an advertising medium, and make it a point to secure a photographer for the occasion who will assist them in making his art tell as a means of awakening interest on the part of the public, especially by working up and working with the illustrated press. This has largely been our duty in connection with the New Orleans Exposition. Were it not for the time required (even with numerous negatives) to print enough for our edition, we should have intruded an example of our work upon our readers long before this.

The negatives we have used for our picture this month were made in December, with a Morrison wide-angle view lens, and

an American Optical Company's camera, upon Inglis plates, ammonia developer. The subject is a portion of the Exposition horticultural gardens, including a view of Horticultural Hall. Those of our readers who live in the cold North or West can compare this December scene with their own surroundings, and—come down and see the reality of nature.

The day was lovely, and warm, and still. The view, to us, was beautiful, when we compared it with the flat swamp which we saw a few months before, with only a skeleton building on a part of it then. It is far more beautiful while we write thereabouts, but the parts included in our picture are no more beautiful than when the plates were taken. Indeed, since the exposures were made, there has been but one day when they could be repeated, so cloudy and windy has the "sunny South" been ever since. So, after all, we are able to supply our readers with a rare picture.

The charm of the whole Exposition park is the groves of moss-garnished live oaks. They are magnificent in size, in form, and in proportion. Though so picturesque, they are a conundrum to the photographer, and it took us a long time to understand how to secure the best effects from them. Evergreen leaves and gray moss make a hard combination for the camera, and the more so, like the restless palm of the Orient, the moss is rarely still. We know now how to catch, sharp and quick, the most tremulous, uneasy fibre. Thus much for an outdoor bit of the Exposition. Presently we shall supply you with an interior that may prove of more interest to you.

International Expositions are not easy to photograph; or, to speak more exactly, it is not easy to choose from them a bit that will please the whole of such an exacting class as that which reads the PHILADELPHIA PHOTOGRAPHER from month to month and year to year.

A word about the building, and we are done. It is 600 feet long by 194 feet through the centre. It is constructed almost entirely of glass, after the plan of Mr. Arthur E. Rendle, 94 Broadway, and No. 10 Horatio Street, New York, who was the able architect. The glass work was done by Mr.

Rendle's patent "acme glazing" (guaranteed not to leak), and is a plan well worth the consideration of photographers about to construct skylights.

California, Florida, and Mexico have done their best to make the grounds beautiful with plants, shrubs, and trees; and while we write, the air is strong with the odor of hyacinths from Holland. The prints were mainly made at the Exposition on E. & H. T. Anthony & Co.'s importation of N. P. A. paper.

SOCIETY GOSSIP.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the regular meeting, held Wednesday evening, February 4, 1885. The President, Mr. Joseph W. Bates, in the Chair.

Mr. Burroughs, for the Committee to revise the Constitution and By-Laws preparatory to incorporation, read a draft of the Charter and By-Laws as recommended by that committee. Action in the matter was deferred until the next stated meeting.

The Lantern Exhibition Committee reported that arrangements had been made for an exhibition at the Franklin Institute, on the evening of February 11th.

Messrs. Stephen O. Fuguet and Alphonse de la Forest Fuguet were elected active members of the Society.

Rules in relation to the selection of annual presentation pictures for distribution to members were adopted, which provide that the competing pictures are to be exhibited before the Society at the May meeting. The Committee are to announce their choice at the June meeting, having examined the negatives before making their final decision. Preference is to be given, as far as possible, to prints made by those competing, and to pictures taken within one year of the competition. If the work justifies it, one picture is to be chosen from the work of those who have been members less than two years prior to the May meeting of each year. The size of the mounts must not exceed 11 by 14.

A question in the box asked, "What causes blisters on silver prints? Is there

anything I can do to prevent or cure them?"

To this it was replied, that they were generally caused by strong hypo solution, or from the fixing-bath being too cold, or varying too much in temperature from the toning-bath and washing water. Certain batches or brands of paper were more liable to the trouble than others. Immersion in strong solution of chloride of sodium directly after fixing would sometimes correct the difficulty, and frequently, if the blisters were small, they would disappear on drying.

Mr. Brown said that at the last meeting a question was asked as to the cause of the albumen being removed from paper by the action of the sensitizing solution. Various reasons were given for the difficulty, but in this particular case the real cause of the trouble was that the silver solution was excessively alkaline. The same paper that had been pronounced worthless, gave good results with a different exciting solution. While on the subject of printing, Mr. Browne mentioned that he had recently examined a large number of prints on plain paper made as early as 1854. These prints were found to be in excellent condition, the high lights free from yellowing, and but little fading observable in the picture. The same could not be said of prints on albumen paper, as photographs dated 1862 showed the effect of time by turning yellow and fading.

Mr. Carbutt stated that Mr. Browne's remarks respecting an alkaline printing bath causing the albumen to leave the paper, brought to mind among some of his early experiments in photography, that of preparing an ammonia nitrate solution with which to sensitize albumen paper by swabbing it on with a tuft of cotton.

This he accomplished by taking nine ounces of a sixty grain solution of silver nitrate, adding strong liquor ammonia until the precipitate first formed was just redissolved, then adding three ounces more of the silver solution, and adding nitric acid, drop by drop, until the turbidity formed was just cleared up. By sensitizing in this way he was not troubled by the albumen leaving the paper.

Mr. Fassitt had prints on plain paper

made in 1855, mounted on common cardboard, which were as good as when first made. The bath used was the old ammonia nitrate of silver bath. Albumen prints made in 1860 had faded considerably, but those which were mounted had faded most, indicating that the paste used, or something in the cardboard acting in connection with the albumen, was a cause of fading. Much of the albumen paper of the present day was considered to have qualities unfavorable to permanence in prints.

Specimens of work on Carbutt's gelatin-chloride opal plates were shown, having a peculiarly pleasing warm tone.

A number of lantern slides were shown, many of them on chloride plates, which indicated that the new plate affords a means of producing excellent positives.

The slides were shown on the screen with one of Hughes's phamphengos lanterns exhibited by Mr. Walmsley.

Mr. Walmsley also showed a quarter size camera and some lenses, all of Beck's make, which were models of beautiful and effective workmanship.

Prints were shown by Messrs. Tatham, Wood, and Vaux. Those by Mr. Tatham were instantaneous views taken on prominent streets in Philadelphia, a large number having been exposed from a cab window. The utter unconsciousness shown by the figures, many of whose forms or faces were familiar ones, proved the success of this capital plan for making a class of pictures impossible to get where the operator is visible. The lens used was a Dallmeyer rapid rectilinear $8\frac{1}{2}$ inch equivalent focus, with stop $11\frac{1}{8}$. The shutter of the camera was of the ordinary guillotine form, the necessary speed being attained by strong rubber bands. Inglis's extra rapid plates were used, with pyro and potash developer. Before development the plates were soaked in a dilute potash solution. The developer was strong with both pyro and alkali.

Adjourned.

Forty-one members and two visitors present.

ROBERT S. REDFIELD,

Secretary.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS, 392 BOWERY, New York, January 7, 1885. President Buehler in the Chair.

Reading of the previous minutes dispensed with. Various journals received, with thanks of the Association.

Mr. Van Sothern, of Willett's Point, was elected a member by acclamation.

Mr. Duchochois read a paper on Chemistry as applied to Photography, accompanying his lecture with experiments.

Mr. Hallenbeck brought to the notice of the Association the death of Mr. Henry McBride, who was the first man to make a daguerrotype of Niagara Falls many years ago.

During the reading of Mr. Duchochois's paper, Mr. Hallenbeck said that Mr. O'Neil added muriatic acid to nitrate of silver in his sensitive silver bath, forming a precipitate; redissolved some of it, and there was some left in the bottom of the bottle.

Mr. Buehler: I knew he used chloride in the silver bath. We use iodide in the silver bath to counteract the free use of nitrate of silver. I hope every gentleman here has appreciated Mr. Duchochois's clear and explicit lecture on chemistry. I think that he deserves all the thanks the Association can give him.

Mr. Duchochois, while speaking of the properties of iodine, remarked that its combination with nitrogen formed a very explosive compound of the formula NI_3 , which would detonate at the slightest touch. He also said that a combination of iodine with ammonia was a good solvent of silver stains.

Von Sothern: At the last meeting, Mr. Cooper mentioned an experiment of his, consisting of the application of a ten-grain solution of soda carbonate, to a gelatine plate, after exposure and before development, for the purpose of eliminating the free bromine. Mr. Cooper and myself are of the same opinion with Mr. Duchochois, who doubts the formation of a subsalt during exposure, and I personally prefer the theory of Dr. Eder and other prominent investigators, that the effect of light on a gelatine film brings about a perfect liberation of the bromine from the affected molecules of silver bromide, leaving the silver in a metallic but slightly oxidized state. If a plate so exposed is placed directly in the developer, the free bromine will mix with the reducing agents and act as a retarder; but if a dilute solution

of soda carbonate, or very dilute ammonia, be applied previous to development, the bromine would be taken up by those solutions as bromide of sodium or ammonium respectively, and could easily be removed by subsequent washing. This theory seems to be true in practice, a plate so treated showing a greater amount of detail in the shadows and more density than if developed directly with the bromine left in the film. As ammonia combines directly with the bromine, I think its application rather more rational than that of soda carbonate, and would recommend its use in the proportion of ten drops to four ounces of water. The action with either solution is complete in thirty seconds, and there does not seem to be much difference between the results. The chemical reaction with soda carbonate is probably thus: $2\text{Ag} + 2\text{Br} + 2\text{Na}_2\text{CO}_3 + \text{H}_2\text{O} = 2\text{NaHCO}_3 + 2\text{NaBr} + 2\text{Ag} + \text{O}$; while, with ammonia, it would simply stand: $\text{Ag} + \text{Br} + \text{NH}_3 = \text{NH}_3\text{Br} + \text{Ag}$. In case that sufficient exposure has been given, this small amount of bromine may be desirable, or even necessary to keep the development under control; but if a plate is known to be under-timed, I would strongly recommend to treat it as described. I consider Mr. Cooper's suggestion very ingenious, and the subject worthy of careful investigation. The results of my experiments corroborate the correctness of the theory in every particular.

Mr. Duchochois: I doubt whether the effect of light on the film produces metallic silver. I think the chemical or molecular change is slightly different, though very difficult to explain. No development could take place if the silver existed in a metallic state.

Von Sothorn: My opinion is that the atoms of metallic silver formed during exposure become at once slightly oxidized on account of the extremely fine state of their subdivision; that the oxygen absorbed in the developer, either pyro or ferrous oxalate, restores them to their former or metallic state, and that they thus form the nuclei or media for further development by a sort of electrolytic action, which Dr. Eder explains by his maxim that bromide of silver cannot exist in contact with freshly precipitated metallic silver, but will also be reduced to the metallic state.

Mr. Buehler: Do you admit that bromine is liberated when the action of light has taken place?

Von Sothorn: I do. I believe that the liberation of iodine or bromine during exposure is chemically complete, though the microscope fails to detect the molecular change. In the wet-plate process the liberated iodine combines with the free silver nitrate in and on the film and forms fresh iodide of silver. In case of a gelatine plate, I believe that the free bromine is held captive by the gelatine and displaces oxygen, which combines with the silver.

Feb. 4.—Von Sothorn: I should like to remind the members present of a process which, though not new, is but little known, and seems to have entirely fallen into oblivion. In 1879 I described the process at length in the *St. Louis Practical Photographer*, and two years later a German engineer published it in the *Scientific American* as his latest invention. I refer to the reproduction of negatives directly, and without the medium of a transparency; and to the production of lantern slides or transparencies directly from a drawing, from any picture, or from nature, by means of collodio-bromide emulsion. The process is as simple as reliable, and gives the finest results. Let us suppose that you want to make a lantern slide from a map or architectural drawing. Focus the picture as you would for a negative; making it, however, of the exact size—say three inches square; coat a plate with emulsion; wash out the solvents, and expose at once, giving about five times the exposure required for a bath plate. Develop in the ordinary way with either silver or pyro or ferrous oxalate, though I prefer the former on account of the fine color of the deposit. You now have a negative in metallic silver on the surface of, and in absolute contact with, a sensitive film of unaltered silver bromide. It is obvious, then, that if such a plate were exposed to light, a diapositive would be formed under the negative. To obtain this result, wash the plate carefully; place it, face up, on a board covered with black cloth, and expose it for two or three seconds, according to the intensity of the superficial negative, to actinic light; taking care, however, that the rays fall on it as vertically as possible. Now re-

turn to the dark-room, and pour over the film some strong nitric acid; or, better, in order to avoid the obnoxious fumes, immerse it in a vertical bath by means of a glass or porcelain dipper. This will at once dissolve the metallic image from the surface without affecting the silver bromide below. Next wash well; neutralize any trace of acid left in the film by applying some solution of carbonate of soda, and then develop once more. When all details are out, wash, fix in either hypo or cyanide, and, if necessary, clear in an acid alum bath. The result is a transparency of exquisite sharpness, clear light, and fine tone; and the whole transformation does not take as long as it took me to describe it. For copying a negative, by either contact or transmitted light, the *modus operandi* is precisely the same. On the first development you obtain a transparency which you subsequently transform into a negative.

Vote of thanks given to Mr. Duchochois.

Yours respectfully,

T. W. POWERS,

Secretary.

THE ROCHESTER PHOTOGRAPHIC ASSOCIATION.—At a meeting of the Rochester Photographic Association, held January 26th, the following paper on "Landscape Photography" was read by Mr. Peter Mawdsley, who prefaced the reading with the remarks that it was not his purpose to enter into a long disquisition on art in relation to photography, but rather to offer a few hints, the results of observation in his own practice. One great end of all papers read before this Society was to excite discussion amongst the members, and with this idea in mind he had divided his subject into "Four Heads."

First, "Selection of View." The foreground really constituting the picture, it is important that its details should be given due prominence on the plate—mid-distance and distance are insufficient of themselves to form a pleasing picture, but judiciously combined with foreground, and accessory to it, will give an artistic whole which will always gratify the eye. Horizontal lines should be avoided. When such occur, the camera should be moved to right or left,

and when that is not convenient, the objectionable feature should be hidden or broken up by the introduction of any movable object which may assist to do so; a branch of a tree or brushwood is generally within reach. I have found a wheelbarrow, horse and cart, or one or more figures, suitably placed, do good service. In photographing buildings never be satisfied with a mere front elevation, but see that it goes off in perspective, and in such cases particularly avoid an unbroken expanse of lawn or grass land; a few garden implements—lawn mower, etc.—will be of great service.

Second, "Lighting." Where possible, I should prefer to have the light from over the right or left shoulder, as the cast shadows give great crispness and brilliancy. Never photograph with the sun directly behind you, as the result would be excessively flat, all light and no shadows at least visible. Whilst in pure landscape the above rules will generally hold good, in seascapes, on the other hand, I should prefer to have the lighting obliquely from the front, as owing to the large volume of reflected light the shadows would be well illuminated and the reflections more brilliant. A first-class ship under full sail taken under such conditions would be a charming object. What I have said relative to seascapes will generally apply to photographing snow and ice.

Third, "Lenses." For pure landscape and seascape there is none better than the old miniscus view lens, the only objection being its bulk, which is very great compared with modern compound forms. It is preferable to include only a small angle of view, and to do this a lens having a focus half as long again as the base line of the picture should be used; foreground and distance will be in harmony, whereas if a wide angle lens is used the foreground will appear unduly magnified and the distance dwarfed; this is characteristic where the background is formed by a lofty range of mountains, and is particularly objectionable. Most compound lenses are so constructed as to admit of the front combination being used alone, and as this will approximately double the focus, a smaller angle of view will be included.

Fourth, "Development." In subjects from which the lighting or other conditions are wanting in contrast, a strong developer which quickly brings printing density will strengthen the high lights and deepen the shadows. On the other hand, with subjects largely and deeply in shadow, by using a minimum of the developer largely diluted, say with two, three, or more volumes of water, giving time and patience to the operation, will result in a negative the high lights of which are not unduly dense, and an amount of vigorous detail will be secured in the shadows which no other development (so far as my experience goes) will give.

Mr. Larned moved a vote of thanks be tendered Mr. Mawdsley for his very interesting and instructive paper, which was carried.

It was also moved and seconded that a vote of thanks be given to Messrs. E. & H. T. Anthony & Co. for the very generous supply of Anthony's *Photographic Bulletin*, and also to the Scovill Manufacturing Company for their kindness in furnishing the Society with a volume of their very valuable journal for 1884.

Mr. Dumont exhibited four 12 by 15 genre pictures produced by Mr. Smithers, of Glasgow, and also two others, one by Mr. Mawdsley, representing a scene in Wales, and the other by Mr. Dumont, an instantaneous view taken from the deck of a rapidly moving steamer when the lens was pointed almost directly to the sun, and the detail is brought out of the shadows.

REVIEW OF PHOTOGRAPHS IN PHILADELPHIA PHOTOGRAPHER FOR 1884.

(JULY, AUGUST, AND SEPTEMBER.)

BY CHARLOTTE ADAMS.

THE idea of pictorial photography is one that is capable of being developed to an indefinite extent. Up to the present time, photographers, as a class, have only admitted the pictorial element into their work as an accessory to the exigencies of portraiture. Only occasionally do we meet with photographic compositions which we may accept as being in themselves attractive pictures,

without reference to the matter of portraiture or truthful reproduction of given objects. There is no reason, however, why this branch of photography should not occupy the attention of skilled operators with a bias toward the artistic side of the profession. Photographic pictures of good, artistic quality, ought to sell as readily on their own merits for decorative purposes as the many photographs of mediocre oil-paintings which fill the shops, and are eagerly caught up by the public. A good original photograph should possess fully as much artistic or decorative value as a bad reproductive one, apart from the interest of the subject. Professional photographers may, in the matter of pictorial arrangement and composition, gain valuable hints from artists who are amateurs of photography. With them the pictorial effect and the pictorial *motif* are the first things to be considered in their photography. Photography to them is simply one more medium of expression, and they handle it as freely as their limited technical knowledge will permit, embodying the ideas which, under ordinary circumstances, they would put into oil- or water-color. Artists aim at making photographic pictures: photographers, as a general thing, are satisfied with giving literal reproductions of objects indicated. Fine opportunities are afforded in this kind of work for the display of the artistic knowledge of the photographer. Every operator will find it to his advantage to cultivate the artistic side of his profession for practical application, and no better way of stimulating his intelligence can be found than the habit of producing pictorial photographic compositions. It develops the creative as well as the mechanical and technical instinct. It is of the same value to the photographic student that the "composition class" of the most advanced American art-schools is to the art-student. It is very possible that the time may come when pictorial photographs will be valued for their own sakes, and a photographer who possessed the necessary art knowledge, combined with the ability to give time, thought, and capital to this branch of the art, might soon achieve distinction and win substantial profit. Endless combinations and suggestions present

themselves to the mind equipped with keen artistic perceptions.

An excellent example of pictorial photography is afforded by the plate accompanying the July number of the PHILADELPHIA PHOTOGRAPHER, called "Gretchen." It forms in itself a complete picture, without reference to portraiture, literary interpretation, or literal reproduction. The name gives the keynote of the composition. The young German peasant girl, seated among her birds, is not the Gretchen of Goethe, nor is she meant to be. She simply offers a modern artistic decorative suggestion of a *motif* common to nineteenth century art and literature since the poet of Weimar embodied in it the characteristics of a national type. The ideal side of the type does not enter into this composition. We have here simply a consistent, well-balanced, decorative scheme, in which the pictorial element is stronger than any other. The fair-haired German girl, in her peasant costume, poses with ease and grace, and small trace of self-consciousness, in the middle of the composition, seated on a photographic accessory, which is a very good reproduction of one of the stone fireplaces seen in many parts of Europe. The accessories of the large pot depending from the crane, the chimney projecting over it with the bunches of herbs fastened at regular intervals, are consistent factors in the decorative scheme. The large pillar behind the figures diversifies the dark space of the background agreeably; and, although numerous short broken lines are visible on its surface, they do not obtrude themselves unpleasantly. The tame raven on the beer-jug is a very good accessory, and the jug itself is of a kind associated with the idea of German popular life. The only detail of accessory in the composition which strikes the beholder as being out of keeping with the general idea of the picture lies in the character of the shoes, which, in shape and style, do not harmonize with the rest of the peasant maiden's costume. Wooden shoes or sabots could have been easily procured by the photographer, and would have added much to the artistic completeness of the composition. This plate is very well lighted; the light, in accordance with the artistic

interest, being focussed on the principal figures, and merging into the shadows above and about it. The various kitchen utensils and pieces of furniture that form the accessories are given their due value, but are nevertheless properly subordinated to the figure. The masses of lights and darks are distributed with evenness and due sense of their relative values. The white mass of the figure is saved from monotony of effect by the dark bodice, which gives the keynote to the background and some of the accessories, including the raven. This dusky bird forms an admirable accent in the composition, and is placed exactly where he does the most artistic good, being thrown into relief by the light tones of the jar and the half tones of the fireplace. The dazzling whites of the girl's garments and limbs are repeated in the figures of the three white doves, which are well composed in relation to the figure, and the white beer-jug on which the raven is perched. In half tones we have the fireplace, some of the birds, and sundry accessories. The scheme of tone is, as a whole, very satisfactory. A word must be said of the skilful manner in which the photographer has handled those accessories so difficult to manage—the birds. There is little trace of awkwardness or stiffness in their positions, and they have a lifelike, alert air, which seldom appears in photographic reproductions of stuffed birds. Persons interested in pictorial photography may study this plate with advantage, both for artistic and technical suggestions.

American photographers are undoubtedly very successful in the line of plastic photography. They not only surmount the technical difficulties of such work in a creditable manner, but they infuse into it a surprising amount of classic sentiment. One would fancy that they had steeped themselves in an atmosphere of antique art and literature, instead of merely mechanically following a contemporary photographic fashion which travels in the wake of the recent national art movement. An admirable illustration of this is presented by the plate accompanying the August number, the "Daughter of Danaus," a panel-shaped photograph, showing a young woman in white classic robes, holding the

symbolical jar which explains the character. This is an original piece of plastic photographic art, conceived and executed, created, in truth, by the photographer himself. It is comparatively easy for the operator to handle a subject such as Mary Anderson or Mrs. Langtry or some other actress trained to plastic poses and to the graceful wearing of classic robes, those same robes being designed and draped on the fair wearers by artists of repute or specialist costumers. Half the credit of the beauty of the photograph belongs to the actress and the artist. A plate like the "Daughter of Danaus" reflects credit upon the photographer only. He must choose and perhaps design the classic costume, must select the subject, invent the pose, arrange the draperies, and school the model in the thousand and one plastic details which only artists understand.

The photographer who can conceive and execute such a plate as the "Daughter of Danaus" must be well equipped with artistic technical knowledge and the artistic instinct which intuitively expresses itself in symmetrical plastic forms. The shape of this plate is very happy. The panel form affords background enough to throw the figure into relief. The solidity of tone shown in this background adds much to the effect of unity visible in the composition. The statuesque idea is consistently carried out from the head of the figure to the pedestal on which it rests. The drapery is gracefully arranged, and good in respect to technical reproduction, being well graded in the matter of light and shade. The arms and neck are firmly modelled; the face is at once sculpturesque and expressive, well carrying out the idea of a living statue which inspires the composition. The pose is easy, natural, and sufficiently suggestive of the antique, and there is in the composition, as a whole, a modern quality which does not detract from its artistic value and adds much to its human interest. The lighting of the figure is skilfully managed.

A really beautiful piece of plastic photography is shown in the plate accompanying the September number of the PHOTOGRAPHER: a large female head and shoulders, of classic character, statuesque in idea and

execution, and yet full of warm, glowing life, and essentially modern in significance. This photograph has a double value—that of admirable technique and execution, and that of spiritual and mental meaning. Here again we have the subjective element in photography present in equal proportion with the objective. The character and individuality of the subject have occupied the photographer's thoughts as much as the lines and curves of the head and body. The plastic quality is not allowed to overshadow the intellectual in this graceful intelligent female head. The loveliness of the outward forms is here symbolic of the inner beauty of keen intellect and delicate, womanly appreciation of the higher side of life's experience. What first impresses the person who studies this plate is the artistic character of the lighting, by which the high lights are focussed on the draperies at the lower part of the photograph and the neck, while the head and face are thrown into dark, strong relief. This is a difficult problem in lighting, skilfully solved by the photographer. The artistic interest in this plate, of course, centres in the head. The photographer has concentrated, not the lights, but the shadows on the head, giving it a vigorous individuality which would have been lost had the head been in light and the rest of the plate in shadow, presupposing, as a sequence, the existence of a dark background. Accent, in every kind of pictorial representation, imparts an effect of strength and decision, and this artistic principle could not be better illustrated than by this photograph, with its harmonious and striking relations of light and shade. The masses of lights and darks are uncommonly well balanced. The white of the drapery, neck, and arms, shading into half tones that are repeated by the background, is consistently carried out in the three white fillets binding the hair. They are really in half tones, but so harmonious in effect that they impress one with a sense of brilliant positive whiteness. The fine quality of relief offered by this head should be particularly noticed. It is the result of the excellent lighting. Subtlety of tone is another of its merits. The modelling of the face, arm, and neck leaves nothing to

desire. The neck especially, with its firmness and softness of texture, is a triumph of photographic skill. The folds of the drapery are crisply and vigorously handled. Very tender and delicate are the curves of profile, chin, and throat, melting away into the background in a manner which is seldom found, as here, united with photographic sharpness and accuracy. The hair is treated with unusual skill, being kept sufficiently broad, and preserving all its rich effect of color, while resolving itself into countless minor details. The effects of outline and curve in this plate are most graceful. The *ensemble* is characterized by the sharpness and clearness of impression which form the basis of a good photographic technique in the same way that correct drawing is an absolute essential of an artistic technique.

(To be continued.)

EXHIBITION OF LANTERN SLIDES

BY THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.

HAVING frequently heard of the excellent work of the members of the Photographic Society of your city, and on two occasions having had the privilege of seeing their productions at the exhibition of the Boston Amateur Society, it was with pleasure that I received your kind invitation to attend upon the evening of February 11. I went, in full anticipation of witnessing a fine display, and I am happy to say that my expectations were more than realized. True, the small hall was by no means adequate to the overflow of spectators, nor were the accommodations for an exhibit everything which could be desired; nevertheless, the skilful manner in which the views were projected upon the screen by the dissolving lantern atoned amply for the petty inconveniences. About one hundred and fifty slides were shown, made from negatives which had been exposed and developed by the members. The name of the photographer and the title were announced as each was thrown upon the screen.

The series opened with a magnificent marine view by F. T. Fassett, representing a

bow view of a coasting steamer. The angle at which the view was taken showed a fine artistic feeling, and the mobility and transparent nature of the waves were beautifully rendered. It was followed by another fine view of the garden of the Petit Trianon at Versailles, by Ellerslie Wallace. The tone of the picture resembled the slides of Levy, of Paris. The foliage was perfect, even in the densest shadows, and the contrast of light and shade very pleasing.

Mr. J. G. Bullock's view at Chamounix, Fairmount Park, was remarkable for its combination of vigor of design, and softness of atmospheric effect. Several fine stately trees, with dark masses of foliage, occupied the foreground through the trunks and branches of which the distant hills were beautifully shown. It was highly artistic in conception.

Mr. Keen's Arched Bridge at Darby Creek exhibited a fine feeling in the conduct of light and shade.

A Waterfall, by Marriot C. Morris, was also very effective in blending of light and shade.

From the Top of Asquam House, by Henry T. Coates, showed a beautiful distance effect, conveying an idea of an intermediate atmosphere, which is always so harmonious in blending the immediate foreground with the far-off horizon.

Mr. David Pepper's Dogs was a fine study of animal life.

On the Tow Path, by J. Bartlett, had also that pleasing atmospheric effect which softens the distance without obscuring.

The Indian Squaw, by Mr. Lambert, though not pleasing in itself from any beauty of subject, showed much skill in photography.

Mr. David Pepper's Procession of Geese was not only novel, but perfect in every respect. It was an instantaneous view, and the artist had chosen that exact moment of time when the geese had so arranged themselves as to give an idea of progressive motion. The detail in the photograph was perfect, and we were sorry that we could not hold longer acquaintance with the subject.

Chrysanthemums, by S. F. Corlies. A very beautiful arrangement of these flowers,

with a wealth of detail and softness in the high lights.

Max and his Mistress, by Ed. Cohen, was familiar to us as one of the prize pictures at the Boston Exposition. A very pretty and well-executed domestic scene.

The Old House, by Mr. Lambert, an instantaneous view, was received with much approbation.

We are the Little Brooks: Who are you? by E. W. Keen, was a very beautiful study of child-life, full of good humor, which was contagious.

An Irish Setter, by J. D. Sargent, was also a good study, but was surpassed by his photograph of a plump well-fed cat, entitled, After-dinner Nap.

Roadside Rest on a Hot Day, by S. Fisher Corlies, was true to nature, without being commonplace.

Factory Falls, by W. D. Wilson, was very good in the rendering of the water.

Spinning Flax, by S. F. Corlies, was a very artistic subject, harmonious by reason of the fine effect of the reflected lights from the bright portions of the picture blending with the darker parts.

Another picturesque scene was that by Mr. A. Clements, entitled, He Loves me; he Loves me Not, representing a rural landscape, with two lovers, the fair maiden engaged in plucking the petals of a daisy, to find if fortune and her fond desire agree. The attitude of the figure is admirable, and the surroundings well chosen.

Just Out of a Cotton Gin, by S. F. Corlies, representing a number of darkey boys taking a rest, was greeted with a round of applause. The woolly heads and the filmy cotton produced a very novel effect.

Hay-making, by Geo. B. Wood, was superb in the arrangement in the masses of light and shade. The whole picture was bathed in a subdued light; the shadows were soft, and imperceptibly blended. The attitude of the figure was true to nature, and the expression of the little girl charming.

Several portraits by Mr. Trask received well-deserved applause.

Mr. David Pepper's Foot Race and a High Jump, two instantaneous views, were well conceived and perfect in detail.

The Elephant Bath, shown by Geo. N. Tatham, were excellent instantaneous views.

The Old Coffee House, by J. C. Brown, showed a nice appreciation of light and shade.

Mr. Geo. B. Wood's Altheas After the Rain was very effective. The rain drops, caught upon the petals of the flowers, were beautifully shown.

Our Ball is Up the Tree, by E. W. Keen. A very effective study of a group of children.

The Torpedo Explosion, by Dr. H. M. Howe, was an instantaneous view, which was marvellous for the accuracy and minuteness of detail.

On the Neshaminy, by W. H. Rau, was remarkable for the beauty and vigor of treatment. A figure of a boy, dabbling with his hands in the brook, finely relieved the foreground. The gradation in the shadows harmonized beautifully with the broad clear light of the sky.

Burnside Bridge, Antietam, by the same photographer, was a fine subject from a very effective point of view.

Lake George, by Mr. F. Bement, was a view full of artistic feeling, and remarkably pleasing in the gradation of tones.

Take a Drive, by Mr. H. T. Coates, was also well selected.

Mr. F. G. Cauffman's Crossing the Brook gave evidence that the photographer combined the skill of an artist with the merits of a first-class photographer.

Alone, but not Lonely, by A. P. Edge, was a very amusing and life-like view of a little boy solacing himself with a feast of goodies.

Dr. H. M. Howe's picture, entitled The Pets, representing two little children in paniers upon the back of a natty little pony, was very pleasing.

Thorpe's Lane Bridge, and several other views upon the Wissahickon, by Mr. C. R. Pancoast, were pervaded with that richness and warmth of tone, and that force of expression in the conception, which at once stamp such productions as the work of an artist, and a careful, conscientious worker.

The Wind Mill at Angers, France, by Geo. B. Wood, produced a fine effect, by contrast of the dark wind-mill against a beautiful flecked sky.

The whole collection was remarkably good. The percentage of poor and indifferent slides was very small. The only fault to be found was the too frequent occurrence of river views and waterfalls. The figure subjects, though few in number, were excellent, and made us wish for more. The idea of giving these exhibitions is a good one. They are open alike to every one, and afford a good opportunity for the younger members to compare their work and profit by the experience of others.

QUESTIONS PUT BY AN AMATEUR.

It has become a matter of some curiosity with me to know how long a hyposulphite bath for fixing dry-plate negatives should be used. It has been my practice to filter my bath from time to time, as the black scalings from the sides of the bottle in which I keep it accumulate at the bottom, and also to add fresh crystals of soda. But I have felt that some definite information would be satisfactory as to whether a bath diminishes in strength much. It would, of course, by evaporation, if left exposed in a pan; but when returned immediately to the bottle, after use, and kept well corked, I find there is little or no evaporation. Also as to what accumulations there may be in solution in a bath after long use; and, in fact, whether it ought not, after a certain amount of use, to be rejected, and a fresh one prepared, as the cost of hyposulphite of soda is trifling. And also about the alum bath, whether it should be frequently renewed? and whether, except in hot weather, there is any particular necessity of using it at all? If used with oxalic acid, and after the negative has come from the fixing bath, does it assist in eliminating or neutralizing traces of the hyposulphite, and thus render the negative more permanent, than even a careful washing would make it? As it is well for amateurs, as far as possible, to simplify matters, and have set at rest doubts, those who are particular about their work will be glad to learn the experience of investigating professionals.

In the *Photographic Times*, a correspondent made inquiry about negatives that, by

reflected light, when held against a dark background, give a very pretty image of the object taken, as a positive, on the negative side. There seems to be no rule for the occurrence of this. I have a negative which is nearly as good a positive, as many an old daguerrotype. The cause in this case is easily explained. It was a thin negative, and slightly fogged, and I intensified it. Having bleached it thoroughly in the mercury solution, I stopped the action of the cyanide of silver before it had blackened through the gelatine film, consequently a dark backing was formed to the whitened image. In this instance, though, the positive is seen through the glass. But I would not like to vouch for the certainty of producing pictures in this way, or for their durability when obtained.

ABOUT PRICES.

FRIEND WILSON.

DEAR SIR: I am sorry to see you discontinue the subject of discussion of prices, until there is a reform for the better. As yet, it has not come. There must be some home-thrusts, and many of them, to get anything like reform. We have proved to the public that a picture can be got up for a low price, and now we have to prove that it is not all gold that glitters, and also that we have rights that should be respected, and the rights of others must also be respected.

It has come to this: that every man in business has got to sweep his own door-step, as friend Ryder has rightly said; and must have a class of work that he can meet the demands of those who wish low-priced goods, and a higher class for those who wish the best that can be obtained. But we are not to bow down to falsehood, and give our patrons the impression that we will give them two dollars for one, as witness the advertisement of more than one in the craft:

"Special inducements.—Cabinet photographs, three dollars for the next month, at So-and-So's, Main Street. Although having made this reduction in price, the quality of work will be kept up to the usual high standard."

"Season of 1885.—So-and-So's photo-

graphs placed within the reach of all. The rates below are for artistic portraits; good as any make in the establishment, and not machine pictures, such as are sold by drummers for cheap clubs;" and this from one of whom we expect the truth, as he is a member of the church, and an ex-Vice-President of the Photographers' Association of America, the prices quoted being half regular gallery rates, while they claim to do as well as at the higher prices.

If to the letter it is lived up to, what is the use of having a higher price? False impressions could be quoted for an indefinite time, but enough to show the wrong has been recorded. Now this has done more than all else combined to make us a disreputable set in the sight of men, and has caused great misunderstanding, for the reason that it is not a square deal that we all can live up to.

It is an established fact that, no matter how much each and every one may have the welfare of the science at heart, they will, to keep their own head above water, do that which, if circumstances were different, they would not do. But it is our own fault, none of us having backbone enough to take into account the welfare of others, otherwise we would not do as so many do in this ever fascinating science. Some photographers have the foolish idea that if they do good work, and make them at a price that barely covers the expense of material and time, that they will have so enchanted the people, and made them see that they are fine artists, that they will reap a rich harvest. After the harvest has been housed, or, in other words, when you have used up the source of supply, what are you going to draw from? They have what they want, and you have to seek new fields to graze upon, at an expense to yourself, which is impossible for a poor man to do; an injustice to yourself, which, in the economy of nature, must be the first to be squarely dealt with, in order that you may do good to others who are most dependent on you; and then the brotherhood as a whole. This I feel in every bone, after years of taking things as they come, making the best of it, and not as I should have done, for the poor cannot help the poor, only in a

meagre way, that keeps them always under foot; and it is therefore but just and right that every one consult his best interests in all he does, if it be honorable; although I hate to come to this conclusion so late in the day, for the candle is nearly burned out, and the snuffings it has got only quickened its flame for a short time, to die nearly away. But I hail with joy the shout of hallelujah sent up from a suffering people who have recognized the fact that in union there is strength, and to do good is the noblest purpose in life. I allude to the Knights of Labor, and trust at no distant day I shall be one of them.

And now, my dear friend Wilson, when I asked you to keep my name on the subscription book, I thought ere this I should be able to forward the amount, but am still unable to do so. If I thought I should not be able to meet my engagements by and by, I should write you to stop it; but I have hopes of better times, and so hate to give the journal up, so I trust you will wait awhile longer, for I have gone down like the rest of them, after all these years of struggling to keep what I thought was due us as photographers, and make three dollar cabinets from one good negative, collecting the money in advance, although I keep to my higher price as heretofore, giving each his due.

I shall open an evening drawing school as soon as I can get a class to teach, believing it is better to wear out than rust out.

Yours truly, M. M. ALBEE.

P. S.—We, in this town, are forced down to the Cheap John of the town, there being four galleries for a population of a little over 10,000, and most all shoe operators at that, who earn only about 75 cents a day, up to \$3.00 and \$4.00, but the average is not over \$2.00, if it is that. This includes good and bad workmen; not a very promising place for art of any kind, I assure you, especially when rum-sellers get rich and the people poor.

You may have noticed in the *St. Louis Journal* for October my attack on the profession, and one on "Photographic Humbuggery" I published in the *Marlboro Times*, from remarks by its reporter, and which

also appeared in the *St. Louis Journal* of February.

I could not make it apply here unless I made it applicable to all, for I have failed to know of a photographer who does not claim the work of photographs finished in ink, crayon, etc. Yes, I do remember one—that of a neighbor photographer, whose father is an artist, and does the work, but he is mostly occupied in figure painting in churches, having given up the work for photographers, working only for his son. When the photographer's name is used in the body of the picture, unless done by his own hand, I claim it is a fraud and an imposition on the public. After having given credit when it was due in that regard, I wrote another, "The Art of Photography," which I sent to the *Times*, of New York, after its publication here, in which I gave photography its due from my point of view. I also published one article on "Trades' Unions" in the *Marlboro Times*, which I also sent to the *Times*, New York. I do this that justice may in a measure receive its due.

The conscientious worker is never overpaid.

Fraternally yours,

ALBEE.

MARLBORO, Feb. 11, 1885.

GLEANINGS.

At Vienna, professional photographers now make use of isochromatic plates for portraiture.

BISULPHIDE of carbon, when freshly made, is the most odorous of all known compounds, but it may be purified until all offensive odor disappears, and may even be mixed with perfumes.

At the London Photographic Association, Mr. Trinks recently showed some very interesting prints. This photographer has been able to obtain, by means of an ordinary platinum print, a fac-simile of an etching. After the print is washed it is passed through water almost at the boiling point, and very rapidly dried. Under this operation the surface becomes unequal. It is then passed under the press, and a print is obtained which is difficult to distinguish from an etching.

MR. L. STARNES recommends for cutting gelatino-bromized emulsion, the silvered wire used in the manufacture of violincello strings. It may be bought very cheaply from dealers in musical instruments, and a tissue of network made from it which completely answers the purpose.

Editor's Table.

THE BUFFALO CONVENTION.—If there is anything in beginning early, the Buffalo Convention will have a measure of success. Last year it looked as if our conventions were at an end. We cannot see that the one at Cincinnati *paid*, unless it be that the President it gave us is to make up our losses there. We have great confidence in him, and hope that he will, with his co-workers, make the coming convention strictly *educational*, and we can point him to no better model than the convention held in Buffalo, in 1873. It sent out a line of thought and help which has been doing good work ever since. Earnest *business*, gentlemen, and not "a good time," is what we, *this* time, all want.

PICTURES RECEIVED.—From Mr. RAY D. CHAPMAN, Eighth Avenue, New York City, a

number of well-lighted and artistically posed cabinet photographs from collodion and gelatine negatives. From Mr. ROBERT STILES, of Brooklyn, N. Y., a pleasant child study. From Mr. H. BUTLER, of Vermillion, Dakota, several full-length portraits. Mr. BUTLER also sends us a number of well-chosen and characteristic landscapes of Dakota scenery. From Mr. H. VAN AKEN, of Elmira, N. Y., a fine study of an old man upon the road. Mr. BURRELL sends some pleasing groups and portraits, also a very amusing picture representing dogs out on a drive. Messrs. BOWKER & SON, of Nantwich, England, have favored us with a choice collection of studio subjects well lighted and posed. They are in the cabinet form, which seems to be coming into style again in England. Through the kindness of Prof. PIAZZI SMYTHE, Royal Astronomer at

Edinburgh, we have received a series of superb views of scenery in New Zealand, the work of Messrs. BURTON BROTHERS, of Dundee, Scotland. The pictures are remarkable not only for the artistic rendering of the subject, but also for the perfection of detail, and the fine translation of the foliage. There is a beautiful gradation in the lights and shades, and the water has that appearance of mobility which is seldom presented in a view. Tropical vegetation and snow-capped mountains are seen in one view. The transparency of the ice and snow is finely given, and the distance has that atmospheric quality of softness which lends additional charm to the views.

THE PHOTOGRAPHIC TIMES AS A WEEKLY.—The *Photographic Times and American Photographer* is now issued as a weekly. It has also been enlarged as to the size of its sheet, but the number of pages has been reduced materially. It is very handsome in appearance, and its enterprising proprietors, the SCOVILL MANUFACTURING COMPANY, intend to make it all that one could wish in a photographic weekly. With its clean white sheets, its broadened columns, its clear type, and its frequent articles on optics, every reader should be enabled to develop while he reads. A good weekly has long been wanted in this country (though we think the days of good monthlies are not ended), and we are glad that some one has had the courage to undertake the task of giving it to us. Much success attend it.

WE have received from Herr K. SCHWIER, of Weimar, the *Deutscher Photographen Kalender*, for 1885. It is embellished with a photograph of L. BELITSKI, whose name is familiar to the readers of German photographic journals. The *Kalender* contains a great deal of matter valuable to the practical photographer.

WE have received the first copy of the weekly issue of the *Photographic Times and American Photographer*, published by the SCOVILL MANUFACTURING COMPANY, of N. Y. It presents a very inviting appearance, both in subject and typography, and is still under the editorship of Mr. J. TRAILL TAYLOR, associated with Mr. W. J. STILLMAN and Mr. CHARLES EHRMANN. It contains a number of interesting articles of practical value to the profession.

WE have received a beautifully bound copy of vol. xiv. of the *Photographic Times*, pub-

lished by the SCOVILL MANUFACTURING Co., of New York. It contains a variety of interesting matter, affording very pleasant and instructive reading, as an epitome of the photographic progress during the year that has past.

SAN ANGELES, TEXAS, January 3, 1885.

E. L. WILSON, ESQ.

DEAR SIR: *Mosaics* at hand and read, but I do not promise that I will not reread it. "Amateur Photography a Teacher," by Mr. A. BOGARDUS, and "An Amateur's Views on Prices," by Mr. W. R. TRIPPE, I think "hit the nail on the head." I wish the people—all the people—would become amateur photographers, then, when they really know the study, the expense, the experience, and patience necessary to make good work, there will be a better understanding between the photographer and his patrons. They will appreciate him more, and be more willing to pay him a good price for good work.

Most respectfully,

M. C. RAGSDALE.

NEW CHANNELS FOR PROFITABLE BUSINESS.—The remarkable developments in electricity within a comparatively recent period, have opened up many new avenues of profit and comfort. One of the latest phases in this line has been adapted to practical and popular use by Mr. FREDERICK LOWEY, the enterprising electrical manufacturer of 96 and 98 Fulton St., New York, whereby he brings a complete model incandescent Electric Lamp within the reach of all, and also produces a superior Plating Battery, with instructions for operating by amateurs, which will secure a handsome business income on very slight investment. For family or experimental purposes alone, or as a practical, scientific, and business educator to the young, these articles are worth several times their cost, outside of any profit that can be made, and the manufacturer is certainly entitled to much credit for placing them within popular reach.

WE are receiving congratulation from all quarters concerning the excellent matters contained in this year's *Mosaics*. The demand for them has almost exhausted the issue. We have only a few more left. Secure your copy before they all disappear.

Our readers, no doubt, are aware that the *Photographic Times*, edited by Mr. J. TRAILL TAYLOR, and published by the SCOVILL MANUFACTURING Co., will appear hereafter in two

forms, as a monthly and weekly magazine. Arrangements have been made with the publishers by which subscribers to the PHILADELPHIA PHOTOGRAPHER may club with the *Times* in either form of its issue—at \$5.50 for the monthly, and \$6.50 for the weekly. It is hoped that our readers will take advantage of this liberal offer.

Mr. Rockwood, who is conspicuous for his enthusiastic interest in the scientific novelties of his calling, has suggested a new weapon for the police force. He says that there is no reason in the world why "the finest" should not carry a camera as readily as a club, and operate it with more certainty of execution, to say nothing of its greater safety when applied to a law-abiding citizen. A large picture is not necessary for the purpose of identification—in fact, in all photographic work sharpness is more or less sacrificed to size. The photographic portraits known as *cartes de visite* are sharper and more distinct than the larger ones, so the likeness of a criminal taken on a plate an inch square would be unmistakable. The whole contrivance necessary would occupy less space, and be lighter to carry, than an ordinary bulldog pistol. Its uses are apparent. Armed with it a policeman could photograph any number of suspicious characters on his beat, whom he did not feel justified in arresting.—*New York Tribune*, February 6, 1885.

OWING to ill-health, our friend, Mr. HENRY ROCHER, of Chicago, has been compelled to retire from active service in the profession, and is now desirous of securing a purchaser for his extensive and well-established business. With the name of ROCHER is associated the idea of high artistic taste in photographic work. His reputation is too well known to need comment, and those who will succeed him in the business may be assured that if his standard of excellence be maintained they will undoubtedly achieve success, as he has done. Mr. ROCHER is not desirous of trying experiments. He therefore asks those who are desirous of entering into business relation with him, to do so only upon the basis of permanency. He wants only such as are determined to carry on the work, and not to relinquish it after a brief trial of a month or two.

Mr. S. THOMAS BLESSING, of the well-known firm of BLESSING & BRO., Galveston, Texas, has purchased the very extensive and well-selected stock of the old firm, and will conduct the business at Galveston as a branch of the New

Orleans house. Mr. BLESSING, by promptness and fair dealing, merits a continuance of the patronage formerly extended to the firm of BLESSING & BRO. His name and reputation as a photographic merchant in New Orleans are favorably known throughout Texas and the entire South, which is a sufficient guarantee that the Texas headquarters for photographic supplies will be conducted, as it ever has been, with honesty of purpose and a desire to promote the best interests of all patrons. The late firm of BLESSING & BRO., having just issued and distributed a new illustrated catalogue and price-list, Mr. S. T. BLESSING adopts the same as his own, the prices being the same as his New Orleans prices. If you have not received a copy write for one.

PHOTOGRAPHIC MOSAICS (twenty-first year), an annual record of photographic progress, edited by Mr. E. L. WILSON, of Philadelphia, occupies a position in America similar to that taken by the *Year Book of Photography* in England. It makes known to the profession, in short and attractive articles, the most important progress that has been made in the domain of photography, and also discusses the current questions of the day. That it has attained its twenty-first year is proof enough that the author has struck the right vein of interest to the profession.—*Photographische Mittheilungen*, Berlin, Germany.

THE SUTER LENS.—We have some magnificent pictures of the New Orleans Exposition, from 20 x 24 inch negatives, made by 8 B Suter Lens. One of them is of the court of the British Honduras Section, and is a good photographic triumph. Here are the products of that interesting country in a court, say 60 x 300 feet, all beautifully caught by the wondrous depth of the wonderful lens. Leopard skins, delicate fibrous materials, plaited goods, woods, curious furniture, hammocks, nets, and what-not of curious articles, are all caught with exquisite sharpness and detail. Two other views—one of the monstrous dragon upon the He-No Tea Hong, and another of the Hong itself—though not so full of small bits, are equally fine examples of lens work in every respect, and cannot be surpassed. Messrs. ALLEN BROS. write us that the sale of the Suter lens is most satisfactory, and that not a single "growl" has come from any purchaser. The work done by these comparatively low-priced instruments is marvellous, and fortunate are their purchasers.

PHOTOGRAPHIC card-stock manufacture has become a fine-art, and the only artists in that peculiar line are Messrs. A. M. COLLINS, SON & Co., 527

Arch Street, Philadelphia. We have received their 1885 catalogue of forty-four pages, which is in itself a work of art, and a real study. The variety of cards, etc., described and priced in it may be judged when we state that the index alone covers two pages. Beside a long line of white and tinted cardboard, there are varieties of card, Victoria, cabinet, promenade, panel, and stereoscopic mounts offered, which must meet the wants of every photographer in the world, and, indeed, as we happen to know, the manufactures of this firm go to all parts of the globe. Some samples sent us by them recently, are like pieces of jewelry, they are so perfect and so beautiful. Their new catalogue will be found a great help to the buyer. Look at the "trade marks" on the cover, and see that the genuine label is on your packages when you purchase.

THE first number of *The Camera, Field, and Book* has been sent us. It is a little pamphlet devoted to photography and literature, published at Bristolville, Ohio, and contains a number of well-written articles on literary and scientific subjects.

THE demand for dry plates in America is constantly increasing. The excellent quality of the various brands in the market has made almost every photographer a convert to gelatine. This increased demand has enabled the manufacturers to supply them at rates much below the former price. We are glad to see that the Inglis, Norden, Beebe, Star, Cramer, Eastman, and Carbutt plates are now offered at twenty per cent. less than the list of prices adopted by the Dry-Plate Makers' Association at their meeting held at Metropolitan Hall, February 10th.

THE *British Journal Photographic Almanac*, edited by Mr. W. B. BOLTON, is, as usual, full of valuable articles. The host of distinguished contributors seems to have combined to make this important photographic annual up to the times, and hence of particular value to the profession. The articles are upon a variety of subjects, and the most diverse tastes cannot fail to find viands there to their liking, and which will contribute to their growth photographically. The portrait of Miss ANDERSON which graces the title-page, is a marvel of photographic lighting, full of beautiful soft tones and gradations.

THE *Year Book of Photography*, edited by Mr. THOMAS BOLAS, F.C.S., is also at hand, and shall continue near at hand all the year through. It is enough to say that such men as Capt.

ABNEY, Messrs. W. K. BURTON, TALBOT, EDER, and JENNINGS have chronicled in its pages their experience to make it the photographer's *vade mecum*. The subject of gelatine is touched upon from every point, and the whole book is so doubly surcharged with valuable hints, that every photographer who is anxious to progress, must look to it for daily assistance.

No. 3 of *Anthony's Bulletin*, in addition to its usual stock of valuable photographic matter, greets its readers with a superb embellishment from a negative by Mr. A. BOGARDUS. It is a portrait of Mr. HENRY J. NEWTON, whose name is so familiar to photographers. The head is beautifully lighted and the shadows blend imperceptibly, giving a softness and vigor to the whole print. The beauties of this negative are well brought out by the excellent quality of the paper print, which leaves nothing to be desired either in tone or finish, but we are not at all surprised at its excellence when we read in the corner, Printed by HUGH O'NEIL, on new N. P. A. Pensé.

THE next best thing to visiting the great Exposition at New Orleans, is the enjoyment of the same by means of projections of photographic transparencies, by the magic lantern, upon the screen. We have just seen the superb set of about one hundred views which Mr. E. L. WILSON has sent us. The variety of the subjects, the high artistic and picturesque value of the scenery depicted, the novelty of the scenes and incidents of life in a country and amongst a people so entirely different from our own Quaker City idea of what things should be, the semi-tropical nature of the vegetation—immense cacti and strange South American plants, mighty groups of noble oak trees—all this presented to us by means of excellent photographs, combine to make the entertainment a most enjoyable one. Nor must we forget the fine views of the buildings and the choice selections from the beautiful exhibits therein. We will be glad when Mr. WILSON favors us with another set of these views.

MR. G. M. WALKER, photographer, Hillsboro, Dakota Ty., writes: "The January number of the PHILADELPHIA PHOTOGRAPHER to hand, with thanks. I would not exchange it for my whole subscription."

WE have received several numbers of ANTHONY'S *Bulletin* in its new and attractive form. They are models of neat typography, and contain a number of excellent articles of photographic interest.

Specialties.

MAKE OUT YOUR OWN BILL, and remit cash with your advertisements, or they will not be inserted.

ADVERTISING RATES FOR SPECIALTIES.—Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to *secure* insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement. **Postage-stamps taken.**

BACKGROUNDS.

Head and Bust, Three-quarter Lengths, Rembrandt's, Vignettes, etc.

LAFAYETTE W. SEAVEY,
216 E. Ninth St., N. Y.

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ARTISTIC BACKGROUNDS

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ACCESSORIES,

REMOVED TO 68 WEST FOURTH ST.,

4 BLOCKS WEST OF BROADWAY, N. Y.

My new studio is fitted up with all the modern improvements, and the most refined demands from a critical public can be satisfied. A visit to my establishment, which has the largest showroom, containing the greatest amount of stock of any place in the world, will be gratefully appreciated.

I have again added numerous new designs to my great variety of patterns for *backgrounds* and *accessories*, and keep also in stock a large quantity of goods for parties to select from, saving time and delay on orders.

PARTNER WANTED.—To one who is a good retoucher, and also able to assist at operating, etc., I will sell a half interest in my gallery now doing a business of \$150 per month. With a good partner we could control a town of 10,000 inhabitants. Will sell half for \$200 cash. I must have help at once. If you want such a chance, address F. A. REMINGTON,
Box 76, Stratford, Ont.

ROCKWOOD SOLAR PRINTING CO.

17 Union Square, New York.

TIME.—It is our intention that every order received in the morning's mail (when not to be put on stretchers) shall leave this establishment the same day or the following morning. If too late for the morning work, it is sent on the second day. Having our own engine and electric light, *we are not at all dependent on the weather.*

GEORGE H. ROCKWOOD,
Business Manager.

VOGEL'S PROGRESS OF PHOTOGRAPHY, LATEST—BEST—\$3.

EVERY photographer in want of excellent lenses, for *any purpose*, will best serve his interest by consulting the new illustrated price-list of Messrs. BENJAMIN FRENCH & Co. before purchasing.

SAMUEL W. BROWN & CO.,
SOLAR PRINTS BY THE PLATINUM PROCESS,
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SILVER PRINTING FOR THE TRADE AND AMATEURS.
2805 POPLAR STREET, PHILADELPHIA.

ADDRESS T. W. POWER, N. Y., Secretary of Association of Operative Photographers of New York City, for operators, printers, and retouchers, 392 Bowery, or 487 Eighth Avenue.

WAYMOUTH'S
VIGNETTE PAPERS, No. 18.

The old form of No. 18, Waymouth's Vignette Papers, oval, has been discarded, and a *new pear-shaped* style is now ready in its place. It is a beautiful piece of gradation and prints perfectly. Price \$1.25 per dozen. For sale by all dealers. See advertisement for all sizes.

No. 18. NOW READY. No. 18.

PORTRAITS IN CRAYON.

The new book by E. Long, on the art of making portraits in crayon on solar enlargements, covers the entire ground, and is sold for the low price of fifty cents. For sale by

EDWARD L. WILSON,
Philadelphia.

METAL GUIDES

FOR

A. M. COLLINS, SON & CO.'S

No. 26 GILT BEVELLED-EDGE CARDS.

The fancy-shaped mounts now so fashionable among photographers, require metal guides with which to cut the photographs. They are now kept on hand, and can be supplied in the following shapes, and at the prices mentioned :

	Each.
Cross.....	\$1 05
Star.....	1 00
Palette.....	90
Leaf.....	90
Bell.....	90
Crescent.....	80
Egg.....	39
Triangle.....	90

For sale by EDWARD L. WILSON,
1125 Chestnut Street,
Philadelphia, Pa.

WE ARE READY.

Owing to the sudden increase in the demand for the Rockwood Dry Plates, we were obliged through the months of July and August to decline many orders. We have now more than *quadrupled* our facilities, and introduced improvements which will, we hope, enable us to fill orders with promptness, and give us plates possessing, if possible, still more sensitiveness and uniformity. For price-lists and *samples of work* done by the "Rockwood Plate,"

Address J. A. RANDEL, Manager,
17 Union Square, New York.

FOR RENT.—Photograph gallery; excellent opportunity for good business. Location excellent. Only one other gallery in a population of twenty thousand inhabitants. Possession March 25th. Address P. O. Box 2387, Bridgeton, N. J.

FOR SALE.—Gallery, including lot (north side and skylight). Size of lot 25 x 80 feet; can never be obstructed. Population of city 20,000, and as many trading from outside. Lafayette College, with several hundred students, within five minutes' walk. Our only reason for selling is the want of personal attention required, and the distance from our main office. To the right party this is a rare chance to build up a fine business, and to own your own gallery and ground in so flourishing a place, with positively no competition for first-class work. Address

PACH BROTHERS,
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AMERICAN
ELECTRIC LAMP.

A MODEL.



Large Size, \$1.00; Small Size, 60 Cents.

The Electric Lamp is one of those useful articles desired in every family. There is nothing to explode or dangerous in its construction, while it is simple and easy to manage. Its light is generated by electricity and at small expense. The incandescent electric lamp consists of stand, globe, platina burner, and double electric generator, with full instruction for putting in operation. Either size mailed on receipt of price by the manufacturer.

FREDERICK LOWEY,
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N. B.—Estimates furnished for factory, church, residence and municipal lighting at lowest cost, and all kinds of electrical work undertaken by contract.

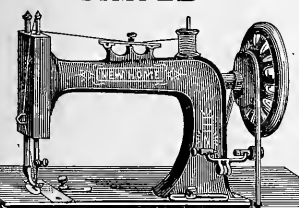
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PORTRAIT ARTIST,

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Photographs finished in crayon, India ink, water colors, and pastel, in all sizes, in the very best styles, and at moderate prices.

Solar Prints and Enlargements Furnished.

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THE WITTEST, BRIGHTEST AND REST OF WEEKLIES.

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TEN PAGES OF READING MATTER IN INFINITE VARIETY.

ONE DOLLAR

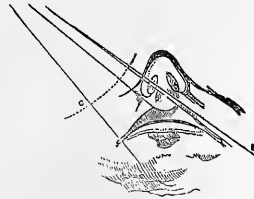


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It leads the nose right, and presents to the eye "a perfect cyclopaedia of photography."

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

By a young lady, to attend reception-room or retouch. Salary not so much an object as experience. Address Miss M. L. Ashley, Box 689, Willimantic, Conn.

By a young lady, to attend reception-room and retouch. Wages moderate. References given. Address Miss B. Marden, Cincinnati, O.

By a young man, as printer and assistant retoucher or retoucher. Can furnish references if desired. Address William Wurtenburg, Shamokin, Pa.

By a young man, as printer or general workman. Wages reasonable. Samples and references exchanged. Address J. L., Box 2, Reno, Iowa.

In a good gallery, as retoucher and printer. Can assist in operating. Can furnish recommendation if required. Address I. L. J., 346 Broad Street, Trenton, N. J.

As retoucher in a first-class gallery. Address Miss J. P. H., 140 W. Third St., Dayton, Ohio.

Permanently, as retoucher. Address Miss C. F. Ball, Cortland, Cortland County, New York.

By a young man, in a good gallery. Is a good general assistant. Address Will A. Robinson, Apalachicola, Florida.

By a first-class printer and toner. Has had ten years' experience. The West preferred. Best of reference given. Address Earnest Worker care Sargent & Co., Bank Street, Cleveland, O.,

By a good collodion transfer enlarger, who is also a good dark-room man. Terms reasonable. Transfer specimens and particulars will be forwarded by addressing J. W. Waldron, 508 Arch Street, Philadelphia, Pa.

In or near Philadelphia, as printer or operator. Address Frank H. Stains, 3538 Wharton Street, Philadelphia, Pa.

Permanently, in first-class gallery, as operator or operator and retoucher. Address A. R. I., Box 729 St. Thomas, Ontario.

By a first-class operator, by April 1st. Samples sent to those willing to pay for good work. Address Box 556, Lansing, Mich.

As printer and retoucher, in first-class gallery. Best of reference given. Address A. E. McDermid, Box 11, Fingal, Elgin Co., Ontario.

By a young lady, as printer and assistant retoucher. Can do general gallery work. Address Nellie E. Nelson, 426½ Fifth and Main Street, Keokuk, Iowa.

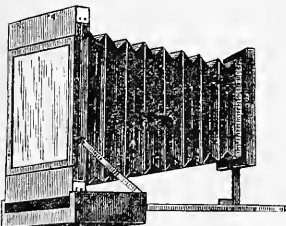
By an Englishman twenty-four years of age. Is well up in the whole routine of photography. References and specimens sent if desired. Address H. Betts, 94 High Street, Merthyr Tydvil, England.

By a young lady, thoroughly competent in retouching, printing, toning, etc. Address Miss Hattie Thumler, 37 Ann Street, New York.

A first-class retoucher and printer wanted. Send samples of work to G. Kennedy, Box 334 Amsterdam, N. Y.

Vogel's Progress of Photography,**LATEST—BEST—\$3.**

PATENTED.



The New 8 x 10, 5 pound Unique Camera, \$20.00.

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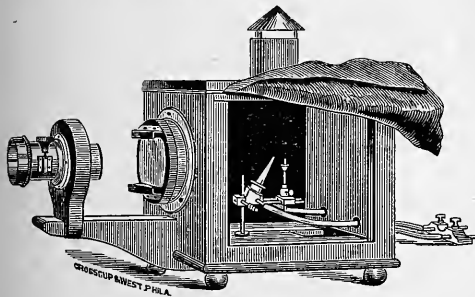
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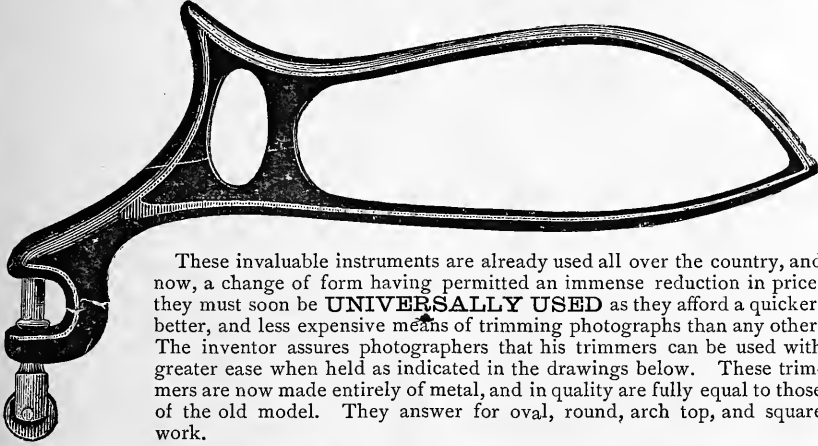
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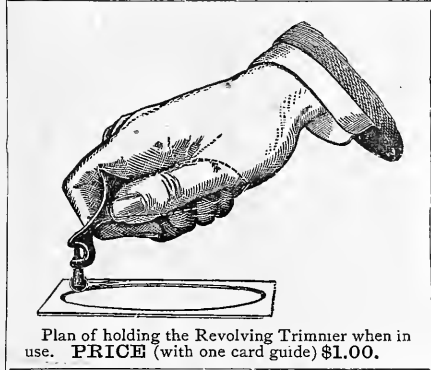
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2 3/4 x 3 1/8	3 3/8 x 4 1/4	5 1/2 x 7 3/8	7 x 9	2 1/8 x 3 1/8	2 3/8 x 4 1/4	3 3/8 x 5 1/4	3 7/8 x 6
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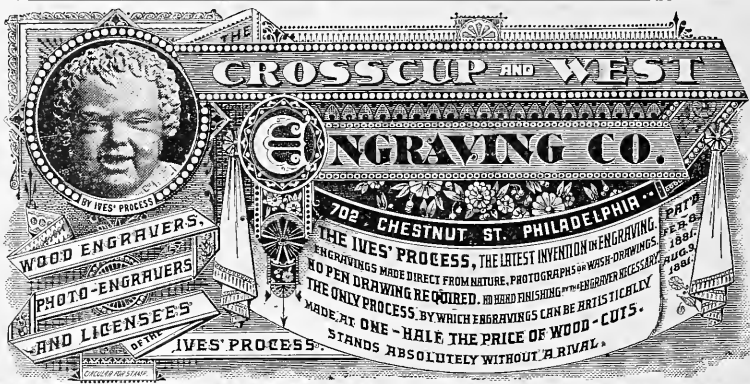
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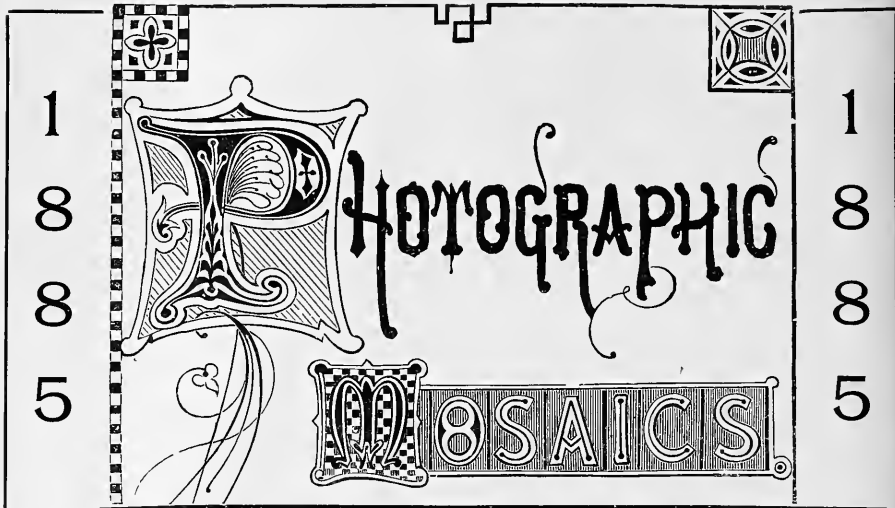
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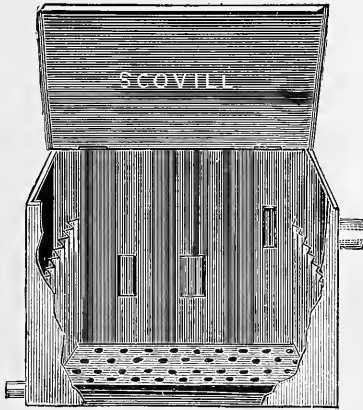
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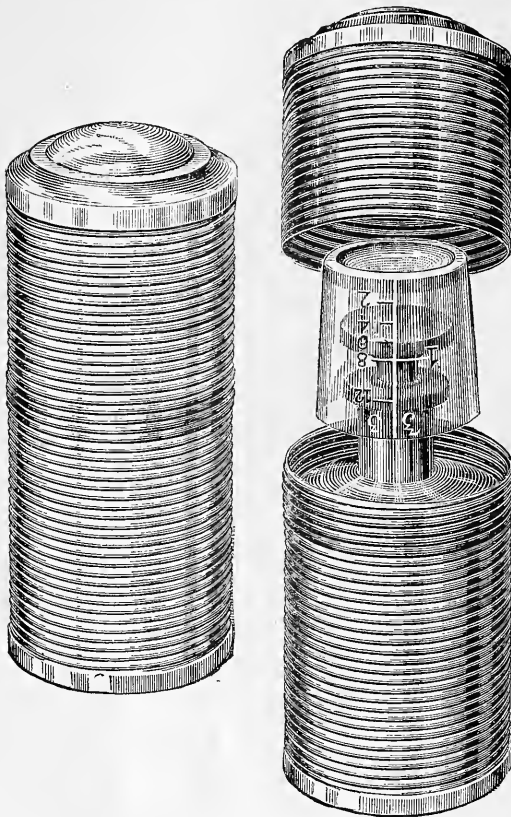
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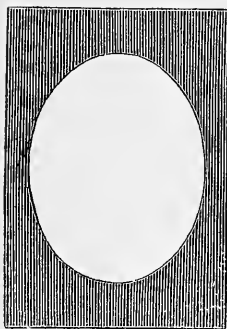
For all cases where EXTRAORDINARY RAPIDITY is desirable and for LARGE WORK these "LIGHTNING PLATES" will, upon trial, prove their superiority over all others.

My regular brand, the "EXTRA RAPID" (yellow label), which is so well known and sufficiently sensitive for general use, will be kept up to its usual high standard.

BOTH BRANDS SAME PRICE.

WILL BE FOR SALE BY ALL DEALERS.

DRY-PLATE WORKS, ST. LOUIS, MO.



GIHON'S CUT-OUTS

An Entirely New Variety for
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Are the very best that are made, and are now without a rival in the market. They are clean cut, most desirable shapes and sizes, and made of non-actinic paper, manufactured specially for the purpose. Each package contains 30 Cut-Outs, or Masks, with corresponding Insides, assorted for five differently sized ovals and one arch-top.

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THEY HAVE NO EQUAL FOR QUALITY.

Beware of spurious imitations made of common paper, full of holes, badly cut, and odd shapes and sizes. Ask your Stock-dealer for GIHON'S CUT-OUTS, and see that they are in his envelope, with instruction circular included. The recent packages are composed of an entirely new variety and of a new paper. TRY THEM.

Promenade Size now Ready. Sold Separately at 50 cents per Dozen.

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Is designed for Completely obscuring the Imperfect Backgrounds of Copies, Retouching Negatives, Faulty Skies in Landscapes, Coating the Inside of Lenses or Camera Boxes, Backing Solar Negatives, Covering Vignetting Boards, And for Answering all the Requirements of the Intelligent Photographer in the Production of Artistic Results in Printing.

Wherever you want to keep out Light, use Opaque.

IT IS APPLIED WITH A BRUSH, DRIES QUICKLY AND STICKS.

CUT-OUTS (thirty), \$1.00. OPAQUE, 50 Cents.

FOR SALE BY ALL DEALERS.

Address all orders to

SCOVILL MANUFACTURING CO., New York.

BEST
NEW DRESDEN
EXTRA BRILLIANT
ALBUMEN PAPER



EVER OFFERED TO PHOTOGRAPHERS.

WHITE, PINK, PENSÉ.

FREE FROM BLISTERS AND IMPERFECTIONS.

A NEW PAPER. NOW READY.

EAGLE SATIN FINISH,

IN PENSÉ AND PEARL.

Although my importations of paper have had a most satisfactory sale, and the old favorite brands will be continued in the market of the same quality, I have a **New Brand** which I offer for public favor which I believe to be **SOMETHING SUPERIOR.**

☞ \$36.00 A REAM. ☞ A REAM \$36.00. ☞

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EASTERN AGENT FOR THE CRAMER DRY-PLATES.

A. M. Collins, Son & Co.

MANUFACTURE ALL KINDS OF

CARDS AND CARDBOARDS

FOR

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AND

MATS, MOUNTS, AND ENVELOPES

FOR

F E R R O T Y P E S .

OFFICE AND WAREHOUSE,

No. 527 ARCH STREET,

PHILADELPHIA.

Price Lists may be had by intending purchasers on application to us, or to all Photographic Merchants, through whom your favors are respectfully solicited.

HANCE'S SPECIAL SPECIALTIES.

I Anderson's Portrait Collodion.

This is especially a *Winter Collodion*, and guaranteed to work with the loveliest harmony, and the most exquisite softness, and freedom from all the *winter* troubles which Photographic Collodion is heir to. None genuine unless the signature of *Elbert Anderson*, the great dark-room operator, author, etc., is pasted over the cork of the bottle.

II Ground Glass Substitute.

Is an indispensable article in the photographic gallery. There are so many uses to which it can be applied that a photographer having once given it a trial, will never be without it, as there is nothing known that will take its place.

The substitute is in the form of a varnish, is flowed and dried the same as varnish, but dries with a granulated or ground-glass surface.

For Vignette Glasses.

- " a Retouching Varnish.
- " Softening Strong Negatives.
- " the Celebrated Berlin Process.

For Ground Glass for Cameras.

- " Glazing Sky and Side Lights.
- " Obscuring Studio and Office Doors.
- " Printing Weak Negatives.

All imitators have given it up. They can't make it. GIVE IT A TRIAL.

PRICE, 50 CENTS PER BOTTLE.

III Hance's Delicate Cream Gun Cotton Is the King Cotton, and has no peer.

Prepared with particular care, warranted free from acid, and very soluble. It has made its way steadily and surely into most of the principal galleries in the country, where parties prefer to make their own collodion, and its superior qualities are shown in the medals awarded at the Centennial, Vienna, and Paris Exhibitions for photographs made with collodion in which it was used.

It is especially adapted to the Rembrandt style, and light drapery. Its sensitiveness renders it particularly adapted for children or any work that requires short exposure, though admirable as well for all work.

PRICE, 80 CENTS PER OUNCE.

Also, TRASK'S FERROTYPE }
HANCE'S DOUBLE IODIZED } COLLODION

PRICE, \$1.50 PER POUND.

FOR SALE BY ALL STOCK-DEALERS. NO RETAIL ORDERS FILLED. ORDER OF YOUR DEALER
SCOVILL MFG. CO., TRADE AGENTS, NEW YORK.

JAMES INGLIS,

MANUFACTURER OF THE

INGLIS DRY PLATES,

ROCHESTER, N. Y.

Inglis' New Dry Plate has the following qualities :

I find them extremely rapid; good printing density. The gradation is fine, from the highest light to the deepest shadow, and all so crisp, yet nothing harsh. . . . Send me one hundred dollars' worth. If you can make plates uniformly as good as these you have reason to feel proud. Wishing you every success.

Yours respectfully,

GLENS FALLS, January 28, 1885.

FRANK M. TAPP.

We can and we do make them just as good every day, and we do feel proud, and so do nineteen out of every twenty who have tried them. Every mail brings us similar letters to the above regarding their *superior qualities*.

N. B. This is a New Brand, which should not be confounded with our old Extra Quicks and Regulars.

SCOVILL MFG. Co., Agents.

JAMES INGLIS, Rochester, N. Y.

THERE IS NO FEAR OF FRILLING.

SCOVILL MANUFACTURING CO., AGENTS.

And For Sale by most of the Dealers.

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ESTABLISHED 1865.

WM. D. H. WILSON.

WILSON, HOOD & CO.

825 Arch Street,
PHILADELPHIA,

SOLE AGENTS IN THE UNITED STATES FOR THE



Centennial, 1876.



Centennial, 1876.

Ross' Portrait and View Lenses.

WE HAVE
NOW
IN STOCK

Portrait Lenses, from 1-4 to 8 x 10.
Cabinet Lenses, Nos. 2 and 3.
Card Lenses, Nos. 1, 2, and 3.
Triplets, Nos. 1, 2, 3, 4, 5, 6, and 7.
Symmetricals. Rapid Symmetricals.

Instantaneous Doublets, all sizes.
Medium Angle Doublets, all sizes.
Large Angle Doublets, all sizes.
Stereographic Lenses, all sizes.
New Universal Lens.

Numerous testimonials pronounce them to be the *best* as well as the *cheapest* Foreign Lenses ever offered to the American Photographer. We will mail price list on application, and promptly fill all orders.

Steinheil's Sons' NEW APLANATIC Lenses.

We now have a full stock of these Celebrated Lenses, at the following prices:

No. 1—1-4 size, 3½ inch focus, \$25 00	No. 4—8 x 10 size, ... 10¼ inch focus, ... \$60 00
» 2—1-2 » 5¼ » 30 00	» 5—10 x 12 » 13½ » 70 00
» 3—4-4 » 7 » 45 00	» 6—13 x 16 » 16½ » 110 00

Nos. 1 and 2 are in matched pairs for stereoscopic work.

We feel sure that at least one of these lenses is needful for the successful prosecution of your business, and so solicit your orders. Always in stock, to suit above Lenses, CAMERA BOXES made by AMERICAN OPTICAL CO., SEMMENDINGER, ANTHONY, BLAIR, etc.

WE KEEP IN STOCK FULL ASSORTMENT OF

AMATEUR PHOTO. OUTFITS

DRY PLATES OF ALL MAKES.

N. P. A. EAGLE and S. & M. PAPER, PER REAM, \$30.00.

Any article needed we can supply, as

WE MANUFACTURE, IMPORT, AND DEAL IN ALL KINDS OF

Photo. Goods, Frames, Stereoscopes and Views,

At prices as low as are consistent with the quality of goods furnished. We are indebted to our customers for the patronage during the past *Nineteen Years*, and our efforts shall be to merit a continuance of it.

Illustrated Price Lists supplied free. Correspondence solicited.

GET THE BEST!

PRICES TO PHOTOGRAPHERS :

Per each Hundred, \$1 50

Per 500, from the same picture, 7 50

Per 1000 " " " 12 00

With 33 1/3 per cent. commission off, to Photographers on all orders of more than 500. No less than 100 made.

SPECIALTY :

My Most ARTISTIC
DESIGNS of own
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C. H. TONNDORFF'S
STAMP PORTRAITS
Furnished in sheets of 25 or 100 perforated and gummed like postage stamps.

Taken from Cabinet
and Card Size Bust
Pictures only.

*My Portraits are endorsed by
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leading business firms:*

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- JOHN A. SCHOLTEN, Photographer, St. Louis.
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- R. UHLMANN, " St. Joseph.
- J. F. RYDER, " Cleveland.
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To better introduce the novelty, it is desirable that each gallery ordering should have a special design, with firm name and address thereon, so as the more readily to advertise themselves and inform the public where same can be procured. Such design will cost \$6. Send for samples, and address to the **Main Office, 1423 Chestnut St.**

C. H. TONNDORFF, Original Inventor,

1546 Chouteau Ave., St. Louis, Mo.

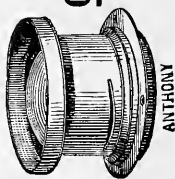
BUY THE BEST!

No other will give you half so much satisfaction.

FOR DRY PLATES

ANTHONY'S Patent Perfect PLATE HOLDERS ARE SUPERIOR TO ALL.

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FOR WET

OR DRY

WIDE-ANGLE RECTILINEAR

E. A.

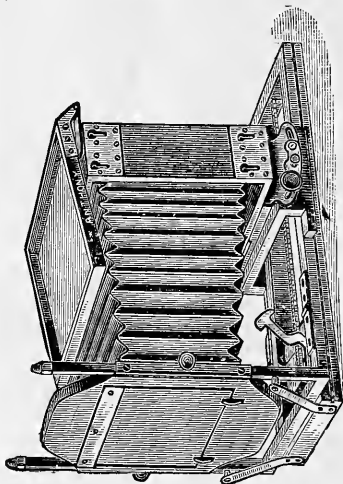
SINGLE COMBINATION, RAPID, WIDE ANGLE, PLATYSCOPE, PORTRAIT AND VIEW LENSES.

DALLMEYER LENSES,
SUCCESS CAMERAS,

THE FAIRY CAMERAS,
THE NOVEL CAMERAS,
SCHMID'S DETECTIVE CAMERA

SEND FOR OUR CATALOGUE, AND GET THE BEST Of Everything.

APPARATUS OF ALL KINDS.
Chairs,
Neg Boxes,
Camera Stands
Printing Frames,
Etc., Etc.



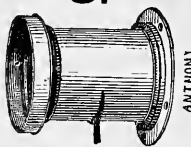
THE FAIRY CAMERA.

The Lightest and Best for Out-door Work.

FOR WET PLATES
NOTHING EQUALS

THE BENSTER PLATE HOLDER.

DALLMEYER



NOTHING

COMPARES

RAPID RECTILINEAR

O. I. C.

PORTRAIT, COPYING, CLIMAX
PORTRAIT, GEM, AND
COMPACT VIEW CAMERAS.

E. & H. T. ANTHONY & CO. BROADWAY, NEW YORK.

--591--

SOLE AGENTS FOR THE UNITED STATES.
14 & 16 E. Larned Street,
DETROIT, MICH.
ALLEN BROTHERS,

Dear Sir: I have tested the Suter Lens which you left with me for trial and am very much pleased with it. For direct life size heads I do not think it has its equal. Its illuminating power is wonderful as well as its rapid action. With it I can make a life-size head in from 10 to 15 seconds. For making large groups it is simply "immense," as it covers a large field with nearly a full opening.

F. J. COONLEY, Esq.
 New York, February 5, 1885.

Messrs. ALLEN BROS.
 I mail you a 20 x 24 print of *The British Honduras Court*, of the Exposition, made from a Suter Lens negative. Were it somebody else's work, I should say some very fine things about it. As an example of lens work, it is one of the most exquisite things I ever saw—and the best negative so far taken in the exposition. The great variety of material included in the picture has afforded an excellent test and a severe trial for your wonderful lens, but it was fully equal to the work. There are fibrous materials, woods of many kinds, nettings, coarse plaited fabrics, leopard skins, sword-fish, furniture, and a hundred other curios, all most sharply and beautifully cut and caught. The depth and angle covered by the lens No. 8 B, are simply astonishing. If I can continue to secure such results I shall end my work here with as much credit as I did in '76. In the language of Sancho Panza, I would say—"Blessings upon the man who invented the Suter Lens."

EDWARD L. WILSON
 New York, February 5, 1885.

Messrs. ALLEN BROS., Detroit.
 The No. 8 B Suter Lens I bought of you, is to my entire satisfaction. The portrait heads, life size and over, are cut sharp, and are of depth; and it affords me much pleasure to recommend it to the fraternity.

Yours truly,
 JOHN WINTNER,
 Photographer and Artist.
 New Orleans, February 7, 1885.

ALLEN BROS.
 Dear Sirs: Suter Lens received. Have tried it. *It is all you claim for it.*

Yours very truly,
 H. H. MCINTYRE,
 SYRACUSE, N. Y., January 9, 1885.

ALLEN BROS.
 Dear Sirs: Heretofore I had used some very fine instruments. I saw before—and I thought I had used some very fine instruments. Read what F. J. Coonley, late chief operator for Mora, N. Y., says: "I procured the Suter Lens from Mr. Anderson, and tested it very thoroughly, and found it to far excel anything I ever bear."

Yours very truly,
 D. F. BARRY,
 Bismarck, Dak., January 8, 1885.

Messrs. ALLEN BROS.,
 Gentls: Your letter of the 6th at hand. In reply, would state that the No. 6 B Suter Lens is what every progressive photographer must and will have in the future. It is wonderful! I can express my delight with it better on a 14 x 17 dry plate, with either bust, half length, or full figure, portraits or views, than any lens I have (and one especially, which cost me four times as much).

A. C. FALOR,
 Berra, O., January 26, 1885.

ALLEN BROS.
 Dear Sirs: We are well pleased with the 7 B "Suter Tube" sent us for trial some time since. It is the best Tube we have seen for the price. We will keep it, and you can draw on us for amount of bill. We will send you some 16 x 20 heads made with the Suter soon, also one 14 x 17, which we think superb.

Yours truly,
 MCKECKNIE & OSWALD,
 Berra, O., January 26, 1885.

ALLEN BROTHERS.
 Nearly all of the large Wholesale Dealers keep the Lenses in stock. If your dealer does not have them, send direct to us. We append a few good words from numberless letters sent us from well-known photographers.

Respectfully yours,
 ALLEN BROTHERS.

Dear Sir: In bringing the famous **SUTER LENS** to your notice, after nine months' experience as exclusive Agents for its sale, we can confidently claim for it that it has no equal to-day for general excellence. Its sale has been unprecedented, and far beyond our expectations. We guarantee every lens, and will cheerfully send to any address a lens, on five days' trial, C. O. D. If returned, express charges to be prepaid.

Nearly all of the large Wholesale Dealers keep the Lenses in stock. If your dealer does not have them, send direct to us. We append a few good words from numberless letters sent us from well-known photographers.

Respectfully yours,
 ALLEN BROTHERS.

A FEW MORE TESTIMONIALS.

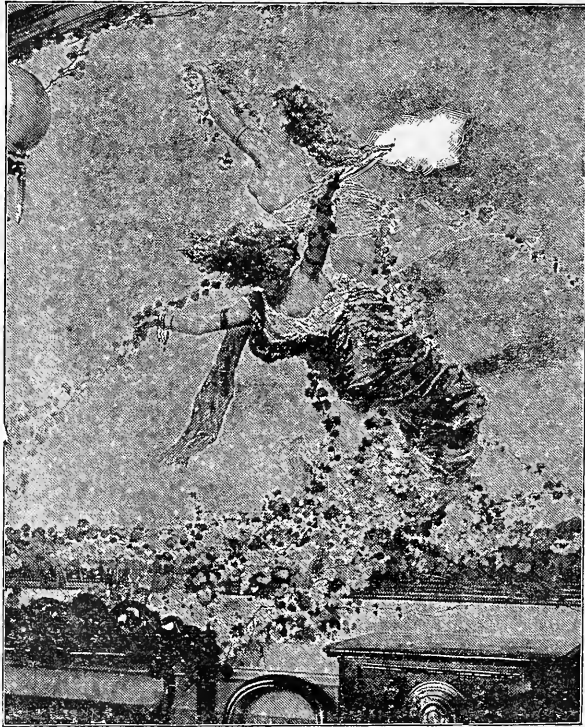
GREAT SUCCESS OF THE SUTER LENS.

OPTICAL LANTERNS AND LANTERN SLIDES.

Nearly twenty years' experience as a Dealer, Manufacturer, and User of these goods, enables me to assure satisfaction to every purchaser.

❧ **EVERYTHING SUPPLIED.** ❧
LECTURE BOOKS ON

**ART, HISTORY,
TRAVEL,**



**FUN, EDUCATION,
SCRIPTURE.**

Send for New Catalogue. (15 Cents in Stamps.)

A superb list of Slides from recent personally made

Negatives of **EGYPT, ARABIA, ARABIA PETRÆA,
SYRIA, AND PALESTINE.**

THE CATALOGUES READY. THE MOST UNIQUE COLLECTION EVER OFFERED.

READ WILSON'S LANTERN JOURNEYS.

THREE VOLS. VOL. III, "THE ORIENT," JUST ISSUED.

By mail, \$2.00 each, Post-paid.

EDWARD L. WILSON, No. 1125 Chestnut Street, Philadelphia.

OF AGE!

Twenty-one years of service as a Photographic Magazine having been fully completed by *The Philadelphia Photographer*, it can now fully claim to be "OF AGE."

It was born when our art was itself only a stripling, and having grown up with it and lived for it, now comes with confidence to the craft for support during its **Twenty-second year**.

Under the same editorial care which gave it birth and name, it will continue its good work in the interests of the art of Photography, with brighter prospects of usefulness and success than ever before. In looking back upon its past record, the editor and publisher thinks he has won the right to claim

TWELVE REASONS WHY "THE PHILADELPHIA PHOTOGRAPHER" SHOULD HAVE THE PATRONAGE OF ALL LOVERS OF OUR ART, AS FOLLOWS:

1. The photographic studies issued with each number are a great help to workers under the skylight, and well worth the price asked for the whole magazine. Over forty of these studies were supplied last year, and some fine gems are preparing for 1885.
2. The editor having been connected with the art for over one-half of its existence, is wholly in sympathy with the working craft, and well-knows their wants to supply them.
3. Its ability to anticipate the wants of the craft is secured by its connection with the practical men of our art all over the world; and the same long connection creates a ready means of obtaining promptly all that is needed.
4. Its enterprise in taking up and making popular and easy all good processes and measures is proverbial.
5. Its war upon low prices, and its endeavors to lift up the fraternity to better ones, as well as its usefulness in winning the press and the public to a better appreciation of our art, are well known to all.
6. It has always been quick in discovering and exposing frauds, humbugs, and attempts to injure its patrons. It is operated for the good of its patrons.
7. Its long standing as an authority in our art, has won it connection with scientists and scientific bodies all over the world, who send their new things to its editor first, over all of its class.
8. Its circulation is International. There is not a land where English is read that it does not go to. It also circulates in every State in the Union, about as follows:

New England,	21.5 per cent.	Western States,	24.4 per cent.
Middle States,	24.1 " "	Canada,	5.3 " "
Southern States,	16.4 " "	Foreign,	5.3 " "

Thus giving the best means of advertising, and thus securing the best circulation among the active votaries of the art.

9. Its form has been adopted by all the other American magazines of our art (all its junior), but its quality and artistic appearance have not been reached by any.
10. Its standing as the leading magazine of its kind, has been maintained ever since it began. "It is the best of its class," say press and patrons.
11. Its success has been a success, though its price is higher than that of any of its contemporaries. The best artists often write, "I don't care how many other journals there are, or how low-priced, I *must* have THE PHILADELPHIA PHOTOGRAPHER."
12. It is the *cheapest* of all, because "the best is *always* the cheapest." You cannot, therefore, afford to do without it.

SUBSCRIBE NOW. \$5.00 a year; \$2.50 for six month; 50 cts. a copy.

It has been our custom for many years, to give old subscribers a *premium* for new subscriptions sent *in addition to their own*. We continue this plan by offering one dollar's worth of our publications for each such additional subscriber for a year. Please do all you can to increase our usefulness in behalf of the glorious art of photography. It is to *your* interest to do so.

For 1885 we have some useful schemes and novelties under way, which will be presented from time to time. Our old subscribers are asked to **renew now for 1885**, so that the January issue will reach promptly. **IT WILL BE A GEM.**

Contributions from both *Actives* and *Amateurs* are invited. Proceedings of Societies are very useful and should be sent promptly.

EDWARD L. WILSON, Editor, Publisher, and Proprietor, 1125 Chestnut St., Phila.

NOTICE TO SUBSCRIBERS.

In remitting by mail, a post-office order, or draft, payable to the order of Edward L. Wilson, is preferable to bank-notes. Postage stamps of the denomination of two and five cents each will be taken. Clearly give your Post-Office, County, and State.

Foreign subscriptions must be accompanied by the postage in addition.

ADVERTISING sheets are bound with each number of the Magazine. Advertisements are inserted at the following rates:

	One Month.	Six Months.	One Year.
One Page.....	\$20.00	\$110.00	\$200.00
Half "	12.00	66.00	120.00
Quarter Page...	7.00	38.50	70.00
Eighth " ...	4.00	22.00	40.00
Cards, 6 lines or less.....	2.00	11.00	20.00

The attention of advertsers, and those having galleries, etc., for sale is called to our **SPECIALTIES** pages. Terms, \$2 for six lines, and 25 cents for each additional line, seven words to a line, always in advance. Duplicate insertions, 50 cents less, each.

We have added an Exchange Column to our Magazine, wherein photographers having articles for exchange can insert advertisements at the low price of 15 cents per line, or fraction of a line, of seven words to a line.

Operators desiring situations, no charge.

TO OUR
PATRONS AND THE FRATERNITY.

GENTLEMEN :

At the beginning of another year we solicit your attention to our claims for your patronage. We have mastered the difficulties of a trying year, and while we may not come out richer in pocket, we are surely many per cent. richer in experience, and in that respect more able to serve you. We are constantly putting new goods on the market, and it will be our endeavor to give you the best results of our energy and thought; we are young and ambitious to be considered the best and ever progressive, whether we are capable of the honor or not, we must leave it with you to decide. It shall be our aim to give you the best goods rather than the cheapest; good workmen use good tools—for these we wish to cater. We do not publish testimonials, although we have some of the most flattering on our letter-files (all coming unsolicited), believing that intelligent men tire of such useless literature, especially since most flowery and profuse ones are obtained of articles devoid of merit, for the good and the bad they read alike. Our apparatus factory is now, we believe, one of the largest and most complete in the world, the machinery being new and made especially for our purpose.

In our combination with Mr. A. Marshall forming the MARSHALL & BLAIR CO., we believe we have struck the key-note to a plan for furnishing photographers with a plate which will equal any in the market. While our facilities enable us to place them on the market at a modest figure, it has always been our belief that some effort should be made to furnish photographers with a reliable plate at a small margin of profit, owing to the quantity used. In doing this we believe the best interest of the manufacturer, dealer, and consumer would be promoted. To the accomplishment of this end we are laboring, and trust you will give our plate a trial and be convinced we are worthy of our encouragement. In wishing you a prosperous New Year, we would ask you not to forget us or fail to read our advertisements; they will appear monthly in the advertising columns of this journal.

Fraternally,

THE BLAIR TOUROGRAPH AND D. P. Co.,

T. H. BLAIR, Treas. and Manager.

(SEE PAGE 56.)

22d YEAR.

APRIL, 1885.

34

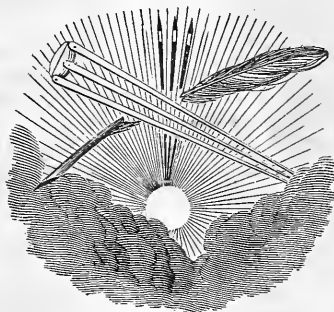
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50 Cents.

THE
PHILADELPHIA
Photographer.

AN ILLUSTRATED MONTHLY JOURNAL,
DEVOTED TO PHOTOGRAPHY.

EDITED BY EDWARD L. WILSON.



PHILADELPHIA: EDWARD L. WILSON,

PUBLISHER AND PROPRIETOR,

No. 1125 CHESTNUT STREET.



SUBSCRIPTIONS RECEIVED BY ALL NEWS AND STOCKDEALERS.

Five Dollars per Annum, in Advance.

Entered at the Post-Office at Philadelphia as second-class matter.

WILSON'S PHOTOGRAPHICS, Fourth Thousand, \$4.00. A SPLENDID PRESENT.

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ADVERTISEMENTS.

ALLEN BROTHERS. The Suter Lens.
 ANTHONY & CO., E. & H. T. The New N. P. A.
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 COOPER, CHAS. & CO. Union Negative Cotton.
 CRAMER, G. Lightning Plates.
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 GENNERT, G. Albumen Paper. C. Böhme &
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 HANCE'S SPECIALTIES.
 HODGE & HUSTON. The Solar Printers.
 HYATT, H. A. New Brand of Dry Plates.
 INGLIS, JAMES. "Insoluble" Dry Plates.
 KEEVIL'S PATENT NEWTONIAN DUPLEX
 LANTERN.
 MAGEE & CO., JAS. F. Photographic Chemicals.

MOORE, ALBERT. Solar Enlarger.
 MOSAICS, 1885.
 OPTICAL LANTERNS AND SLIDES.
 PASSAVANT'S DRY PLATES.
 PHOTOGRAPHIC COLORISTS' GUIDE.
 PHOTOGRAPHIC PROGRESS SINCE 1878.
 PHOTOGRAPHIC PUBLICATIONS.
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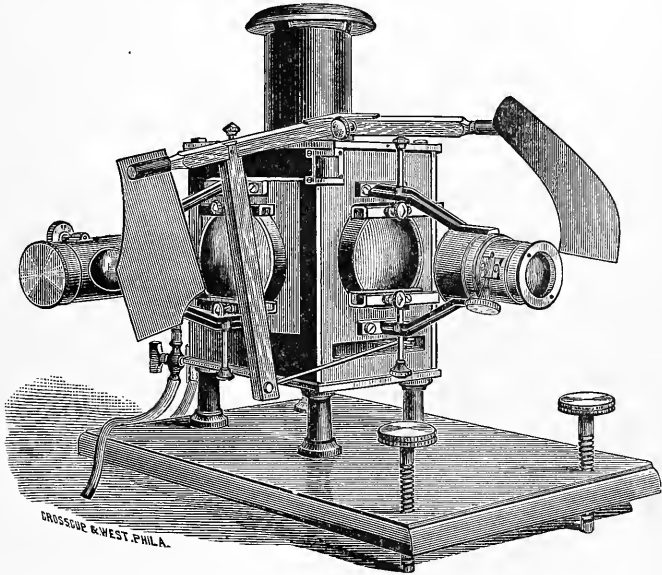
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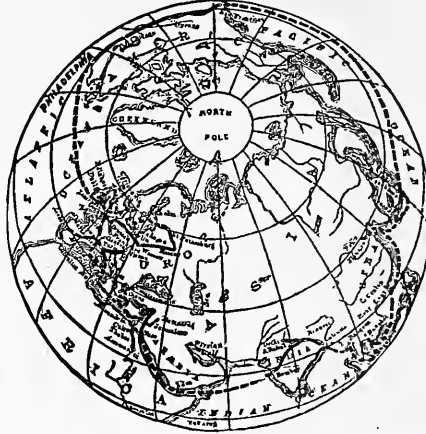
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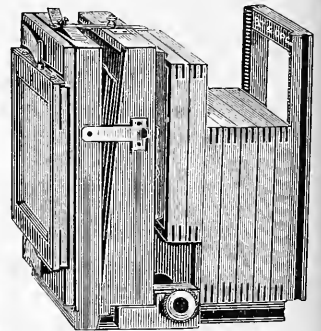
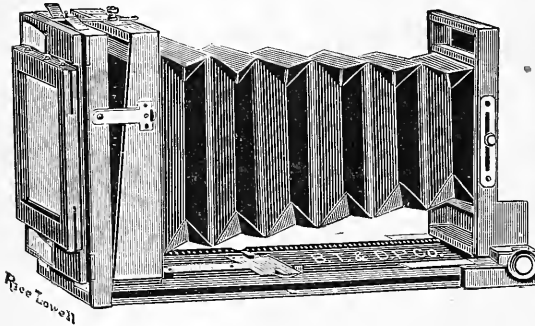
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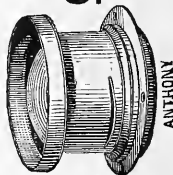
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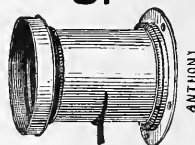


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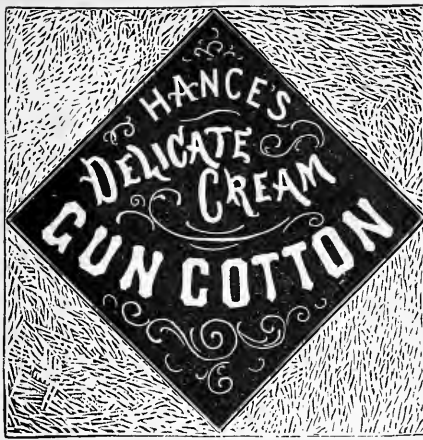
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No. 256.

PHOTOGRAPHY AT THE NEW ORLEANS EXPOSITION.

SINCE our last letter, considerable progress has been made towards beautifying the photographic exhibit, and yet, with all the effort that has been expended, comparatively speaking, it is a failure. Some of the reasons for this we have already stated. The first and principal one is the lack of interest on the part of the photographers themselves. The second, the failure on the part of those who applied for space, to send their exhibits. Third, the failure of those who did send exhibits to direct them as they were instructed. Fourth, the fact that many photographers preferred to exhibit with their State departments rather than in the photographers' department proper; and finally, the exhibit is a failure comparatively speaking, because of the failure of the management to give photography the consideration it should have had. But there is still a prospect of the photographic exhibit becoming even more attractive than it is now.

Several of the pictures still remain, or are supposed to remain, in what the management dub the "calaboose." There goods improperly directed are stored. Some time between now and the millenium they will be opened, their contents revealed, and perhaps part placed in the photographic department. The ill-fated boxes which are now supposed to be in this purgatorium, are those which have been improperly directed

by the senders, and there is no hope for them until they are officially released. To try to find them without any knowledge whatever of their marks, is impossible for even the superintendent of the photographic department of a world's exposition. They will some day be revealed, and their senders learn by this slow experience to direct their goods properly. Other cases were directed to the "Art Department," and in turn were captured by the officials having the work of the brush and crayon in charge, and stored in the city of New Orleans two months, until the Art Hall was ready to receive pictures. When that time came, these boxes being opened and found to contain photographs, were sent, after the processes of red tape had been endured, to the photographic section, over a quarter of a mile distance. There the photographs were properly hung.

The fact that the photographic department is not yet ready, makes us hesitate for one month more before giving a list of the exhibitors; we, therefore allude only to a few of them.

One of the most promising exhibits is that of Mr. F. Gutekunst, of Philadelphia, which not only embodies a very fine variety of portraits of various sizes, but also a splendid collection of phototypes, together with his famous picture of the 1876 Exhibition, and some reproductions of Darley's illustrations of Dickens. There is no photo-mechanical work here that approaches in quality that

of Mr. Gutekunst. His work is too well known for us to praise it, and his display does him the greatest credit.

The next largest exhibit probably is that of Mr. F. W. Guerin, of St. Louis. In variety and subject it resembles very much the exhibit made by this gentleman at the Cincinnati Convention, a few additions only having been made, therefore many of our readers are familiar with it. When we make our complete list, if we are ever permitted to do so, we shall refer to both of these exhibits again.

One of the finest displays of landscape work made is Mr. G. F. Mugnier's, of this city. Mr. Mugnier claims to be "only an amateur photographer," spending only a part of the day in the practice of our art, being employed the balance of the time at the United States Mint. He has, however, collected a variety of pictures of New Orleans and the surrounding country, which is unique in its way, and better illustrates the Sunny South than any collection we have ever seen—the quality of the work is also excellent. The product of Mr. Mugnier's negatives is being sold at the various photographic stations throughout the Exposition and meets a ready demand.

Mr. C. W. Motes, of Atlanta, Ga., also makes a display similar to that which many of us beheld at Cincinnati, and which is very creditable to himself. His "sculpture" photography is particularly pleasing and attractive, and includes some very nice selections, some of which are new.

Mr. A. L. Blanks, of Vicksburg, Miss., also makes a fine exhibit of portraiture, with a surprisingly beautiful selection of outdoor instantaneous work. Not only is the execution fine, but the subjects are also excellent in every respect.

The only city photographer who has made any display as yet is Mr. Theodore Lillenthal, whose variety consists not only of plain work, but of brush work of excellent quality.

The visitor is attracted by the display of solar enlargements from Mr. E. Long, of Quincy, Ill. They hang near the side of the great organ, and do Mr. Long full credit.

Mr. T. H. McCollin, of Philadelphia,

covers more space perhaps than any one in the department, with his splendid variety of solar enlargements and blue prints. The quality of all these is excellent in every respect, and commensurate with the quantity.

A very excellent exhibit was made here by the Air-Brush Manufacturing Company, of Rockford, Ill., and was attended in person by Mrs. Walkup, but the lady became discouraged, and has returned to her home, leaving the exhibit still hanging. Mr. E. K. Hough continues to demonstrate the use of the air-brush at certain times of the day, and always attracts around him a crowd of interested visitors.

While we consider the photographic department properly located, still there are so many grander attractions here than our art is capable of making, that we get very little attention from the public except on "fete days," when the galleries are crowded, and we get a good show of attention.

The case of photographs sent from Germany by our good friend, Dr. Vogel, has arrived since our last letter, and includes small selections from several photographers in Berlin and other parts of Prussia, whose names shall be given presently. A very interesting collection is sent by our inventive friend himself, illustrating the uses of azaline collodion. A complete list of these also will be sent when some more cases which are still held by the United States Custom House authorities are allowed their release.

Some little fault has been found by the very few exhibitors who are represented here, because of the tardiness with which the photographic department has been opened. We have given some of the reasons for this slowness, but above them all there was one great reason which made the opening of our department slow, viz., the general tardiness which has characterized everything pertaining to the Exposition. And yet, with all this, the photographic department was opened to the public in quite presentable shape fully a month before the superintendent of the art department was able to open the doors of the art hall for public inspection. We do not feel called upon to excuse anything; our work in this matter has been and is entirely gratuitous. More

than all this, we have been compelled to involve ourselves to a considerable amount for the purchase of material and labor for placing the exhibit in as good shape as it is in now. Any thinking person who will put this and that together will understand without requiring us to go into further details. The Exposition authorities found exhibitors so ready to take advantage of their offer that the great Exposition grew to much larger proportions than the wildest dreamer could expect—the result was, more was attempted than could be accomplished with the money, and the national treasury had to be resorted to. As large bodies move slowly, the Exposition had to suffer, and the tiny space devoted to photography had to suffer also, notwithstanding the efforts of the few photographers who are there represented, and the work of the anxious superintendent, who was ambitious to have his department not only the most beautiful, but the most promptly open to the public. Next month we hope to give a full report not only of the complete photographic exhibition, but a list of all the photographs which are included within the entanglements of the United States and Government Buildings, together with a synopsis of the appliances of the art represented. Our opportunities for profitable experience here with dry plates have been considerable. As a grand outgrowth of this experience we are free to confess to many disappointments. It is almost impossible to decide upon any arbitrary rules for the exposure of these plates as to time, and day by day the way must be felt in the matter, as the light varies as the time of day changes. But when one once knows the requirements of a method, if one is thoughtful, those requirements can be met without much inconvenience. In working here, if more than one exposure must be made in a certain locality, usually the first one is taken to the developing-room and developed before more are taken. This takes a little time, but it prevents a good deal of unnecessary labor, and saves dry plates. Never in all our experience have we witnessed so many beautiful results by photography as we have seen during our stay here; every lover of a good negative will understand this. It is a portion of our duty at the end

of each day to inspect the negatives (the work of the good fellows who are our co-laborers), to name and to catalogue, to approve or disapprove. It will be understood, therefore, that we share a great deal of delight in looking over so much excellent photographic work. The negatives are produced on plates of various manufacture, and are as satisfactory as anything our art has ever been known to produce, but alas we meet with frequent disappointment when looking at the prints from these excellent results. We have not yet concluded why these disappointments are so apt to occur, nor have we allowed ourselves to feel satisfied that they are necessary, but that they *do* occur is certain. A great source of disappointment is in the fact that every negative whose exquisite half tone and splendid detail in the shadows attracted our admiration the night before, the next day will produce prints that are hard in contrast, and without those delicate renderings which are seen in the plates themselves. This disappointment we feel sure is due largely to the printer, for the old wet-plate printer forgets that the good results obtainable from a dry plate are harder to get than those obtained from the wet. They can be just as excellent if care be taken in the printing. We have not sufficiently pursued our observations to be able to say whether or not slower printing will be better for dry plates. Our present opinion, however, is that dry plates ought to be printed more slowly than wet plates, in a diffused light, and with more care, in order to get out the full value of the negative. This is a subject that must have the consideration of all wise photographers, and we should feel personally pleased if those who have observed and have come to any conclusion, will give us the benefit of their experience through these pages. We still find among the many photographers who visit us from time to time, some who are still on the fence as to whether they "like dry plates better than the wet ones." In our mind there is no question as to which is best for us to work in our present labors. Certainly many of the results we get would not be possible with wet plates, no matter how much of cumbersome apparatus is used, or

how much talent is displayed. As a rule, we believe that softer results can be obtained from dry plates, and, to *our* taste, better ones. There is just as much difference between the slow-printed photograph from a dry plate and one printed from a wet plate, as there is between the vigorous landscape painting of the Dusseldorf artist, and the soft, delicate, tender, color-dreams of Thomas Hill, the California artist. They are both as beautiful and grand as they can be, and yet how very different in appearance. Therefore, no one ought to say, "the results from wet plates are superior to those from dry." Any one will admit, however, that they are *different*. Users of dry plates should not attempt to expect the same results from dry plates as they are accustomed to secure by the wet process. We hope that information on the further practice with dry plates will have plenty of attention at the convention in Buffalo.

Another direction in which we are working at present is in experimenting with the electric light. We have plenty of opportunity to make not only indoor, but outdoor views of the buildings, and shall pursue the subject considerably in the hope of securing some information that will be of value to the trade generally. A photograph of the Music Hall, taken a few evenings ago by electric light, produced a very singular and a partially opposite result—that is, the flames, so to speak, of the electric spark, were clear glass in the negative, and produced a black spot surrounded by a white nimbus in the resulting prints. Some of our physicists can explain this result, pending our further observations.

We hear a great deal of the bad weather which our friends have had in the North; we assure you that we have had our full share of it in the Sunny South. As stated in the article on "Our Picture," in our last number, the view that was there described was only possible about two days during the whole of the month of December, not only on account of the wind, but on account of the lack of sun. December, January, and February as well, were all dismal here, giving us but little sunshine. This made photography at the World's Industrial and Cotton Centennial Exposition a great trial.

We will, for the sake of novelty, append below the record of the weather, kept by one of our printers at the Exposition during the month of February, together with a statement of the number of sheets of paper he printed. It is rather crude in make-up, but it tells the whole story, and is quite interesting:

Feb.	Printed.
2d. Clear; out of paper a while . . .	58
3d. Morning very foggy . . .	56
4th. A beautiful day; help part of the time . . .	76
5th. Cloudy in the morning; a very strong light . . .	80
6th. Hazy in the morning . . .	73
7th. Printed in the forenoon; afternoon at out-printing . . .	38
Total for six days . . .	381
9th. Cloudy in the morning . . .	71
10th. Hazy in the morning . . .	73
11th. Hazy all day . . .	52
12th. Cloudy and cold; windows down . . .	12
13th. Rained all day . . .	14
14th. Did not work; laid off to go in town.	
Total for five days . . .	222
16th. A nice day . . .	68
17th. A nice day . . .	75
18th. Forenoon cloudy . . .	56
19th. Very foggy . . .	58
20th. Cloudy part of the day . . .	64
21st. Rained . . .	20
Total for six days . . .	337
23d. Cloudy all day . . .	52
24th. Rained all day . . .	20
25th. Cloudy . . .	47
26th. Partly cloudy . . .	70
27th. A very strong light all day . . .	102
28th. Clear, but out of paper . . .	74
Total for six days . . .	383
Total for month . . .	1324

Now, however, we are having beautiful spring weather. The orange, plum, and peach trees are in blossom, the pansy, the hyacinth, and tulips rival each other in beauty in the Exposition flower-beds, and

on all sides the buds and leaves are pushing forward with all the vigor the warm sun can inspire. The grass is green; the air is balmy. Those of you who are freezing at home would do well to pay us a visit.

Quite a number of photographers have honored us with their presence, and it gives us a pleasure always to show them what we consider the most important part of the Exposition—*i. e.*, how a great barn of a structure can be turned into workrooms, studios, and storerooms, where nearly sixty people can be given pleasant employment in a moderate climate. Among those who have visited us have been Messrs. Jackson, of Denver, Haynes, of Wyoming, Pugh, of Georgia, Blanks, of Mississippi, Hays, of Alabama, Ayres, of New York, Kingsbury, of Connecticut, and Mrs. Fitzgibbon Clark, of St. Louis. Mrs. Fitzgibbon Clark remained here several days, and seemed to enjoy herself hugely during her visit. She looks well and talks well and hopefully of the prospects of the *Practical Photographer*. She went home, we believe, with a good deal of material that will be adapted to the interests of her readers.

We hope presently to secure some results for the study of our readers that will be far superior to the one in our last issue; meanwhile we are glad to know that others have come to our aid, and that some magnificent studies are in preparation. For the present, adieu.

OUR PICTURE.

WORDSWORTH has said, "There is a pleasure in poetic pains which none but poets know," and we might well say there is a pleasure in photography which only photographers know. This delight begins the very moment we take up the camera and travel forth to look with true feeling upon the face of nature. There are no arbitrary doctrines of art to limit us in our selection—no set rules to alter the true features and the natural expression of things. We have come to look at her face to face, and not through a glass darkly, "to study with joy her manner, and with rapture taste her style." The commonest objects discover new beauties which the careless

eye has time out of mind overlooked. The camera is an instrument which enlarges our mental vision, and the world which aforetime was "a blank of things," becomes clothed with beauty and loveliness. We learn something at every moment, we discover likenesses and differences in things, and without altering in an iota a single phase of nature—create new scenes which may of right be called products of the imagination, because the mind first perceives them, not the sense. But photography is no recorder of dreams. It delights not in the so-called ideal—has no desire "to o'erstep the modesty of nature."

Shakespeare tells us his "mistress' eyes were nothing like the sun," and Richardson acknowledged that Clarissa's neck was not so white as the lace upon it, whatever poets might say if they had been called upon to describe it. Men of less genius have sought to dress nature to advantage—their works have not outlived their times. Photography need not fear the slur cast at her that she can only translate nature line for line. This is all we desire. Nature has charms enough and is inexhaustible in her resources. She is constantly creating scene after scene of exquisite beauty, which needs only the true feeling for the beautiful in the soul of the photographer to give it a "local habitation and a name."

Goethe, in his *Sorrows of Werther* has a very pleasing reference to this doctrine. He says, "About a league from the town is a place called Walheim. It is very agreeably situated on the side of a hill. From one of the paths which lead out of the village you have a view of the whole country, and there is a good old woman who sells wine and coffee there, but better than all this are two lime trees before the church, which spread their branches over a little green surrounded by barns and cottages. I have seen few places more retired and peaceful. I send for a chair and a table from the old woman, and there I drink my coffee and read Homer. It was by an accident that I discovered this place one fine afternoon. All was perfect stillness—everybody was in the fields except a little boy about four years old, who was sitting on the ground and holding between

his knees a child of about six months. He pressed it to his bosom with his little arms, which made a sort of great chair for it, and notwithstanding the vivacity which sparkled in his eyes, he sat perfectly still. Quite delighted with the scene, I sat down on a plow opposite, and had great pleasure in drawing this little picture of brotherly love and tenderness. I added a bit of the hedge, the barn door, and some broken cartwheels, without any regard to order just as they happened to lie, and in about an hour I found that I had made a drawing of *great expression and very correct design, without having put in anything of my own.*" This confirmed me in the resolution that I had made before, only to copy nature for the future. Nature is inexhaustible, and alone forms the greatest masters."

We make no apology for quoting these words of a great man who, if any one deserved the title, was an idealist. Artists may say what they will about idealism, in their heart of hearts they take the greatest delight in the actual transcripts from nature. The Italian painters delight us not alone by the greatness of their art, but also by the power with which they have selected and portrayed scenes directly from the daily life in Rome, Venice, or Florence. They have recorded personal life and habitual scenes of domestic relations. They have looked at life, and life breathes from their pictures. Do not forget that their picturesque costumes were the habits of everyday life. Our costumes and the scenes which we daily behold are not a bit more prosaic than theirs. Depend upon it, time will idealize our frockcoats and overskirts, and the painters of 2000 A. D. will sigh for the picturesque garments of the nineteenth century.

Everyone is pleased with representations from nature, with beautiful gardens, lovely stretches of country, groves of trees, cattle on the meadows, streams and rivers, and the sea in its tempestuous loveliness, of storm, or when with soft murmurings it is hungering for calm. He who renews our pleasure by depicting such scenes should not be called dull or prosaic. No, he is not called dull or prosaic by the true lover of art.

The above remarks have been made by

way of a prologue to the excellent work which it is our privilege to give our readers this month—work which is a confirmation of Goethe's words, "*I found I had made a drawing of great expression and very correct design without having put in anything of my own.*"

There is no necessity of putting in anything of our own to make a scene delightful, but one thing is necessary without which there will be no beauty to delight us, and that is the possession of taste and feeling in the selection of the actual in nature. We have often said in these pages, and we are not afraid to repeat it, that we are convinced that photography can achieve anything, provided the soul of the artist guides the camera. The excellent examples of which we give miniature reproduction, bear witness. The entire work, from the exposure of the plate to the mounting of the finished print, was performed by amateurs. The photographs are marvels of tone and finish. The artists who made them are citizens of San Francisco and vicinity, and the scenery the beautiful shores of the Pacific Coast.

It is hardly necessary to say that they are instantaneous views. How much vigor and beauty of conception they possess. There is a transparency and, at the same time, a moving power in the mass of water, and the surface of the waves is illuminated with beautiful reflections. Nothing has been added to these pictures. They are just as nature presented them at the instant of time they were taken, yet how full of expression. The centre view is all life and animation—even the dust raised by the horses' hoofs has been caught in its whirling motion, giving an additional charm to the view. We cannot but wonder at the extreme sensitiveness of the plates upon which these views were taken. One of the pictures represents a rock off the coast covered with sea fowl. The air also throngs with them, yet the highly sensitive film has secured all this without a blur—even the plumage of the birds is minutely detailed.

The Passavant dry plate has a wide and well-merited reputation for combining extreme rapidity with brilliancy, softness, and

delicacy. They translate, with vigor, the details in the dark portions, and give a mellowness in the high lights and a softness in the gradations of intermediate tones, which cannot but result in a beautiful and harmonious negative. Landscapes taken upon these plates preserve that air-drawn distance which softens without obscuring the far-off horizon—that is, they give that quality of atmosphere which renders a view, whether a painting or photograph, so charming that we seem almost to breathe the air with which everything seems suffused.

We could have given our readers a better idea of the individual beauties in larger views, but then we would have failed to have presented the variety of conception so admirably manifested in the representation of marine views. Our design was to give studies (we say it with all deference to the fine work before us), and to show how a feeling for art can create a thing of beauty from the material which nature presents at any one point of time or portion of space.

The paper upon which these reproductions are made is the celebrated N. P. A. albumen paper furnished by Messrs. E. & H. T. Anthony & Co., of New York.

REVIEW OF PHOTOGRAPHS IN PHILADELPHIA PHOTOGRAPHER FOR 1884.

(OCTOBER, NOVEMBER, AND DECEMBER.)

BY CHARLOTTE ADAMS.

IN a vein of modern realism is the plate which forms the frontispiece of the October number. It is especially noticeable for the excellence of its texture-rendering. The peculiar lustre of silk, the dusky softness of velvet, are here given with a just appreciation of their artistic relative value and of their intrinsic interest. The shining surface of the long kid gloves, the hair of the fur rug on which the figure is seated, are literally reproduced, but are in no sense obtrusive. These accessories are kept well subordinated to the figure. It is not the photographer's fault if the subject has chosen to array herself in a heavy, unbecoming sort of costume, which, with its large masses of lights and darks, overweights her dainty little figure. Any one who glances casually

at this plate can see that his attention is at once arrested by the large, abruptly contrasted masses of black and white that form the lower part of the photograph. The artistic interest is illegitimately concentrated on these meaningless garments, much to the injury of the head. How great would have been the gain, artistically and technically, if the subject had only had wisdom and tact enough to dress herself in some costume which had the precious quality of unobtrusiveness. Of course, the operator, in taking a portrait-photograph, cannot be held accountable for the mistakes in dress made by his sitters. The lighting of this figure is not, however, entirely satisfactory, and here the responsibility of the photographer comes in. He might, to a considerable extent, have neutralized the obtrusive effect of the skirts, by focussing the lights on the head and shoulders of the figure. Another way would have been to introduce large masses of white into the background, to repeat those in the draperies, and to have accented the head more strongly, to force it into bolder relief between the upper and lower masses of light. There is considerable good work shown in the details of this plate. The flowers of the bonnet and the fringes of the drapery are given with delicacy and precision.

A very artistic piece of work is the figure of Mrs. Langtry as Galatea, which accompanies the November number. It has the plastic quality, but it has also the vital human quality. We see before us Mrs. Langtry the woman, as well as Mrs. Langtry the actress, and, for the time being, the model. The pose is admirable, whether the merit be that of the beauty or the photographer. Operators who have actresses for subjects possess, as a rule, an advantage over other photographers, for actresses, from their stage training, are virtually professional artists' models, and, in matters of pose and drapery, instinctively carry out the ideas, or even the faint suggestions of the operator. No photographer could wish for a better model than Mrs. Langtry, and in this plate she has received full justice. It is rather a pity that so artistic and well handled a figure should not have more consistent surroundings. If the background

had been a united space of darkness, without any suggestion of form, the figure would have been thrown into stronger relief, and the statuesque effect would have been added to, rather than, as here, detracted from. The Brussels carpet, with its geometrical designs, forming broken masses of lights and darks, is a sight to make gods and men weep. How much better would it have been to have mounted the figure on a pedestal of simulated marble, or to have covered the carpet with some dark material, unbroken by light lines or forms. With the technique of the figure there is no fault to be found. The finely modelled neck and arms are faithfully reproduced. The small crimped folds of the classic garment are given with due sharpness and accuracy, as well as appreciation of their artistic value, but the photographer has successfully resisted the temptation to accord them undue prominence in the scheme of the picture. The artistic, as well as the technical, interest is, very properly, concentrated on the head and shoulders. Excellent work is shown in the arrangement and execution of the classic mantle held on the left arm. The little acorn ornament forms an excellent accent, repeating the slight accents formed by the girdle, the shoulder-fastenings, and the Greek block bordering about the lower edge of the garment. The head is well handled. It is at once firmly and solidly modelled, broad in general impression, and yet carefully executed as to detail. In the head the human element prevails over the plastic. It is full of character and expression. Every feature is instinct with spirit and intelligence. This figure is quite equal to the best London photographs of Mrs. Langtry, and much superior to most of the American.

In the December number we have a very complete example of the modern realistic treatment of children in photography. In nine cases out of ten the photographer who handles children's portraits will do well to make his plates smell of the studio as little as possible. Very few photographs of children possess the naturalness, simplicity, and lack of affectation which should characterize them. To begin with, the fond parent or guardian is determined that Tommy or Mamie shall appear to the best advantage,

and, if possible, in a more or less ideal aspect. This alone makes Tommy or Mamie rebellious or submissive, according to individual disposition, and little pirates and little prigs are equally trying to the operator. The photographer himself, with an eye to business, naturally idealizes his subjects and their accessories, in order to appeal to the vanity of the pecuniarily responsible parent. To this tacit agreement between parent and photographer may be attributed the numerous horrid little monstrosities that fill the photographer's show-windows. The parental mind is seldom educated up to the appreciation of photographic realism where its offspring is concerned. Hence comes the love of pseudo-artistic accessories on the part of parents and photographers in children's portraits. Some of the least artistic work produced by American photographers lies in the direction of children's portraits. This is by no means always the fault of the photographer. He cannot spend his time struggling against the tide of popular taste, nor in instilling the rudiments of a theoretical art-education into the minds of the well-meaning customers who want their money's worth in the way of fanciful adornments, such as chairs, tables, baskets of artificial flowers, and gift-books, for the proper setting off of Tommy's charms. Tommy in private life may be a freckled-faced, shock-headed, rowdy, jolly little piece of humanity. But what average American parent would wish to have his Tommy handed down to posterity in such realistic fashion? His own yearning after the ideal expresses itself in a desire to give Tommy the advantages of a liberal photographic setting. So Tommy is oiled and soaped, thrust into tight new clothes, and his best boots (that are awfully stiff), given a clean pocket-handkerchief, and told to look as if he were saying his Sunday-school lesson. All this naturally puts Tommy in a very pleasing and Christian frame of mind. He goes to the photographer's as if he were on his way to the stake, and before he is many minutes older he finds himself pilloried, by the joint agreement of parent and photographer, between a gorgeous armchair and an equally gorgeous sofa, with a portiere behind him, that looks like a bed-quilt, large jars of flowers

disposed about his small person, and, perhaps, a photograph album under his elbow. There's nothing mean about this photographer, thinks Tommy's parent, and his commercial soul rejoices thereat. Tommy's portrait, when it finally emerges from the photographer's hands, all crisp and shining, is welcomed with admiration, and is enshrined among the treasures of Tommy's family. Everybody is satisfied, except, perhaps, the photographer, who possibly has a spark of artistic conscience glimmering deep down in his soul, but as nobody cares in the least what he thinks, it doesn't matter at all.

The strong point about a picture like the plate accompanying the December number is its unlikeness with the general run of photographic Tommies, Tots, and babies. Whether the fond parent enjoyed some insight into the first principles of artistic photographic composition, or whether his yearnings for decorative accessories were overruled by a wise providence in the shape of a judicious photographer, we are not informed. In any case, it is an uncommonly successful photograph. So natural and simple is the pose that one is led to believe that the photographer has adopted the stratagem employed by so many artists in posing their models, in order to obtain desired attitudes or suggestions of the best aspect of the figure. They have a way of interesting the models in conversation or passing occurrences, so that the consciousness of the studio is eliminated from their minds, and, being quite at his or her ease, the model instinctively falls into desired or desirable poses. This is an excellent idea to apply to photographic posing, especially with children. It is much more effective than the innocent fiction of the photographer about the canary bird perched wherever the eyes of the infant were intended to rest—that good old fiction of our childhood's photographic days, before the instantaneous process had been born into the world. The memory of that fictitious canary bird comes back to me now across the years wafted on the smell of the once all-pervading collodion. The child of the present day is less afflicted with that awful odor in the process of having its features perpetuated for the benefit of a posterity that may never exist.

The lighting is another of the good qualities of this photograph of "Little Wee-Wee." The light falls on the right side of the face and on the right hand in such a manner as to cause it to assume the position of the focus of the composition. It also brings forward the front of the frock without producing an obtrusive effect. A less skilful operator, in giving due value to the mass of white forming the frock and the elaborate detail of the embroidery, would have exaggerated it and have injured its harmonious relation with the head. This operator, however, by his skilful manipulation of light, has given all the parts their just balance. The fine quality of tone visible in this plate has much to do with its success. A photographer who doubts the artistic importance of tone should compare this plate with the photograph of Miss Effie Ellsler, in the October number. One of the striking faults of that plate is its lack of tone, which gives the masses of white on the drapery such offensive prominence. In the portrait of "Little Wee-Wee" we also have a mass of white, but it is kept in perfect subordination to the rest of the composition through the excellent tone of that plate. The conclusion is obvious. The distribution of masses in the "Wee-Wee" plate is very good. They are, first of all, broad and united. This is one of the primary causes of the artistic success of the picture. There are no niggling details; no superabundant accessories to attract the attention of the spectator from the figure. The position of the mass of white between two masses of dark, slightly opaque in effect, is highly favorable. The value of an unbroken background, and particularly a dark one, is well shown in this photograph. Very skilful is the modelling of the hair. Here, again, much may be attributed to the lighting. The breadth of treatment does not interfere with the rendering of the separate masses of hair. The silky lightness, so noticeable in the hair of well-cared-for children, is here admirably reproduced. The skull is firmly grasped, and its bony structure is strongly felt under the hair. The modelling of the face is vigorous and soft. There is no trace of weakness in the flesh texture of either the face or hands,

but it has all the fineness and delicacy of epidermis that belong to children. The good surface rendering of this plate is well illustrated in the open-work embroidery of the frock. It is of the kind known to the contemporary female mind as "rick rack." The woollen texture of the table-cover is well given. There is an effect of solid relief noticeable in this plate which is very desirable. If photographers only understood the value of this quality they would endeavor always to infuse it into their plates. As it is, most photographs, especially portraits, have a flat look. It is only among the few photographers who understand the principles of art as applied to photography, that we may look for this essential quality of relief.

As a whole, the twelve plates accompanying the PHILADELPHIA PHOTOGRAPHER for 1884 are very creditable to American photography at large. Various schools and methods are represented in the series, and the professional or the amateur photographer can select from among the plates given such as are most in accordance with his own bias for purposes of study and self-improvement. The ambitious photographer should lose no opportunity for the exercise of the faculty of critical analysis, either with regard to his own work or that of others. He should note the points wherein each plate is deficient, and apply his perception of such deficiency in his own productions. Every professional photographer is supposed to possess a fair mechanical or technical equipment, but a knowledge of the theory of art has not, until recently, been regarded as an essential factor. It is a fact, however, that the best technical work is generally seen in plates which are artistic in conception and treatment, perhaps because a workman who is thorough in one particular is apt to be thorough in all, and ambitious to keep pace with the progress of his profession. We cannot have too much art in American photography, but it must be genuine art, not pseudo-art. Good art is based on essentials, and one of its first principles is selection. Even the best photographers do not always bear this fact in mind, if one may judge from their productions. A nice sense of proportion is another

fundamental requirement in the photographer, and yet how rarely do we find it even in the plates of men who have a high reputation for artistic work. This weakness is especially noticeable in realistic portrait photography, where, unless the operator be unusually keen of artistic perception, in nine cases out of ten, he will allow the accessories of costume or furniture to overweight the figure and diminish its force as the leading idea of the picture. The photographer should remember that the subject is always more important than the accessories of the subject, and that the technical and personal interest should centre in the head. Every photographer should endeavor to imprison upon his negative the intellectual, moral, and spiritual nature of his subject. A good portrait painter, even one who is chiefly concerned with the decorative, objective aspect of his sitter, always infuses into his portrait the hidden personality that reveals itself to him during the process of outward representation. A photograph is a portrait, and the attitude of the photographer towards his subject should be precisely the same as that of the painter towards his. The photographer has the advantage of being able to grasp his subject in an instant, and perpetuate the most fleeting expression, while, on the other hand, the artist has the opportunity of studying the personality of his subject during several sittings and drawing its latent characteristics to the surface.

GERMAN CORRESPONDENCE.

Opera Glasses and Moonshine in Photography—Application of Photography to Astronomy—Warnecke's Rapid Paper and Orthochromatic Plates—Societies of Operative Photographers and Journals—Influence of Moisture on Aniline Process.

Two things at present seem to be attracting notice in photography, to which hitherto photographers have not given much attention; they are, the opera glass lens and the moonlight.

Four years ago my pupil, Mr. Jahr, succeeded in taking by moonlight a photograph of the Garfield Monument in Cleveland. At that time he gave an exposure of from six

to seven hours, but to-day the thing can be done much more rapidly. A young astronomer, Mr. Baltin, exhibited at the Society for the Advancement of Photography an interesting stereoscopic picture, made by himself, representing the fountain of the Potsdam Observatory with the surroundings. The picture was taken on the 26th of January at night during moonlight, upon the highly sensitive gelatine plate of Gädeke. He used for an objective a pair of opera glasses; the stop had a diameter of one centimetre; the time of exposure, was two and a half hours. On development the plate was laid, first of all, in a weak solution of soda. The exposure was a success, and scarcely to be distinguished from a negative of the same subject taken by daylight. One thing contributing to the success of the experiment, was the fact that the structure and surroundings were at the time covered with snow. This view excited great interest. The remark was made that amateurs used opera glass lenses. There was very often, to be sure, a focal difference in the two, which could, however, be easily corrected. The focal length amounted to about ten centimetres. Accordingly, in the case of the experiment of Mr. Baltin, the relative aperture was only one-tenth. No doubt, with a portrait lens, aperture one-third, the operation could be performed in a shorter time—that is, in the proportion of 3.2:10.2 or 9:100, therefore eleven times quicker, or in about fourteen minutes. It may, therefore, be perceived that the gelatine plate has made some progress, especially in sensitiveness, inasmuch as the same result at the present time may be effected in fourteen minutes, which four years ago required from six to seven hours. Moreover, the experiment has been made of attempting reproductions by moonlight. My assistant, Mr. Schultz Menke, recently took in full moonlight, with an exposure of two hours, a color scale. The results showed that bright yellow (Naples yellow) acts less energetically with moonlight than by daylight, confirming the fact that the moonlight in yellow rays is relatively much poorer than daylight.

It seems that the importance of the opera glass is not confined to the amateur, but

meets also with favor with the practical photographer. Mr. Haberland has taken groups with it under the skylight, and has achieved good results. He has also used it for instantaneous pictures. Astronomers are among the most zealous votaries of our art. The physical observatory at Potsdam, near Berlin, cultivates the science. Dr. Lohse, besides the great number of photographs of the sun (ten centimetres in size) intended for the registry of the sun-spots, has endeavored to make much larger pictures (thirty centimetres in diameter). He makes use of an artifice. He observes the sun through a telescope of peculiar construction; awaiting the favorable moment, he touches off the instantaneous shutter of the heliograph so that the exposure takes place. The number of errors occasioned by motion in the atmosphere can then be reduced to a minimum, and much time and expense saved. The earlier experiments of taking the photographs of the greater planets at the focal point of the great refractors has been continued. Dr. Lohse could also carry into effect the idea of receiving direct enlarged images in the instrument. It would necessitate the employment of a negative lens which would produce an enlarged image before being brought in combination at the focus. The employment of such a lens has the advantage that the camera placed on the ocular end need not be so long as with the use of a positive lens. Inasmuch, as at the end of October Mars and Jupiter were very close together, Dr. Lohse had taken a number of exposures of the two planets with a regular progressive time of exposure upon the same plate to make a comparison of their photographic effects. On the 5th of May, the same observer had, with reference to the solar eclipse the next day, taken a series of exposures upon the sun's surroundings, which were later compared with the corona photographs taken during the eclipse. The exposures were made with a Steinheil objective, and the necessary preparations taken in order to modify the intensity of the light of the sky to the corona light. To prevent injurious reflections, the plates were coated on the back with red collodion, or gelatine films were employed instead of the plates.

The photographic novelties of Warnecke & Co. are attracting attention. First of all, we must mention the rapid paper. We are informed that the paper is principally covered with chloride of silver gelatine emulsion. The importance of chloride of silver emulsion has for years been underrated; now it is looming again into importance. The paper has in this place been repeatedly tried. It has been found that short exposures do not give pleasant tones. Some of them are very unpleasant by daylight. With full exposures we get pictures which tone better in the gold bath. Whether the paper in its present state will satisfy the demands of practical photographers is an open question, but no doubt it has a future. Warnecke & Co. also make orthochromatic plates, prepared according to a formula of Abney's, demanding in application, like azaline plates, the employment of yellow glass. The orthochromatic plates do not appear to possess great sensitiveness. A plate which required two seconds for exposure without the yellow glass, required five minutes with it, that is, one hundred and fifty times as much. Azaline plates require with yellow glass only six times as much exposure as without, and with the new orange-colored yellow glass only three and a half times.

As is well known, we have now very many photographic associations. The operative societies, in especial, are growing in importance. At present the Vienna Operative Society has three hundred members. It has its own publication, called *Der Photographische Mitarbeiter*, a journal for photographic operators, retouchers, etc., edited and published by Hans Lenhard, of Vienna. It appears monthly, and is devoted to the interest of the operative fraternity. The Society of Operative Photographers in Vienna employ this journal as their organ. At their general assembly on the 23d, they resolved to take in the name of the Society three hundred copies and distribute them free of charge to the members. I may mention in connection that the older Vienna Society has given up its semi-monthly issue, and has returned to the monthly, in consequence of which Vienna has now three monthly journals.

Recently my assistant, Mr. Schultz Menke, made a very interesting observation of the effects of dampness upon aniline prints. We had prepared for the first time in our new institute aniline prints after the well-known Willis process. We used the formula which we had been using for the last twenty years with success, but for the first time had a complete failure. The pictures would not develop. By accident Mr. Schultz Menke breathed upon the exposed pictures which were in the fuming box, and at the same instant the picture appeared with great rapidity. Dampness, therefore, doubtless plays an essential part in the development of these pictures. In the old high school the place was damp; in our new institute everything is dry. I have received repeated inquiries from America concerning the failures with this process, which is used much for tracing. I am, therefore, convinced that want of moisture in the fuming box is the cause, and would, therefore, recommend the employment in the box of blotters dampened with water.

Yours very truly,

DR. W. VOGEL.

BERLIN, March, 1885.

AN ANSWER TO AN AMATEUR.

THROUGH the courtesy of the editor of the PHILADELPHIA PHOTOGRAPHER, I would like to answer a question or two, asked by "An Amateur," in the March issue of this journal, and also to notice another article which appeared in the same number.

In the *Photographic News Year Book* for 1884, I published a formula for a hypo bath which can be used perpetually.

The formula is not my own. As near as I can remember, I got it from an old Beebe developer formula, but I believe I am the first who publicly advocated the long-continued use of a strained hypo bath. It is made as follows:

Hyposulphite of Soda	. . . . .	4 ounces.
Water	. . . . .	16 ounces.
Then add Citric Acid	. . . . .	30 grains.

Soon a sulphury precipitate will form, which, for convenience, I filter out, although it does not appear to injure the negatives if left in. When it is found that the

bath works too slowly, a little hypo must be added. It sometimes happens that plates after development with pyro, are not thoroughly washed before fixing, and the hypo bath becomes so discolored with developer that the films are stained yellow, when this happens a few grains of citric acid must be added, and the negatives will again clear up dark gray. I have a bath of this kind which has been in use for two years, and it is still as good as when first made.

Except for hardening purposes, I do not find it necessary to use the alum bath; my plates are washed for two hours in a tray having a small stream of water running through it, and I have never yet, in six years' use of gelatine plates, lost a negative from hypo, but many of my acquaintances, who either wash plates a shorter time or washing them long enough, even by letting a tap stream fall on them and run directly off, have had many valuable negatives spoiled.

Under the heading of "Dots of the Day," attention is called to Mr. Rockwood's "new artistic idea" called "At Home Pictures," and the reader is made to infer that Mr. Rockwood is the originator of the idea. During the winter of the year of 1881, I conceived the idea of making portraits and groups at the houses of the sitters, and tried to get Mr. G. W. Davis, of Washington, D. C., with whom I then was, to introduce them. In March or April following, I began making them at Nantucket, Mass., with great success, as the good people of that place will testify to, and I advertised them in the papers of the place as "At Home Portraits," in which the subject could be taken surrounded by home subjects. Shortly after this I saw in one of the English journals that some one in Europe was doing the same thing, giving them exactly the same title. When the idea was put in practice by me, I was not aware that anyone else had ever thought of it. It may be so with Mr. Rockwell even now. As far as I know, I was the first to fit up for and practise that branch of photography in America, but if anyone else can show that he was ahead of me, I will yield the point of priority to him, but certainly not to anyone who began it since.

HARRY PLATT.

WHOSE HAND ARE WE IN?

EVERY expert plate photographer of to-day would probably confess that he was always best satisfied with himself when he could and did make his own bath and collodion in successful working order. Then when his patient became sick he could understandingly—it is fair to presume—administer the needed remedy. But with the average photographer of to-day how is it? Who makes your bath and collodion? Which, of course, simply means dry plates.

We were not favorably impressed when the gelatine plates were first brought into our gallery some three years ago, and declared that if this was the "new era," a very little of it would do us. But our operator had given his notice that he would leave if the plates were not forthcoming, and so they came and were tried, and we were both disgusted. We had, however, the consolation of saying to our patrons that the required time for sittings had immensely shortened up, and, in fact, their attention was called to this point more particularly than to anything else. The lighting process, however, at that time did not quite satisfy our patrons, who had visited our gallery from year to year and had pictures made; they could readily see the difference in the *quality* of work, and were not timid in their remarks. Explanations would not have been agreeable on our part, nor would it have been possible to have thrown the right light on the subject, and now to ease up on this part of the experience we are quite ready to confess that we think the albums throughout this section of the country show pretty correctly when dry plates were first introduced.

Who has not seen, in his experience (don't be afraid to own up), where the one left off and the other began. There is not such a great gulf between the two now, and the gelatine process (unlike some new things) has come to stay for a while at least. And now with this view of the case, the manufacturers of the plates—in whose hands we are so long as we buy them—would do well to remember some things: at the price they are getting for their plates, *better glass* should be used and

more pains should be taken in cutting the glass to fit the tablets. It is not pleasant for the artist to stop to cut down the glass to fit, and this should be done by the maker of the plates; we would suggest that the plates be cut a sixteenth part of an inch below the marked size. Does not your price for your goods pay you for taking this pains? We know you talk about your new holders, but we say cut the glass the *right size*. We find no fault with the price of plates, but would suggest on general principles and on chemical principles particularly, that in a process so difficult of manipulation as that of making *good reliable gelatine plates*, that the utmost care be taken and none but the most reliable painstaking skillful help be employed. We would also say to photographers—for their special benefit—that dry plates, when *properly made*, have all the chemical wealth of wet plates in point of results with anywhere from ten to twenty-fold speed added thereto, and, in fact, are but a continuation of the wet plates. We know there is a little more difficulty attending the proper toning of negatives made by this process, but a *thorough study* of light will surely bring its reward.

WARREN, O.

L. M. RICE.

GLEANINGS.

FROM a consular report addressed to the Minister of Commerce, we learn that several merchants of Marseilles have caused wines received from Algiers to be photographed. Photography, says the report, reveals adulterations of wines by the changes made in the crystals and in the color. If a wine has been diluted with water, and alcohol or sugar added, the presence of a greater abundance of crystals or salts will show it. Photography could also be used to detect wines containing fuchsine or other coloring matters, and, besides, to determine, with a certain degree of precision, the age, the source, and the condition of the liquid.—*Revue Photographique*.

At a recent meeting of the Photographic Society at Coventry, Mr. Baynton made known his process for preparing transparent positives with chloride gelatine for

use in the lantern. It is to Mr. Civrac that he owes the formula of the emulsion, and to Mr. Edwards that which is used for the developer; but the author has slightly modified them, as we shall see:

Nitrate of Silver,	30 grammes.
Water,	300 "
Gelatine (hard),	30 "
Chloride of Sodium (pure),	15 "
Water,	300 "

Soak the gelatine for a short time, and dissolve by placing the vessel in water at about 50° C.; heat the solution of nitrate of silver to the same temperature. Carry these two preparations to the dark-room, and mix them as is usually done for obtaining emulsion. Now cool by placing the vessel in running water. When the emulsion is cold it is washed, remelted, and filtered. All these operations are performed as in the preparation of ordinary gelatino-bromized emulsion. Expose to diffused light for about five seconds, more or less, according to the density of the negative. For the development take:

No. 1.

Neutral Oxalate of Potash,	60 grammes.
Chloride of Ammonium,	2.60 "
Citric Acid,	7.50 "
Distilled Water,	600 "

No. 2.

Ferrous Sulphate,	15 grammes.
Alum,	6 "
Distilled Water,	600 "

Add a portion of No. 2 to the same quantity of No. 1 (No. 1 should not be added to No. 2, otherwise the result would not be so satisfactory). If the plate has been properly exposed the result will be a print of purplish-black tone. If a brown or warm tint is desired, double the time of exposure and add to the developer its volume of pure water. In this case development is much slower. Fix by plunging the transparent plate in:

Hyposulphite of Sodium,	1 part.
Water,	8 parts.

And after fixing and washing allow the plate to remain for half a minute in a bath composed of:

Alum,	30 grammes.
Sulphuric Acid,	30 "
Water,	600 "

This bath dissolves and causes the disappearance of the opalescence left by the action of the oxalate. After this operation the plate should be well washed, dried, and finally varnished in the ordinary manner.

It is said that a new manufactory of the metal magnesium has been established at Charlottenburg, near Berlin, at which, by a process of electric reduction, magnesium is produced at the price of twelve francs per pound.

A DUTCH chemist, Dr. Beijernick, of Amsterdam, has made a discovery, which, at this time, attracts a great deal of attention. He pretends that the formation of gum in vegetables is a special disease, and that by placing a small piece of gum in an opening made in the bark of a tree, large quantities of it may be produced; in a word, it is a veritable inoculation.

ASTRONOMICAL photography has just made another step forward. A Polish scientist, M. Belopolski, informs us that the track of a comet among the stars may be more accurately studied by means of photography than by any other method. The place of the stars being fixed, whilst the comet travels with enormous rapidity, its course through the starry heavens may be reproduced during several successive nights, which would give the path with great accuracy. But for this it is necessary to use a special lens. After a great number of experiments, Mr. Belopolski decides in favor of the small English portrait lens as giving the greatest rapidity and the best definition. Although he used it without a stop, this lens, levelled at the milky way for an hour, gave him, perfectly well defined, the stars of the ninth magnitude. The diameter of a star of the ninth magnitude on the plate is 0.036 of a millimetre.

At St. Petersburg, it is said, the photographic business at this time is very dull. Not less than eighteen houses have been closed since the summer. On the *Newski*, a photographer announces that for the sum of seventy-five francs, paid down, he takes the engagement to furnish portraits at six different times during the year.

IMPERVIOUS PASTE.—Soak ordinary glue until it softens, remove it before it has lost

its original shape, and dissolve in ordinary linseed oil, on a gentle fire, until it acquires the consistency of a jelly. This paste may now be used for all kinds of substances, as, besides strength and hardness, it possesses also the advantage of resisting the action of water.—*Monde de la Science*.

A CORRESPONDENT writes to M. Andra, pointing out the fact that sulphocyanide does not dissolve alumed gelatine, and, therefore, could be used for fixing gelatine negatives. This product also would have the property of greatly facilitating the clearing of carbon prints.—*Paris Moniteur*.

ACCORDING to Captain Abney, the desiccation of gelatino-bromide plates is a subject of the highest importance. If desiccation is done slowly, plates are obtained liable to fog; if they be dried too rapidly, they produce blisters. What should be done to avoid this trouble? It is necessary that the desiccation should be done in not less than eight hours, and not more than twenty-four hours. It is indispensable, says Captain Abney, that manufacturers of these plates should conform to this rule.

PORTRAIT PHOTOGRAPHY; METHOD TO ENABLE A PERSON TO SEEK A SUITABLE EXPRESSION.—It is very often difficult, not to say impossible, to photograph certain faces; their mobility of expression, the tension of the nerves, cause them to make grimaces. An excellent way (which is not new, however) consists in making the sitters look at a mirror; but the difficulty in placing them in the exact position causes a loss of time, and this process is neglected. To obviate this difficulty, the mirror in question is movable, is mounted on a head-rest, and can be raised or lowered, as well as turned upon itself. At the top of its frame and in the middle is placed a small tube, from two to three millimetres in diameter, about ten centimetres long, and terminated by a cone serving as an eye-piece. The operator, placed behind the mirror, and looking through the small hole, points the appliance at the middle of the face of the sitter, and is sure that he can see himself without being obliged to put the question to him. To find the exact

angle at which the tube should be placed, nothing is easier. A wafer is fixed in the centre of the movable mirror, which is placed parallel at a certain distance. The small tube is introduced into an opening made beforehand on the frame of the small mirror; the tube is pointed through the opening at the wafer, which is reflected in the other mirror. The tube is now definitely fixed, and it corresponds exactly to the centre of the small mirror.

DR. E. A. JUST, manufacturer of photographic paper at Vienna, writes as follows:

"The general tendency, it is true, is to give a preference to everything that is cheap, and it is easy to understand that manufacturers, in order to compete, should be obliged to lower the quality of their paper; but it would never enter their minds to lessen the strength of the saline solutions in the albumen, the value of the salt being too small to be taken into consideration. The value of the substances necessary in the manufacture of albumenized paper—for example, double albumenized paper of ten kilogrammes—is in the following ratio: Paper, 4600; albumen, 1200 to 1900; salt, 8. It results from the examination of this proportion that manufacturers have nothing to gain in using less salt, but, on the contrary, there is much to gain as regards the paper and the albumen. As is well known, the paper mostly comes from the paper mills at Rives, and the manufacturers of this locality, knowing that it is impossible to give a good article at a low figure, keep up their prices, and furnish only excellent paper.

"As to the albumen, something might be gained by using a less dense solution and a thinner coating. But it seems that the impossibility, which many photographers experience, in obtaining brilliant prints of a purple tone, arises, on the one hand, from the quality of the albumen before the preparation, and on the other from the impurity of the nitrate of silver and of the chloride of gold, and, besides, from the manner of sensitizing. More attention should be paid to these points. The paper should be supple, and contain a certain amount of humidity, as then the albumen is already swelled, which facilitates absorp-

tion as soon as the paper is floated on the bath of nitrate of silver; and, moreover, the capillary attraction of the fibres of the paper is diminished. In order to obtain the purple tone and the desired brilliancy, it is necessary to observe what precedes, to use a rather brilliant negative, and an albumenized paper of good quality.

"In regard to the quantity of chloride in the albumen, it is admitted that its increase, within certain limits, can add brilliancy to the prints. But beyond these limits there would simply be a useless loss of the nitrate of silver. If a silver bath of 14 to 16 per cent. gives finer prints than one of 10 per cent., this is due rather to the influence of the free nitrate of silver than to the increase of the molecules of chloride of silver, which may be obtained in equal quantity with a much weaker bath."

PASTE FOR SILVERING.—Take

Chloride of Silver,	60 grammes.
Bitartrate of Potash,	200 "
Sea Salt,	400 "
Water,	100 to 130 "

Rub up very fine, so as to form a paste to be used by diluting with water, and applying with a brush.—*Munde de la Science.*

PHOTOGRAPHING SICK PERSONS.—It is stated that most of the French hospitals have now a photographic studio attached to the premises for photographing the patients at different times. The rapid dry-plate process is employed for this purpose, and there has been devised an electrically opened camera, which is found very useful in obtaining a series of views in rapid succession. Certain classes of patients are photographed on their entry into the hospital, and at regular intervals thereafter. In cases of hysteria, for example, it is said to be interesting to note the original contractions and compare them with succeeding ones, the photographs being all placed in an album for study of the disease, and for comparison with others taken from other patients. In this simple and convenient way the leading features of the ailment are made recognizable. The new printing processes also enable these photographs to be copied and distributed to other hospitals and medical men.

SOCIETY GOSSIP.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the regular meeting, held Wednesday evening, March 4, 1885, the President, Mr. Joseph W. Bates, in the Chair.

The minutes of the last regular meeting were read and accepted.

The Secretary reported that the Scovill Manufacturing Company had presented the Society with copies of the *British Journal Almanac* and of the *Year Book of Photography* for 1885, and also Vol. 14 of the *Photographic Times*. Also, that Mr. Edward L. Wilson had presented a copy of *Photographic Mosaics* for 1885. On motion a vote of thanks was passed for the donations.

A report favoring the holding of an exhibition of photographic prints during the fall or winter of 1885-6 was submitted, and a committee appointed to make all necessary arrangements for holding such an exhibition.

The Lantern Exhibition Committee reported that an exhibition had been given on the evening of February 11th at the Franklin Institute. One hundred and sixty-two slides, selected from the work of forty-two members, had been shown. The exhibition had been fairly representative of the work of the members. A second exhibition was in contemplation, to be held early in April.

Dr. Morris J. Lewis and Mr. Edgar W. Earle were elected active members of the Society.

The Charter and By-Laws, offered at the last meeting, with a view to the incorporation of the Society, were taken up for consideration. The form for the proposed charter was duly approved by the Society, and the committee, together with the officers of the Society, were directed to make application, in proper form, for a charter of incorporation. The proposed new by-laws were then considered and formally adopted by the Society.

Mr. Browne, on behalf of Mr. Smith, handed to the Society a framed copy of the latter's picture, called "Feeding Dolly," a very successful example of indoor drop-

shutter work. A vote of thanks was passed for the same.

A question in the box asked: "What is the relative strength of a saturated solution of carbonate of soda (NaCO_3), and concentrated ammonia (NH_4HO), specific gravity 26?"

The meaning of the question was considered indefinite. The strength of a saturated solution of carbonate of soda would vary according to the temperature, though it is generally understood that 60° is the standard temperature for such comparisons. The specific gravity of concentrated ammonia is .9, not .26. The querist is referred to an article in the *British Journal Almanac* for 1885, on "Alkaline Development," which would probably give the desired information.

Mr. Bell showed some prints illustrative of the subject of albumen stripping from paper caused by cold weather.

A print shown, on paper sensitized on a very cold day, had been given the usual preliminary washing, and was then immersed in salt and water, to redden it preparatory to toning. The effect had been to strip the albumen entirely from the paper, so that it looked like a plain paper print. There had been no stripping up to this time. The difficulty was obviated by adding to the sensitizing bath (which was a neutral one) a small quantity of alum. Another print on the same paper, sensitized in the same bath after the addition of the alum, was entirely free from the trouble.

Mr. Walmsley showed a "finder," or "view adjuster," ingeniously arranged so that it could be instantly altered for either horizontal or vertical pictures, by a lever which turned the rectangular opening, indicating the field covered by the camera, from a horizontal to an upright position, or *vice versa*.

Mr. Edge showed an exposing shutter, invented by Mr. Jarvis, of Chicago, as described by Mr. F. H. Davies in the *British Journal Almanac* for 1885. In compact form it was arranged in a simple manner for giving greater exposure to the foreground than to the upper part of the picture. By means of a rubber band the slide was thrown upwards, beginning the expo-

sure at the bottom first, and after ascending sufficiently to uncover the lens, it fell by its own weight, slightly aided by a light band, until the lens was covered again.

A number of good pictures were shown by Messrs. Edge, Cauffmann, and Reichner, also some lantern slides by Mr. Wood and others.

Mr. Carbutt, after adjournment for the purpose, illustrated by some experiments on the exposure and development of gelatinochloride opal plates and paper. The exposure was quickly made by the light of burning magnesium ribbon. Lamp or gaslight could also be used, but, of course, required much longer exposure. The development was then proceeded with, to the great interest of the members. The tones obtained varied according to the length of exposure given, great latitude being allowable in this respect. Long exposures gave warm, reddish tones, but required a more dilute developer, liberally restrained. The opal or paper prints could be toned to the same colors as albumen prints between developing and fixing, but should be developed rather red for this purpose. A combined toning and fixing bath was recommended.

Forty-eight members and five visitors present.

ROBERT S. REDFIELD,
Secretary.

THE ROCHESTER PHOTOGRAPHIC ASSOCIATION.—At a meeting held February 9th, the following questions were discussed:

Question 1st. Does varnishing a dry plate negative facilitate printing?

Question 2d. When is the proper time to spot prints, before or after burnishing?

Question 3d. What is the best lubricator for photographic prints, and how should it be properly applied?

Mr. Pomeroy said, in answer to the first question, that, as far as his experience had gone, it did not facilitate printing to varnish a dry-plate negative; it is a surface to protect the film, and it certainly would not facilitate the printing, as it would not make the negative print more rapidly; it is a very thin coating. He had never seen any varnish so transparent that it would not hinder the rays of light passing through it to a certain extent.

Mr. Lee thought there could be no question about it, as it is only another medium for the light to go through.

Mr. Knapp stated that, in his opinion, the varnish would make a wet plate print quicker.

Mr. Larned said that varnish, to a certain extent, reduced the negative.

Mr. Knapp asked if a negative was varnished in spots would it print in spots?

Mr. Lee thought that would be a good test, for if the spot is lighter or darker than any other part of the print, that would be a test.

Mr. Larned said he had seen a negative where a light line in the background had been perfectly retouched dry, and yet would print light after varnishing; it seemed to him as if the varnish reduced the negative.

Mr. Lee said it was possible that when the varnish is first put on the negative may appear to be reduced, but when it dried in it would be found different.

Mr. Knapp said his experience was just the reverse; that he retouched his negatives before varnishing them.

Mr. Fox remarked, in reply to the second question, there will be more or less spots come on a negative. He thought the spots should be removed before burnishing. He had had very good success in doing so, and had never had the least trouble with spots showing after burnishing, if they had been well touched out before burnishing.

Mr. Lee thought Mr. Fox's theory correct, that the spots should be removed before burnishing.

Mr. Larned, in answer to the third question, stated that, in his experience, dry Castile soap, applied with a Canton-flannel pad, had been found to be the best lubricator. A great many recommended using it in liquid form, but it tinted cards. He thought it liable to show streaks on the edges of the print, unless care was exercised in applying it.

Mr. Fox asked Mr. Larned if he rubbed the card that was to be copied?

Mr. Larned replied that he did, and that dragging on the edges of the card was thereby avoided.

Mr. Knapp thought that depended upon whether the print was dry or not.

Mr. Larned said care should be taken in the amount of soap used, how it was applied, and the heat of the burnisher.

Mr. Lee said the most difficult kinds of mounts to burnish are those called "bottle green." He had seen a burnisher so hot that it would drag a bottle-green mount every time, while an ordinary one would burnish in good shape with the same degree of heat. He thought there is more pigment in the bottle-green mount than in the primrose or light-colored ones.

Meeting adjourned.

SOCIETY OF AMATEUR PHOTOGRAPHERS OF NEW YORK.—A special meeting of this Society, devoted entirely to the exhibition of lantern slides, was held at their rooms, 1260 Broadway, on Tuesday evening, February 24th, at eight o'clock.

The new lantern constructed for the Society was used for the first time, and gave a large and well-illuminated screen. This lantern contains the $6\frac{1}{2}$ "Ross Condenser," made to the order of the late Dr. I. I. Hays, the Arctic explorer, and purchased by the Society from Mr. E. R. Rockwood. The front portion of the lantern carrying the objective is made with bellows body, and so arranged that any lens can be used as on a camera. The body is of Russia iron. A "mixed" jet is used, which is, of course, adjustable as to distance and light relative to the condenser. The whole is on a neat walnut stand supported by brass pillars, and is adjustable by levelling screws. The design of the lantern was made by Mr. Beach; the bellows front was made by the Scovill Manufacturing Company, and the jet, brass-work, etc., was furnished by Chas. Bessler, and the Russia iron by Shaw & Bailey. The lantern is so arranged that 4 by 5 and 5 by 8 plates can be inserted in addition to the regular lantern size.

The President announced the subjects and makers of the slides as they appeared upon the screen, and Mr. H. V. Parsell, Jr., manipulated the lantern.

A large number of slides sent by the Cincinnati Camera Club were first shown. These comprised views of steamboats and scenery on the Mississippi and Ohio Rivers, views in Cincinnati during the great floods,

and in the vicinity of the city under more favorable conditions. Several slides by Mr. Bullock were noticeable from the fact that he himself was included in the picture, exposure having been effected by a shutter on the "Cadett" principle, actuated by pressure of a bulb held in the hand through a long and fine rubber tube. A view in the hunting field, showing the dogs in the act of "pointing," and the sportsmen ready to shoot, was particularly good, needing only the birds to rise and be shot to make it complete. Other slides were of scenes around Lake George.

These slides were principally from negatives of Messrs. E. J. Carpenter, George Bullock, Carson, Rochester, and Frome. The slides were divided between the wet and dry processes.

The work of members was then introduced.

Mr. Randall Spaulding sent some views of Montclair, also of Arizona and New Mexico.

Mr. Neefus showed a dozen copies from engravings and photographs, which were very well done.

Dr. P. H. Mason, of Peekskill, showed views of the State Camp at Peekskill, and a schooner opposite the Highlands of the Hudson.

The finest work of the evening was unquestionably that of Mr. Brush. His slides included views in the White Mountains, of which one was the "Notch," and that of the profile face called "The Old Man of the Mountain," were especially excellent; several views in Watkins Glen and in the vicinity of Fortress Monroe. Of these latter the "Virginia Creeper," a country cart "steered" by a sun-bonneted female, and a discontented looking ox harnessed between the shafts, was good in every way; and another, entitled "A Dark Subject," was a portrait in easy attitude of a "berry black boy," and called forth laughter and applause. A superb slide of Trinity Church, Boston, should also be mentioned.

Mr. Brush also showed a few reproductions from foreign slides, which, to all appearances, were quite equal to the originals. Mr. Brush uses both the albumen and chloride plates. The latter gave very

pleasing results, as also in the case of three slides by the President. These had a peculiarly warm tone, illustrating the range of color obtainable with these plates.

Mr. Beach spoke of the ease with which slides can be produced on chloride plates, and advised members to try them. He used the developer as recommended, only diluted with an equal amount of water.

Mr. Mapes sent a few views of scenes on the Long Island Shore, and a good shutter picture of a lawn-tennis game.

Some slides by Mr. Cullen, of yachts racing, elicited applause.

A set of views of the New Orleans Exposition, made by E. L. Wilson, of Philadelphia, was then shown, and the entertainment was then brought to a close, owing to the lateness of the hour.

Over two hundred slides had been shown, and the supply was then not exhausted. The slides left over will doubtless furnish material for a future meeting.

Credit is particularly due to Mr. Beach for his energy in getting the lantern completed in time to be used, and to him and Messrs. Parsell and Robertson, of the Committee of Arrangements, for securing and arranging the slides.

There was a large sprinkling of ladies in the audience, and it was the universal verdict that the first exclusively lantern meeting was a success in every way.

SOCIETY OF AMATEUR PHOTOGRAPHERS OF NEW YORK.—Report of the regular meeting of March 10, 1885. President Beach in the Chair.

Messrs. James C. Wagstaff, J. H. Maghee, Edward M. Franklin, C. C. Roumage, Jr., and George Boynton were duly elected members of the Society.

The Secretary read the following reports:

The Committee on Books and Current Publications acknowledged the receipt of *Watzl's Monthly*, from Richard Watzl; *American Carbon Manual*, by E. L. Wilson; *The Tannin Process*, by C. Russell; *A Popular Treatise on Photography*, by W. H. Thornthwaite; *Photographic Manipulation*, by S. R. Divine; *The Silver Sunbeam*, by J. Towler, fifth edition, from Mr. F. C. Beach; *The Chem-*

istry of Light and Photography, by H. Vogel, from Mr. C. W. Canfield; *British Journal Almanac and Photo News Year Book*, from the *Photographic Times'* publishers; *Manuel de Touriste Photographe*, by Léon Vidal, from Mr. Thos. Bolas, through Mr. F. C. Beach; also the *St. Louis Photographer*. Jos. S. RICH,

Committee.

REPORT OF COMMITTEE ON DRY PLATES.

MR. PRESIDENT: During the past month your Committee have received one package of plates from H. F. Neidhart, Chicago, Ill.; three packages from the St. Louis Dry Plate Company, and two packages from the Cramer Dry Plate Works.

They have partially tested twenty-two different brands manufactured by twenty different makers. The number of tests made was one hundred and nineteen; thirty-two of which were made by sunlight, twenty-four by Warnerke's luminous tablet, and sixty-three by the kerosene lamp and radiometer. The kerosene used in these tests is 150 degrees fire test. A board of officers appointed by the Secretary of War in 1879, of which one of your Committee was a member, made a careful and protracted investigation of various oils by different tests and experiments. The oil now used by your Committee is the oil recommended by that board, and now used throughout the army.

As these tests are still incomplete it is hardly practicable or just to report partial results, but any member of the Society will find the record of all tests made, in the dark-room, which is always open for inspection.

The Committee have plates from twenty different manufacturers, eighteen of them located in the United States, one in England, and one in Belgium.

In testing these plates, the developer recommended by the maker of the plate is used, also a standard developer composed of

Water,	1 ounce.
Dry Pyro,	2 grains.
Carbonate of Soda,	5½ "
Sulphite of Soda,	11 "
Carbonate of Potash,	5½ "
Yellow Prussiate of Potash,	5½ "

Among the developers recommended by the plate-makers, nine are ammonia, seven soda, six iron, two potash, and two soda and potash. With only two or three exceptions we found the standard developer more powerful than those recommended by the plate-makers. In one case where the plate-maker's developer showed fifteen as the last number with a Warnerke screen, the standard developer showed twenty with the same exposure.

Apparently, the yellow prussiate of potash in the standard developer allows us to use less pyro. In one case two grains of pyro in the standard developer gave as good results as five grains in the maker's.

We find the standard developer works well with every plate so far tested, although it requires a bromide on some of the extra-sensitive plates to prevent fogging.

Some use the very uncertain and indeterminate saturated "solution," while the majority neglect to state whether their salts are to be used dry, granulated, or crystallized. As some of these crystals contain over sixty per cent. of water, it would seem that a developer made with them would be much weaker than one made with granules. It is claimed by some, however, that crystals are as potent as granules weight for weight. Your Committee hope to report fully upon this point at a future meeting.

The formula for the soda solution accompanying the Seed plates is as follows:

Water,	30 ounces.
Carbonate of Soda,	10 "
Sulphite of Soda,	10 "

At a temperature of 59 degrees 30 ounces of pure water will dissolve about 19 ounces of carbonate of soda. The same quantity of pure water will dissolve about 7½ ounces of sulphite of soda. In the above formula, if the carbonate is first dissolved in the water, we will have a half-saturated solution, and upon adding 10 ounces of sulphite more than half of it will be undissolved, and, therefore, wasted. If, on the other hand, the sulphite is first added to the water, we will have a saturated solution and 2½ ounces undissolved. Just how much carbonate this saturated solution of sulphite will dissolve requires a careful

chemical analysis to determine. This formula gives a wasteful solution of variable and unknown strength.

The improper packing of plates is the cause of serious expense and annoyance to amateurs.

In most cases a pair of plates is placed face to face, separated by a pasteboard mat. We have tested a number of these mats, and also the boxes in which the plates were packed, and in every case found them heavily loaded with hypo. The effect upon the plate in some cases is most serious. In one case it had fogged seven-eighths of the plate, and caused such a deposit of metallic silver that the negatives looked like fine daguerrotypes.

This evil can be remedied, possibly cured, by varnishing the mats after they are cut, and also varnishing the inside of the boxes. In addition, the plates should be wrapped in "needle" paper, which is entirely free from hypo.

We feel confident that the majority of our plate-makers do not realize the injury to their plates and reputations occasioned by their packing boxes.

Respectfully,

H. J. NEWTON, Chairman,
 DR. JOHN H. JANEWAY,
 D. H. WALKER,
 C. W. DEAN, Secretary,
 Committee on Dry Plates.

A bottle of the Seed developer, showing one-third of the salts undissolved in the bottom, and a sample plate spoken of in the report, were passed around for examination.

The form in which the Committee on Dry Plates have stated the formula for the standard developer does not give particulars as to how the developer is prepared. We here give the correct proportions for mixing. The chemicals are dissolved in the following order:

No. 1.

Water,	32 ounces.
Yellow Prussiate of Potash (480 grains to ounce),	3 "
Carbonate of Soda, dry or granulated (480 grains to ounce),	3 "
Carbonate of Potash (480 grains to ounce),	3 "

No. 2.

Water,	32 ounces.
Sulphite of Soda (480 grains to ounce),	3 "

For ordinary use, on a properly exposed plate, $\frac{1}{4}$ ounce of No. 1 is added to $1\frac{3}{4}$ ounces of No. 2, and, lastly, 4 grains of dry hypo. If the plate is over-exposed, the quantity of No. 1 may be diminished to a few drops and bromide added. If under-exposed, No. 1 may be increased four times without danger of spoiling the plate.

The President: I have a sample of pyro here which I presume a number of you have already seen. It is made by compressing the pyro into tablets. The amount in each tablet is exactly two grains. I have tried it, and I find that it works very nicely. It is a great convenience for those who travel to have the pyro in this form. It is sold under the name of "Pelletone."

I have received a letter from Mr. Henry Smith, of London, in regard to the international exchange of lantern slides, and it may be of interest to you to state that he has made a proposition that negatives and positives be made of such a size that they can be used in contact printing. That would be about $3\frac{1}{2}$ by $4\frac{1}{4}$, and he proposes to limit the number of members to twenty-five.

I think all members of this Society, especially those who wish to join, should have the privilege. Two methods of distribution are proposed. One is to divide up the aggregate number of negatives and positives which are received, and distribute them among the members who will take the copies, and after they have taken the copies of the lot they will return them to a central office, as you might say, and from there be again redistributed until all have had a chance to copy them. Another plan is (instead of sending out the negatives and positives in lots) to keep them at one place, and for one person to take, say, a thousand or more gelatine plates of a certain brand and expose them to these positives and negatives, a certain number being intended for each member of the exchange, then pack them up and send them off to each member, who will then develop his own transparencies or lantern slides. I should prefer

that simply lantern slides be exchanged, with the privilege that any member desiring to make copies could keep them for that purpose. That, I think, is the most feasible plan. Mr. Smith suggests, that allowing each member to be entitled to 125 exposed plates, it would, in the aggregate, amount to a consumption of 3125 plates, which would be a good thing, no doubt, for some manufacturer of dry plates.

I am also glad to call your attention this evening to the presentation prints, although I do not know that we have quite as many as we expected; still, for the first attempt, it makes a very fair showing. Judges have been appointed to decide in regard to the prints, who are as follows: Mr. Abraham Bogardus and Mr. Chas. A. Needham. I believe Mr. Needham is present this evening, and he will report the award.

Mr. C. A. Needham then read the report of the Judges on the Presentation Print.

The pieces of most merit were found in landscape and still-life.

The picture which received the presentation title is "A Winter Scene on Orange Mountain," made by Mr. Randall Spaulding, of Montclair, N. J.

Dr. J. H. Janeway exhibited a model of an instantaneous shutter which worked with great rapidity, and remarked that any amateur with a pocket-knife and a pair of strong scissors could make a similar shutter in an evening at a very trifling cost, which would answer almost all purposes required of a shutter. The only expense incurred for this shutter was for the two spring hinges taken from tobacco boxes, they costing fifty cents. A piece of hard wood, $4\frac{3}{4}$ inches long, $3\frac{1}{2}$ inches wide, and $\frac{1}{2}$ inch thick, constituted the base, upon which were fastened at each edge strips $4\frac{3}{4}$ inches long, $\frac{1}{4}$ inch wide, and $\frac{3}{8}$ inch thick, grooved below to allow the drop to run, and above to receive the doors; cross-pieces fitted to these strips, one at the bottom, $\frac{1}{2}$ inch wide, and another $2\frac{1}{2}$ inches above the bottom of the same width, both grooved to receive the door. On the bottom cross-piece was fastened a spring with a catch to hold the doors closed, which can be worked either with the finger or pneumatic drop. On the upper cross-bar were placed two pins to

hold the rubber band used to accelerate the drop. The doors were $2\frac{1}{2}$ by $1\frac{3}{8}$ inches each, made entirely light-tight by a thin piece of pasteboard upon the edge of one, near the top, and on the inner side of each door was fastened a pin to hold the drop when in position. The doors were opened by the spring-hinge before mentioned, when the catch was removed, and thus released the drop. The drop is a piece of zinc 4 inches long by $2\frac{3}{8}$ inches wide, rounded at the top, with a hook fastened near the top to receive the rubber band. A wooden pill-box, with its bottom punched out, was glued to the back to receive the lens.

The President: We will now undertake to show the merits of the rapid printing process. I have a sample chloride print here which was sent from London. [It was passed around.] I desire to make a few remarks in regard to this paper, and at the close I shall have the pleasure of introducing to you Mr. Carbutt, of Philadelphia, who, with myself, will undertake a series of experiments with the paper.

Mr. Beach desired to call attention more particularly to the qualities of the paper, the advantages it affords the amateur, and how easily it may be prepared.

Unlike argentic gelatino-bromide paper, this paper may be toned to any desired color after development, which, in the opinion of some, is a great advantage. It does not fog during development; a bright yellow light can be used during the various manipulations, and the image stands out from the paper in better relief than is ordinarily the case with bromide paper. It seems to be a pleasing medium between the extremely rapid bromide paper and the ordinary ready sensitized albumenized silvered paper.

If, therefore, we can either make for ourselves, or purchase ready-made, a reliable gelatino-chloride paper which shall possess all the advantages of good silvered albumen paper, with none of its defects, something which can be readily toned and controlled, and be of so great a sensitiveness that sunlight will be unnecessary, and at the same time keep good till we want to use it, we shall have an article which will

aid us very materially and mark an advance in photographic manipulation.

Hearing of several favorable accounts of the paper, I was led to send for a sample, and recently received a few sheets from Messrs. Morgan & Kidd, of Richmond, England, named by them "Contact Printing Paper," and I propose to experiment to-night with this, and perform before you the operation of exposing, toning, and fixing, that you may observe the interesting changes which occur.

Mr. Beach then entered into a demonstration of the working of this paper.

After he finished the reading of the paper, the President remarked: Having said this much, I will now introduce to you Mr. Carbutt, and we will proceed in an informal manner to make some exposures here and illustrate the process.

Mr. Carbutt: Mr. President and gentlemen—It affords me much pleasure to be present this evening at the kind invitation of your President, and take part in what is to me the most fascinating part of photography, whether it be negatives or positives. Not only am I to assist the President in the demonstration of the merits of the paper, but also in some of my own manufacture, as I believe I am the first to undertake it in this country. (Applause.) Making positive prints by the chloride of silver development is not new. It is now over nineteen years since the attempt was first made to make a positive by gelatino-chloride paper. Some of you were probably in swaddling clothes at that time, as some of the members appear comparatively young men now, but even to many old photographers this is taken up as something entirely new, and only those who have kept up with the history of photography know what has been done in the past. A gentleman, whose name I do not now remember—a man well known in London photographic circles—once made the assertion that it was not possible to develop a latent image on chloride of silver paper. From 1856 to 1859, before I moved to Chicago, and while I was in Indiana, I remember I was then making experiments with chloride paper, and I was then following out the idea suggested by the gentleman in London who declared that it was impos-

sible to develop a latent image on chloride of silver paper. I exposed and experimented until a faint trace of an image was seen, and I then finished the picture with gallic acid slightly acidified. There is not the slightest trace of an image visible after the exposure is made on the gelatino-chloride paper now made use of, and by the advancement in the knowledge of photography, it is possible to develop a latent image on chloride of silver by the ferrous oxalate or pyro developers. So that to-night we can demonstrate to you that a latent image on chloride of silver paper is developable, and in order that we may have time, we will at once go at the practical part of it. Either daylight, gaslight, or the more actinic light of magnesium ribbon can be used, according as is most convenient. I am myself using magnesium light.

No questions being asked, the lights were lowered and the experiments begun.

Mr. Carbutt, taking an inch and a half of magnesium ribbon, held it about one foot away from a printing frame in which was a negative and a sheet of his chloride paper, while the President had in his printing frame a sheet of Morgan & Kidd's chloride paper four inches away. With a spirit lamp the magnesium was lighted and the exposure made. Development then followed, Mr. Carbutt's print coming up rapid and turning to a reddish-brown color, which was attributed to over-exposure. Mr. Beach's print proceeded slowly and was slightly under-exposed, but by developing for ten minutes the picture was well brought out.

In the meantime Mr. Carbutt had made several exposures and obtained some interesting effects. Without toning he produced clear black and white prints, which were much admired. He claimed that it was advisable, if possible, to do away with toning and produce a print of the proper tint at once by development.

Mr. Beach then toned his print, using Morgan & Kidd's formula; the manipulation was conducted under a bright gaslight, and was watched with interest by many members. After fixing in a hypo bath much stronger than was recommended, the print assumed a velvety black, and was

much more brilliant than the usual gelatino-bromide print.

Altogether the demonstration was quite successful and instructive, many members being impressed with the value and utility of the new process.

At the close of the meeting the President extended the thanks of the Society to Mr. Carbutt for his interesting demonstration.

PHOTOGRAPHY AND ART ILLUSTRATION.

RECENTLY I came across an old book published in this country at the beginning of the present century. The title-page announced the fact that it was finely illustrated. It was, therefore, with eagerness that I turned over the pages to see the promised treat of pictorial beauties. I could not resist a smile at the rude, quaint, and almost caricature representations. They were wood-cuts, and the lines were coarse and the lights and shadows great masses of black and white. Yet, no doubt, this book, as I was led to judge from its excellent and really beautiful binding, was regarded in its day and generation as a treasure, and commanded an extra price for its illustrations.

No doubt, wood engravers were scarce in the early days of our Republic, and the general public was not very exacting in its demands for artistic excellency. In truth, it is not much more than a century since the first illustrated serial made its appearance in the metropolis of London. It created a sensation; the press hailed it with enthusiasm; and it became all the talk of town and country.

Its success brought other serial illustrated works into the field, the progenitors of that host of illustrated periodicals, now the source of knowledge and the delight of millions.

Now-a-days we can open scarcely a book, even of the cheapest character, without finding illustrations which fifty years ago would have passed current for excellent artistic work and have been considered worthy of a place in some gentleman's drawing-room. Even our primers and school-books are enlivened with really choice and excellent cuts, so that school children have be-

come quite connoisseurs in judging of art illustration.

We need not remind anyone of the superb illustrations found in the higher class of periodicals, or of those beautiful reproductions of works of art of the great masters in painting and etching. It is no exaggeration to say that copies from celebrated works which twenty years ago would have taxed the ability of the best engravers to produce and have commanded hundreds of dollars in price, may now be bought for almost as many cents, and what is more marvellous, they translate the character and individuality of the originals more faithfully than the works which demanded so much skill and labor.

Now to what is all this due? In one word, to photography. By her magic touch the lines of beauty have been traced, and the thoughts and imaginations of genius have been removed from the confined sphere of a favored few and made the common delight of all. Emphatically, photography is a most helpful handmaid of art.

From the first discovery the value of its application to illustration was recognized and appreciated.

In the correspondence between Niepce and Daguerre, the former speaks of having perfected in an important degree his process of engraving upon metal plates. We know that the process consisted in flowing over a plate a coating of bitumen dissolved in some essential oil, allowing it to harden in the dark and then exposing it under a print to the direct action of the sun. The varnish is made insoluble by the action of the light upon those portions where it penetrated through the print to the bitumen, all the unaffected parts can be washed out with the solvent, and as only the insoluble parts remain upon the plates they protect the surface of the metal in those places from the action of the acid used in corroding it.

This was the first step towards the great processes of the present. All honor to Niepce for his discovery.

Experiment soon enlarged the knowledge of the investigators. It was found that the most valuable application of photography to reproduction depends upon the peculiar change induced by light upon bichromate

of potassa in connection with albumen or gelatine.

If an ordinary lithographic stone be covered with an albuminous solution mixed with bichromate of potassa, and if this liquid be allowed to dry spontaneously, the albumen, much as it may be altered in its nature, is not in its solubility, and a simple washing in warm water is sufficient to remove from the stone the greater part of the unaltered matter which the light has been unable to penetrate.

If the surface thus prepared be exposed to the action of light through the unequally transparent parts of a negative, a change takes place which is certainly not an ordinary coagulation, and to which the oxidation of the chromic acid doubtless contributes by rendering the albumen insoluble and causing it to remain on the stone in large quantities, the larger the more intense the exposure to the light has been. Thus charged, the albumen resists water as if it were a greasy substance. In this state it readily absorbs the ink which does not adhere to the other parts of the stone where the light has not acted; so that if a roller charged with ink containing soap, which lithographers call transfer ink, is passed over the stone, the ink adheres only to the albuminized parts, coating them with it in varying proportion as in an ordinary drawing.

It was noticed in this process, for which we are indebted to the genius of M. Poitevin, that the gelatinous coating of bichromate of potassa under the action of light lost the property of swelling up, which ordinary gelatine possesses, and that the film when washed with water became raised up in those parts not acted upon by light, while the other parts did not undergo any change. Thus, irregularities were produced upon the stone corresponding to lights and shades in the picture, so that the electrotyper was enabled to prepare a metal plate suitable for printing on an ordinary type-press.

The celebrated Albertype is based upon the principle evolved by M. Poitevin; a well-polished glass plate is covered with a solution of gelatine and bichromate of ammonia and albumen, which is exposed to light to make it insoluble in water. Upon this another coating is applied, composed of

gelatine, isinglass, bichromate of potassa, and a mixture of benzoin and tolu in alcohol. The prepared plate and a negative are placed in an ordinary printing frame and exposed to light. The plate is then removed and plunged in tepid water, by which the soluble parts are dissolved, the other parts being left in slight relief. When dry and oiled it is ready for inking with an ordinary lithographic roller.

The heliotype greatly resembles the Albertype, and is produced by pouring a hot solution of gelatine and bichromate of potassa with chrome alum, to make it hard, upon a plate of glass which has been previously washed. When dry the gelatine film is stripped off and placed in contact with a reversed negative and submitted to light. The film is now attached to a plate of metal and the superfluous chemicals washed out with water, leaving upon the plate so much of the gelatine as carries the drawing.

In this condition it is capable of yielding impressions from the press in the ordinary method of lithographic printing, the plate being alternately dampened with water and inked. The chrome alum so hardens the gelatine that it is capable of resisting the friction caused by the inking and the pressure employed.

The Woodbury process is named after its inventor, Walter Woodbury, of England. A leaf of gelatine containing slight coloring matter, such as India ink, is rendered sensitive by a solution of bichromate of potassa in water.

The film is then placed in contact with a negative and exposed in an ordinary printing frame to light. The gelatine leaf is now removed to a dark room and placed upon a glass plate which has been previously covered with India-rubber varnish, and then immersed in a bath of tepid water.

The water dissolves the still soluble portions of the gelatine, the whites of the picture, leaving the other parts unaffected. The film is removed and dried, and will be found to present a copy of the negative picture, the whites hollowed out and the shadows in relief. Two plates are now employed, the one of polished steel and the other of lead. The gelatine leaf is placed between these two plates and submitted to

pressure in a hydraulic press. It will be found that the lead is really more yielding than the gelatine, and has received a perfect impression of the gelatine picture which by the pressure is completely embedded in the lead. What follows is easily guessed, the lead impression is inked with a composition, consisting of gelatine and India ink, carmine being introduced to give a fine tone. The ink is applied warm. An impression upon paper has all the appearance of a beautiful photograph.

The beauty of Woodburytypes has made them especial favorites with lovers of artistic prints. They unite all the softness of a photograph with the permanency of an engraving.

The only objection to the old Woodbury process is, not more than a thousand copies can be taken from the lead without showing marks of deterioration. Mr. Woodbury's latest improved process, the stannotype process, obviates this difficulty. In it he dispenses altogether with the hydraulic press. The printing is direct from the gelatine mould, covered and protected by tinfoil. A positive is used in printing instead of a negative. A press of peculiar construction is employed, and the mould inked with a special ink, and a piece of prepared paper laid upon it and the press closed. The prints when dry are laid in alum and afterwards rinsed in cold water.

There are certain processes effected by a reticulation of the film of the bichromated gelatine. The best results in this direction are those achieved by Mr. Frederick Ives, of Philadelphia.

In reply to a letter of James Shirley Hodson, author of an excellent work on the subject of "Art Illustration," Mr. Ives describes his work as follows:

"My invention may be best described as a photo-mechanical process for producing direct from nature or from any object which may be photographed, a pure line and stipple picture, in which the shades of the original are represented by black lines or dots of varying thickness on a pure white ground, and which may be reproduced (in the same manner as a pen-drawing) by the ordinary photo relief and photo-lithographic processes. In short, it is a photo-mechani-

cal method for producing direct from nature an economical and superior substitute for pen-drawings.

"The line and stipple picture is produced in the following manner: A thin film of gelatine sensitized with bichromate of potassa, is exposed to light under an ordinary photographic negative of the object to be reproduced, then swelled in water and a cast taken in plaster-of-Paris. The highest portions of the cast represent the blacks of the picture, the lowest parts the whites, and the middle shades are represented by variations of heights between the two extremes.

"To produce upon the white surface of this relief an impression which will represent the variations of shade by black lines and stipple of varying thickness, an evenly inked surface of elastic V-shaped lines or stipple is pressed against it until the required effect is obtained.

"The process is confined to the establishment of Crosscup & West, of Philadelphia, and samples of the excellent work produced have from time to time graced the pages of this journal."

The excellent work of the Moss Engraving Co., of New York, is based upon the general principles given, but the inventors claim that their good results depend upon certain modifications which they hold secret.

We have only space to notice briefly the photograveur processes, the productions of which have been so admired by artists for the softness and delicacy of their tone and their gradations in light and shade.

Of all the productions of illustrations by mechanical means, these resemble most of all paintings.

Mr. Fox Talbot, to whom photography owes so much, was the first who took out patents for the production of photograveurs.

M. Goupil & Co., of Paris, are at present the principal workers of the photograveur process.

Mr. Leon Vidal describes the method as follows:

"A bed of bichromatized gelatine is exposed to the sun's rays through a photographic negative and afterwards washed in water. The image after the washing, and when the gelatine has become dry, appears as if formed of a more or less marked

grain in proportion to the intensity of the shadows. The gelatine is then firmly pressed against a sheet of metal, which takes the impression of the image which has been formed upon the gelatine. This impression, properly prepared, serves as a mould upon which, by means of the galvanic battery, copper is deposited. As soon as the required thickness is deposited, the plate is finished by cleaning and by such retouching by an engraver as may be considered necessary. If the plate be now subjected to the process of steel facing, an intaglio frosty surface is obtained from which a large number of impressions may be obtained."

THE NEW DEPARTURE IN PAPER PRINTING—CARBUTT'S GELATINO-CHLORIDE PAPER.

It is not necessary at this late day to remind any one that photography, as far as negative making is concerned, has in reality put on her seven-leagued boots, and that the old wet-plate process has been left far in the dim vistas of the past; but while our coursers have thus been spurred to their utmost speed, we have forgotten to look behind and discover that our chariot wheels of progress are clogged with an obstruction which no one has hitherto thought necessary to remove, that is paper printing. What progress have we made since the first formula for paper printing was given to the world? We have stood still. We may boast that we can take a negative in the fraction of a second, but hide our heads when we must acknowledge that it may take a day to print from it. Our silver paper makes us still the slave of old Sol. When he frowns, as he very often has done this winter, our poor paper prints must wait his gracious smile to body forth slowly the quick perfection of the lively negative.

We can imagine the active negative speaking in tones of reproach to the slow evolving silver paper. But courage! The star of progress is rising above the horizon. We are convinced that ere long the photographer will be able to print his photos by gaslight. What a boon this to the photographer pressed for time. We recently had the opportunity of witnessing a demonstra-

tion of printing upon the gelatino-chloride paper made by Mr. John Carbutt. The paper was exposed under a negative to ordinary light on a cloudy day for a few seconds; he also employed the light of burning magnesium wire, which immensely diminished the time of exposure.

The paper was then softened for a minute in clear water, after which it was treated to the developer formed as follows:

No. 1.

Neutral Oxalate of Potash, .	4 oz.
Neutral Citrate of Potash, .	1½ oz.
Chloride of Ammonium, .	80 grs.
Citric Acid,	120 grs.
Distilled or Water from Ice,	40 oz.

No. 2.

Protosulphate of Iron, .	480 grs.
Water,	40 oz.
Sulphuric Acid,	10 drops.

Fixing Bath.

Hyposulphite of Soda, .	4 oz.
Water,	20 oz.

Clearing Solution.

Water,	20 oz.
Pulverized Alum,	1½ oz.
Sulphuric Acid,	½ oz.

Take one ounce of No. 1 and one ounce of No. 2 and add one ounce of water; pour over the paper and move the dish as in ordinary development. The image will very soon begin to show itself and develop to perfection. If the paper has been rightly timed, a beautiful sepia tone will be produced full of soft and rich gradations; if the time has been a little full, a rich russet-brown is the result. Delicate purplish tones can also be secured by toning the print with gold, as with an ordinary silver print. The tones produced by the development alone are very rich and pleasing, but if the purple tones are preferred, with the use of the gold bath, care should be taken thoroughly to wash out the iron from the paper before subjecting it to the bath, otherwise there will be an unevenness in the tone, and the bath will be ruined. To prevent this, all that is necessary is to subject it to the clearing solution given above, let it lie in this for ten minutes, then wash before placing in the fixing bath, where it should remain ten

minutes, keep the prints in motion in the hypo solution as with ordinary silver prints. Wash after removal from the hypo and the operation is complete.

By amateurs this new departure in paper printing will be hailed with delight, especially as it has reached such perfection in the hands of Mr. Carbutt.

They can with ease print, develop, and finish their pictures, and in the end secure views which will delight them. The miseries attending the manipulation of silver prints has deterred many an amateur from undertaking the operation himself, and, consequently, he has been contented with blue prints in which much of the soft gradation and beauties of the negative are lost. With this new paper, almost as easy in manipulation as a blue print, he will be able to produce charming results which will faithfully translate the excellence of his negatives.

Mr. Carbutt has also favored us with a demonstration of the development of his opal plates.

The process is similar to the development of the chloride paper.

The sensitive film in exposed in contact with the negative to diffused or artificial light. The image should show gradually; if it flash out, either the exposure is too much or the developer needs a little bromide; one to three drops of a fifty grain solution of bromide to each ounce of developer has a strong restraining action in the presence of the citric acid and chloride of ammonium; for very warm tones, dilute developer with equal parts of water and add one or two drops of bromide solution to each ounce of developer, but be sure and give at least double the exposure; do not carry the development of the opals too far, as they loose very little in fixing. For a positive picture on opal, the development should be arrested the moment the detail shows in the high lights, and this is most effectually done by quickly removing the plate from the developer, and flushing over the surface a five grain solution of potassium bromide; this instantly arrests development and preserves the brilliancy of the image.

Wash and fix in solution No. 3, wash a few minutes and immerse for one minute in solution No. 4, wash thoroughly, and before

placing to dry go over the surface with a swab of absorbent cotton while water is flowing over it, then dry spontaneously. Opal plates with matt surface for artistic work are also made.

There are few productions of photography more pleasing than these opal plates. There is a softness and harmony in the gradations of tone and a brilliancy in the whole, which make it a pleasure to look at them.

OBITUARY.

On the 13th inst. suddenly passed away Titian Ramsey Peale, at his residence in Philadelphia, in the 86th year of his age. He was the last surviving son of Charles Wilson Peale, artist and naturalist, and founder of Peale's Museum in Philadelphia.

The subject of this brief memoir accompanied Wilk's Exploring Expedition as naturalist, and on his return was appointed examiner in the Patent Office, where he remained many years. He was one of the earliest amateur photographers in this country, and used his influence with the Government to introduce photography in several of its departments and particularly in the expeditions to the far West, and much of the early work done in that direction was due to his exertions. His leisure hours at Washington were often spent on Rock Creek and other picturesque spots around the city, and during the war the camps and military movements were favorite subjects for his camera.

His great age prevented him pursuing actively his pleasant pastime of late years, although he manifested a warm interest in the advancement of the art, and often remarked how much more he could have accomplished had gelatine plates been in use twenty years earlier.

He was a most genial companion, and his loss will be felt by a large circle of warm friends.

THE PLEASURES OF PHOTOGRAPHY.

BY XANTHUS SMITH.

A GREAT deal has been written both in prose and poetry about the pleasures incidental to the chase, and all that has been

said about the keen zest with which the sportsman and angler pursue their avocations is fully applicable to the amateur photographer, who sets out in search of subjects for his camera. The angler having bestowed much time, with his mind in an agreeable state of anticipation, upon the preparation of his rod and reel and flies, sets off at early morn, released from the confinement of his daily occupation, to ply his hook and line in the midst of beautiful and secluded nature; and the hunter, with gun and game-bag, roams over hill and dale in a delightful state of expectancy of what may rise before him, and by skilful aim become his prize; and the amateur photographer, while he also enjoys to the same extent all these pleasure-giving sensations, may besides be a most refined and sensitive humanitarian and rest happy in the consciousness that he destroys no life, and that while he plies his avocation, the finny tribe may be gliding and darting beneath the surface of the sunny brook, the furry, gambolling about him over the glade, and the feathered, warbling overhead, all in undisturbed enjoyment of the existence that has been given them. And then, too, to see how lasting the result of his efforts, not simply a meal or two, which though devoured with sharpened appetite, is soon to be forgotten, but a treat in store for himself and his friends whenever he may choose to go to his cabinet and bring forth his treasures.

The season is now approaching when many very picturesque and interesting landscape bits are to be got even in the neighborhood of cities, by those who have neither the time nor means to make extended journeys. The budding foliage of May, whilst it transforms nature from the desolate barrenness of winter, still admits of the seeing of a great deal that by the middle of June is shut out. The stems and limbs of fine trees, groups of picturesque buildings, and interesting peeps of distance are all swallowed up by midsummer in a dense green foliage, which is one of the least suitable things in nature to be photographed.

Those who are provided with an outfit should now be getting it in readiness. Every necessary together, in the neatest and most compact order, so as to be carried

in the easiest and safest manner possible, and so that nothing is likely to be forgotten at setting off. Complete as are the different kinds of apparatus furnished, there is still much room for improvement, and those who have any experience in photography will know what a constant rearranging, fitting, and adapting, are necessary in order to meet the various unlooked-for contingencies which are constantly arising, and which without both ingenuity and effort would stop out the chances offered by new and peculiar situations. See that your cameras are light-tight and your plate-holders absolutely so, and provide yourself with a reliable make of plates. Whatever may be said of others, Carbutt's are certainly so, and having arranged matters so as to secure a holiday for the first calm day, take a train to some station a few miles from town in a direction where there is, if possible, a rolling country with a stream. Where there are hills the farmer is able to do little, consequently nature has her own way. Take the course of a brook if you can. You will there find trees in greater variety and luxuriance—there the chances of encountering picturesque mills and old stone bridges occur, and the reflections of objects in the occasional flat passages of water add so much to the beauty of the scene, and, too, a foreground of water and rocks is one of the most interesting you can have. Do not be in a hurry—unless you have experience, and see some rare chances, then be as quick as the sportsman with his gun—but ordinarily go well about, selecting and comparing, and when you think you have a good subject, view it on the focussing glass of your camera from different points. You will always find that in order to gain one advantage or beauty, you must sacrifice another, decide which is the most important to be seized before exposing your plate.

Be provided with a lunch, not a great basketful, for you will have enough to carry without that, but a compact bite that will go in your pocket, for if in addition to the accomplishment of your object you are also to gain some advantage in health and strength by your trip into the country as well as enjoyment, you must not exhaust

yourself, and if you wish to do your work justice you will not have time to go hunting a public house and wait until a dinner has been prepared for you. And try and have an agreeable companion with you—one, if possible, interested in the same pursuit. One is better than two or three, if you wish to accomplish much, for the greater the number the more will be the diversity of opinion, and consequent trifling of time. Two can, however, work to much better advantage than one, for in addition to the assistance they may give each other in various matters, with a companion you will be emboldened to venture amongst surroundings which you might be inclined to avoid if alone. There is a humorous little sketch, accompanying some advertisement of photographic outfits, of an aroused bull dashing at an amateur, who with head muffled under the focussing cloth is all unconscious of his perilous situation. If you have chanced to have seen this, you will fully appreciate my meaning. Animated nature gives variety and interest to subjects, and you should court rather than avoid both man and beast, and as you will sometimes see little distinction between the two in your out-of-the-way ramblings, you will find the assistance of a friend of great advantage.

I think that nothing can exceed the zest with which an amateur sets out in search of subjects suitable for his camera or the agreeable state of expectancy in which he returns, keen to develop his plates and see what may be the result of his day's work, and if it should have proved successful, what a triumph to have succeeded in fixing some beautiful and transient effects of nature to be looked at for years and years to come, perhaps, and recalling each time all the pleasant associations connected with the attainment of them. Indeed, I wish that very many more than do, could understand and practise so innocent and instructive an enjoyment, and I am quite sure that there are many who never having thought of a camera as a source of amusement, could they but get a taste of its beguiling allurements, would not let a day pass until they had set about providing themselves with a photographic outfit.

Editor's Table.

PICTURES RECEIVED.—From Mr. JOHN E. DUMONT, of Rochester, New York, a number of highly artistic views of scenery in the northern part of New York State. These photographs are not only excellent technically, but give evidence of great ability in selective power. There is a just relation in all the parts of the picture, and the management of the light and shade gives beautiful effects. The deep portions harmoniously blend with the high lights, which seem to suffuse a softness over the densest parts of the picture. The mobile power of the water is true to nature, and the foliage well brought out. The distance has that fine atmosphere which softens without obscuring the far-off horizon. The snow and ice views are especially fine. One, of the Falls of Niagara in winter, is a superb picture. The ice has all the appearance of ice, and none of that harsh white effect and violent contrast which we too often see in winter subjects. Its translucent nature is beautifully shown. We are sorry we have not the space to speak of the individual merits of these photographs, which represent a variety of subjects, all of which are worthy the brush of the painter. From Mr. C. W. MOTES, Atlanta, Ga., a very beautiful photograph from life representing "Faith at the Cross." A sweet maiden with hands uplifted, clinging to the cross with an expression of trust and hope upon her face, makes up the simple picture, full of suggestion and photographic excellence. It is of the same class of work as Mr. MOTES's celebrated picture, "The Daughter of Danaus," and is surely worthy of the highest praise, though scarcely as pretentious a subject as the other. We congratulate our friend on his taste, which is decidedly superior.

It is astonishing what perfection the application of photography to illustration has reached. We have just received from Messrs. BACHRACH & Bro., of Baltimore, a beautifully illustrated pamphlet of the Levytype process of photo-engraving. It contains reproductions of fine drawings, etchings, engravings, etc. They are produced directly in hard type-metal, and can be employed on a printing press with the same facility as wood engravings, and have the advantage of being just as good and infinitely cheaper. The designs are very choice and

artistic and present a very pleasing effect in the color employed. For commercial and scientific work photo-engraving is fast taking the place of the old tedious and mechanical process, which in a few years will be left to the artist alone to impress the products of his genius upon.

THE BLAIR TOUROGRAPH AND DRY PLATE Co., of 471 & 475 Tremont Street, Boston, Mass., whose compact combination and reversible-back cameras are so well known to professionals and amateurs, have found it necessary, owing to their greatly increased trade, to establish agencies for special territories. Arrangements have been made with Mr. WILLIAM T. GREGG, of New York, and Messrs. BLAIR & PRINCE, of Cincinnati, to act as their agents for the respective territories. Mr. WILLIAM T. GREGG has recently opened a large establishment at 318 Broadway to accommodate a full line of goods, where a fresh stock of everything manufactured by the BLAIR COMPANY will be found. A large and commodious dark-room has been built for the convenience of customers, and a photographer of wide experience has been secured to take charge. The firm of BLAIR & PRINCE is one of recent organization. Their store, with basement, is located at 148 N. Fourth Street, one of the most popular thoroughfares of Cincinnati. They are well equipped with a large and choice stock of new goods, from the best manufacturers of photographic and dry-plate requisites. They have also a convenient dark room for the accommodation of their amateur customers. Mr. BONSSUR, late with Messrs. DOUGLASS, THOMPSON & Co., of Chicago, and formerly with Messrs. W. H. WALMSLEY & Co., of Philadelphia, has been engaged to assist in the business. Dealers can be supplied from either of the houses, in New York or Cincinnati, at the same rates as directly from the Blair factory.

MESSRS. WILKINSON & Co., of Sunderland, England, have brought to our notice their triple lantern, an instrument containing all the latest improvements constructed for producing every effect which makes the magic lantern so popular. The body of the lantern is of polished Spanish mahogany, with six rosewood panelled doors and mouldings, fitted with brass cells and colored glasses, two pairs brass rail-handles

to lift it by, fronts and stages entirely of highly finished brass, three sliding adjustments for focussing to various distances, twelve achromatic focus lenses, best four-inch condensers, top lantern removes and fits on to second base board, three best oxyhydrogen jets of improved and very solid construction (fitted with mitre wheels for turning lime), platinum points, etc. The jets fix on to turned steel pins, fitted in stout iron plates, sliding in dovetails. The new tri-axial dissolver, fixed on a brass plate which hinges forward and clamps, so as to come under the eye of the operator.

We have received a circular from the SCOVILL MANUFACTURING COMPANY, of New York, containing a description of a convenient form of pyrogallic acid. By compression this bulky material is made to occupy the smallest amount of space possible. There is no doubt of the popularity of pelletone, as it is called. It is put up in bottles containing one hundred two-grain (exactly two grain) tablets of SCHERING'S unrivalled pyrogallic acid. Everyone knows what a mess is made by having to weigh small quantities of pyrogallic acid every time that it has to be used, and one does not care to be always having recourse to scales and weights, especially the tourist when away from home. Numerous expedients to obviate this have been had recourse to, such as dissolving the pyrogallic acid in alcohol, or in water to which sulphite of soda, citric acid, nitric acid, and other agents have been added to prevent its oxidation, and these are all excellent in their way, although they entail some degree of preparation, and necessitate the keeping of solutions ready made up. It occurred to Dr. GEORGE S. SINCLAIR, of Halifax, that all the annoyances and difficulties inherent in such solutions could be entirely got rid of by having the pyrogallic acid compressed into small round tablets, each containing *exactly two grains*. Experiments were tried, and machinery made, the result being this great boon to the photographer—that in a small bottle may be carried a large number of these compressed pellets, each of which is precisely two grains. They are ready for use at all times; to make a solution of any definite strength, it is only necessary to measure out the water required, and to each one, two, three, or more ounces, add so many of these pellets, which quickly dissolve, giving a *fresh* aqueous solution of the acid, entirely free from any contaminating or preservative agent.

These tablets keep indefinitely, dissolve easily,

and, being made of SCHERING'S finest manufacture, can be implicitly relied on.

We have received a very touching appeal from Mr. J. V. KRAMER, a photographer of this city, a personal appeal for help from the fraternity. Sickness and accumulated misfortunes have brought this worthy man to the brink of absolute dependence upon the charity of the generous spirits of our profession. We are convinced that Mr. KRAMER would not make this appeal until every resource for self-aid had been exhausted. We can, from personal acquaintance, say that he is indeed a worthy object of sympathy. Any pecuniary aid may be sent to him direct, at 6048 Lombard Street, Philadelphia, or to the editor of PHILADELPHIA PHOTOGRAPHER.

IN our last issue in commenting upon the reduction in the prices of dry plates in America we stated that the reduction of twenty per cent. had been made from the price adopted by the dry-plate makers at their meeting held at the Metropolitan Hotel, February 10th. It should have been stated that the reduction was from the old price-list.

At a meeting of the Society for the Advancement of Photography, held at Berlin, the President (Prof. H. W. VOGEL) presented the various photographic periodicals, and drew the attention of the members to the important changes that have occurred in the publication of photographic journals. Hitherto the older American journals appeared monthly—since New Year the *Photographic Times* is issued weekly in folio size, and *Anthony's Bulletin* semi-monthly, under the direction of the renowned chemist, Prof. CHANDLER. On the contrary, the *Vienna Photo. Correspondenz* has changed from a semi-monthly to a monthly, but in larger form and with an illustrated cover. Besides this he made mention of the sad news that the publisher, Counselor Dr. E. HORNIG, was very much impaired in usefulness in consequence of a nervous malady, and hoped for his speedy recovery.—*Photo. Mittheilungen*.

It is with pleasure that we learn that a new association of photographers is to be established, called the Photographic Association of Fort Wayne. Its object is the mutual benefit of all members of the Society, and the general advancement of the art of photography. We wish them success in this enterprise, believing that there is no more effectual means of furthering the art than the mutual interchange of ideas which association calls forth.

Specialties.

MAKE OUT YOUR OWN BILL, and remit cash with your advertisements, or they will not be inserted.

ADVERTISING RATES FOR SPECIALTIES.—Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to *secure* insertion. Advertisers will please not ask us for recommendations. ~~45~~ We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement. **Postage-stamps taken.**

BACKGROUNDS.

Head and Bust, Three-quarter Lengths, Rembrandt's, Vignettes, etc.

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216 E. Ninth St., N. Y.

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My new studio is fitted up with all the modern improvements, and the most refined demands from a critical public can be satisfied. A visit to my establishment, which has the largest showroom, containing the greatest amount of stock of any place in the world, will be gratefully appreciated.

I have again added numerous new designs to my great variety of patterns for *backgrounds* and *accessories*, and keep also in stock a large quantity of goods for parties to select from, saving time and delay on orders.

Ask your stockdealer for one of Scofield's re-touching-pencil sharpeners, and one vignetting attachment on trial, or we will send them, post-paid, on receipt of 50 cents for sharpener and 25 cents for vignetter, with privilege of returning if not O. K. *You will never regret the investment.* Address C. A. SCOFIELD,
39 Columbia St.,
Utica, N. Y.

ROCKWOOD SOLAR PRINTING CO.

17 Union Square, New York.

TIME.—It is our intention that every order received in the morning's mail (when not to be put on stretchers) shall leave this establishment the same day or the following morning. If too late for the morning work, it is sent on the second day. Having our own engine and electric light, *we are not at all dependent on the weather.*

GEORGE H. ROCKWOOD,
Business Manager.

VOGEL'S PROGRESS OF PHOTOGRAPHY, LATEST—BEST—\$3.

EVERY photographer in want of excellent lenses, for *any purpose*, will best serve his interest by consulting the new illustrated price-list of Messrs. BENJAMIN FRENCH & Co. before purchasing.

FOR SALE.—Cheap, seventeen years of the PHILADELPHIA PHOTOGRAPHER, complete, 1868-1884. Unbound and in excellent condition.

Address H. A. P.,
care of PHILADELPHIA PHOTOGRAPHER.

ADDRESS T. W. POWER, N. Y., Secretary of Association of Operative Photographers of New York City, for operators, printers, and re-touchers, 392 Bowery, or 487 Eighth Avenue.

No. 18. WAYMOUTH'S VIGNETTE PAPERS, **No. 18.**

The old form of No. 18, Waymouth's Vignette Papers, oval, has been discarded, and a new pear-shaped style is now ready in its place. It is a beautiful piece of gradation and prints perfectly. Price \$1.25 per dozen. For sale by all dealers. See advertisement for all sizes.

No. 18. NOW READY. **No. 18.**

PORTRAITS IN CRAYON.

The new book by E. Long, on the art of making portraits in crayon on solar enlargements, covers the entire ground, and is sold for the low price of fifty cents. For sale by

EDWARD L. WILSON,
Philadelphia.

METAL GUIDES

FOR

A. M. COLLINS, SON & CO.'S

No. 26 GILT BEVELLED-EDGE CARDS.

The fancy-shaped mounts now so fashionable among photographers, require metal guides with which to cut the photographs. They are now kept on hand, and can be supplied in the following shapes, and at the prices mentioned:

	Each.
Cross.....	\$1 05
Star.....	1 00
Palette.....	90
Leaf.....	90
Bell.....	90
Crescent.....	80
Egg.....	59
Triangle.....	90

For sale by EDWARD L. WILSON,
1125 Chestnut Street,
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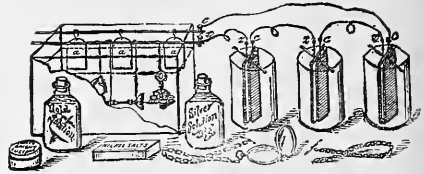
WE ARE READY.

Owing to the sudden increase in the demand for the Rockwood Dry Plates, we were obliged through the months of July and August to decline many orders. We have now more than quadrupled our facilities, and introduced improvements which will, we hope, enable us to fill orders with promptness, and give us plates possessing, if possible, still more sensitiveness and uniformity. For price-lists and samples of work done by the "Rockwood Plate,"

Address J. A. RANDEL, Manager,
17 Union Square, New York.

A GOOD BUSINESS

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GOLD, SILVER, AND NICKEL PLATING.

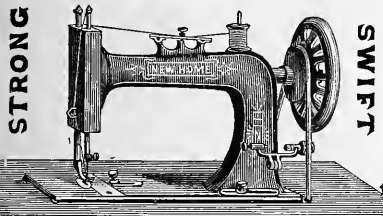
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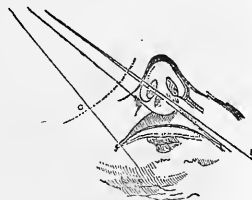


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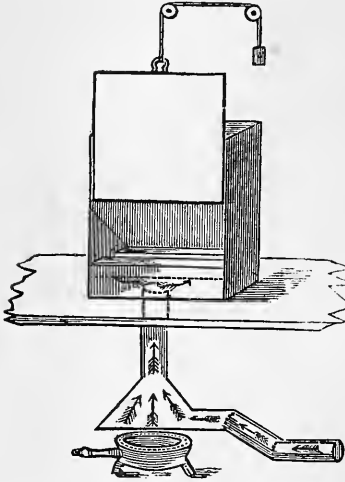
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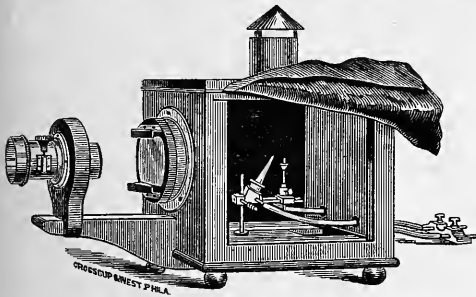
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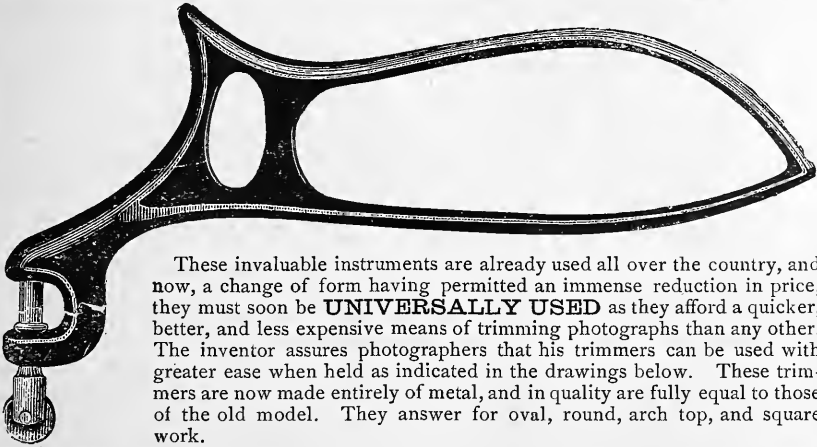
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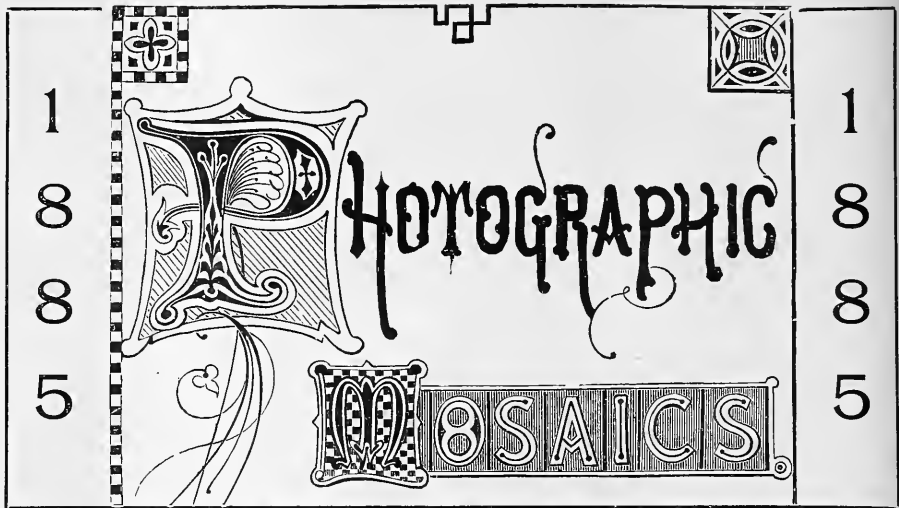
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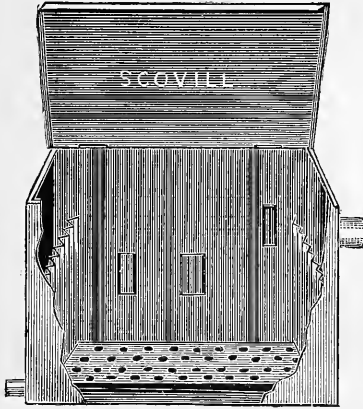
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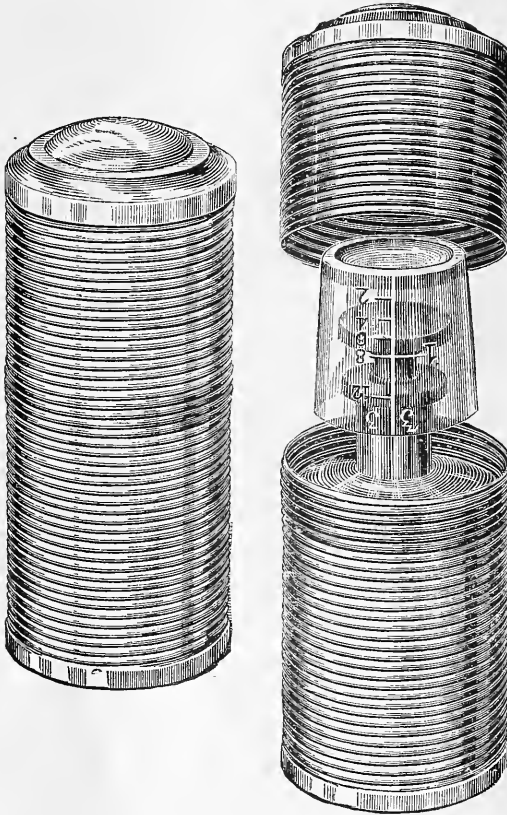
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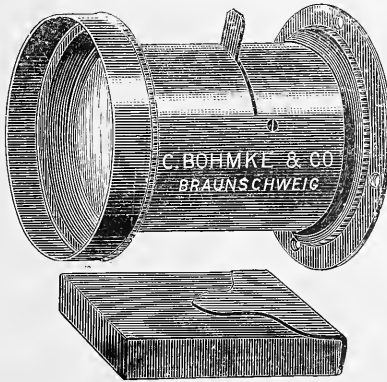
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4 x 5 . . .	75	6½ x 8½ . . .	1 90	16 x 20 . . .	14 50
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THIS NEW PLATE COMBINES

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FINE CHEMICAL EFFECT,

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EASY TO DEVELOP,

And CANNOT BE EXCELLED.

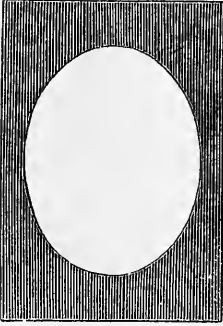
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- " Softening Strong Negatives.
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- " Obscuring Studio and Office Doors.
- " Printing Weak Negatives.

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It is especially adapted to the Rembrandt style, and light drapery. Its sensitiveness renders it particularly adapted for children or any work that requires short exposure, though admirable as well for all work.

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ALLEN BROS.,
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MESSRS. ALLEN BROS.:
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A. C. FALOR.
 Yours,
 MCKECKNIE & OSWALD.

MESSRS. ALLEN BROS., Detroit, Mich.
 GENTLEMEN: I say, without hesitation, that the Suter Lens B 3 is fully equal, if not superior, to any of the known lenses, even not excepted. I took a group of four persons in my parlor, the light coming from an ordinary window. I had a Carbutt B plate, used the second largest stop, and as an experiment, gave only ten seconds. The result is one that I never obtained before, even out of doors, and with either _____, _____, and other makes of lenses. For definition, the lens is simply wonderful. If these lenses were more widely known, no one would think of spending almost double their price on any other lens. In my opinion they will drive everything else out of the market at their present prices.

Yours, very respectfully,
 DR. J. MAX MUELLER.

MESSRS. ALLEN BROS.,
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I mail you a 20 x 24 print of *The British Honduras Court*, of the Exposition, made from a Suter Lens negative. Were it somebody else's work, I should say some very fine things about it. As an example of lens work, it is one of the most exquisite things I ever saw—and the best negative so far taken in the exposition. The great variety of material included in the picture has afforded an excellent test and a severe trial for your wonderful lens, but it was fully equal to the work. There are fibrous materials, woods of many kinds, nettings, coarse plated fabrics, leopard skins, sword-fish, furniture, and a hundred other curios, all most sharply and beautifully cut and caught. The depth and angle covered by the lens No. 8 B, are simply astonishing. If I can continue to secure such results I shall end my work here with as much credit as I did in '76. In the language of Sancho Panza, I would say—"Blessings upon the man who invented the Suter Lens!"

EDWARD L. WILSON.
 Truly yours,
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F. J. CONLEY, Esq.
 DEAR SIR: I have tested the Suter Lens which you left with me for trial and am very much pleased with it. For direct life size heads I do not think it has its equal. Its illuminating power is wonderful as well as its rapid action. With it I can make a life-size head in from 10 to 15 seconds. For making large groups it is simply "immense," as it covers a large field with nearly a full opening.

C. D. FREDRICKS.
 Yours truly,

DEAR SIR: In bringing the famous **SUTER LENS** to your notice, after nine months' experience as exclusive Agents for its sale, we can confidently claim for it that it has no equal to-day for general excellence. Its sale has been unprecedented, and far beyond our expectations. We guarantee every Lens, and will cheerfully send to any address a Lens, on five days' trial, C. O. D. If returned, express charges to be prepaid.

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3. Its ability to anticipate the wants of the craft is secured by its connection with the practical men of our art all over the world; and the same long connection creates a ready means of obtaining promptly all that is needed.
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5. Its war upon low prices, and its endeavors to lift up the fraternity to better ones, as well as its usefulness in winning the press and the public to a better appreciation of our art, are well known to all.
6. It has always been quick in discovering and exposing frauds, humbugs, and attempts to injure its patrons. It is operated for the good of its patrons.
7. Its long standing as an authority in our art, has won it connection with scientists and scientific bodies all over the world, who send their new things to its editor first, over all of its class.
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New England, . . .	21.5 per cent.	Western States, . . .	24.4 per cent.
Middle States, . . .	24.1 "	Canada,	8.3 "
Southern States, . . .	16.4 "	Foreign,	5.3 "

Thus giving the best means of advertising, and thus securing the best circulation among the active votaries of the art.

9. Its form has been adopted by all the other American magazines of our art (all its junior), but its quality and artistic appearance have not been reached by any.
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It has been our custom for many years, to give old subscribers a *premium* for new subscriptions *sent in addition to their own*. We continue this plan by offering one dollar's worth of our publications for each such additional subscriber for a year. Please do all you can to increase our usefulness in behalf of the glorious art of photography. It is to *your* interest to do so.

For 1885 we have some useful schemes and novelties under way, which will be presented from time to time. Our old subscribers are asked to **renew now for 1885**, so that the January issue will reach promptly. **IT WILL BE A GEM.**

Contributions from both *Actives* and *Amateurs* are invited. Proceedings of Societies are very useful and should be sent promptly.

EDWARD L. WILSON, Editor, Publisher, and Proprietor, 1125 Chestnut St., Phila.

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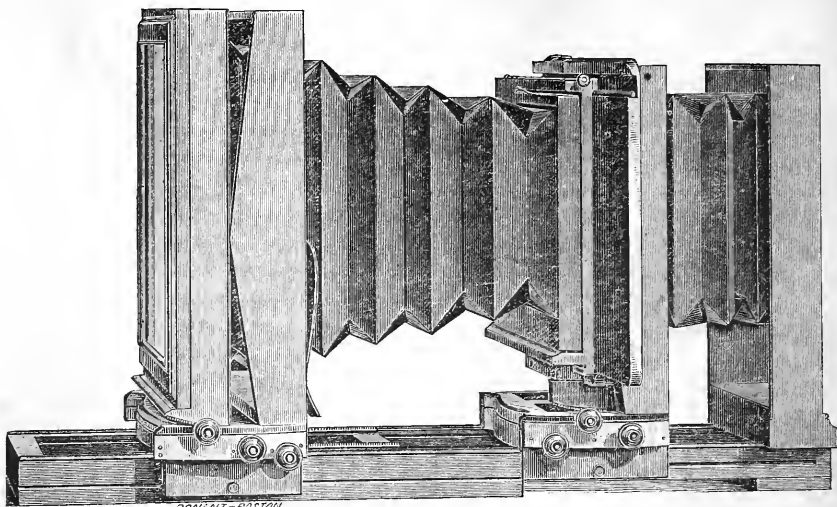
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We have added an Exchange Column to our Magazine, wherein photographers having articles for exchange can insert advertisements at the low price of 15 cents per line, or fraction of a line, of seven words to a line.

Operators desiring situations, no charge.

BLAIR'S CAMERAS.



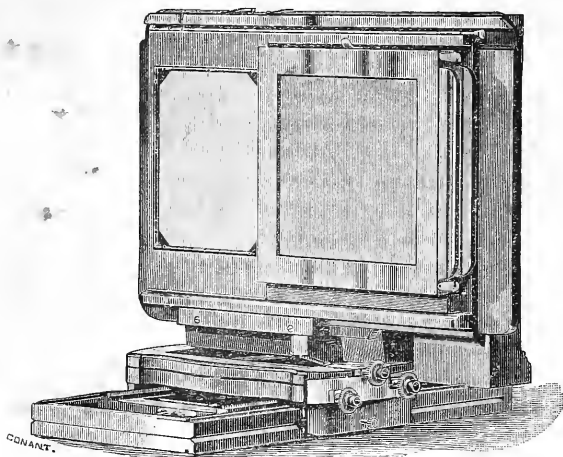
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8 x 10 Portrait Camera, with 14 x 17 Extension Attached.

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They are adapted to the uses of both professional and amateur, and combine all the desirable improvements. We beg to call your attention, in this issue, to our Combination Portrait Camera.

Bear in Mind that our Cameras cost no more than others of best make, which are not adapted to receive our Patent Extension; by purchasing one of our Cameras without the Extension, the latter can be had at any time without extra cost of fitting, as in the case when we fit our Extension to Cameras of other makes.



8 x 10 Portrait, without the Extension, Double Plate-Holder in Position.

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All articles manufactured by us will be found in stock.

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BLAIR & PRINCE.

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148 W. Fourth St., Cincinnati, Ohio.

318 Broadway, New York.

(SEE PAGE 82.)

22d YEAR.

MAY, 1885.

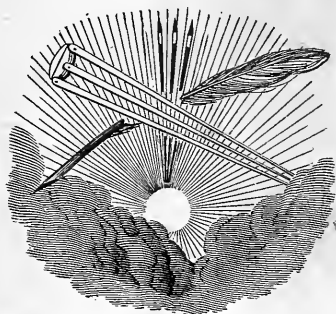
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EDITED BY EDWARD L. WILSON.



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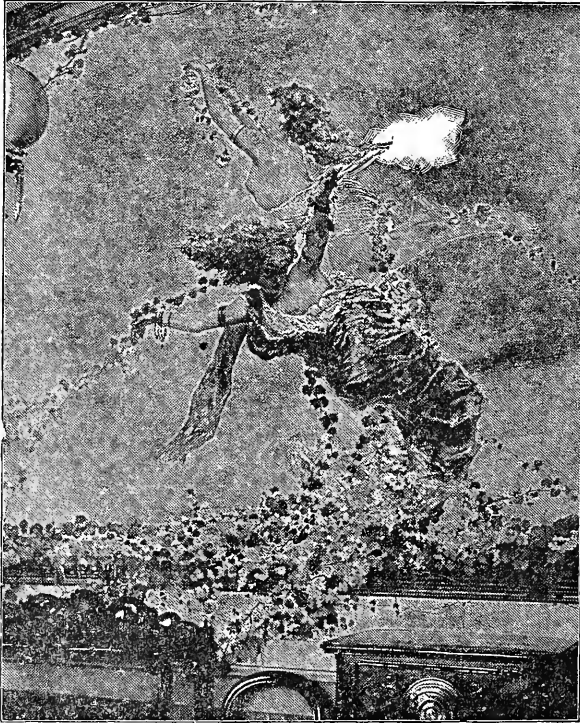
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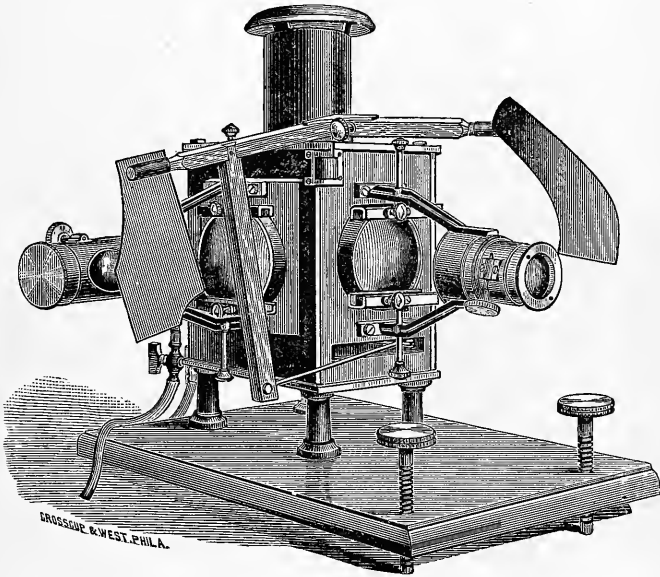
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
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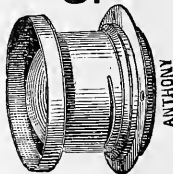
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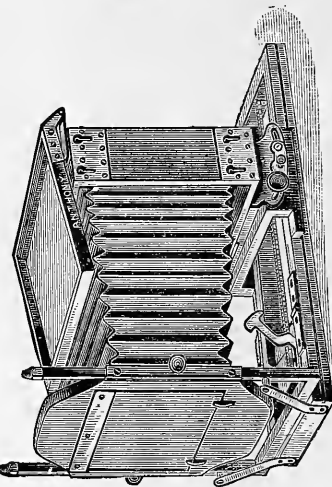
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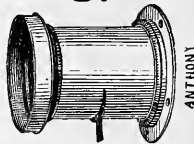


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Technical High School.

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AND

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**INTENDED ALSO AS A SUPPLEMENT TO THE THIRD EDITION
OF THE HANDBOOK OF PHOTOGRAPHY.**

Revised by EDWARD L. WILSON, Editor Philadelphia Photographer.

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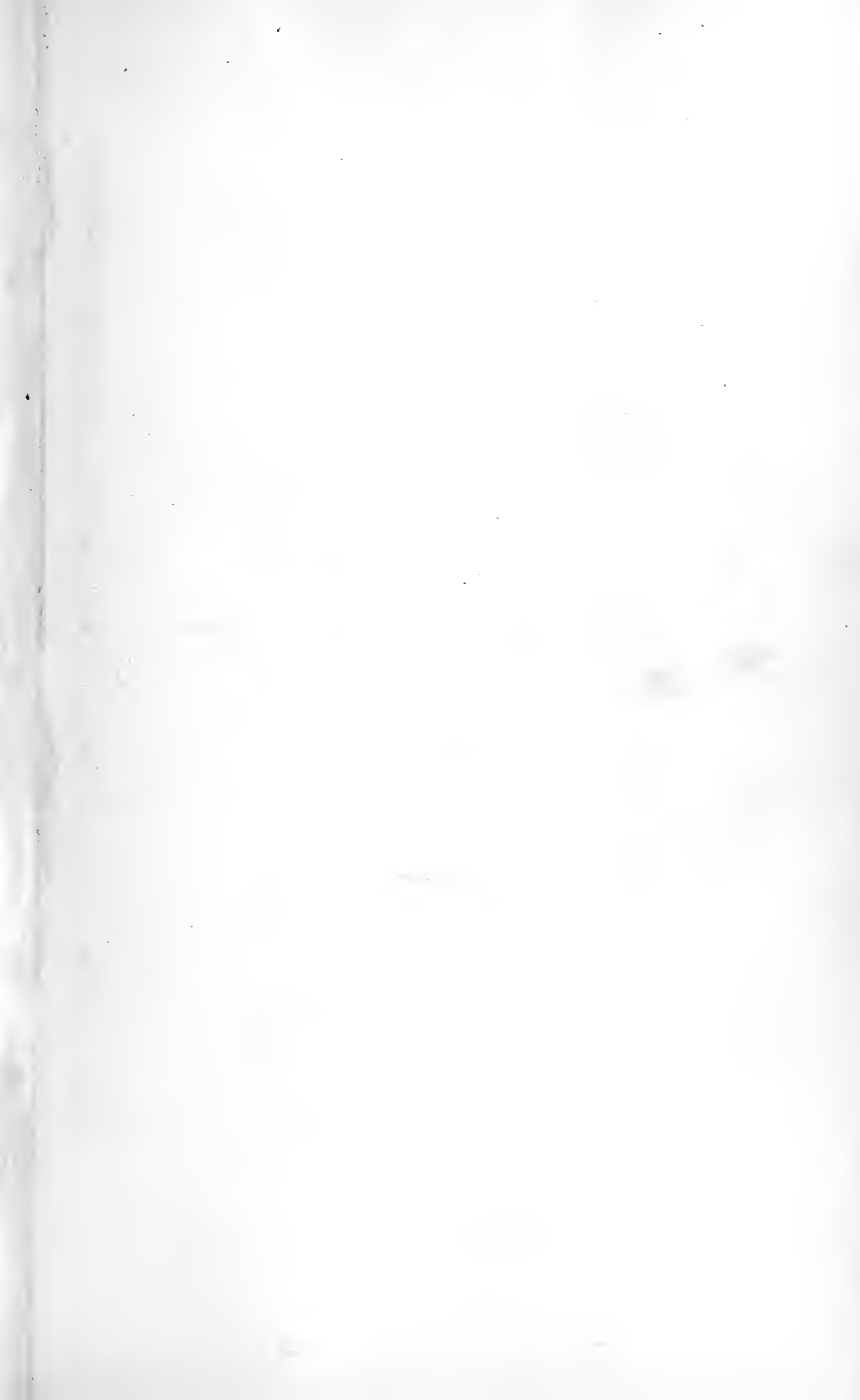
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W. WYKES,

GRAND RAPIDS, MICH.

OVER THE SEA.

THE
Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XXII.

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PHOTOGRAPHY AT THE NEW ORLEANS EXPOSITION.

WE are able now to give our readers about as complete a list as it will be possible to give them of the photographic exhibit at the World's Cotton Centennial and Industrial Exposition at New Orleans, and, in order that it may be complete in one letter, we shall repeat somewhat that has already been written, that our readers may have a general impression of how the whole thing looks. We will begin at the amateur exhibit. This is quite creditable, and is due almost wholly to the energy and persistence of Mr. F. C. Beach, the earnest President of the New York Amateur Society. All sorts of happenings have conspired to keep back and to break up this section of the exhibition, but after all a very presentable showing is here.

The exhibit being made collectively, as this is, offers difficulties. We should like very much to be able to mention the names of all those who have distinguished themselves in giving this evidence of their patriotism, but that is impossible; we can only mention a few of the Societies that are represented, as follows: The Photographic Amateur Club of Philadelphia, the Society of Amateur Photographers of New York, The Cleveland Amateur Society, the Amateur Society of Lowell, Mass., the Chicago Photographic Amateur Society, and the Rochester Photographic Society.

The exhibit of the New York Society comes first. The principal collection is by Mr. Thomas Pray, Jr., who contributes four frames of varied subjects, of excellent quality, including some that illustrate his recent southern trips. We regret that Mr. Pray did not exhibit some of his microphotographs of cotton fibres, which we consider a reach in a direction very little travelled, and in which Mr. Pray's work is far ahead of anything else of the kind. The most life-like picture of his group is that of a serpent coiled up and ready to spring upon any who comes too close. Mr. Pray deserves praise (no fun) for his generosity in making such an extended exhibit, as compared with some others.

Some of the best views of the New York Society are by Mr. R. A. C. Smith. The most of these are American landscapes, but some of them, we believe, are from scenes in the Island of Cuba. There is a lovely quality about them, and the whole collection gives evidence of painstaking and care.

Our old dry-plate friend, Mr. George H. Johnston, Bridgeport, Conn., under the protecting care of the same Society (of which he is a member), gives his heart away in his splendid illustrations of hunting-life in the hills and vales of the Adirondacks; every phase of camp-life is here illustrated, from the first break into the jungle for a home, to the comfortable scene, where, hunting ended, again secure in camp, preparation for the

evening repast is going on. All bring back to memory contented and healthful days in the wild wood.

We expected to see the work of a good many more prominent members of this Society than is here shown, from men who are made conspicuous by the absence of their good works.

The Rochester Photographic Society is represented by some splendid examples of outdoor work from negatives made by Mr. Peter Mawdsley and Mr. John E. Dumont. From Mr. Mawdsley we expected the very best, and he has not disappointed us. Mr. Dumont is a very careful worker, apparently filled with artistic sense, and expresses his individuality in his work. There is a peculiar quality in the results of both these gentlemen, due, no doubt, to the plates they use, after the artistic elements are considered.

The Lowell Amateur Photographers have also done well. Their collection includes a great variety of home and outdoor scenes, bright and beautiful in quality, showing a good deal of skill and taste.

The last remarks may be applied to the contributions of the Chicago Amateur Club, included in three frames, very tastefully arranged. Of course, the best views of this direction would be scenes along the mysterious windings of the river which chops Chicago into bits. Some instantaneous views of this are exceedingly well chosen, and of excellent quality technically. One picture, which causes a good deal of remark, is that of a man taken in the attitude which he presents when seen upon the ground-glass, viz., standing upon his head. It is well done.

The Philadelphia Amateur Club has also done well, for a number of its members are represented. The gem of the collection is a group of the members of the Club, who, with camera to the front, are grouped carelessly but tastefully, and an excellent life-like photograph picture is secured.

Views upon the lake, of buildings, rural, and animal pictures, make up the collection of the Cleveland Society, which is included in one frame very tastefully arranged.

And that embraces the amateur collection, unless it be that we include ourselves, for in close proximity we have taken the liberty of

hanging a number of our own frames of Oriental views. A pretty extensive amateur excursion was ours, and we claim companionship with the amateurs, because we want to belong to both branches.

This then, for the amateur work. The next upright holds our own humble display of the Centennial Photographic Co. Our principal exhibit is in the southeast gallery of the main building, where we are occupied a good deal of the time, when editorial duties will permit, by photographers who call upon us, taking them through "the mill" and showing them all that there is to see. We have no secrets. We have not had the space here and the sunshine to make our work what we would like to show in our collection in the photographic exhibit.

We now follow with a list of the practical photographers, some of whom we have mentioned before. We shall give them as the pictures are found by the observer, following along, first, the south side of the uprights, and then going over to the other.

Mr. C. W. Motes, of Atlanta, Ga., exhibits two frames of beautiful photographs, similar to those admired so much at the Cincinnati Exposition. A picture of "The Daughter of Danaus" is here of large size, beautifully printed. Mr. Motes also makes a new departure in his china pictures, which are very beautifully printed and toned, and the only ones on exhibition. A careful, conscientious photographer is Mr. Motes, and when we see one of his displays we are sure it is the best he can do; he has done well this time.

Mr. J. Henry Doerr, of Louisville, Ky.: Portraits of people old and young, solar prints, and architectural views, all of excellent quality. Evidently Mr. Doerr believes in quick plates, as is proven by the expression secured by him in many of his pictures. Those of children are particularly sweet and life-like, and must have been caught quickly. The photography is excellent.

Mr. F. Gutekunst, of Philadelphia: We have already alluded to the splendid exhibit of Mr. Gutekunst, which is made up of a sufficient number of frames to cover a space twelve by forty feet. It includes, not only a fine collection of phototypes, but outdoor work, and the perfection of portrait

studies. In every sense this collection is an admirable one, hard to beat. The portrait work done by the phototype process is better than anything we have seen of the kind from any part of the world; they have all the qualities of the steel-plate print, with the life-like expression of the photograph. Mr. Gutekunst is to be commended particularly for his silver printing, than which nothing can be more satisfying; every quality of the negatives seems to be secured with excellent result.

Messrs. Genelli Bros., of St. Louis, Mo.: A frame of stamp pictures and stamp albums.

Mr. F. M. Turner, of Tuscaloosa, Ala.: Cabinet portraits, a crayon head, and a drawing. Mr. Turner's child pictures are among the best of his exhibit.

Mr. F. W. Guerin, of St. Louis, Mo.: Mr. Guerin's work is well known to many of our readers. His exhibit covers a space twelve by forty feet, and in some senses is the most attractive of the whole collection. We have no desire to criticise anyone's work in this exhibit, for we are too full of admiration for anyone who has been patriotic enough to contribute to the collection. We have too often spoken in praise of the studies made by Mr. Guerin, and are glad to see him ambitious in the direction of *genre* and composition pictures. Of course, he has made some mistakes, and some of the mistakes unfortunately hang here in this collection, but there is such an overwhelming display of excellence that one would be prudish to find any fault. Such pictures as the "Boys Fishing," particularly the one whose line is fastened, the "Lady Leaning against the Wall," and the "Young Miss by the Seaside," are well worthy of study and following. Mr. Guerin grows every year, and the fact that he studied art carefully and conscientiously is shown in his pictures more and more as time goes on.

Mr. H. Pietz, of Springfield, Ill.: A wonderful combined collection of about all the kinds of work which the ordinary photographer is asked to do; winter and summer, indoor and out, in the machine shop, in the parlor, in the studio, out in the fields, along the winding river, and among the groups of families, we see the camera has been diligently and carefully at work, pro-

ducing satisfactory results. A better arrangement could have been made, but the same novelty could not have been secured.

Mr. Theodore B. Schurr, of Lockport, N. Y.: Well done for Mr. Schurr for sending his pictures from such a distance! We like to see such ambition, and it is a pleasure always to look upon such studies as his child pictures, some of which are very pretty.

Mr. F. W. Hardy, of Boston, Mass.: Two frames of splendid portraits, and another of Mr. Hardy's famous picture of the "Boston Skating Rink Carnival," with which our readers are familiar. Mr. Hardy's prints are excellent; in pose, composition, and lighting, they have no superior. His pictures of old persons and young misses are particularly fine. One of the best things Mr. Hardy has done in making up this collection, consists in the particular way in which his pictures are mounted; instead of being tacked to white, or black, or maroon cardboard, as we usually see, he has chosen a delicate tint of aniline green, which he has, with apparent carelessness but with consummate skill, so folded as to catch the light and shade beautifully, and to make a splendid background, upon which his pictures are fastened. The effect is exceedingly neat and pretty, and we commend it to the study of those who exhibit in future. The idea is a very artistic one, and splendidly carried out.

This completes the display of the south side of the uprights. Before we take the other, a few feet further away, at the rear of the great organ, we find, first:

The display of Mr. T. H. McCollin, of Philadelphia, of solar prints by the platinum process upon paper and cotton fabric; and of blue prints of great size; a collection exceeding, as a whole, anything of the kind we have seen on exhibition.

Close to these is the display of solar prints of Mr. E. Long, of Quincy, Ill. Well done for Mr. Long also, who has given evidence of his good faith in our art, and of the quality of his own work by making this exhibit, which does him full justice.

And now for the north side of the uprights.

Moss Engraving Co., of New York: A very interesting series of illustrations of their method of photo-engraving; every stage of the process is illustrated, from the

negative to the electrotype plate, yes, even to the paper printing. Some very excellent specimens in color are included in this collection. These gentlemen were among the very first to carry photo-engraving to perfection, and deserve very great praise for the high standard they have obtained and for the business they have built up.

Through the courtesy of Dr. Vogel, quite a bright little foreign exhibit is made; the following is a list of contributions:

Dr. H. Vogel: Prints from azaline negatives and ordinary negatives arranged side by side so that the comparison can be made. Before alluded to.

Mr. Edmund Gaillard, of Berlin: A collection of phototypes of very excellent quality, largely from negatives and photographs of works of art.

Mr. H. Haberlandt, of Berlin: Some splendid portraits of the real old Berlin quality, of old persons and young.

Mr. Heinrich Graff, of Berlin: A series of portraits, cabinet and boudoir size, which also evince the careful training of the Berlin school.

We should not overlook the two examples of heliochromographie by Mr. Gaillard, one of an old lady, from life apparently, and the other "Christ Crowned with Thorns." The last is most excellent, equal to anything we have seen in this line.

Mr. H. P. Robinson, of Tunbridge Wells, Eng.: The series of nine pictures, of which mosaics appeared in our magazine some time ago; for remarks please refer to the article which accompanies them.

Messrs. Hargrave & Gubelmann, of New York: Four frames of a large series of views of marine, instantaneous, and architectural subjects, and three 13 x 16 pictures of interiors, all of excellent quality. These gentlemen pride themselves particularly upon their instantaneous work, and well they may, for seldom do we see anything better in this direction.

Mr. C. A. Schindler, of Hoboken, N. J.: A frame of photographs of furniture, intended more particularly to attract photographers to this excellent manufacture, but in which we fear he will be disappointed in results.

Mr. G. F. Mugnier, of New Orleans: Mr.

Mugnier confines his work particularly to cabinet size and stereoscopic views, but throughout we see evidence of the skilled photographer and careful artist. Not only in his choice of subject and choice of time, but in technicality are his views admirable. Still more, we can say, he has evidently made it his purpose to illustrate thoroughly the productions of the sunny south, and he has done it with conscientious care, starting with the primeval forests, swamps, and groves, lake scenery, bayous, and the mighty river, and carrying us through all the mysteries of the manufacture of turpentine, the raising of rice, cotton, sugar, and grain, and their manufacture and preparation for the market, through the various stages until we reach the freedman in all his home scenes and workings, from the preparation of the soil to the demolition of the sweet and succulent sugar cane, to which he is so largely devoted.

Mr. Mugnier deserves the highest commendation for his industry in this direction.

Following his admirable collection is the portrait of the Soldier Priest, Father Hubert, S. J., of the Jesuit Church, crayoned by Miss Louise Piere, a pupil of A. W. Warner, artist.

Mr. Theodore Lilienthal, of New Orleans: The only collection of portraits by a New Orleans artist. One crayon specimen breaks the rule, the rest being plain. Mr. Lilienthal is an ambitious, wide-awake photographer, believing that the best will take the best with the public, and has made a fine display here of his work. His portraiture is of excellent quality, and the collection includes a splendid group of musicians, which we consider the gem of the lot. He is apparently very successful with children. Mr. Lilienthal has recently produced a very fine composition group of the Mexican Band, which we thought would certainly appear here, but for some reason has been left out.

Mr. T. L. Blanks, of Vicksburg, Miss.: This is one of the brightest spots in the whole collection. We are not familiar with the plates that Mr. Blanks uses; we have grown to believe that that has not so much to do with it, provided the photographer knows how to handle them. Mr. Blanks

has secured some most admirable results which attract us whenever we go in the neighborhood, we must admit. Here are five frames of families, rural groups, architectural subjects, steamers and vessels under go, and what not of subjects made by the earnest photographer who loves his work. Two or three very ambitious groups are included in this collection, one representing the Old Hermit in his Woodland Home, and another apparently an Old Fisherman Camping out near some Sequestered Bayou.

A number of cemetery views are very excellent in quality; some of the shadows which fall upon these pictures are as black as night, and yet wondrously exact in detail. It is rarely that one can gather such in his work. Mr. Blanks is one of our rapidly growing photographers.

Mr. I. W. Taber, of San Francisco, who at the time of the taking of this display was manufacturing dry-plates, has made a collection from his plates which is most admirable. Mr. Taber has gone even so far as Japan to secure some of his illustrations. Here are portraits, theatricals, instantaneous, marine, and other views of large size, with a fine collection of the Yosemite Valley. We have alluded to Mr. Taber's collection before, and engraved what we considered the gem of his collection in our March issue; we could do nothing now that would present his work before his fellow craftsmen in a more favorable light, and so we proceed to the next and last display of

Mr. William H. Jackson, of Denver, Col.: Mr. Jackson has also had commendation from us in this direction, and, therefore, we need not repeat history. His work is always splendid. His pictures of old Mexico create in us a continuous desire to battle with the subjects that are found there, and we fear we cannot rest until we wrestle with them under our own focussing cloth.

We must not close our notes of this exhibit until we have referred to the transparency collection. There are only three exhibitors.

Mr. F. Gutekunst, of Philadelphia, makes a splendid display of outdoor and landscape subjects, which presents to the observer all the excellence and technical qualities of his negatives in handsome style. We do not

think a better transparency was ever made than his one of the United States Capitol building at Washington. "Superb" is the only word that will convey a sense of its excellence, and even then it is a feeble word unless accompanied by the other term, wonderful!

Mr. John A. Scholten, of St. Louis, makes the most striking exhibit of any in the gallery. Here are about twenty portrait subjects framed with borders of stained glass, arranged in bits or parts after the style of the stained glass windows seen in churches, cathedrals, etc. Should such a thing be suggested to us we would say—horrible taste, but when we examine the delicate qualities, lovely tones and gradations of light and shade of the portraits in contrast with these richly colored borders, we cannot but help approve and admire. It is a daring reach in photography, and few would wish to place their work in contrast with so much color, but Mr. Scholten has no reason to be afraid; his pictures rather gain than otherwise by such company, and we hope to see attention given in this direction by other photographers.

Adjoining his transparencies is our own collection of some fifteen statuary subjects made upon Mr. Carbutt's transparency plates. It would be unwise for us to say what we think of them. One of our own frames of transparencies has met with the fate which seemed to follow several other of the exhibits for which space was applied in the photographic department, viz., it has not yet arrived. It is probably serving as a part of the collection of some unclaimed luggage in some railway or calaboose between here and Philadelphia. We know not where; we wish we did!

We might say we wish a more generous exhibit of photographs had been made at this exposition, were it not that we realize sensibly and with great pain, that scarce enough people have reached this quarter, to have made it pay for any great outlay or trouble. This is probably an open secret, and, therefore, we make bold to reassert it. A magnificent exposition at large is here, and it is a great pity that more people are not here to enjoy the lessons which it teaches, and to profit by them.

In our next we hope to give a detailed statement of the photographers' exhibit made in the Government and States building, where photography has been largely employed to illustrate the industries, the technical advantages, and the products of our country, as well as to exhibit its own capabilities in the various arts, sciences, and mechanics of our great land. In other words, we hope to reveal the fact that our art representation in that great building is *one vast photographic kindergarten*. Until we make this assertion good, farewell!

OUR PICTURE.

PERHAPS no branch of photography demands a greater exercise of the taste and judgment, to be effective, than portraiture. The difficulties connected with composition pictures are by no means as great, the abundance of the material allowing a latitude in the combinations which may result in a pleasing and harmonious effect, but it seems if the proper attitude and expression of the subject be not grasped and represented the portrait appears but commonplace and uninteresting.

First-rate portraiture will always be rare notwithstanding that the demand for it is immense, because it requires a peculiar talent to produce true or excellent work. Mere likeness will not satisfy, because almost anyone without any skill in lighting and posing can make a photograph which will look more like the sitter than like anyone else, but such work must not be called portraiture, neither can it lay just claim to this name even though the technical skill of the photographer be considerable, and all the aids of proper lighting and the retoucher's pencil be enlisted in the service.

Something more than technical excellency is required. He must possess the ability to give expression to the face of the sitter. To accomplish this, we are willing to admit, requires not only talent in the operator, but a certain amount of general culture which every photographer does not have. It may sound absurd to say that a true likeness of a man is not one which merely looks exactly line for line like himself, but it is true. It must not merely resemble him as we see

him in his daily life, but must bring out his character, his peculiarity of disposition, the inner likeness of the mind, which can only be enticed by judicious management to manifest itself in the countenance. Do not imagine that this is presumptuous on the part of photography. We have frequently seen that peculiarity of sweetness of expression in a simple photograph which so delights us in the grand paintings of Guido and Velasquez. We have seen faces which actually conveyed the thoughts which were passing through the mind of the sitter—thinking portraits. It may, we are willing to acknowledge, have been accidental, but it proves that such expressions can be caught by the quick pencil of light, as well as by the brush of the painter. We have seen portraits which reminded us of Reubens, Gainsborough, Rembrandt, Reynolds, as distinct in individuality as the work of these great men. We do not mean that they had the Rembrandt or Reubens method of lighting, we have seen many wretched caricatures which have been designated with such titles.

Moreover, these portraits have not always been the pictures of beautiful persons, some of the sitters might have been called plain but for this beauty of expression. Beauty of features is, indeed, a great aid in making a picture interesting but it is not essential. Expression is essential, and without it no face however classical or lovely can be effective.

Year after year our exhibitions of oil paintings are crowded with portraits of persons about whom we know nothing, or care nothing. Sometimes the face of a celebrated actress will engage our attention no matter how lacking the expression may be, but here we are interested in the object itself and not in the work of the artist, yet, let the hanging committee, as they sometimes do, place a picture by some distinguished painter, a mere portrait, which some lover of the art has lent, among this vast crowd of uninteresting faces upon the wall, and that single picture will be pointed out and admired by people who know little or nothing about the principles of art, more than all the rest, and why? Simply because the genius of the painter is there;

technical excellency is not looked for, though it may be there also—for greatness generally combines the two. If photographers would keep to the high standard, and not be afraid to try to do something which painters would feign stop photographers from doing, we are satisfied that people would take as great delight in looking at photographic portraits as they do in looking at landscapes, and if sitters would more rigorously demand these qualities we are sure that photographers would achieve better results.

Nothing but a good portrait is worth having, mere representation is too often mere caricature, and unless the photographer can body forth the mind in the face, his portraits will be commonplace and in-artistic no matter how beautifully he may pose and light, how excellently he may time the negative, or with what skill he may develop the plate.

We give our readers this month a portrait by W. Wykes, of Grand Rapids, Mich. The photographer has selected with good taste a face with well-cut and regular features. The lighting has been so arranged that the dark portions are nicely relieved against the light background of the picture. The expression is good, the eyes seem to be gazing at the far-off horizon and the thoughts of the fair sitter are, as the title suggests, over the sea. The prints were made upon the N. P. A. albumen paper, furnished by Messrs. E. & H. T. Anthony & Co., 591 Broadway, N. Y.

ON PRINTS AND PRINTING.

WE have had so many inquiries lately about prints and printing, that we think it advisable to give some hints to those in distress in this branch of our art. Many complaints have been made about the albumen softening and washing away, leaving the paper plain and dead. We shall give some hints and formulas that may help many who are too modest to ask for advice. Take first the silver bath; it is necessary to note the following facts. To prevent the albumen dissolving off the paper, a certain strength of nitrate of silver is necessary. It is not possible to make a bath whose fixed

strength is lower than twenty-five grains, and get brilliant prints. Even at this strength it is necessary to add some neutral or inactive nitrate like ammonium or sodium. For instance, either add nitrate of ammonium in crystals (25 grains to the ounce, or 1 grain for each grain of silver) or divide the solution into two equal parts, add liquor ammonia to the one-half until it becomes brown and clears again, then mix with the other half and clear away the brown precipitate by adding, slowly, nitric acid, *c. p.*, until the solution is clear: this constitutes the old ammonia nitrate bath. The limit of strength should never exceed sixty grains, although it has been used at eighty, and sometimes at one hundred grains. The question resolves itself into what strength of silver shall we fix on? We must remember also that silver nitrate solution has a stronger affinity for chlorine than for albumen, and that the silver albuminate is not formed until long after the chloride of ammonium has been converted into silver chloride. In connection with floating the paper on the silver bath, let us notice that the moment the paper is placed in contact with the silver solution, chloride of silver is formed, and the nitrate of silver in the layer immediately in contact with the face being scarcely diminished by the chloride formation, an albuminate is formed, at once forming a film which is to a great extent impermeable to the solution. The further penetration of the solution will be slow, so the time of floating must be prolonged in order fully to saturate both the salt and the albumen. In tracing the action of a weak solution we find the solution would as before at once form chloride of silver; but before the coagulation of the albumen on the surface had taken place the solution would penetrate to the interior of the paper, and the albuminate formation would proceed equally throughout the whole interior of the paper. In this case the floating should be shorter, for if floated too long the solution in the interior becomes weakened, and dissolves part of the albumen, and will be carried by the water into the paper. It may dissolve away partly on the surface, presenting a dead, lustreless appearance, and form a picture in the paper instead of

on the surface. From the above we find that a strong solution will require longer floating, while a paper floated on a weak solution requires short floating. A strong solution does not lose its strength as rapidly as a weak one, and may not require as close attention. For the weak solution a saturated solution of silver should be kept at hand, and some added to the bath every few sheets that are floated to keep it up to strength. For general work and in practice, a moderately strong bath is recommended, say about fifty grains to an ounce, only adding ammonia in very dry weather. Some brands of paper do not seem to work even with all the knowledge given above. We would advise in case of softening of the albumen (supposing the bath and floating to have been properly attended to) the addition of a lump of alum placed in the corner the silvering-dish or the addition of a solution of alum (one grain to an ounce), one ounce to the quart of silver. This will give a gloss to the paper, and sometimes make a weak and apparently worn-out bath give bright, clean, brilliant prints; it certainly does help to coagulate the albumen which might otherwise dissolve away.

The safest plan is to place the lump in the dish, or in the filter when filtering the solution, and two minutes floating on a fifty grain solution is sufficient where the temperature is not too low. The room should be warm, or the floating must be prolonged to three minutes. It is also advisable to have the fuming-box dry or warm, otherwise weak sickly prints are the result. Fume *long* on cold days— one hour is not too long. Some years ago the Treasury Department at Washington was turning out wonderfully rich prints, which we learned afterwards they claimed were produced by fuming the paper ninety minutes and sometimes two hours. In cutting paper it is strongly recommended *never* to cut it in such manner as will make the prints of a series stretch two ways of the paper; that is, cut some cabinets say vertically out of a sheet, and others horizontally, since the paper stretches the *width* of the sheet, and should one print be made each way, mounted, and held side by side, a marked difference will be seen, the width of a face showing more if exaggerated than

the length, therefore it is preferable to cut the sheets for portraits, when possible, so that the face is lengthened. Should the face of a sitter be naturally long, it can be very much improved by cutting, so that the paper will stretch the broad way of the face. An economical plan is to cut the paper, before printing, into exact sizes, either with a knife or very *sharp* scissors; mark the negatives either with lead-pencil or by pasting strips of paper on them as guides. The advantage of cutting before toning is certainly worth the trouble. In the first place, the paper clippings are valuable, and in the second place the prints can be blotted directly from the water and mounted without first drying, for by drying and cutting, then again wetting the prints, the albumen will often crack and present a rough surface, which cannot be covered even with burnishing. The subject of blisters is one that seems never to have been satisfactorily answered. We have found in almost every case that they can be at least modified if not wholly prevented by reducing the strength of the hypo solution, making it one ounce of soda to eight ounces of water, and allowing the prints to remain in this from twenty to thirty minutes. Test the soda solution for acidity, and if acid, make neutral or slightly alkaline with ammonia. This prevents bad tones and stops blistering. To those whose water supply for washing prints is limited, we would suggest the using of acetate of lead, or sugar of lead, after soaking and making several changes of water. After fixing make a solution of the eliminator by taking one ounce of a saturated solution to one quart of water, and adding acetic acid until the solution clears, then immerse the prints and keep in motion, allowing them to remain in it ten minutes, after which give a few changes of water.

A PHOTOGRAPHIC VISIT TO SOME OF OUR BATTLEFIELDS.

BY WILLIAM H. RAU.

SOME weeks after our trip to Fredericksburg our party again made a visit to a battlefield. This time to Antietam, where our army led by McClellan defeated the

Confederates. Colonel Boteler, of Sharpsburg, kindly took us in charge and pointed out to us the most striking places incidental to the battle. Getting into carriages our party was driven through the town of Sharpsburg towards the Antietam, which flows into the Potomac River some miles above. The scenery was quiet and beautiful. To the right lay the Potomac and the hills beyond, from which side the Federal forces fought their way. After a ride of half an hour we arrive opposite a cornfield, in which we see a barn and some houses. This scene must be photographed, it is so quiet now, but during the war it was the scene of fearful carnage. Col. Boteler told us he saw men carry out legs, arms, and parts of bodies from that barn, and load them in carts to haul them away for burial. The fighting at this place was terrific, the troops were so badly mutilated that scarcely a man escaped without a wound. The view of this field and group of houses was made dead against the sun, which gives it a sombre overcast effect, not at all inappropriate. A mile further on and we reach the National Cemetery, where are buried the Federal dead who died near or in the battle of Antietam. On a knoll in the centre of the cemetery, from which radiate the walks, stands the colossal granite statue of a soldier "at rest." This statue was shown at the Centennial Exhibition as a sample of American workmanship, and stood between the Main Building and Memorial Hall. Many, no doubt, will remember the quiet repose of the figure. Standing on the base of the figure we can see the entire battlefield. One view made from here, looking across the valley, shows the position of McClellan's headquarters. Another view looking toward the Old Dunker church, shows thousands of headstones and a beautiful undulating country, over which much sanguinary fighting was done. Passing along the road towards the Dunker Church, we notice the old rail fences perforated and stuck with bullet-holes, etc. Scarcely a person is met with. Near the church is a lane at right angles with the road, which by many is thought to be the bloody lane where the dead and wounded lay piled up in layers—it literally flowed with blood.

Here, also, stands the quiet, plain Dunker church, bearing many bullet marks, and a peaceful appearance it has now. A little to the north of this is another lane, which by others is believed to be "Bloody Lane." To make sure of having a picture of "The Bloody Lane," we made negatives of both. The day was delightful, clear and temperate, and not much wind—a very favorable one for photography. Turning back towards the cemetery, and on reaching the pike and following it to the east, we soon arrive at the famous Burnside Bridge, named after the gallant general who fought so hard to get possession of it. The bridge don't seem to have suffered any; if so, it has been thoroughly repaired. It is built of solid masonry and has three arches, and crosses at a bend in the creek. This was certainly our most picturesque subject of the day. The light was just at that angle when it gave bright lighting and rich shadows, both in bridge and foliage. The country seemed quite cultivated compared with the other places visited earlier in the day. Standing on the centre of the bridge we get a gem looking up the stream, the trees overhanging the water, and in many places trailing in it. Retracing our way a few hundred yards we came to a point from which the fighting ground of General Burnside's army could be well mapped out, and although the light was unfavorable we made a view showing this most excellent location. Going back until we are on the banks of the Potomac River, we follow along the towpath of the canal until we arrive opposite a bluff on the opposite or eastern bank of the stream. The bluff is about five hundred feet high, and is very abrupt and almost perpendicular. Back of this is almost a level, on which our troops (the Corn Exchange regiment of Philadelphia) came charging down at full tilt, and coming suddenly and unexpectedly to the edge of the cliff, went over, mangling and crushing them to death. An eye-witness on the opposite side of the stream says he saw an officer on horseback make a tremendous leap, and then a double somersault before striking. He was killed by the fall. Our view shows the rocky face of the cliff plainly against the dark foliage on either side, and

can only be seen at long range or on opposite banks of the stream. A few hundred yards further down the river is a milldam, and which many Federal troops tried to cross and were picked off one by one by the rebel sharpshooters. After much persuasion we induced Col. Boteler to take us to the ruins of his house, which was burned by order of the Union General Hunter. He had not visited this place since its destruction, and although he had occasion to pass it at times on the road, yet he never entered the grounds, as all the sadness of the destruction, etc., would be recalled, and this was not pleasant. However, he consented, and took us around the grounds, showing the various buildings or locations where they once stood. The ruin of the house is almost hidden by a growth of trees struggling almost to its lofty chimneys. It was indeed a mournful sight. A wealthy, magnificent mansion and home, founded in colonial days, destroyed in a few hours. We secured a view of this interesting relic of the war, for it must be remembered that Col. Boteler was an active man on the Confederateside. He served in Congress previous to the Rebellion, and when the war broke out went with his State, Virginia, was a Confederate Congressman, and on the staff of Stonewall Jackson. He related numerous stories and anecdotes about Jackson, among which was the following: He said that Stonewall Jackson had a constant fear that his arms might suddenly become paralyzed, and so he kept them in motion at all times when it was possible, and especially when a little excited. This was especially the case when he was on a horse, and riding among his troops, when he would hold his arm high above his head and move it slowly around, giving the impression among many that he was constantly praying while fighting. He was very devout, and as gentle as a woman. We last visited the Confederate cemetery, where found a plot laid out for the Confederate dead. Here we saw the first monument erected to the memory of the Confederate soldiers who died at Antietam.

PHOTOGRAPHIC EXPERIENCES AT THE NEW ORLEANS EXPOSITION.

BY G. HANMER CROUGHTON.

ANOTHER month has developed more and varied experiences which are both interesting and instructive. When we started in here we lighted the developing and changing rooms by lamps hung outside a window glazed with ground and ruby glasses; in this manner we got a steady, even light which never varied, and we could work with certainty every day, no matter if the day was dull or sunshiny; but the underwriters objecting to our use of lamps, we were obliged to have holes cut in the side of the building, and to get daylight into both developing and changing rooms.

This change has been the source of a great deal of trouble to us. In the first place, the developing room being on the south side of the building, we do not get the sun till nearly noon, so that in the first part of the morning we can work with less of the ruby light than we can in the afternoon, when two panes of ruby and one of ground glass was found to be insufficient. Suspecting that the light was not safe, the developer and one of the operators tried it and placed a plate under a negative in the sink where the developing is done, and in four minutes a well-exposed transparency was produced. We had then to reduce the light till it was more like the light produced by the lamps, and we find that on a bright day it is not safe to develop unless there are two thicknesses of ruby glass, one of ground glass, and one of green. Having the green glass inside gives a nice quiet light which is much more agreeable to the eyes than the ruby; but it is astonishing how much light the green glass cuts off.

Now a few words about the plates and exposure. I did not mention the names of the plates in my last when speaking of our work here, but Mr. Inglis has himself in his advertisement stated that Mr. E. L. Wilson says his plates are too quick. He says in his advertisement, and in a letter to Mr. E. L. Wilson, that he has developed two negatives made upon his plates, one of them exposed one second and the other ten

seconds, and produced negatives of equal quality from each. That is no doubt correct; we have done so here upon all the plates we have used, and anyone can do the same with any plate in the market. I published in the English photographic journals an experience of the same sort, with English plates, nearly five years ago, and have all through my experience here manipulated in the same manner plates made by Cramer, the St. Louis plate, Eastman's, Passavant's, the I. C. plate, the Stanley plate, in fact, as I have said before, any plate in the market will do the same, *providing your first exposure is enough*. You can put ten times the exposure and (*if you know you have done it*) produce the same effect by manipulating your developer. But the difficulty here has been to know what exposure has been given, because the actual time was no criterion whatever for the exposure. One exhibit has been overexposed in one minute, while another has been underexposed in one hour with the same instrument and same stop in both cases. I have taken an 8 x 10 group outdoors with a Morrison lens on an English plate in two seconds with the second smallest stop. An exhibit has been made in the building with the same instruments and the same plates, which was not overexposed with two and a quarters hours' exposure. One dodge which has been resorted to is worth notice where long exposures are necessary, and that is, to make the first part of the exposure with a small stop and open up as the exposure goes on. For instance, in one case where one and a half hours' exposure was given the first half hour was given with the smallest stop, and the next with the next size larger, finishing with nearly an open lens. This shortens exposure considerably without loss of sharpness, *providing the smallest stop is used first*.

I must confess that in the whole course of my photographic experience, which now extends over twenty-five years, I never met with such difficulties as this Exposition work has developed. The construction of the building and the position of the exhibits are in most cases against us; for instance, one part of the exhibits will be under the skylight and the other in the

shadow under the gallery. The part under the skylight would probably be well exposed with from three to five minutes; that under the gallery would require from thirty to forty-five minutes. In such a case as this one or the other must suffer. We find the best method to adopt to overcome this difficulty is to give the longest exposure required for the shaded part, and develop with two parts bromide and pyro solution and one part accelerator. But even then I have had in one and the same picture deep shadow with very little detail, and windows which have been reversed by the prolonged action of lights showing as positives instead of negatives.

The manner in which the buildings are lighted has been the cause of much trouble to us; the halation from them spreading over and, in some cases, destroying the details of the exhibits, and we have frequently been obliged to send men upon the roof to cover up the skylights, which would spoil the picture, using some hundred or two yards of cloth at a time for that purpose.

This halation appears to me to be far greater with dry plates than with the wet process, and it is really a great disadvantage. Underexposure greatly exaggerates this trouble, while overexposure will, in some cases, do away with it altogether, or, at least, mitigate it to such an extent that it will pass unnoticed.

The more I use the Morrison lenses the more I like them. There is one very great advantage. The lenses of different focal lengths all fit in the same flange, so that the operator can carry two or three lenses of different focal lengths and use them all with the one front. But above all, they cover so well, and with such fine depths of focus. The exhibits are so close here that we are frequently obliged to use very short-focus lenses to get them in, so that we have been forced to use six-inch lenses for 10 x 12 plates, and get them well covered, too. And lately we have been using a ten-inch focus lens on the 17 x 14 camera, and cutting out to the very corners of the plate as clean and as sharp as possible. I would never before send the lens that I have done this, the time-honored practice being never to use a lens of less focal length than the

smallest side of the plate to be covered. Thus, a ten-inch lens should be used for an 8 x 10 picture, or, if in close quarters, then the eight-inch lens might be used, but it was not expected to cover well; but here we have a six-inch lens covering an 8 x 10 plate, and doing it well, too, and a ten-inch lens covering a 14 x 17 plate, sharp and clean to the very corners. We have a Suter lens on the 20 x 24 box and one on a 10 x 12 box, both of which are very fine instruments, and some fine pictures have been taken with them, both in and out of the buildings. The ten-inch lens on the 10 x 12 box is used for making groups in the grounds, and it works both well, as regards definition, and quickly on exposure.

The question has been asked, Are we producing here with dry plates as good work as was done at the Philadelphia Centennial with wet? That is a very difficult question to answer. I was not at the Centennial at Philadelphia, but judging from the large books of views we have here I should say that the work done there would be hard to beat by any process. In judging in such a case you would have to take into consideration the differences in the construction of the two buildings. There was a great deal more light in the Philadelphia building, or the work could not have been done at all. Just think, for a moment, what it means to give an Inglis dry plate over two hours' exposure. Say, for sake of example, these plates are only four times as quick as wet plates (and they are nearer twenty times), that would mean eight hours' exposure with a wet plate. Under these conditions many exhibits here it would be impossible to take with a wet plate. Then, again, I think it would be impossible to photograph successfully with the wet process those exhibits which are so unequally lighted without getting the lights solarized. Where the conditions are favorable we have made some 20 x 24 negatives, which could not be beaten by any process, and I have no hesitation in saying that the larger portion of the work will bear favorable comparison with the Philadelphia Centennial pictures.

In one thing I think photographers are wrong in this country, and that is in the

practice of printing in the sun. This forces the operator to thicken the negatives to bear sun printing. My experience in England has only been confirmed by my practice here, and that is that a thin negative with every gradation is best printed in the shade, and to intensify such an one to stand sun printing is to spoil it.

I believe there is one thing the wet process can do better than the dry, and that is, make magic-lantern slides; but I have been using some special plates prepared by Mr. Carbutt, which come very near, indeed. The results are better when made in the camera than when made by contact with the negative; at least that is my experience, and by using the developer, the formula for which is sent with the plates (which are a weak ferrous-oxalate), and clearing with the sulphuric acid and alum, a slide can be produced of good color, with clear lights and very delicate gradations with very little trouble.

As stated in the April number of the PHILADELPHIA PHOTOGRAPHER, we have been photographing by electric light. The picture of the Music Hall is most interesting, as it is a refutation of the statement made by rival companies that the Edison incandescent light is non-actinic. It is to the eyes a redder light than the arc light, but the exposure proves it to be very little inferior in actinism to the arc light. The exposure in the Music Hall was thirty minutes. The same exposure was given in the Horticultural Hall, which is lighted by the arc light on the Thompson-Houston plan, the last being the best exposed of the two.

MR. VALENTINE has published a paper upon photography in winter, and the reproduction of landscapes in which the ground is covered with snow. Although gelatino-bromide plates are very convenient for this kind of work, on account of their great sensitiveness, the author says that he has not yet been able to obtain with them as fine prints as those made with wet collodion. After having tried several kinds of positive paper, he adopted the white albumenized paper as giving the best prints of snow-scenes.

ISOCHROMATIC PHOTOGRAPHY.*

BY FRED. B. IVES.

It is well known that the ordinary photographic processes do not reproduce colors in the true proportion of their brightness. Violet and blue, photograph too light; green yellow, orange, and red, too dark. For a long time it was believed to be impossible to remedy this defect; and even when it became known that bromide of silver could be made more sensitive to yellow and red by staining it with certain dyes, the subject received very little attention, because it was also known that the increase of sensitiveness was too slight to be of practical value in commercial photography.

Dr. H. W. Vogel, who was one of the first, though not the first, to devote attention to this subject, announced, in 1873, that he had succeeded in making a yellow object photograph lighter than a blue or violet one, by using a silver-bromide plate stained with corallin, and exposed through a yellow glass. The plate showed no increased sensitiveness to red, and the experiment, although of considerable scientific interest, did not indicate a practically useful process.

In the spring of 1878 I became interested in this subject, and tried to discover a method of producing plates which should be sensitive to all colors, and capable of reproducing them in the true proportion of their brightness. I commenced by trying nearly all the color sensitizers which had already been suggested, in order to learn which was the best, and then, if possible, *why* it was the best, as a guide to future research. Chlorophyl was the only thing I tried which was sufficiently sensitive to red to offer any encouragement in that direction; but the solution which I obtained was weak and unstable, and far from being a satisfactory color sensitizer. Hoping to

* Read at the stated meeting of the Franklin Institute, March 18, 1885.

Through the kindness of Prof. W. H. Wahl, Secretary to the Franklin Institute, and also with the permission of the author, we are permitted to publish this valuable paper simultaneously with its appearance in the *Journal of the Franklin Institute*.

obtain a better solution with which to continue my experiments, I made extracts from many kinds of leaves, and found that a solution from blue myrtle leaves looked better and kept better than any other, and when it was applied to the silver bromide plates they became remarkably sensitive, not only to all shades of red, but also to orange, yellow, and green. By placing in front of the lens a color-screen consisting of a small glass tank containing a weak solution of bichromate of potash, to cut off part of the blue and violet light, I obtained, with these chlorophyl plates, the first photographs in which all colors were reproduced in the true proportions of their brightness. But my chief desire at that time was to realize a method of producing from any object in colors a set of three negatives, in one of which the shadows should represent the blue of the original, in another the yellow, and in another the red, in such a manner that transparent pigment prints from these negatives—blue, yellow, and red—would, when superimposed on a white surface, represent not only the lights and shadows, but also the colors of the object. This had already been attempted by others, who failed because their plates were not sufficiently sensitive to red and yellow.

Having succeeded perfectly in my undertakings, I published my discovery in 1879,* explaining how to prepare and use the chlorophyl plates, in connection with the yellow screen, for the purpose of securing correct photographs of colored objects.†

* PHILADELPHIA PHOTOGRAPHER, December, 1879, p. 365.

† I intended this publication to be a very full and explicit one, and it was sufficiently so to be perfectly understood by most who saw it; but some may think I did not sufficiently emphasize the importance of using the particular kind of chlorophyl which I mentioned. In a brief communication to the editor of the *Photo. News*, in 1883, I described some experiments with eosine as a color sensitizer, and then called attention to the superiority of blue-myrtle chlorophyl for this purpose, stating that I had not been able to secure such results with any other kind of chlorophyl, and then a fresh solution from fresh leaves must be used to secure the greatest possible degree of sensitiveness. See *Photo. News*, Nov. 1883, p. 747.

So far as I know, nobody tried the process. Nearly five years later Dr. Vogel announced that, after eleven years of investigation, he had at last realized a successful process of this character, and that this new process of his was the "solution of a problem that had long been encompassed with difficulty." This publication attracted a great deal of attention, and gave me occasion to call attention again to my process,* and point out that it was not only the first practical solution of this problem, but the only truly isochromatic process ever discovered. Dr. Vogel's new process was not only no better in any respect, but the plates were insensitive to scarlet and ruby-red, and, therefore, would not photograph all colors in the true proportion of their brightness.

My method consists in treating ordinary collodio-bromide emulsion plates with blue-myrtle chlorophyl solution, exposing them through the yellow screen, and then developing them in the usual manner. The emulsion which I have employed is made with an excess of nitrate of silver, which is afterward neutralized by the addition of chloride of cobalt; it is known as Newton's emulsion. I now prepare the chlorophyl from fresh blue-myrtle leaves, by cutting them up fine, covering with pure alcohol, and heating moderately hot; the leaves are left in the solution, and some zinc powder is added, which helps to keep the chlorophyl from spoiling. I have a bottle of this solution which was prepared about six months ago, and now appears to be as good as when first made.† A glass plate is flowed with

* Photo. News, London, September 5, 1884, p. 566, and Year Book of Photography for 1885, p. 111.

† I originally recommended chlorophyl extracted from dried leaves, because I had not yet learned how to preserve the solution for more than a few weeks—and at some seasons it would be difficult, if not impossible, to obtain fresh leaves. The tea organifier which I recommended is also a color sensitizer, and when it is used in connection with the chlorophyl from dried leaves the plates are as sensitive to red as can be safely prepared and developed in the light of an ordinary photographic "dark-room." Plates prepared with chlorophyl from fresh leaves

the emulsion, and as soon as it has set the chlorophyl solution is applied for a few seconds, after which the plate is washed in pure water until smooth, when it is ready for exposure.

My color-screen consists of a small plate-glass tank, having a space of three-sixteenths of an inch between the glass, filled with a solution of bichromate of potash about one grain strong. I place the tank in front of the lens, in contact with the lens-mount. The advantage of this tank and solution is that it can be more easily obtained than yellow plate glass, and the color can be adjusted to meet any requirement.

The plates require about three times as much exposure through the yellow screen as without it, and may be developed with the ordinary alkaline pyro developer.

In order to illustrate the value of this process, I made two photographs of a highly colored chromo-lithograph, representing a lady with a bright scarlet hat and purple feather, a yellow-brown cape, and a dark-blue dress. One, by the ordinary process, represents the blue as lighter than the yellow-brown, the bright scarlet hat as black, and the purple feather as nearly white. The other, by the chlorophyl process, reproduces all colors in nearly the true proportion of their brightness, but with a slight exaggeration of contrast produced purposely by using a too strong color solution in the small tank. These photographs are herewith reproduced. (See plate.)

I also made two landscape photographs, one by the ordinary process, and the other by the chlorophyl process, exposing them simultaneously. In the ordinary photo-

do not require treatment with the tea organifier to secure this degree of sensitiveness. Recently I have used the tea organifier and some other sensitizers, in connection with the solution from fresh myrtle leaves, and in this way have produced plates having such an exalted color sensitiveness as to be unmanageable in ordinary "dark-room" light. Possibly, such plates might be prepared and developed in total darkness, by the aid of suitable mechanical contrivances, but I am not sure that they would work clear even then, because they appear to be sensitive to heat as well as to light.

graph, distant hills are lost through over-exposure, yet the foreground seems under-exposed, and yellow straw stacks and bright autumn leaves appear black. In the chlorophyl photograph, the distant hills are not over-exposed, nor is the foreground under-

posed, brought out all colors better than the eosine plate, and gave full value to the bright scarlet of the hat, the detail in which was beautifully rendered.

Dr. Vogel advanced the theory that silver bromide is insensitive to yellow and



From Ordinary Photograph of Chromo-Lithograph.



From Isochromatic Photograph.

IVES'S PROCESS OF ISOCHROMATIC PHOTOGRAPHY.

exposed; the yellow straw-stacks appear nearly white, and bright autumn leaves contrast strongly with the dark green about them.

To test the relative color-sensitiveness of plain emulsion plates, plates stained with eosine, and plates stained with the blue-myrtle chlorophyl, I exposed one of each kind through the same yellow screen, giving each five minutes' exposure, on the same piece of copy, which was the chromolithograph already described. The plain emulsion plate showed only the high lights of the picture, after prolonged development. The eosine plate was under-exposed, but brought up everything fairly well except the scarlet hat, which came up like black. The chlorophyl plate was over-

red, because it reflects or transmits those colors; and that it becomes sensitive when stained, because of the optical properties of the dyes. He afterwards admitted that only such dyes as are capable of entering into chemical combination with the silver-bromide proved capable of increasing its sensitiveness to color, but he held to the theory that the optical properties of the compound were the cause of its color-sensitiveness.

I have shown that the color-sensitiveness can be produced by treatment with an organic compound which has none of the optical properties characteristic of dyes; and that chlorophyl, which absorbs only red light, greatly increases the sensitiveness also to yellow and green. There is,

therefore, good reason to doubt if the color-sensitiveness is ever due to the optical properties of the dye or combination.

Attempts have been made to produce isochromatic gelatine dry plates which, while many times more sensitive to white light than my chlorophyl plates, shall also show the same relative color-sensitiveness. Such plates would be very valuable but for one fact; it would be necessary to prepare and develop them in almost total darkness. Gelatine bromide dry plates extremely sensitive to yellow, but *comparatively insensitive to red*, might be used to advantage in portrait and instantaneous photography, because they could be safely prepared and developed in red light; but when truly isochromatic photographs are required, the time of exposure must be regulated to suit the degree of sensitiveness to red, which cannot safely be made greater than I have realized with my chlorophyl process.

WALTER B. WOODBURY.

ONE of the familiar names in the history of photography is that of Woodbury; in a work by a French writer, Davanne, this name is placed next in rotation to those of Talbot, Daguerre, and Nièpce; and Mr. Woodbury's most notable achievement is the invention of the permanent printing process which bears his name. For a score of years, photographic and other scientific literature, also the records of the Patent Office, bear witness to the wide range of his knowledge, and to the ingenious activity of his inventive powers.

It is doubtful, indeed, if the inventive faculty has not been too powerful for his material interest, impelling him on new lines of research before garnering a harvest from seed earlier sown. Photographic inventors have rarely won any conspicuous reward; the field open to them scarcely admits of great financial success. Such a complete invention as the Woodburytype, for example, became practical only through a long series of experiments, by which each stage of operations is perfected; the labor employed must be trained to manipulative skill, and half the term of a patent may expire before success is sufficiently assured

to attract capital, by which the process may be developed into a profitable industry.

The subject of notice has had his successes and his disappointments, and taken each with equanimity. Recently, however, his health became seriously undermined before its cause was suspected; and without health, the prosecution of his business enterprises was impossible. The crisis of affairs being serious, and becoming known to his friends, the regard, sympathy, and good will towards Mr. Woodbury found expression in the shape of an influential committee, determined to appeal to the photographic and literary world for subscriptions to a fund which should afford him means and leisure to recover his health; and, therefore, the opportunity of establishing his stannotype process, and completing improvements in block-printing, which he has begun.

Mr. Woodbury was early attached to photography, and at about the age of seventeen determined to carve out a career for himself, and started, with a modest photographic outfit, for Australia, in 1849. Here he acquired for himself mastery over his materials, and in a few years we hear of him in Java, single-handed, improvising a studio, struggling with the difficulties incident to a tropical climate, and creating quite a sensation with excellent portraits, produced, from beginning to end, with his own hands. The first month, working twelve hours a day, realized a considerable sum of money, but this eventuated in a serious illness of three months. In 1859 he returned to England with a series of exquisite views taken in the Island of Java; these were purchased by Negretti and Zambra.

In 1860 Mr. Woodbury returned to Java, and established himself in the capital, Batavia. Those who remember the difficulties that beset the collodion process five-and-twenty years ago will appreciate the obstacles to be overcome in a hot and humid climate, with a vertical sun in the midday hours. For success a fund of resource was necessary, and Woodbury was equal to the task.

Health giving way under the climate, he returned to Europe, and having already in

his mind the genius of the process which bears his name, he determined to give his faculties free play, and devote himself to invention.

From 1864 to 1884. Mr. Woodbury took out no less than twenty patents, some, of course, dealing with the production of photographs in relief, and printing from metal intaglios; others for producing designs on wood, paper, metal, cloth, etc.; and a series dealing with improvements in optical lanterns, stereoscopes, kaleidoscopes, barometers, hygrometers, and photographic apparatus. In the course of this period he contributed to the *English Mechanic* an exhaustive series of papers on the various scientific experiments which could be shown in the optical lantern, and these articles were subsequently republished under the title of "Science at Home." His contributions to the Photographic Journals and Year Books have been numerous, and a correspondence he entered into with Professor Tyndall was published by that gentleman in the columns of *Nature*. Mr. Woodbury also edited, illustrated, and published a work containing a series of views from all parts of the world, entitled, "Pleasure Spots of the World."

Woodbury claims, with justice, to have initiated in France the method of photogravure, since worked to great perfection by the house of Goupil; his name is associated with improved actinometers, with balloon photography, with the process of artificial but inimitable water-marking of paper, called photo-filigrane, and many more items of interest and utility.

Sufficient has been said to show his multifarious activity of mind, the variety and value of his contributions to photographic art, and his many years of scientific service. The committee believe that its action on behalf of Mr. Woodbury will meet with a prompt and generous response. Contributions had better be sent direct to the Treasurer of the Fund, Mr. W. S. Bird, 74 New Oxford Street.—*The Photographic News*.

WE learn with great regret that the well-known stockdealers Messrs. SMITH & PATTISON, of Chicago, have suffered a total loss, by fire, of their valuable stock of photographic goods.

A WORD IN DEFENCE OF THE AMATEUR.*

IN these days of advanced photography it seems strange to me to hear the oft-repeated remark that "amateur photographers are killing the business."

I would like to ask the professional brethren here to-night to go back with me a number of years to the days of Daguerre.

I ask in all seriousness if it was not for these men would not we all—I speak now to professional photographers—be working at some other business, had not these men given their earnest attention and time to the introduction and perfection of our art as understood in those days? And, again, I would ask you to think of every improvement that has taken place in our profession. Has not the amateur been in the first rank, both as inventor and improver? Just here I would mention our own members, Eastman, Mawdsley, Forbes, and Walker.

When the card photograph had about run its race, did not Adam Salomon, a sculptor and artist, and at one time an amateur photographer, give a fresh impetus to photography by introducing retouching and adding art principles to photography?

The process now so generally in use which we call instantaneous or dry plate photography, do we not owe almost entirely to the amateur?

And if we stop to think for a minute what right have we to suppose or expect these new processes and improvements by *amateurs* were only intended or ought only to be for our advantage and pecuniary benefit.

Then I dispute the saying that amateurs are ruining our business, rather are they a direct benefit to the painstaking photographer. For years the cry has gone up from amongst professional photographers "that the public are not judges of good photographs"—that if the people were only able to discriminate between good and bad photography, then the millenium, so far as photographers were concerned, would indeed be at hand.

* A paper read before the Rochester Society of Photographers by Mr. S. D. Wardlaw, President, March 9, 1885.

Now there is no better way to instruct the public, in regard to our art, than to have them try it themselves.

When they are able to make and appreciate a good piece of work of their own production, the more liable and willing will they be to give professional photographers the credit due when they produce a creditable work.

If the indifferent, careless, or cheap photographs, get crowded out by the superior ones produced by the painstaking, careful, educated, and artistic amateur, so much the better for photography say I, and I for one will always cheerfully, and to the extent of my little ability, help the amateur in his attempt to master the difficulties which at first beset his path, and in so doing I will only be in a slight measure repaying to amateurs the many and great obligations I have received from them both oral and written.

The "killing of the business" comes not, in my way of thinking, from competition with the amateur, but from amongst the body of professional photographers themselves. From the grasping and envious nature of a few (a few as compared with the number of photographers) whose tactics in the past have been to work for lower prices than their more careful and skilful professional brethren could well afford to do, and in this way secured to themselves a share of the public patronage which they ill-deserved and worse requited. These are the ones who mostly rave against the amateur, and why? Because now appears on the field a new body, well equipped with apparatus, armed with brains, talent, ability, a desire to achieve and with a love for the work in which they are engaged, and a hearty contempt for these same grasping envious professional gentry and their productions, who have heretofore posed to the general public as *artists*. And what is better still, these same talented amateurs can afford to work to their own ends without a thought whether "the world-renowned photo.-artist, Mr. Muddle, makes twenty-four cabinets and a panel thrown in for twenty-five cents or not," Aye there is the rub. These professional "cheap Johns," who vainly rage against the amateur, would be in the seventh heaven

of contentment if they could only afford (providing always they had the ability) to make pictures at a lower rate than these same amateurs (that is, for pleasure).

Gentlemen professionals, in conclusion, I would say, take the same pains to secure a good creditable piece of work, bring to such work the same love and ambition to excel that does the amateur, and when you have completed your picture put upon it the same value the amateur places upon his, and my word for it, you will no longer look on the amateur as your enemy but your friend.

SOCIETY GOSSIP.

THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the regular meeting, held Wednesday evening April 1, 1885, the President, Mr. Joseph W. Bates, in the Chair.

The minutes of the last meeting having been approved, the Lantern Committee reported that arrangements had been made for an exhibition at Association Hall, on the evening of April 8th.

The Excursion Committee reported that they had in contemplation an excursion to take place in the latter part of May. If a sufficient number would take part, it was proposed to go by private car over the New York, Philadelphia & Norfolk Railroad, via Delaware and the eastern shore of Maryland, to Cape Charles, thence to Old Point Comfort and Norfolk, and over the Norfolk and Western Railroad to Petersburg, Allegheny Springs, Goshen Pass, Peaks of Otter, etc.

A single-day tug-boat trip to Fort Delaware was also proposed, to take place some time during April or May.

The Committee on Membership reported the election as active members of Messrs. G. Walter Bates and Charles M. Taylor, Jr.

The President announced the death of Mr. Titian R. Peale, an honorary member, and of Mr. Samuel Powell, Jr., a corresponding member of the Society.

In relation to the death of Mr. Peale, Mr. Corlies offered the following minute:

"The Photographic Society of Philadelphia has learned with sorrow the decease

of Titian R. Peale, an honorary member of this Society.

"Mr. Peale was one of the earliest amateur photographers in this country, and being located in Washington as examiner in the Patent Office, he was enabled to use his influence in introducing photography into several departments of the Government, particularly in the early expeditions to the far West.

"He was an active member of the first Photographic Exchange Club.

"His advanced age prevented him taking an active part of late years, although he always manifested a warm interest in everything pertaining to the art."

Mr. Browne offered the following in relation to the death of Mr. Powell:

"Mr. Samuel Powell, Jr., formerly of Philadelphia, but more recently of Newport, R. I., a corresponding member of this Society, died at his Newport residence, March 5, 1885.

"Mr. Powell was led to take up photography in 1856, to assist him in matters of research, and he continued to practise the art as an amateur until his failing health forced him to lay it aside a few years ago. Among his scientific labors may be mentioned the photographic enlargements of Diptera, used in illustrating Baron d'Ostenvacker's volume on that subject.

"Mr. Powell made the photographs to illustrate Mr. W. G. Binney's book on snails.

"For many years Mr. Powell had a standing order among the fishermen on the coast to send him specimens of any odd variety of fish they might catch. Those that were of interest were carefully examined and then photographed.

"He was in constant correspondence with Prof. Spencer Baird, of Washington, D. C., on the same subject. Mr. Powell also photographed the fossil remains of the well-known Saurian found in New Jersey, and fully described by Dr. Leidy. He also assisted Dr. Weir Mitchell in photographing the heads of snakes with their poison fangs.

"He was well known among the prominent scientific men of this country, and his

death will be a cause of lasting regret among his large circle of friends."

On motion it was

Resolved, That in the death of Mr. Samuel Powell, Jr., the Photographic Society of Philadelphia has lost a member who contributed much to enhance the value of photography in scientific work. His labors were constant, and earned for him the reputation of being an accurate and able observer.

Resolved, That this minute be entered on the records of this Society, and an attested copy be sent to the family of the deceased.

The President appointed Messrs. John C. Browne, Samuel Sartain, and William H. Rau, a committee to select the Presentation Pictures for 1885, in accordance with the rules recently adopted.

A question in the box asked: "Has the portrait lens any advantage over the rapid rectilinear, other than the rapidity for taking portraits?"

Mr. Browne stated that while a portrait lens would be most suitable in a gallery, that the rapid rectilinear would work better out of doors, as with it the large volume of light could be better controlled.

Mr. Walmsley said that in many galleries the rapid rectilinear was used largely, owing to its greater depth of focus, and with the use of the very rapid plates now obtainable, the exposures could be sufficiently short. In taking children, however, where very short exposures, were necessary, the portrait lens would be required.

Mr. S. M. Fox thought that in a gallery where space was an object, the portrait lens had the advantage of shorter focus.

Messrs. Wilson, Hood & Co. showed a number of interesting articles, among which were: A new low-priced camera, made by Messrs. E. & H. T. Anthony, in which the folding bed was held in position when in use by two metal clamps instead of the usual screw. An "Eclipse" shutter, made by Prosch, was arranged to adjust the rapidity in a simple and effectual manner. A quarter-size camera, by the American Optical Company, was arranged with a clamp having a ball-and-socket joint by which it could be attached to the steering-bar of a bicycle. A Waterbury candle

lantern for changing plates was provided with a candle on a spring-socket, the whole folding in compact form for use while travelling. "Pyro Pellets" put up in bottles of fifty pellets, each containing two grains afforded a convenient form for use at home or abroad.

A sample print on a new gelatino-bromide paper, prepared by Messrs. E. & H. T. Anthony, was also shown. This paper was specially prepared with a surface suitable for working on with crayon, charcoal, or pastel. Heretofore gelatine papers prepared for enlarging purposes had been very difficult to work on without roughening the paper with some gritty substance. The print shown was a copy of a crayon drawing, and the tone was one admirably suited for crayon work. The paper is prepared with fine or coarse "tooth," as may be required, and is manipulated in the same manner as the gelatino-bromide paper.

Mr. Walmsley showed an "Instantograph shutter," in which the exposure was given by a circular opening in a round plate, which revolved past the opening of the lens. It was provided with a pneumatic release, and was of very compact form.

A copy of *First Lessons in Amateur Photography*, by Prof. Randall Spaulding, was presented by Messrs. Wilson, Hood & Co.

Forty-two members and one visitor present.

Adjourned.

ROBERT S. REDFIELD,
Secretary.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS.—392 Bowery, N. Y., March 4, 1885.

In the absence of the President and Vice-President, Mr. Schanidner was called to the Chair. Minutes of last meeting read and approved. The various journals were received, with thanks of the Association.

Mr. De Lemos and Mr. Wiegand were elected to membership.

In the absence of Mr. Duchochois there was no regular subject for discussion.

Mr. Eddowes: I would like to ask if any of the printers present know the average number of grains of silver absorbed by a sheet of paper?

Mr. Harrison: I don't know how the

question can be answered, as every sheet floated on the bath will make it weaker.

Mr. Mildenberger: A sheet of paper will take up just so much silver and no more—it don't matter what strength the bath is.

Mr. Schnaidner: There seems to be a great demand for good commercial operators; can any one tell why it is so?

Mr. Fields: I don't see why that can be. There is no trouble in making mercantile work if your bath is in good order, and you light your articles right. You have to get good detail, and sometimes have to give very long exposures; it is entirely different from making portraits.

The Secretary: I have to differ from our worthy member, as I think it is sometimes very difficult to make good negatives of mercantile work. For instance, in silverware the fine engraving and line have to show, and on a polished surface and strong light it is very difficult to procure a good negative. We have used powder to dull the articles, and also used putty for the same purpose. It makes a dull surface by just patting the article with it.

A Member: Sometimes an operator has to go out to make a negative of bronze work or silverware. There are some firms that will not allow the articles that are to be photographed to be taken away, and the negatives have to be taken in a bad light. Men who have worked under the light at portraits will find a great difference.

A Member: It is said that some work requires a long exposure—suppose that you had to photograph anything that moved in the least draught, what would you do in such a case?

A Member: I have had to photograph gas fixtures that had swinging ornamental fixtures; the street car passing the building would cause them to move, and it was impossible to get more than a blurred mass. In answer to a question, he said he would rather make mercantile work with wet plates.

Yours respectfully,

T. W. POWER,
Secretary.

March 18, 1885. President Buehler in the Chair.

Secretary Powers being absent on account

of sickness, Mr. Eddowes was made Secretary *pro tem*. Owing to the absence of the minute book, the minutes of the previous meeting could not be read.

Messrs. Schimmer and Stoltz were elected to membership.

Reports of the Librarian, Board of Trustees, and Financial Secretary were read and accepted.

The nomination and election of officers for the ensuing year was next taken up, and the various offices were filled as follows:

President.—T. W. Power.

Vice-President.—T. C. Roach.

Secretary.—W. Eddowes.

Financial Secretary.—W. F. Smith.

Treasurer.—C. Schnaidner.

It was moved and carried that a vote of thanks be given to the old and new board of officers.

Mr. Roach was made Master of Ceremonies for the evening and the meeting was adjourned, but the clink of the social glass and the melody of the jolly song were heard far into the morning hours.

The PHILADELPHIA PHOTOGRAPHER and various other journals were received, with thanks of the Association.

Secretary's address 770 Broadway, New York.

Yours respectfully,

W. EDDOWES,
Secretary.

PHILADELPHIA AMATEUR PHOTOGRAPHIC CLUB.—Meeting called to order with H. Pusey in the Chair.

The following officers were elected for the ensuing year:

President.—H. Pusey.

Vice-President.—Wm. G. Haines.

Treasurer.—Alfred Thompson.

Secretary.—W. W. Randall.

The Secretary read a communication from the London Stereoscopic Co., stating that an exhibition under their auspices, free to all amateurs, was to be held in London during next month, and invited members of his Club to exhibit. Referred to Executive Committee.

The Treasurer read his report which showed the finances of the Society to be in a most flourishing condition. The Society

has been in existence but one year, and has done remarkably well; many interesting papers have been read and numerous demonstrations given by practical hands. New members are constantly being added to the list, and altogether the outlook for the future is very bright.

The meeting then adjourned to attend the lantern exhibition which takes place every meeting night, and forms quite a feature of the Club.

A FEW HINTS ON DEVELOPERS.

At a recent meeting of the Rochester Photographic Association Mr. John E. Dumont, one of its most talented amateurs, presented a paper on dry-plate developers which is worthy of publication. It was entitled "A Few Hints on the Developer," and read as follows:

A short time since I visited the rooms of the Society of Amateur Photographers of New York, and while there was shown into the dark-room, where the committee were testing the plates of all the different makers, and I saw long shelves filled with bottles. On examination I found there were two bottles for every brand of plates. An idea struck me. Is it necessary to have so many lots of developers? I say no.

I have frequently had different persons come to me and ask, "Will this or that developer work on this or that plate?" and then there are others who do not stop to think whether the developer will work well or not, but use one developer for them all, and if it does fail to bring good results on some particular maker's plates, they condemn the plates and damn the maker, and never stop to think that it is the developer or themselves that is to blame.

The maker of plates knows what proportions of silver, bromides, etc., that he puts into a plate, and he knows what proportions of pyro, etc., are required to develop those plates. There are some plates that will develop with half a grain of pyro, while others require as many as five or six grains.

Now, to those who desire to produce the finest results I would recommend that they always use the formula that the maker fur-

nishes. Some of you will say, "I am constantly changing plates," or "I use one brand of plates for a certain class of work, and another brand for a different class, and cannot keep so many developers." To those persons, what I have to say applies.

The iron developer has gone out of use excepting for lantern slides and transparencies, so I will confine myself to the developers now generally recommended by most dry-plate makers. Pyro made alkaline by a greater or less quantity of ammonia, carbonate of potash, or washing soda, restrained with more or less bromide of ammonium or potassium. Citric acid, and sulphite of sodium do not aid development only in so far as they preserve the pyro. Citric acid prevents decomposition of the pyro, and should in all cases be dissolved before adding to the pyro, as I find it has no effect unless it is dissolved first. Sulphite of soda prevents oxidation of the pyro, and is of but little benefit in a pyro-ammonia developer, but where potash or soda is used it is absolutely necessary, as it prevents the staining of the gelatine film, as in cases of prolonged development the film would become so stained as to be non-actinic without its use.

I would recommend to those who are using different brands of plates to make sixty-four grain solutions in separate bottles of pyro, stronger water ammonia, carbonate of potash, and bromide of ammonium or potassium, always adding sixty grains of citric acid and four ounces of sulphite of soda to each ounce of pyro.

Now, each ounce of developer recommended by the following makers contains the quantities of pyro, ammonia, or potash and bromide set opposite their names. I have only figured out a few of the Rochester makers, as that is sufficient to illustrate:

	Pyro.	Ammonium.	Bromide.	Potash.
Eastman,	1 $\frac{2}{3}$ gr.	1 $\frac{1}{2}$ min.	$\frac{1}{4}$ gr.	
Forbes,	1 $\frac{3}{4}$ "	1 $\frac{1}{2}$ "	$\frac{1}{4}$ "	
Inglis,	2 $\frac{1}{4}$ "		1 $\frac{1}{2}$ "	6 $\frac{3}{4}$ gr.
Monroe,	3 $\frac{1}{2}$ "	3 $\frac{3}{4}$ "	1 "	
Mawdsley,	2 "	3 "	1 "	
Mawdsley,	2 $\frac{1}{2}$ "		$\frac{1}{4}$ "	5 gr.

Make up to 4 ounces.

To use the Mawdsley plate I take of pyro 1 drachm, ammonia 1 $\frac{1}{2}$ drachm, and bro-

mide $\frac{1}{2}$ drachm, adding water to make up to 4 ounces. Or if I want the potash I take pyro 1 $\frac{1}{4}$ drachm, potash 2 $\frac{1}{2}$ drachms, bromide 7 minims, adding water to make up to 4 ounces.

I recommend 64-grain solution, as it is simpler to work. Each drachm contains 8 grains. I think all makers should give the strength per ounce of their developers.

To amateurs who use but small quantities of developer, I would advise that they mix no more of the pyro solution than will last them ten days, as my experience is that where sulphite of soda is used it causes the pyro to decompose much more rapidly than where citric acid alone is used. I recently condemned a lot of plates because of their slow development, but later on tried the same emulsion with a fresher pyro mixture, and they flashed up quickly, and what I had called a very slow plate with an old developer was a very rapid one with a fresh developer. I have since used my old pyro solutions as a retarder in cases of over-exposure, and find it is better for that purpose than bromides.

In closing, I would say, always use the developer that the maker recommends. Always keep your solutions fresh and trays clean, and never condemn a plate until you are sure the plate, and not yourself, is at fault.

SOME OF THE BEAUTIES OF DRY-PLATE WORKING.

BY THOMAS PRAY, JR.

LET it be understood at the outset that the writer is not a professional photographer, and whatever his accomplishments may have been in the line of photography, they are all classed as "immature" by our jocular friends of the professional branch of the art. This article is not written critically in any sense, except for the purpose of eliciting information. In the editorial sense of the word, we have looked with much interest for something to be done somewhere, by some one, and yet nothing has been done, to eliminate the difficulties which attended the amateur, from the continual changing of the character of the emulsion, in some respects, by the dry-plate

maker. All of us, either professional or "immature," know full well that we are treated every week to a brand new lot of developers which combine a great deal of ignorance as well as a great variety of chemical combinations, if we are to read as the formulæ are written or printed. But if we read analytically, we find that, practically, all this variety of formulas come down to one point, they either use pyro dry at the instant of using, or if they use it in solution, it must be made as used, and with some half dozen (more or less) chemicals, for the purpose, as it is said, of eliminating something, or of preventing something, or of accomplishing something. They then use soda, potash, or ammonia, and it will be a waste of time to refer any further to the developers other than to say that each platemaker has seemed to make discoveries of a great variety of developing formulas, which when reduced to a working practice simply amount to changing the proportions slightly, or, if anything, adding a lot of incongruous or incompatible elements, which only serve to vex the amateur and perplex the professional.

But it is not our purpose to deal with developers, and it may be said, as the only further reference to them, that during the past three and a half years we have recorded the results of over one hundred different developer formulas, on three different brands of plates, only to find in the end that a single developer, divested of all nonsense, would give more perfect results and better control of exposure than any of the other score of formulas. But these are questions which are constantly occurring, and the amateur has been taught practically to look to his developer, and if anything went wrong with him, his exposures, the pyro must have been wrong, or there must have been too much acid, or too much something else, but it has never been that the platemaker is continually changing and experimenting on the amateur by giving one sensitiveness at one time, a different one at another, more or less emulsion on the plate the next time, then some fancy way of packing the plates.

Our own experience with these plates

commenced, practically, in 1880, in a limited way for a scientific purpose. It is, perhaps, needless to say that the first six months' experience found us with some two or three gross of several different brands of plates, all packed away in a large soap box, after having been stripped with hot water and carbonate of soda; but there had been some information acquired. In 1881, our first venture in any amount of plates was made. One gross of half plates, $4\frac{1}{4} \times 5\frac{1}{2}$, from two different makers was purchased. There was a difference in the sensitiveness of the emulsion by the different makers. Some of these plates are now in our own possession, and are the basis of the complaint in this article, and as reference is made to the standard plate, let it be understood that it means, to this old emulsion on a lot of plates with which every other lot of plates has been compared, by some of the six or eight developers which have been used in all these experiments. In 1882, three gross of 5×8 and 8×10 were purchased. Some of each of these lots are still on hand, and comparison has also been made as with them and later purchases from the very same makers. After the right exposure was found, either for outside work or for the scientific work (in which line our investigations were directed), the developers were then kept in solution for not to exceed three weeks, the same formulas exactly have been used as standard developer, and the six formulas which were selected have been reduced practically to two. During this time something like 3000 different negatives have been accumulated, some of which have won very warm compliments from professional friends, and have found places in their collections, while others are retained as mementoes of our own failures either in exposure or attempting to develop a plate which was imperfectly made or imperfectly coated.

We find a growing sentiment among dry-plate users (but which we have never seen as yet expressed in any of our photographic journals), to begin to inquire into the causes of why, with the platemakers' production at one time we get very good results and at another time it is impossible to develop so as to make a print of ordinary merit. The

lenses which have been a part of our outfit have been Voigtländer's, Ross's, and Dalmeyer's, although, in some instances, plates have been exposed with cheaper lenses for the purpose of carrying the investigation into lenses as well as plates. The standard exposure has been one of the most beautiful of Ross's portable, symmetrical lenses, used on a 5 x 8 plate, and one of the same lenses, slightly longer focus, on an 8 x 10 plate, and a Dalmeyer, new system, wide angle, rectilinear. These three lenses practically cover the whole period of investigation. The original emulsion, which will be termed standard, gives, on a 5 x 8 plate, with its regular proportions and an exposure of ten to twelve seconds, in good sunlight, a clear, crisp negative, in which the sky would acquire sufficient density so that when the print was properly made, and fully toned and cleared, it did not look like a coming thunder-storm, and all the detail was beautiful. One of the plates was four boys behind a snow-bank, in which the foundation of a house and a part of the first story of two houses are shown; the sky beyond and between the houses is of sufficient density to shut out any coloring of the paper in a deep print. This is from the standard emulsion, and may be pronounced as about correct. The next subject is a sunny exposure in South Carolina, with beautiful detail, from another emulsion supposed to be the same, which has two grievous difficulties; the sky has the appearance of an immediately approaching thunder shower; one side of the plate has density sufficient so that the line of contour of the hill beyond us is plainly discernible; on the other end of the plate there is exceedingly little difference between the density of the real estate and sky; while on a 4 x 5 print there are about a thousand white spots, which do not add to the pleasure of the artist. If we take another, we have a street scene in New Orleans, showing the river of filth along the sides of the street, a group of boys in the foreground on the bank, the street all cut up in ridges, all of which is in beautiful detail, and the reflection of the sky and the trees is plainly seen in the gutter on the side of the street. So far everything is brought out elegantly,

but the sky beyond has all the appearance of having had a dirty sponge passed over the print before it was burnished. How is it possible, then, if the emulsion is properly arranged, and the exposure is such that the fine details are exquisitely pleasing on one side of the plate, and the other side, only so far as the sky appears, is a piece of botch-work? And these are only a few of the instances which have occurred.

We now return to the first subject of the same house where the boys were playing in their snow fort. With a new emulsion, giving the same exposure, with the same lens, developing with a new solution of pyro, we get beautiful detail in the ground, the underpinning the shadows, one side of the plate has sufficient density and the other side has the approaching thunder-shower accompaniment, making a complete botch. All the plates developed in same place and water.

There seems to be an effort on the part of platemakers in several different makes of plates (they have been so careful to make a portrait plate for landscape work), to put the least possible amount of emulsion on the plate, and to work for softness more than detail, which is precisely what we feel the amateurs will eventually kick about. It may be all very well to make a plate which will be very soft in its detail and gradation, but in our own experience we cannot afford to spend a couple of weeks after returning from a business or pleasure trip with, as in our last venture, nearly a gross of 5 x 8s, some with one and others with two exposures on the plate, to develop them one by one, and then spend the rest of the fortnight in painting out the sky, so as to get an approximate picture or print.

During the time of this experience the advice of the platemaker has been sought in many instances, and in one case the trouble with the bad development was the use of too much oxalic acid. To satisfy ourselves upon this point, we put half an ounce of oxalic acid into four ounces of water, and after this was dissolved, or all that would dissolve, it was filtered, and half an ounce of pyro put into it; some of the very same emulsion of plates was then developed with this excessive amount of oxalic acid, and

the negatives vouch for themselves that they are beautiful in perfection, and some of the prints from this excessive oxalic acid developer were pronounced by the platemaker as positively charming. He was not, however, informed what made them so charming. In another case, while enjoying a brief holiday with one of the finest professional photographers in this country, and a man of national reputation, we were using some very quick plates, and after the exposures were made, and we had returned home, we were cheered by our own helplessness in seeing a larger portion of the gelatine float off the plate during development, and our subsequent experience with other exposures from the same batch proved that there was no substrata on the glass, and the writer has a most amusingly spotted night-shirt (silver spots of black) as a memento of sitting up all night with two of these plates, trying to preserve something upon them. A week or two afterwards, for it was warm weather, we heard from our professional friend, whose experience had been exactly similar to ours, and he had given the platemaker particular fits. But these are only some of the pleasures of using dry plates.

Not many months ago, while residing in Boston, one of our amateur friends came over one evening with several plates which had been exposed, and two of which had been developed; they were simply black as black could be from overexposure. Upon asking what the plates were, we were told they were a plate requiring, with the lens our friend was using, about eight or ten seconds for a landscape with the sun; the plates were 8 x 10, the views were valuable. We suspected there might have been one of those peculiar mistakes to which dry-plate makers are subject, so we commenced the development of one of his plates by putting a drachm of a fifty grain solution of bromide of ammonium into the developer with about double the amount of pyro and from a quarter to a third the amount of soda; after watching several minutes the plate began to develop, and every one of his plates were developed into beautiful negatives. Upon returning next day to his box of slow plates, we put one of them

before a Dalmeyer wide angle, rectilinear, with a drop shutter, and developed in the regular way for one of the highest speed plates. The whole secret lay in the fact that the platemaker had marked a very rapid plate with a slow emulsion, and our friend not suspecting it, supposed, as he had been so often told, *that the trouble was all in the developer*. In another case, when doing some photo-micro. work with some beautiful specimens most elegantly mounted, we found trouble in securing density, so that the object itself could be brought out. The object was wanted upon a white or light-colored background rather than upon the thunder-shower background; it was absolutely impossible to secure the result with proper exposure; no modification of the developer would allow it. Upon consulting the platemaker, and sending some plates, we were told to use less retarder. Throwing the plates one side, we secured another emulsion with quite a difference in the numbers, exposed just as we had been doing, developed from the very same pyro and acid solution, and secured negatives which have been admired by every one of the very few who have ever seen them.

How, then, is the amateur to protect himself, or how is he to secure any sort of an average for his hard work, and, in many cases, expensive work as well, with no possibility, perhaps, of going over the ground again for months? Lately, we were quietly told the price of our plates had been reduced. We do not make any change or take back any plates. In other words, that because the supply has exceeded the demand, or some other reason, we have reduced the price of our plates; and we do not any longer guarantee them, and they are subject to all sorts of variations, possibly, without any recourse. A great deal more might be said on this subject. We have never seen the matter put in this light by anyone, and should be glad to hear from those who are using dry plates, to know whether our own trouble has been all imagination, or whether they, like ourselves, have kept any track or record to which they can refer positively. We hear all sorts of stories about exposure and development; we have satisfied ourselves, to our

sorrow and expense, that the developer will not make the plate, provided the exposure has been correct, if the plate is as full of vagaries as some of our makers seem to be with respect to this everlasting and annoying question, the developer. A good plate is needed, and we believe the amateurs of the country, those who have not the drop-shutter craze, or who want something besides the approaching thunder storm, or a blur, would not care so much what the prices of plates were, if they could buy from two different lots of emulsion with any certainty of receiving some sort of an approximation to the same sensitiveness, to the same general chemical properties, so as to secure an approximation to a clean, well-finished print, without being continually annoyed by having their developer found fault with and changing it every two or three weeks, at the pleasure of the plate-makers, some of whom, we believe, are experimenting on the credulity and patience of the amateurs. At least, such would seem to be the case, for we know that the troubles we have ourselves encountered are vexing amateurs everywhere. What say our professional brethren? We know some of them who are almost turning back on the dry plate entirely, for between the continual change of emulsion and the tremendous discoveries in developers, an amateur or a professional is continually kept changing exposures and development without any certainty of approximation to good results, and it is becoming almost impossible to make a handsome, clean printing negative without the instantaneous craze background, which is a vile-looking affair in a picture.

(To be continued.)

No. 24 of the *Amateur Photographer* has been received. It is a very interesting journal of a popular character, devoted to the interest of photography and the allied arts and sciences, containing many very pleasant and well-written articles, and reports of various photographic societies.

We have just received the new catalogue issued by Messrs. BUCHANAN, SMEDLEY & BROMLEY, 25 N. Seventh Street, Philadelphia. It contains a full description of all that is needful in the art, being especially full in the list of lenses.

PERTAINING TO THE



BUFFALO, N. Y., April 14, 1885.

THE Sixth Annual Convention of the P. A. of A. was to have been held in Music Hall, Buffalo, but on account of this fine building having been destroyed by fire, other quarters had to be procured. I have been able to secure the new State Arsenal for the coming exhibition. This is one of the most magnificent buildings in the country for the purpose, having a floor space of 50,000 square feet, without anything to obstruct the view. This will give ample space for exhibits, and allow for spacious aisles around each, so that all will show to advantage.

This Convention promises to be the best ever held, as reports from all quarters guarantee a very large attendance. The Western photographers are already on the alert, making preparations to attend in large numbers.

I am almost daily in receipt of letters from parties requiring space, and the amount now sold exceeds my most sanguine expectations.

The afternoon sessions will be made especially interesting by short practical papers on photography. Already a number have signified their willingness to contribute, among them the following: J. Traill Taylor, Editor *Photographic Times*, New York; E. L. Wilson, Editor PHILADELPHIA PHOTOGRAPHER; J. F. Ryder, Cleveland, O.; President Landy, Cincinnati; and several gentlemen from Europe, whose names I have not learned, with others to hear from. In fact, every department promises to be a success.

The utmost harmony exists among officers

and members. All appear to be doing their best to put new life in the Association, and to make the coming Convention memorable.

Fraternally,

H. McMICHAEAL,
Secretary.

OBITUARY.

THE death of the Lord Mayor of London is announced. Mr. Nottage, who was born in 1822, was of Welsh descent, of a family long settled in Nottage, Glamorganshire. He spent his early life in Essex, afterward engaged in the iron trade, and became most extensively known in later years as the founder of the London Stereoscopic and Photograph Company, a concern that has done an extensive business in London for the past twenty years or more. He was elected alderman in 1875, and served as sheriff of London and Middlesex in 1877. He was installed Lord Mayor last November, and the show—as it is called—that he made at that time was regarded as one of the most extravagant demonstrations of the kind ever witnessed in London.

ON THE EXERCISE OF TASTE IN PHOTOGRAPHY.

So much has been written about the necessity of artistic feeling in photography that one is often in despair lest that inspiration not having been the natural accompaniment of his birth, his labors after its attainment may be in vain; nevertheless, one cannot help believing with Ben Jonson, that after all "a good poet's made as well as born." So our hope comes to our rescue, and bridges over our doubts, and we find ourselves in the beautiful regions of self-confidence.

Now, what is taste or artistic feeling? We do not ask like Pilate, who said "What is truth?" and straightway went out, afraid that he might be told. We are anxious to know how it may be acquired, and whether the desire to possess it may not be the indication that we have the germ which industry and well-directed effort may develop.

"A self-taught painter," says Constable, "is one taught by a very ignorant person." But I must confess that I am rather doubt-

ful of the value of set rules in art or photography.

Old Dr. Johnson once said to Miss Burney "There are three distinct kinds of judges upon all new authors or productions; the first are those who know no rules, but pronounce entirely from their natural taste or feelings; the second are those who know and judge by rules; and the third are those who know but are above the rules. These last are those you should wish to satisfy. Next to them rate the natural judge, but ever despise those opinions that are formed by rules."

Johnson's judgment was always sound and unaffected—he judged as he felt, naturally. In speaking of Shakespeare's attention to the laws of nature, he says, "He was an exact surveyor of the inanimate world; his descriptions have always some peculiarities gathered by contemplating things as they really exist. Whether life or nature be his subject, he shows plainly that he has seen with his own eyes; he gives the image which he receives, not weakened or distorted by the intervention of any other mind. The ignorant feel his representations to be just, and the learned see that they are complete."

I think that the great requisite for taste is simplicity. Now, by simplicity don't understand tameness. Tameness is always an indication of poverty of resource. Simplicity is best expressed by temperance, because taste will venture much, sometimes very much that is not quite compatible with conservatism, but this venture is always attended with success, because the bounds of temperance are never overstepped. Good taste never seeks merely to astonish—this is the province of sensationalism. Violent lighting, bizarre posing, and affected composition are not the material with which it constructs that which is chaste and beautiful. Taste does not search in every corner of the globe to find something new. No; it is content with the material which its own age and generation supplies. It requires far less ability to invent something, the indigest of the fancy, something which the world has never seen before, and which perhaps the world will be sorry that it has seen, than to select, with taste, from the

great storehouse of nature's beauties. It is sometimes argued that fashion controls taste, but good taste never finds any obstacle in the most arbitrary dictates of fashion, because it is superior to them.

I do not think, however, that taste despises all rules. The indolent photographer, no matter how much of inherent talent he may have in matters of taste, will find his vanity a poor prop to depend upon for judgment. If genius alone discovers laws, surely she will not despise their value. Genius is never lawless either in science or art, but she never obeys the letter but the spirit, which quickens to greatness of result. There are some rules which, as Sir Joshua Reynolds has aptly said, "the authority of which, like that of our nurses, continue no longer than while we are in a state of childhood." For instance, there is a rule laid down, which I think Leonardo da Vinci was the first to lay stress upon, that in the management of light and shade in a picture you must oppose a light ground to the shadowed side of your figure, and a dark ground to the light side. A very just principle, and one which produces, in ninety-nine cases out of one hundred, beautiful results; yet Leonardo was the very first one to violate the law. Not that he was anxious to show that he was superior to law, but because his consummate taste showed him when that law could, with force, be suspended. No doubt he had, as you have, seen in nature that the combinations of lights with lights and darks with darks produced glorious effects. What we object to is the rigidity with which these laws for the production of artistic effect are laid down in works treating of the artistic side of photography.

We do not think that the photographer should be a slave to method or make pictures by the rule of three. Let him use his own selective ability, and if the conception dawns upon him that a group in a composition will be made more beautiful by totally disobeying the rule of pyramidal construction, let him regard it as an inspiration, and follow whither it leads him. We do not mean that he should set out with the intention of violating all the set rules in the belief that he will produce something

effective. Lay not that flattering unction to your soul, O, photographer! You may gratify your vanity, but good sense and good taste will not hold up your hands. Take, for instance, the "Last Supper," by Da Vinci. We are told that in any composition where there are a number of figures represented, some of them should be given with their backs to the spectator. Raphael has done it, Titian always, Giotto, and, in fact, all have conformed to the set principle. But what did Leonardo? Every face in that wonderful work is visible to the spectator, yet who will assert that any other picture of the "Last Supper," by any other artist, no matter what his genius, approaches this.

Wattau once painted two pretty little girls, sisters. He represented them side by side. They looked almost alike, and dressed alike, painted with the same light and shade, and, strange to say their faces are directly in front—looking at the camera; as a photographer would say, yet nothing could be more charming, nothing more effective. Why? Because the scene is a real one. It is native simplicity and total freedom from affectation.

If we take nature for our guide, I do not say we shall not err therein though we be fools, but I do say, if we be not fools we shall find that by the exercise of the gifts which God has given us, we shall advance more rapidly towards the power of good judgment and good taste than by the blind obedience to set rules. All laws are really nature's laws, and all which affects us as beautiful is but the varying phases of nature. Art itself is but selections from nature, and even genius is only the preëminence in the power of perceiving what is beautiful in nature, else how would men who are not geniuses see the beauties which genius discovers and reveals to them. Nature is inexhaustible in her resources, and the revelations she manifests to great minds must not be called the creations of their intellects. The superior intellect first perceives, but others less gifted can also appreciate, and justly, it is therefore no excuse to say that we live in an unpoetic age, or in a period unartistic. Poetry and art never die. There is as much in the

nineteenth century, if not more, for the employment of the artistic talent as there was in the period of the Renaissance. Our artists and poets may sigh after the middle ages, and paint and sing of the heroes and heroines of the past, forgetful of the heroes and heroines of the present, though dressed in the costumes which age has not mellowed with the beauty of quaintness. When men shall awake to the appreciation of the latent beauty, yes, artistic beauty, in our machine shops and factories, our steamships and locomotive, and the scenes which they witness every day of their lives, they will no longer look back to the past, but will realize the value of the present. Let me say a

word here in encouragement to the photographer. I think he lives more intimately in the present, feels more its full force and value, and constructs his pictures with more originality from the material at his hand, than the painter, though the camera may be a more humble instrument of art than the brush and the palette. When some man of genius shall show the modern world the beauties which its heavy eyes have not seen, it will, on looking back, be conscious of the fact that more true originality in art is in the picture by the artistic photographer than by the painter of the nineteenth century. Necessity has compelled him to grasp the present, and art to extract beauty from it

Editor's Table.

PICTURES RECEIVED.—No. 6, vol. ix., of the *Journal and Transactions of the Photographic Society of Great Britain*, is embellished with a beautiful Woodburytype entitled "The Return from Plough." The print is from a negative by Mr. J. GALE, and is remarkable for the softness and harmony in the gradations of light and shade. The grouping is very artistically conceived. No. 11 of the *Deutsche Photog. Zeitung* presents its readers with a series of character studies from German life, which are not only highly amusing, but also excellent as studies of ethnology. The negatives are by Mr. LOUIS BECKER, of Essen, and the lichtdrucks, or phototypes, as we call them, by Mr. WILLIAM HOFFMAN, of Dresden. We have received from Mr. R. LAIDLAW, of Hamilton, Ontario, a number of excellent photographs of buildings and churches, made upon plates manufactured by himself. Mr. LAIDLAW deserves great credit, not only for his excellent photographic work, especially the interiors, which are beautifully lighted, but also for his skill as a dry-plate maker. The prints are excellent in tone, the shadows are clear and full of detail, and the high lights soft, all of which bear evidence to the good quality of the emulsion he uses.

THE MORRISON LENSES.—Those of our readers who are preparing for their summer work have an opportunity of possessing at a low price, some of the excellent Morrison lenses which

have been in use at the New Orleans Exposition. These lenses need no word of commendation from us. They have been in use a dozen years or more, and their reputation is well established. Of course, a large number were necessary to do the work at New Orleans expeditiously, and that work being ended they are for sale. The offer is made in the advertisement, and, as it will be seen, includes some AMERICAN OPTICAL COMPANY'S boxes also, with tripods, holders, printing-frames, and other articles. For amateurs particularly, this will be a good chance. Please address as directed in the advertisement.

REPORT of the proceedings of the Seventh Meeting of the Photographic Merchants' Board of Trade, held at the Metropolitan Hotel, New York, February 10, 1885. We have received a copy of this document from the present Secretary, Mr. D. K. CADY, of Cincinnati, which, besides the minutes of the meeting, list of members, etc., includes a very able paper read at the meeting by Mr. G. A. DOUGLASS, of Chicago, on the state of the trade, the census of photographers, and the literature of the profession, the relation of the dealers to the Photographers' Association of America, etc., the whole of which having been published in two or three of the photographic magazines, and now in pamphlet form, we omit, but which we commend to all for careful reading. We are glad to know that the

work undertaken by Mr. DOUGLASS is to be followed by a duly appointed committee, and that further statistics may be expected in the future. The Board of Trade seem to be doing an excellent work, and one that will not only bind its members together, but will be useful to the fraternity at large in promoting the interests of every one connected with it. We hope to see it grow stronger and stronger with every year.

PROGRAMME OF THE INTERNATIONAL PHOTOGRAPHIC EXHIBITION TO BE OPENED AT OPORTO, PORTUGAL, September 1, 1885.—The Board of Directors of the Crystal Palace and the Society (Photographia Moderna) seconded by Portuguese Amateur Photographers, contributors to the art journal—*A Arte Photographica*,—intend to open on the first of September, 1885, an International Exhibition of works, products, etc., belonging to every branch of Photography and Heliography. All photographers, amateurs, and manufacturers of photographic apparatus, implements referring directly to the art in question, whether Portuguese or foreign, are respectfully requested to take part in this concours. For further information we beg to present our readers with the following programme adopted by the Commission :

The opening of the Exhibition will take place in the Crystal Palace of Oporto, on the 1st of September, 1885, and the closing will be effected on the 31st of October of the same year.

Persons wishing to become exhibitors are requested to communicate, up to the 30th of April, 1885, with the Secretary of the Commission, and indicate the space which they will require, as well as the class or nature of the objects to be exhibited, in conformity with the conditions specified in the different clauses of this programme.

All objects to be exhibited must be forwarded before the 1st of July, 1885, at the expense of the senders, to the following address: *Commissao Executiva da Exposicao Internacional de Photographia—Oporto*.

The articles must be accompanied by a list, indicating the number of objects sent, signed by the exhibitor, and specifying whether the space he wishes to occupy be horizontal or vertical.

The exhibitors must secure their prints in appropriate frames. In order to avoid expenses and difficulties to the exhibitors, the Commission will take upon itself to furnish suitable glass cases at the most moderate prices. A previous demand having been made by the exhibitor to this effect, the prints must be sent in proper

condition, according to the custom on such occasions.

The account presented by the Commission must be previously settled by the exhibitor.

The exhibitor is requested to inscribe his name on each separate print or frame containing several prints.

It will be necessary to mention and specify : The subject; the negative process whether (as in the case of wet or dry collodion), collodion or gelatine emulsions, albuminous as well as positive processes. All information regarding photographic processes in general will be thankfully received.

Exhibitors wishing to sell their prints, frames, or products of whatever sort, must give notice of their intention to the Commission; and will please name the price, which will be affixed to the object during the whole time of the Exhibition.

No print or object can be withdrawn from the cases before the closing of the Exhibition, without the special permission of the Executive Commission.

The same Commission reserves to itself the right of rejecting such objects as may be considered unworthy of being exhibited.

The Executive Commission will place at the disposal of a Special Jury, gold, silver, and copper medals and honorary certificates, to be conferred on the most praiseworthy exhibitors, whose products will enter into the following categories :

A. Prints in fatty inks from gelatine on metal or glass.

B. Heliographic impressions (photogravure sur cuivre).

C. Woodburytype, photoglyptic, stannotypic, and other processes.

D. Photolitho and photozincography, gillotage, etc.

E. Carbon photography, chromotype, photochromia on paper, glass, wood, and porcelain.

F. Photography on albumen paper, collodion-chloride, gelatine bromide, gelatine chloride, platinotype, etc.

G. Gyanotypia and analogous processes.

H. Enamels, vitrified photographs, colored photography processes, applied to pottery.

I. Amplifications of clichés, portraits, and landscapes. Special positives for projections, together with such explanations appropriate for teaching and scientific lectures. Amplifications in gelatine bromide, chromotypia, ferro-prussiate, collodion-chloride.

J. Apparatus and photographic implements, specialties of work referring to the operations

of scientific expeditions, for tuition, industry, etc.

K. Photomicrography, different appliances of photography relating to micrographical studies and investigations.

L. Works and journals on photography.

M. Photographically illustrated publications and photomechanical processes.

N. Gelatine plates, paper prepared for the different processes, portrait cards, and different sorts of card-board, chemical products, albums, passepartouts, together with whatever ornamental installations may be applied to photographic prints.

The Special Jury for the awarding of prizes will be composed of a certain number of Members indicated by the Principal Commission.

The Principal Commission takes upon itself to regulate the general expenses of organization, installation, and administration.

Ten per cent. will be reserved on the value of articles exhibited and sold during the Exhibition.

The articles belonging to the different exhibitors will be sent back directly, at their expense and risk, within thirty days after the closing of the Exhibition.

Any case unforeseen, and not included within these regulations, will be resolved by verdict of the Principal Commission. Against this verdict there will be no appeal.

The Principal Commission: Direction of the Crystal Palace, Leopoldo Cirne, Ildefonso Correa, Carlos Relvas, Eduardo Alves, Augusta Gama.

THE SUTER LENS.—We have great pleasure in referring again to the excellence of this remarkable lens, the importation of Messrs. ALLEN BROS., the agents, 14 and 16 East Larned Street, Detroit, Mich. These gentlemen have become immensely popular benefactors, for they have given us a wonderful lens of great depth and power at a low price. In our work at New Orleans we have used several of these lenses, one of which, 8 B, is remarkable for depth and definition, and for illuminative qualities, which we never saw excelled. Quite a number of 20 x 24 plates have been made with this lens, with the most exquisite results. Below we append a clipping from the *Detroit Free Press*, which was called forth by a print from one of our negatives sent to Messrs. ALLEN BROS., which is from the pen of the funny man of the *Free Press*, Mr. BARR (LUKE SHARP), also a prominent photographer. Mr. LUKE SHARP, after saying it is the best picture he ever saw, writes further, as follows:

“The picture was in the British Honduras Sec-

tion at the Exhibition, and the amount of well-defined detail was nothing short of marvellous. The netting, lettering, etc., and the thousand different articles that made up the British Honduras exhibit were all shown as perfectly as if each piece had been photographed separately under the best light. The work was done by a Suter lens, a lens made in Switzerland.”

The picture alluded to at the Court of British Honduras at the Exposition at New Orleans, contains articles of all kinds, from the minutest materials to the coarsest kind of logs, as ebony, together with netting, plaited work, skins of wild animals, articles made of rushes plaited, and what-not of tropical productions, all of which are equally defined, and which have responded to the most delicate capabilities of the modern dry plate. The photograph is simply exquisite, not because the editor of this magazine stood by and had a hand in making it, but because of the merits of the various articles used in its make up, the principal one of which was the excellent lens used on that occasion. We recommend these lenses with all the cheerfulness in our composition.

MR. MUYBRIDGE, whose name is associated with the subject of instantaneous pictures of animals in motion, recently gave a private exhibition with his zoöpraxoscope before the Biological Department of the University of Pennsylvania. About three hundred pictures were shown in series representing nude men in a variety of attitudes, and performing different operations. Pictures were also shown of physical deformities, and of various animals in the Philadelphia Zoölogical Garden. The cameras used were marvels of beauty. Dalmeyer lenses of two and a half or three inch aperture, and twelve inch focus were employed, also a number of smaller cameras of eight inch focus, arranged in batteries. The appliances altogether were very elaborate, and so arranged as to take a series of progressive forms from front, side, and rear. The shutters employed were very large, almost gigantic, and a very high rate of speed was claimed for them, which was not generally credited by the audience, which was composed largely of scientific men, artists, and photographers.

BOOKS RECEIVED.—We have received a little work entitled *Silver Printing on Albumen Paper*, by Mr. W. H. PORTER, published by Messrs. H. LIEBER & Co., of Indianapolis, Ind. containing a very excellent description of the various processes employed in silver printing,

written by one who has had practical experience in manipulation, and knows just the snags and difficulties that are encountered, and the way to steer the course clear through to success. No amateur should be without this little book, which is both pleasant and instructive reading. The price is within the reach of every one. From the SCOVILL MANUFACTURING COMPANY, 423 Broome Street, New York, series No. 17, *First Lessons in Amateur Photography*, by Mr. RANDALL SPAULDING. A series of lectures containing concise descriptions of apparatus, and explanation of the methods of exposing, developing, fixing, and finishing of photographs by the dry method. The author is a teacher, and knows just how to impart valuable instruction.

A VERY interesting exhibition of lantern slides, the work of the members of the Photographic Society of Philadelphia, was given on the evening of April 8th, at Association Hall. The work was of a very excellent character, and showed much artistic ability on the part of the exhibitors.

POSTAL PHOTOGRAPHIC CLUB; PROSPECTUS.—This club has been organized to afford an opportunity to amateurs in all parts of the country of communicating with each other. The general scheme consists in having each member contribute six or more specimens of work, these specimens to be arranged in albums by the Secretary, and to be sent from one member to the other (each member paying carriage to the next on the list). A notebook will accompany each album, and in this notebook each member will write criticisms on the work presented, and vote on a prize print. The management of the club is in the hands of a committee of five members. The expenses are to be met by an admission fee of fifty cents and annual dues of two dollars. Ladies are eligible to membership, and this club offers them an opportunity for correspondence in photographic work. All interested are requested to communicate with the Secretary, Mr. JOSEPH S. RICH, 50 West Thirty-eighth Street, New York, who will send a copy of the rules, and furnish any information desired.

CHAS. W. CANFIELD,
JOSEPH RICH,
FREDK. C. BEACH,
H. V. PARSELL,
RANDALL SPAULDING,
Committee.

At a meeting for the organization of the Postal Photographic Club, held April 1, 1885, at 361 Broadway, New York, the following gentlemen

were elected as the committee: Messrs. CHARLES W. CANFIELD, JOSEPH S. RICH, FREDERICK C. BEACH, H. N. PARSELL, and RANDALL SPAULDING. At a subsequent meeting of the Committee the following officers were chosen for the year: President, CHARLES W. CANFIELD; Secretary and Treasury Mr. JOSEPH C. RICH. The rules as presented were adopted.

FREDERICK C. BEACH,
Secretary pro tem.
NEW YORK, April 6, 1885.

DEAR SIR: The Postal Photographic Club being now fully organized, the Secretary would like to have intending members send in prints for the first album, which will begin its travels about the 25th of this month. Rules 12 and 13 give information as to these prints. Herewith will also be found "print slip."

The membership of the Club will probably be twenty-five before the end of this month, and with thirty names on the list all expenses for the first year can be met. If you know of anyone who might join this Club, the Secretary would be pleased to have you send his name.

JOSEPH S. RICH,
Secretary.

50 West Thirty-eighth Street, N. Y.

THE PHILADELPHIA PHOTOGRAPHER.—The last number of this important trade magazine contains a further account of photographic exhibits at New Orleans, and many practical suggestions to photographers in special articles and the reports of society meetings. The illustration is a collection in miniature of a beautiful set of views of bay and mountain scenery, taken by San Francisco amateurs. They are instantaneous pictures, taking birds on the wing, the spray of a breaking wave, and the dust thrown up by galloping coach horses. The composition of the pictures is highly artistic. Mr. EDWARD L. WILSON, Philadelphia, is the publisher.—*Philadelphia Public Ledger*.

It is the intention of the Managers of the Lehigh University, at Bethlehem, Pa., to add to the Department of Chemistry, now under the direction of Prof. W. H. CHANDLER, a section devoted to photography. Prof. W. D. HOLMES, former art editor of *Our Continent*, is to be instructor. It is his intention to form two classes, one for advanced scholars who are desirous of experimenting and investigating, and one for those who intend merely to gain a practical knowledge of the science. The plans are not fully matured, but arrangements, it is hoped, will be completed so as to begin instruction with the fall term.

Specialties.

MAKE OUT YOUR OWN BILL, and remit cash with your advertisements, or they will not be inserted.

ADVERTISING RATES FOR SPECIALTIES.—Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators' desiring situations, no charge.* Matters must be received by the 23d to *secure* insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement. **Postage-stamps taken.**



BACKGROUNDS, ETC.

Coming out weekly. New designs for the Spring and Summer Season. Replenish your stock now? Do not wait until July or August. From our six hundred designs all climes and conditions can be suited.

Twenty Second-hand Backgrounds, some as good as new, at half price. Trees, Walls, Balustrades, Garden-seats, Gates, etc., in stock for immediate shipment. Call and inspect our show-room.

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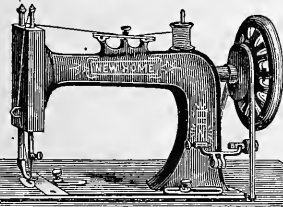
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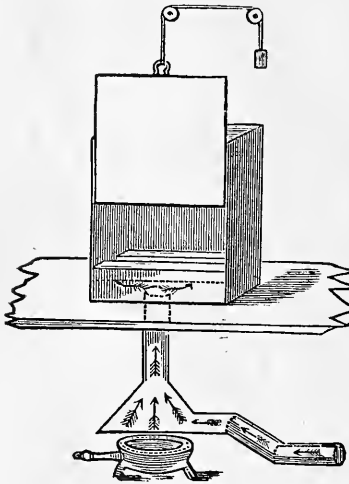
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- VI. Unity.
- VII. Examples—Expression.
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- XI. The Sky.
- XII. The Legitimacy of Skies in Photographs.
- XIII. The Composition of the Figure.
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- XVI. Variety and Repetition (continued)—Repose—Fitness.

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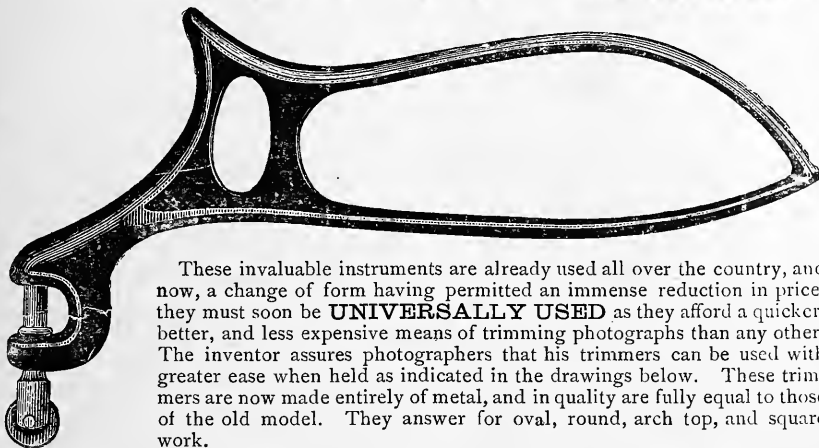
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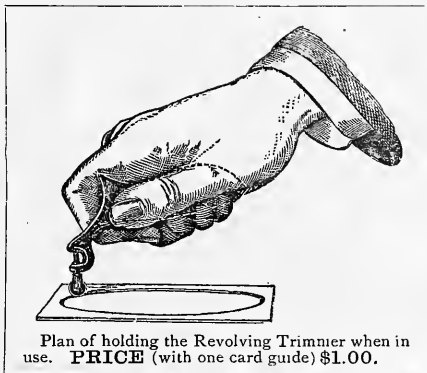
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2 $\frac{1}{2}$ x 3 $\frac{1}{2}$	3 $\frac{1}{2}$ x 4 $\frac{1}{2}$	5 $\frac{1}{2}$ x 7 $\frac{1}{2}$	7 x 9
2 $\frac{1}{2}$ x 3 $\frac{1}{2}$	3 $\frac{1}{2}$ x 5 $\frac{1}{2}$	5 $\frac{1}{2}$ x 7 $\frac{1}{2}$	7 $\frac{1}{2}$ x 9 $\frac{1}{2}$
2 $\frac{1}{2}$ x 4 $\frac{1}{2}$	4 x 5 $\frac{1}{2}$	5 $\frac{1}{2}$ x 7 $\frac{1}{2}$	7 $\frac{1}{2}$ x 9 $\frac{1}{2}$
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2 $\frac{1}{2}$ x 3 $\frac{3}{4}$	2 $\frac{3}{4}$ x 4 $\frac{1}{2}$	3 $\frac{3}{8}$ x 5 $\frac{1}{4}$	3 $\frac{3}{8}$ x 6
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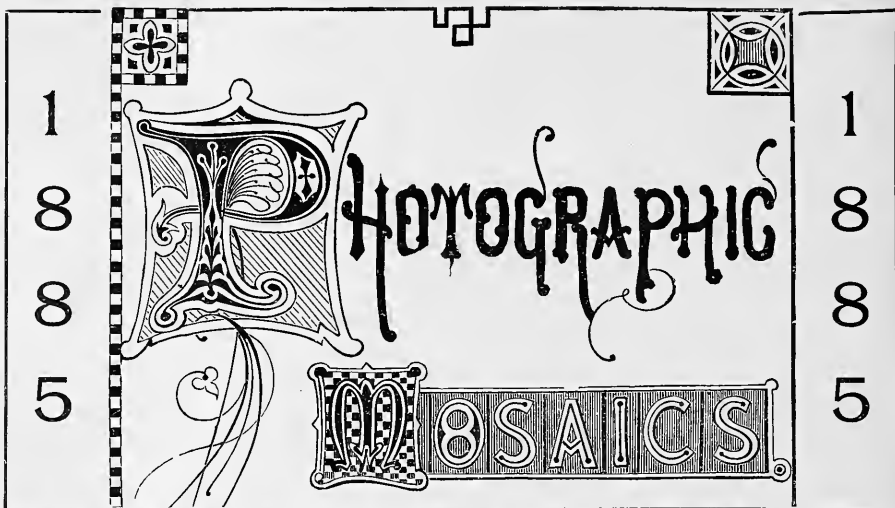
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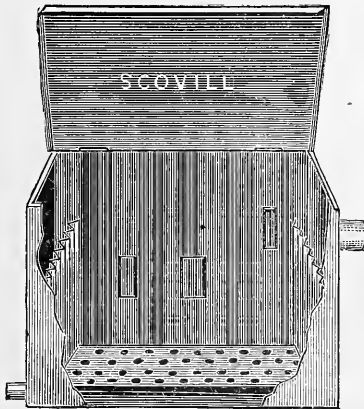
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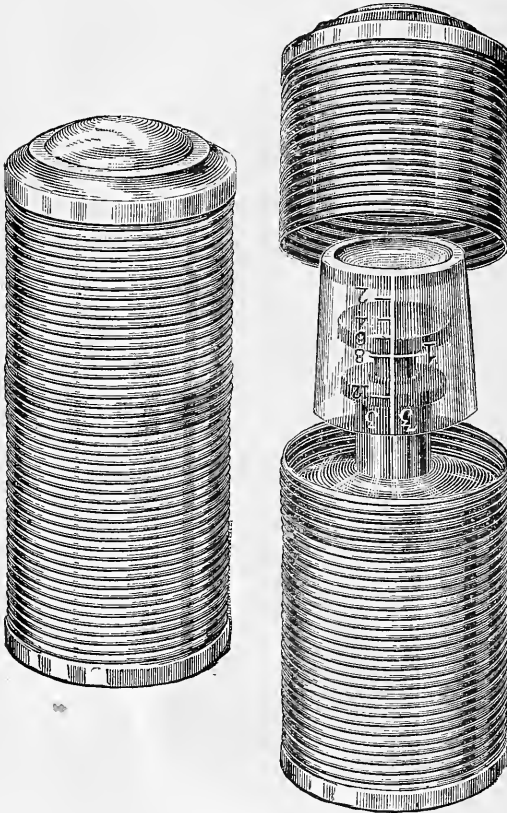
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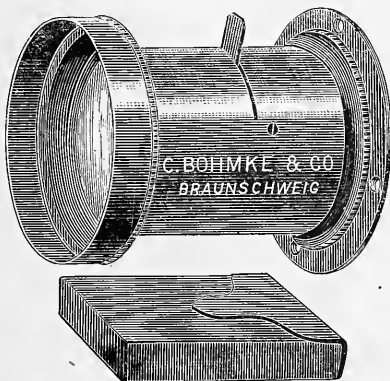
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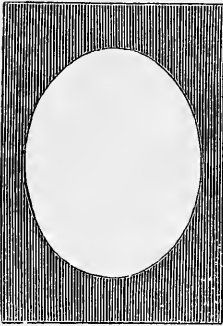
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ADVERTISING sheets are bound with each number of the Magazine. Advertisements are inserted at the following rates:

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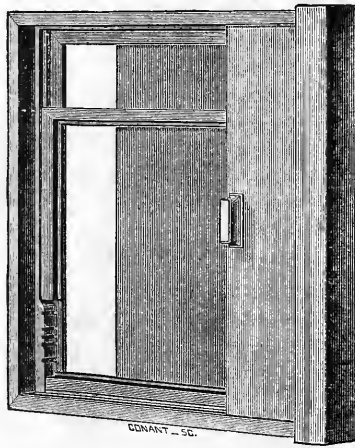
The attention of advertisers, and those having galleries, etc., for sale is called to our **SPECIALTIES** pages. Terms, \$2 for six lines, and 25 cents for each additional line, seven words to a line, always in advance. Duplicate insertions, 50 cents less, each.

We have added an Exchange Column to our Magazine, wherein photographers having articles for exchange can insert advertisements at the low price of 15 cents per line, or fraction of a line, of seven words to a line.

Operators desiring situations, no charge.

BLAIR'S FLEXIBLE SLIDE PLATE HOLDER.

It would be difficult to convey to one not aware of the bother of the ordinary Slide, when drawn from the Plate Holder, the convenience of one, which, at a gentle pull from behind, rolls in guides to the opposite side of the Holder; but to the operator who is acquainted with the nuisance of the ordinary style, we believe we need say no more after calling attention to our



FLEXIBLE SLIDE HOLDER.

It is, we believe, the finest made Holder in the American market. No illustration or description will do them justice. They are reversible, with arrangements for smaller plates.

8 x 10 Size,	Price, \$10 00	18 x 22 Size,	Price, \$25 00
10 x 12 "	" 12 00	20 x 24 "	" 30 00
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17 x 20 "	" 22 00		

All of Our COMBINATION PORTRAIT CAMERAS above 8 x 10 in size are Fitted with these Holders. 8 x 10 Fitted to Order. —

THE BLAIR TOUROGRAPH AND DRY-PLATE CO.

Factory, 471, 475 and 477 Tremont St.

BOSTON, MASS.

AGENCIES AND WAREROOMS,

BLAIR & PRINCE.

148 W. Fourth St., Cincinnati, Ohio.

W. T. GREGG,

318 Broadway, New York.

Number 258.

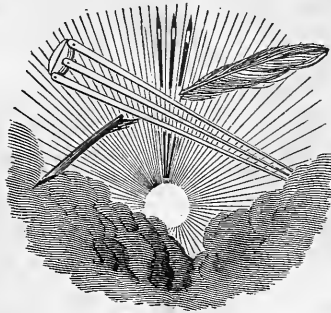
50 Cents.

THE
 PHILADELPHIA
Photographer.

AN ILLUSTRATED MONTHLY JOURNAL,

DEVOTED TO PHOTOGRAPHY.

EDITED BY EDWARD L. WILSON.



PHILADELPHIA: EDWARD L. WILSON

PUBLISHER AND PROPRIETOR,

No. 1125 CHESTNUT STREET.



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Five Dollars per Annum, in Advance.

Entered at the Post-Office at Philadelphia as second-class matter.

WILSON'S PHOTOGRAPHICS, Fourth Thousand, \$4.00. A SPLENDID PRESENT

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INSTANTANEOUS MARINE. I. W. TABER, San Francisco, Cal.

ADVERTISEMENTS.

ALLEN BROTHERS. The Suter Lens.
 ANTHONY & CO., E. & H. T. The New N. P. A
 Pensé Extra Brilliant Dresden Albumen Paper.
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 Co.'s Improved Aplanats.
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 KEEVIL'S PATENT NEWTONIAN DUPLEX
 LANTERN.
 MAGÉE & CO., JAS. F. Photographic Chemicals.

MOORE, ALBERT. Solar Enlarger.
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 OPTICAL LANTERNS AND SLIDES.
 PASSAVANT'S DRY PLATES.
 PHOTOGRAPHIC COLORISTS' GUIDE.
 PHOTOGRAPHIC PROGRESS SINCE 1878.
 PHOTOGRAPHIC PUBLICATIONS.
 PHOTOGRAPHISCHE MITTHEILUNGEN.
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 THE HELIOTYPE PRINTING CO.
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 WILSON'S VIEWS OF THE ORIENT.

<p>119 South Fourth St. PHILADELPHIA.</p> <p style="text-align: center;">Branch Office, 603 Seventh Street, WASHINGTON, D. C.</p>		<p style="text-align: center;">H. HOWSON, <i>Engineer and Solicitor of Patents.</i></p> <p style="text-align: center;">C. HOWSON, <i>Attorney at Law, and Counsel in Patent Cases.</i></p>
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SUTTER LENS

IF you wish PERMANENT RESULTS from your visit to the Convention, be sure and take home with you a SUTTER LENS. You can make with it larger and better work. No investment that you can make will pay you as well as this.

If we have not the size you want in stock, be sure and leave your order with us at Buffalo, as the Lenses are sold as fast as they are received. All orders filled in rotation from the date of receipt.



GREAT SUCCESS OF THE SUTTER LENS.

→*CINCINNATI NEW STOCK DEPOT.*←

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BLAIR APPARATUS AND MARSHALL & BLAIR'S DRY PLATES.

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318 Broadway, N. Y.,

MANUFACTURER OF THE

PHOTO-OPTICON.

For Oil or Gas, Singly or in pairs for Dissolving Effects.

The most brilliant picture, largest screen, and most compact Lantern in the world. The best instrument at a fair price. My lists of Views are the largest in the United States.

Photographic Cameras, Lenses, Shutters, Dry Plates, Supplies, etc.

NEW YORK WAREHOUSE OF THE

BLAIR TOUROGRAPH and DRY-PLATE CO., of Boston.

*American and Foreign Photographs of Places, Persons, Paintings,
and Sculpture, mounted and unmounted.*

INSPECTION AND CORRESPONDENCE SOLICITED.

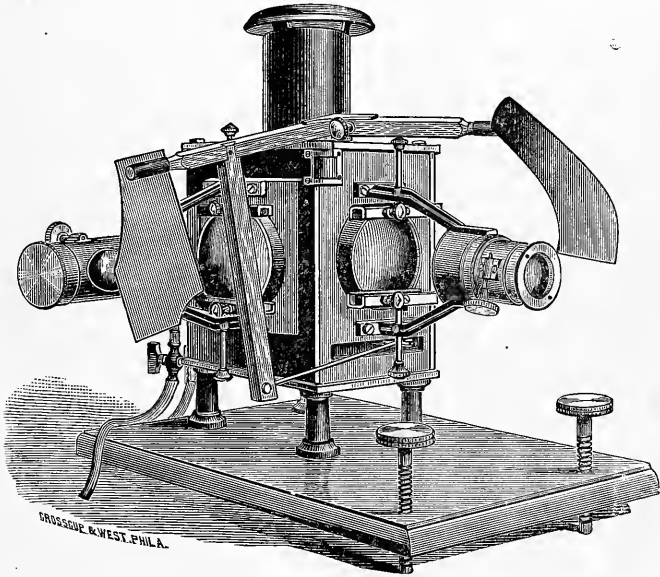
KEEVIL'S PATENT

NEWTONIAN DUPLEX LANTERN.

This new lantern is duplex in form, being fitted with one optical system, projecting in front, and another projecting from one side. The light through the first system is transmitted on to the screen directly, in the usual way. At the extremity of the other system, is fixed a prismatic lens, by which means a disk can be projected on to the screen central with the other. The oxyhydrogen jet is arranged on a pivot, which is a fixture in the bottom of the lantern, the centre of rotation being as near the outside surface of the lime cylinder as possible; and by rotating the burner through about a quarter of a circle, the light is brought central with each condenser alternately, and simultaneously the mechanical dissolver opens and closes the objectives.

A Complete Lime-Light Dissolving Apparatus, most Compact in Form, at the Low Price of \$100.00; with Full Oxyhydrogen Accoutrements, \$130.00.

- LIST OF ARTICLES NEEDED.**
- 1 Keevil Duplex Lantern, for dissolving views..... \$75 00
 - 20 x 40 best Rubber Bags and Cocks..... \$36 00
 - 24 feet Rubber Tubing..... 6 00
 - 1 Oxygen Retort and Wash-Bottle..... 7 00
 - 1 five gallon Hydrogen Generator and Wash-Bottle..... 7 00
 - 1 Alcohol Burner..... 1 00
 - 1 dozen Oxygen Material..... 6 00
 - 15 pounds Granulated Zinc..... 5 00
 - 1 12 x 12 Screen..... 71 00
- Or the Whole Splendid Dissolving Outfit for \$130 cash. \$146 00



To compensate for any loss of light occasioned by the use of the prism, the condenser of this system is made somewhat shorter in focus than the other one, evenness of illumination being thereby secured. Both objectives are made achromatic, and the definition of the one to which the prism is attached is in no way inferior to the ordinary one. The jets never require adjustment, as every lantern is put to a practical test before being sent out; the best position for the jet being thereby obtained, further adjustment becomes unnecessary. The dissolving apparatus is adjustable and very efficient. The conical fronts are easily detached, and if required it can be used as a single lantern. The whole lantern is of metal. Its small dimension are much in its favor, the whole packing into a small box, easily carried in the hand. These desiderata are certain to make it a favorite with those who wish for an apparatus of extreme portability. See further in our new catalogue.

We have arranged for the sole agency of the United States, and have a stock on hand and for sale. We have thoroughly tried the new lantern, and are charmed with it in every way. It is lighted in a minute, easily adjusted, and gives entire satisfaction.

SEVERAL RECENT IMPROVEMENTS.

SECURED BY LETTERS-PATENT IN ENGLAND AND THE UNITED STATES.

It is made to sit on any table or stand, and full directions for working accompany it. Send for estimate for a full outfit, bags, tubing, generator, &c &c. Lists of our new dissolving views will be given on application.

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Sole Agent for the United States.

1125 Chestnut St., Philadelphia.

THE BEST AND THE CHEAPEST.

GREAT REDUCTION IN

PRICES OF DRY PLATES.

FROM AND AFTER MAY 10, 1885, THE PRICES OF

Eastman's Special Dry Plates

WILL BE AS FOLLOWS:

3½ x 4¼	. \$0 45	10 x 12	. \$3 80
4 x 5	. 65	11 x 14	. 5 00
4¼ x 5½	. 75	14 x 17	. 9 00
4¼ x 6½	. 90	16 x 20	. 12 50
5 x 7	. 1 10	17 x 20	. 13 00
5 x 8	. 1 25	18 x 22	. 15 50
6½ x 8½	. 1 65	20 x 24	. 18 50
8 x 10	. 2 40		

Eastman Special Dry Plates give the best chemical effects, and photographers are invited to compare them with any other plate in the market for **Brilliancy**, **Roundness**, and **Quick Printing**.

Owing to improvements made from time to time, and the extreme care exercised in every detail of their manufacture, these plates are **quick**, **clean**, and **uniform**.

Only the best English glass is used. No cheap French glass, such as is employed in inferior plates. Try them and you will use them.

FOR SALE BY ALL DEALERS.

MANUFACTURED ONLY BY

THE EASTMAN DRY PLATE AND FILM CO.,

ROCHESTER, N. Y.

The Following is of Interest to Every Photographer.

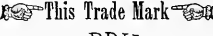
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P E N S É.

We desire to call attention to our **NEW PENSÉ N. P. A.** Extra Brilliant Dresden Albumen Paper.

The manufacturers at Rives have recently many marked improvement in their celebrated paper, and all the sheets of this brand are **manufactured specially for it**, and are readily distinguished from all other papers by the **water-mark N. P. A.**

It is doubly albumenized by the **most experienced house** in Germany, with **new and improved** formulas, and we are confident that on trial it will be found **superior** to any other in market.

Its excellence has induced some unscrupulous persons to **place the STAMP on the Paper of other makers**, in order to work it off, trusting that photographers will not look through to see if the **water-mark** is there. To prevent this we have registered  in Washington, which will subject to heavy damages all those who stamp this brand on paper which does not bear **EXTRA-BRILLIANT N.P.A. DRESDEN.** the **water-mark N. P. A.** This Paper can be had also in **PINK, PEARL or WHITE.**

FOR SALE BY ALL DEALERS IN PHOTO. GOODS IN U. S. AND CANADA.

E. & H. T. ANTHONY & CO.,

591 Broadway,

NEW YORK.

N. B.—When any paper is offered to you at a low price, **Measure it.**

Also note whether it runs **Uniform**, for some albumenizers mix the first and second qualities, not discarding that which has defects, and thus get their paper cheaper.

Important Reduction

IN THE PRICE OF THE POPULAR

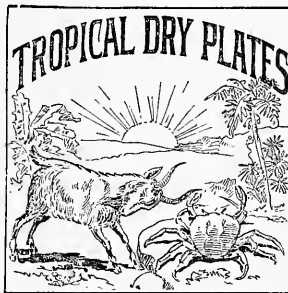
STANLEY DRY PLATES.

FOLLOWING IS THE REDUCED PRICE LIST:

<table border="0" style="width: 100%;"> <tr><td>3¼ x 4¼, per dozen,</td><td>\$0 45</td></tr> <tr><td>4 x 5, " </td><td>65</td></tr> <tr><td>4¼ x 5½, " </td><td>75</td></tr> <tr><td>4¼ x 6¼, " </td><td>90</td></tr> <tr><td>5 x 7, " </td><td>1 10</td></tr> <tr><td>5 x 8, " </td><td>1 25</td></tr> <tr><td>6½ x 8½, " </td><td>1 65</td></tr> <tr><td>8 x 10, " </td><td>2 40</td></tr> </table>	3¼ x 4¼, per dozen,	\$0 45	4 x 5, " 	65	4¼ x 5½, " 	75	4¼ x 6¼, " 	90	5 x 7, " 	1 10	5 x 8, " 	1 25	6½ x 8½, " 	1 65	8 x 10, " 	2 40	<table border="0" style="width: 100%;"> <tr><td>10 x 12, per dozen,</td><td>\$3 80</td></tr> <tr><td>11 x 14, " </td><td>5 00</td></tr> <tr><td>14 x 17, " </td><td>9 00</td></tr> <tr><td>16 x 20, " </td><td>12 50</td></tr> <tr><td>17 x 20, " </td><td>13 00</td></tr> <tr><td>18 x 22, " </td><td>15 50</td></tr> <tr><td>20 x 24, " </td><td>18 50</td></tr> </table>	10 x 12, per dozen,	\$3 80	11 x 14, " 	5 00	14 x 17, " 	9 00	16 x 20, " 	12 50	17 x 20, " 	13 00	18 x 22, " 	15 50	20 x 24, " 	18 50
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These Plates have met with remarkable favor among both amateur and professional photographers, and the demand is much greater than could have been expected within the short time that has elapsed since their introduction. Their rapid rise to popularity is a sufficient evidence of their superior qualities, for with so many plates in the market, nothing but **INTRINSIC EXCELLENCE** could have brought them so suddenly into their conceded position of **THE BEST PLATES MADE.** **FOR SALE BY ALL DEALERS.**

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TROPICAL DRY PLATES.

The only Dry Plates made that will **NOT FRILL** in water of any temperature, and can be *dried by artificial heat.* By their use the negative can be developed, fixed, and dried in a few minutes, enabling proofs to be taken from them at once. They are Rapid and Uniform, unsurpassed for softness and delicacy, and can be used in the *hottest climates.*

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<table border="0" style="width: 100%;"> <tr><td>3¼ x 4¼, per dozen,</td><td>\$0 50</td></tr> <tr><td>4 x 5, " </td><td>75</td></tr> <tr><td>4¼ x 5½, " </td><td>85</td></tr> <tr><td>4¼ x 6½, " </td><td>1 05</td></tr> <tr><td>5 x 7, " </td><td>1 30</td></tr> <tr><td>5 x 8, " </td><td>1 45</td></tr> <tr><td>6½ x 8½, " </td><td>1 90</td></tr> <tr><td>8 x 10, " </td><td>2 80</td></tr> </table>	3¼ x 4¼, per dozen,	\$0 50	4 x 5, " 	75	4¼ x 5½, " 	85	4¼ x 6½, " 	1 05	5 x 7, " 	1 30	5 x 8, " 	1 45	6½ x 8½, " 	1 90	8 x 10, " 	2 80	<table border="0" style="width: 100%;"> <tr><td>10 x 12, per dozen,</td><td>\$4 00</td></tr> <tr><td>11 x 14, " </td><td>5 85</td></tr> <tr><td>14 x 17, " </td><td>10 50</td></tr> <tr><td>16 x 20, " </td><td>14 50</td></tr> <tr><td>17 x 20, " </td><td>15 25</td></tr> <tr><td>18 x 22, " </td><td>18 00</td></tr> <tr><td>20 x 24, " </td><td>21 50</td></tr> </table>	10 x 12, per dozen,	\$4 00	11 x 14, " 	5 85	14 x 17, " 	10 50	16 x 20, " 	14 50	17 x 20, " 	15 25	18 x 22, " 	18 00	20 x 24, " 	21 50
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Sole Agents.

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CAN BE HAD OF ANY DEALER IN PHOTO. MATERIALS.

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One hundred dollars would not buy mine if I could not get another. I do not see how I managed so long without it.—OSCAR CROMWELL, Grizzly Flat, Col.

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Your *Photographics* is the best thing out; practical and to the point, and no nonsense.—WALT. C. NORTH, Utica, N. Y.

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EDWARD L. WILSON, Author and Publisher, 1125 Chestnut Street, Philadelphia.

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Sole Agents in the United States for the Celebrated Lenses
Manufactured by

VOIGTLÄNDER & SON.

ALSO, THEIR FAMOUS

EURYSCOPE,

Which is unrivalled for groups, full-length figures, and other demands in the gallery and every species of out-door work, including instantaneous photography.

THE EURYSCOPE is made *exclusively* by Voigtländer & Son, and their name is engraved on the tube.

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IMPORTERS, ALSO, OF THE CELEBRATED

TRAPP & MÜNCH

ALBUMEN PAPER,

AND DEALERS IN ALL KINDS OF

Photographic Materials and Magic Lantern Slides.

SEND FOR OUR NEW ILLUSTRATED PRICE LIST OF LENSES.

BUY THE BEST!

No other will give you half so much satisfaction.

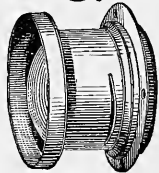
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ANTHONY'S Patent Perfect PLATE HOLDERS
ARE SUPERIOR TO ALL.

SEND FOR OUR CATALOGUE, AND GET THE BEST OF Everything.

DALLMEYER LENSES,
SUCCESS CAMERAS,
THE FAIRY CAMERAS,
THE NOVEL CAMERAS,
SCHMID'S DETECTIVE CAMERA

APPARATUS OF ALL KINDS:
Chairs,
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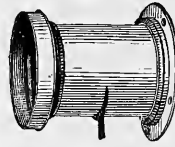
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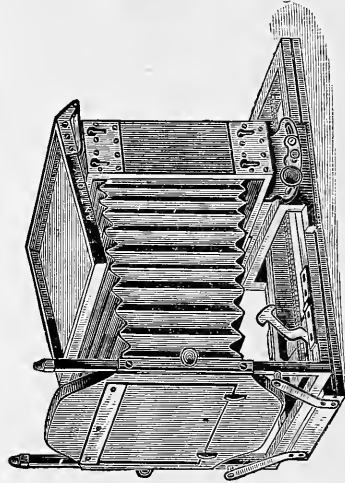
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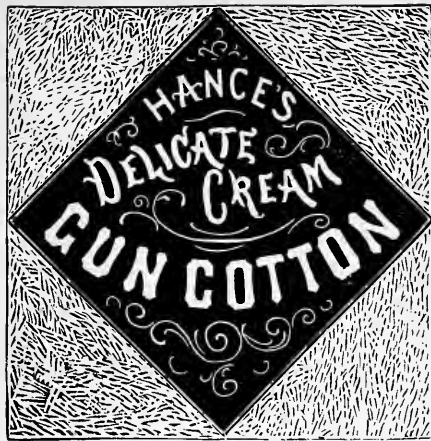
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Vol. XXII.

JUNE, 1885.

No. 258.

PHOTOGRAPHY AT THE NEW ORLEANS EXPOSITION.

HAVING now given a complete list of the regular photographic exhibits at New Orleans, we proceed to keep our promise to present our readers with a catalogue of photographic representation in the U. S. Government and States Building. We have frequently alluded to the fact that this building had robbed the regular photographic exhibit of a great deal that ought to hang with it, but we had no idea that it had done so to such a great extent, for we find in the Government Building a collection that would well serve to make up a national photographic exhibit. At the Centennial Exhibition of 1876, in the splendid photographic hall there was a greater number of processes represented, but the useful appliances of photography were not nearly so largely shown to the public as they are here. Here photography, indeed, makes up a very important element in the whole grand educational exhibit collated by the Government and the States and Territories.

Those who carefully read the catalogue given below will see that it has been made to help almost every department of art and industry that is known to our people; in some cases, scientists who have been interesting themselves for some time in collecting material pertaining to their specialties, have relied upon photography entirely to illustrate the result of their work. We have

gone over the ground very carefully with our stenographer; and, although some of the pictures in this building may have escaped our notice, we believe we have pretty thoroughly catalogued the productions of our art, and are able to say the list is quite complete.

We began our work at the northern entrance of the building, and took the list in three sections. First, that represented by the States; second, that represented by the Government; and, third, what was to be found in the departments devoted to education, to the colored people, and to the woman's and temperance departments. We shall first follow the catalogues of the pictures as we found them, with a few passing remarks, and afterwards will have an article summing up on the whole, including some thoughts which came to us as we were going on with the work. We begin the catalogue with—

New Mexico. Here are photographs of Indians, and various scenes in their life: dances, schools, cave homes, and manufactures, exhibited by the Albuquerque Indian School. Another lot illustrate the mining of iron, herding of cattle, gulch mining, natural scenery, and farming. The largest of these are by W. A. White, Baton, New Mexico.

Colorado. Scenes along the line of the Denver & Rio Grande Railway, by W. H. Jackson, Denver, work which is mentioned elsewhere.

Arizona. Illustrating mineral products, natural scenery, vegetable growth, Indians and their homes, life and travel in the "Wild West," and mining, by Hildreth & Burge, and Flagstaff. Views of the Grand Canon, Colorado River, especially those of Peach Spring, the celebrated resort, smelting works, and other characteristic pictures by Fly, are fine. The judgment of Judge Lynch (a man hanging on a telegraph pole) is also very realistic.

California. Views of natural scenery and big trees. J. Pitcher Spooner, Stockton, exhibits a very unique collection of the mammoth farm machinery used in the golden land, and some splendid views of Stockton, all of excellent quality as photographs. Mr. Spooner's architectural views are particularly fine; one of a tumble-down old shanty, with the inmates sitting at the door, is the gem picture of the lot, though all are very pretty. Photography is also made use of here for showing up the exhibits of various manufacturers, fruitgrowers, and merchants, some of which are of displays made at other Expositions. Some animal and landscape pictures by W. A. Clinch, Grass Valley, are also worthy of mention. Among the others is one entitled "A Big Load of Logs," the load containing 14,958 feet of round timber.

Three very fine views are shown here, without any photographer's name attached. They illustrate the production of lumber from the boom to the board-yard.

The next collection is of Pacific Coast scenery by Mr. I. W. Taber. It exceeds anything else here in our line, and is a much finer exhibit than that made by Mr. Taber in the photographic section proper; a fair instance of how State pride has influenced photographers to bend towards their State exhibits, rather than to enhance the main exhibition of their art. We have no fault to find, however, so long as photography is well represented and receives no snubbing, as it is apt to do. The New Almaden Quick-silver Mining and Smelting Works, and hydraulic mining at North Bloomfield, Nevada Co., Cal., are finely illustrated. Some meteoric iron, and a photograph illustrating the beautiful form of crystallized gold, are very good illustrations of lens work. The

last-named specimen was found about sixty feet below the surface, in a decomposed quartz seam, between slate. Another photograph is of a meteoric iron mass, whose weight is eighty-four pounds. It was found in 1880 near Shingle Springs, Eldorado Co., Cal.

Twelve frames of 5 x 8 views of the Pacific Coast scenery, of Belmont, Monterey, and surroundings, and of the Yosemite Valley, by Fiske, San Francisco, Cal., are gems of photographic art, and place Mr. Fiske in the front rank.

C. E. Watkins, San Francisco, Cal., also displays several frames of magnificent pictures of California scenery, coast and landscape, with others of the old Carmel Mission at Monterey—whale fishing, architectural views, summer resorts, natural springs, the fishing interests of Monterey, and life in the wilderness. The gems of the collection are 20 x 24 views of the "Hotel Del Monterey," "The American's Favorite Winter Resort," and the old "Carmel Mission Church." The photograph of Mr. Thomas Hill's splendid painting, "The Last Spike," by Mr. Watkins, is also displayed here. Three views of the "Hercules Dredgery," by a nameless photographer, exhibit the interest of the country in this direction, and how they are applied.

Nevada. General views of Carson City, illustrating the industries of the State Prison, natural scenery, etc. Among the views of the State Prison are some of the natural wall (sandstone) 20 to 30 feet high, carefully watched by the mounted guard on the top of the wall, and sadly broken into by prehistoric tracks of the species "Genus homo," and the "Eliphas Americanus." These are by Mr. J. R. Waters, of Gold Hill, Nevada.

The illustrations of hydraulic mining, smelting, and river mining at Virginia City are very fine; every species of machinery and appliance used in the mining interest is illustrated here by photography. Mr. Waters does not forget the more picturesque in nature either, as the views of Truckee River, Carmelian Bay, and other places prove. One of the most interesting scenes is a picture entitled "Loading Logs," where the great ox teams are at work with their solitary woodsmen, amid the wonderful pines

and cypresses in that section. A representative scene of life in Nevada is a view from Carson City, where the vast expanse of country broken into by railway tracks seems to be covered with illimitable piles of lumber ready for the market. The landscape gem of the lot is a view of Carson River. Interiors and views of machinery of the Brunswick Mill at Carson City, although had photographs, are exceedingly interesting pictorially, as illustrating the tremendous power applied in this industry. A view of basaltic columns near Mt. Davidson makes us think of the Giant's Causeway, being exactly the same in shape. Same natural views near Virginia City and Tahoe are very fine; all these views represent an immense amount of labor on the part of the photographer, as we all know.

Illinois. Views of the Illinois Industrial University, showing the laboratory, gymnasium, machine shop, carpenter shop, military class, designing room, architectural study, chapel, museum, farm, barn, and College court are good. Mr. C. W. Mosher, of Chicago, displays several hundred of his photographs arranged for posterity, a collection of which we know the history from its beginning. We probably will not know its end.

Mr. W. E. Bowman, Ottawa, Ill., exhibits a collection of the gems of the Illinois Valley, which includes his own portrait, with good truth, because Mr. Bowman is one of the gems of the Illinois Valley.

Some views of the bridges of Chicago, by a photographer whose name is not given, are very fine. Several albums lie on the table filled with 8 x 10 photographs, by J. W. Taylor, Chicago. They are of architectural studies of the great city of the West, and are exceedingly well done. Mr. Taylor's interior views are particularly attractive. Mr. Mosher also exhibits some very fine pictures of stock and cattle, which can hardly be excelled. Another application of photography is made by Messrs. Tibbals & Graves, of Bloomington, Ill., of various public school buildings in the Illinois towns. Those of the Illinois Industrial University and of the Illinois Wesleyan University are also excellent. They represent, no doubt,

subjects educationally of great interest in the West.

In the Wisconsin Department a fine series of 11 x 14 views, by some nameless photographer, is exhibited, of scenery reached by the Chicago & Northwestern Railway. The wild scenery of Devil's Lake, the placid beauties of Green Lake, the wonders of the Wisconsin lumber region in winter and summer, and the quiet shades of Green Lake neighborhood, with thrilling scenes of the Dalles of the St. Croix, are all here beautifully portrayed by the camera. Some remarkable efforts at double printing have been practised by this photographer, such as placing a statue of Mercury upon a rock with hands stretched out across the lake, beckoning; another of an antelope under a pine tree, watching the coming of the murderous hunter upon the other side of Green Lake. The pictures are wildly imaginative and suggestive, and reflect discredit upon the photographer who did them. The Chicago, Milwaukee & St. Paul Railway makes a large photographic exhibit of the scenery along the line in Wisconsin. We never knew before that such wild scenery was to be found in this State, though some of the dells of Wisconsin are very familiar to us. We remember one view here particularly; of a round-faced rock, where once upon a time, with our friend Mr. Carbutt, we were photographing a good many years ago, one of our circular diaphragms rolled from the slit in our lens, struck this round-faced rock, then, bounding high in air, made a long, last leap over the face of the rock into the clear water of the Wisconsin River below. We obtained our last view of the precious little disk some sixty feet below the surface of the water. The views of "Giants' Castle," "Lone Rock," and of the "Dells" are particularly fine; they were made from 20 x 24 plates. Judging from some smaller prints which bear his name, they were made by Bauder, of Mariette, Wis. Another series on the line of the same railway illustrate fishing and Indian life. Some of these photographs are from very antique drawings, and are not very elegant. The history of these drawings we do not find. There are some very antique photographs in this collection; but, as an illustration of the growth of the coun-

try, the whole series is a success. Some architectural views of the various cities in this enterprising State are quite creditable; others are used to illustrate the educational interests; and we might include in this series, the State Prison at Waupun. One of the gems of the collection is the Wisconsin State capitol at Madison. A very interesting series of smaller views represents the various departments of the Wisconsin Industrial School for Girls, which must be a very excellent institution. Another series is of the Wisconsin State Normal School, and still another of the Wisconsin Female College. Wisconsin is evidently well schooled, as well as well photographed. A still smaller collection is of the various school buildings in the State, and thus photography is made here to do a most useful work in informing the public of the condition of affairs in Wisconsin. Among the pictures of schools and school neighborhoods, we find one labelled "Artician Well at Prairie du Cheen, 960 feet deep"—much deeper than the spelling, we opine. Some amateur work is here, especially a view of the District School No. 5, Sugar Creek, which the photographer, either through ignorance, or from a hidden spring of irony and humor, has taken with his camera pointed upwards. As the school has a broad piazza in front, crowded with people standing on the edge of the steps, and as the house recedes backwards, presenting the appearance of a sudden earthquake in the rear, it would appear that those persons were very desirous of leaving the falling structure, following in this respect the worthy example which the family of rodents have given us, of leaving a sinking ship. The Milwaukee public schools are very finely illustrated by a series of twenty-five splendid photographs, made apparently by Mr. W. A. Armstrong, although unfortunately the name of the photographer is hidden. Why this should so often be, we cannot understand. Photographers should maintain their dignity, and always have their names shown upon their pictures. We have had a battle in this direction in our New Orleans work; many objected to the name of the photographer being upon the mounts, looking upon it as an advertisement; but we are trying

to educate the people in this, for if they wish them without our name on, they will have to go without the photographs. A frame of portraits by our old friend Mrs. Lockwood, of Ripon Wis., in the style called "Egyptian," graces the walls of the Commissioners' Office of Wisconsin. It is a pity they are not hung in better light, for they are worthy of it. Some other specimens of portraiture by Mrs. Lockwood also hang here, one of a bride being the gem of the series. This lady is again represented in the woman's department of her State by a very pretty frame of portrait work of various kinds, mostly cabinet size.

Indiana. In the Indiana section the various charitable institutions of the State for the education of the blind, for the treatment of the insane, the court-houses, and public buildings, are illustrated by a small series of photographs. Much to our relief, we find in this section a fine collection of portraits by our friend Mr. D. R. Clark, of Indianapolis; a very fine collection, indeed, that was lost to our regular photographic department by Mr. Clark's apparent State pride. Some of his groups of children are particularly lovely and lifelike, and the same may be said of the older figures. Several lifesized portraits by Mr. Clark are excellent, especially one of an old lady. The same may be said of the portrait of Vice-President Hendricks. A small collection of views of "Cedar Farm," a summer resort, by C. Heimberger & Son, New Albany, Ind., is worthy of note. Some small frames of views of Baden Springs are quite pretty here, and some photographs of cattle in groups and singly are also well done. Part of this collection is by Schreiber & Sons, Philadelphia. A series of photographs is also hung here of bits of the architectural decorations of the Court-house at Lafayette, Ind., which are very interesting, and give photography a chance to make itself useful in this direction. Some very bad photographs, indeed, of the Rice Polytechnic Institute are also placed here in very elaborate frames, but the frames do not make up for the bad work. Very fortunately, only the residence of the photographer is given, and that we withhold for the credit of our art.

Michigan. In the ladies' parlor of the

Michigan section we find two very creditable photographs of street scenes in Grand Rapids, by C. L. Merrill & Co., of that city. The public school buildings of the city of Detroit are very amply illustrated by a series of photographs, which surround a fine map of Detroit, where stay the "Free Press" and the "Lime Kiln Club." The University of Michigan also uses photography very extensively to illustrate its work. Some views of the Library and Museum are very fine—the photographer forgotten. The State educational institutions of Michigan also make a very fine display by means of our art. This collection includes the asylums for the insane, Michigan State University, House of Correction, State capitol, State Normal School, Agricultural College, School for the Blind, Institution for the Deaf and Dumb, the Reform School, etc. Thus the whole creditable display is made to serve a most useful purpose in illustrating the enterprise and public spirit of the people of Michigan. Another series is of the denominational colleges and public schools in the various cities of Michigan. Some albums in this department also include fine series of views of natural scenery in Michigan, scenery of great beauty, of which the State is so full. The Wolverinè Chair and Furniture Company of Grand Rapids make use of photography to illustrate their manufactures. We believe there are more classes of furniture made here than in any other city of the United States, and photography is used to sell them.

Ohio. The natural scenery of Ohio is well represented in the department of this State by photography, but who the talented photographer was who has given us such splendid pictures, we know not. His work is hanging all through this section, and it is a great pity that we should not know his name. The Ohio Penitentiary, public schools, and various other institutions, are also remembered by means of our art. The Nile Tool Works of Hamilton, Ohio, illustrate their splendid machinery by the same means. The photographs are very fine, indeed, of their kind; the photographer remains in oblivion. The Ohio Reform School tells the public of its various departments by a series of sixteen photographs, made un-

doubtedly by some of the amateur talent of the school. Whoever the individual was, he has forgotten to level his camera, or his outfit had no swing back or swing front. The Girls' Industrial Home, one of Ohio's most useful and praiseworthy institutions, shows better photography, and also a fine series of views of its various buildings. If this was done by one of the pupils of the school, certainly the lady amateur is the best. A very interesting series of photographs of relics found in the mountains of Ohio is contained in one of the cases here, together with the implements from which the photographs were made. Strange to say, not a single example of portraiture graces the Ohio department.

In regular order of arrangement, we now come to the cross section of the U. S. Government Department; but, as we propose to make memoranda of the Government photographs separately, we arrive next at the

Texas Department. Some panoramic views of Galveston interest and call forth admiration in this section; they are in four series, generally from 11 x 14 plates, and were made by Ferdinand Guerrero. Messrs. Sprain & Snell, of Brenham, Texas, display a very fine collection of well-arranged views of their State. The church architecture of Galveston is finely represented by the views of Mr. N. J. Clayton, of that city. Some fine views of residences are also exhibited by Mr. Clayton. Mr. H. B. Hillyer, Austin, and Messrs. Williams & Lenox, of Denton, each contribute a series of views of various parts of the State, and the public school buildings of the State are finely illustrated by a large series of pictures made by Mr. A. M. Galloway, of San Antonio, and others. This collection is a very large one, and the collector has apparently been occupied many years in gathering it. The growth of photography might well be illustrated by this series, so varying is it in quality. Some of the views are very fine, while some it would scarcely be possible to make worse; nevertheless, the series well represents the school architecture of the State, and well may the State be proud of it. A frame of views of Columbus, is skied so badly that we cannot read the name of

the unfortunate photographer, although it is the best series of views in this department. Fry & Brunig, Cuero, Texas, display a small frame of illustrations of the Mier Expedition of 1842; they are more thrilling than excellent. We now find another collection of architectural views from 17 x 21 plates of Austin City, by Mr. H. B. Hillyer; these are certainly the gems of the Texas Department, and do credit to the talented photographer. The Denison gate, a very artistic erection in the Texas Department, emblematical of the Gate City, is decorated largely by means of photography. One of the most interesting specimens here is the portrait of Sam Hanner, "Denison's first boy, born Dec. 4, 1872." Sam is a bright-looking boy, and is probably an amateur photographer.

Louisiana. Louisiana, of course, gives her photographers an opportunity to illustrate the manufacture of sugar, so that we have by some of her nameless artists splendid photographs of cane crushers, vacuum pans, steam drains, and sugar houses, together with some fine views of sugar plantations. The rice interest of the State is also beautifully illustrated by means of photography. Thus we have not only the mills at large, but interesting views of rice hullers, elevators, screen mills, and rice pounders, which are very interesting to those who do not understand the trouble necessary to produce the wherewithal to make our national and favorite dessert. Scenes of farm life of Louisiana are also finely illustrated by photographs by Mr. G. F. Mugnier, of New Orleans. Messrs. Lillenthal & Co. also exhibit a fine frame of views of varied Louisiana scenery, including some splendid pictures of live oaks, of sugar mills and machinery, cemeteries, etc. A large series of antique stereoscopic views hang in close proximity to this frame, but cannot be by the same photographer, though we are not informed who the photographer was. The gem of the whole collection in this department is a view of "Cotton Picking," by Mr. Mugnier. Although a scene of the present time, it also is representative of the past, for in this line matters have not changed much since the war. Mr. Mugnier certainly takes the palm in this

State by his landscape photographs, and is a most industrious and tasteful worker.

Mississippi. Mississippi comes out very poorly in the line of photography, our art being used here only to represent a series of views of the Agricultural and Mechanical College of the State; the cow shed, the engine house, the college herd, a group of students ready for work, group of students under arms, and a group of the Faculty and their officers, make up the series. Dr. O. M. Blanton, the famed bee-keeper of this State, displays some fine views of his apiary.

Tennessee. Tennessee uses photography to illustrate her splendid mountain scenery, and we see our art also employed here in another industry, viz., in the illustrations of mineral springs at Tate Springs, East Tenn. The barreling and bottling of the water, the various houses of entertainment in the neighborhood, with a very fine topographical view of the surrounding scenery, are all given in a collection by a photographer who is sunk into obscurity. As this series is thrice repeated, we are debarred from finding fault with Tennessee for not making a more elaborate photographic display. Mr. Schlier, Nashville, Tenn., has a series of very pretty views of picnic parties, a fine collection of rural scenes, etc., which deserves to be larger; the quality is excellent. A large collection of cattle pictures by Schreiber & Sons graces the Tennessee Agricultural Department, and is a beautiful accompaniment.

Kentucky. Kentucky certainly takes the palm in the line of photography. First, though not always foremost, is a collection of some sixty photographs from 13 x 15 plates of the blue grass region of Kentucky, which have been very tastefully colored. It is the only series of the kind; the only fault we have to find with it is, that both the name of the photographer and the painter are kept from us. There are enough uprights covered with photographs hung here to make a very respectable national photographic exhibition. Every interest of the State almost is represented, including views of the Swiss colony at Bernstadt, of the vineyards, of the orchards, of the sugar plantations, of the hemp farms, of the factories, of the pasture fields, of the public buildings and

public school buildings, of the stock farms, of the residences, of the race courses, of the fair grounds, of barbecues, of the cotton fields, tobacco plantations, the charcoal burnings, mining interests, natural scenery, household scenes, the geological interests, the schools, the lumber interests, vegetables, grains, flora, woods, forestry and natural springs, and of every conceivable industry and enterprise that is practised in the State of Kentucky—in all, two or three thousand views. A space about 300 by 12 feet is entirely occupied with transparencies, certainly the largest collection we have ever seen. All of the interests that we have mentioned are again illustrated here, together with a number of others. There is a great variety of work here also, some of it being very excellent, and some of it very inferior. Some of the transparencies have been insufficiently washed, and are quite yellow and brown and red and green. It would be hard to pick out the gems of the collection. One of those that attracts us the most is an old cabin, labelled "Butter-making, Bourbon Co." It is a picturesque bit, representing one of those lovely old cabins that are few in number now in our country, together with the dairyman and his daughter engaged in their work. Some views of tobacco fields and sugar plantations are also very fine; while some of the pictures of the sheep and animals are as lovely as anything could possibly be made by means of our blessed art. This collection is largely due to Mr. Proctor, the State Geologist of Kentucky, who was assisted largely by Mr. James Mullen, of Lexington, and Mr. Wm. Bell, of Philadelphia. The transparencies vary in size from 11 x 14 to 17 x 21; as a rule, they are worthy of the highest praise. As a collection, the series is unique. Never before was anything displayed so extensive and so elaborate, covering so much variety as this one. In the headquarters of the State Commissioners is a frame of very fine photographs of the officers of the Colleges, including one of Mr. Proctor himself—the photographer, whisper it not—nameless, but we are informed that most of them were made by our friend Mr. Mullen. The gem of the portrait collection is a 17 x 21 transparency, life size, of J. Proctor Knott, Gov-

ernor of Kentucky. Of course, a collection of pictures by Mr. Mullen could not exist without some of his horses, which are undoubtedly the best that are made. The school interests are also finely illustrated.

We now go back to the north side of the Government Building, the east section, and there, in the exhibit of the East Tennessee & Western North Carolina Railway, we find, first, a revolving stereoscopic box filled with illustrations of the Cave of Luray, and afterwards several frames of 20 x 20 prints of the Doe River Gorge and Doe River Narrows, by Mr. C. H. James, of Philadelphia.

In the office of the Richmond & Danville Railway we find a number of photographs of scenery on the Piedmont air line, and in one corner we see they were made by Mr. C. M. Bell, of Washington. This illustration of modern photographic push is balanced by an old sign post which graces the latter picture, from which we learn that the distance "to Antioch is 3 miles," and our readers will please figure up the rest.

The Georgia Pacific Railway Co. exhibits a series of small photographs illustrating the timber interests of Georgia. Among the many scenes of the wildwood, as wild as wild can be, we see the steamboat has pushed its way to the head of navigation on Worrior River, in strong contrast with the primitive forest.

Oregon. In the Oregon section we find a frame of photographs of the school buildings of the State, which are very well taken, the only representation of our art in Oregon.

Wyoming. The Wyoming section is rich in photography, the Yellowstone National Park giving the camera there such an opportunity for its talent as is supplied by but few places in our country, beautiful as it is. Here we see the magnificent productions of Mr. William H. Jackson, of Denver, and Mr. F. J. Haynes, of Fargo, Dakota. When we see two such masters in landscape art as Messrs. Haynes and Jackson hanging their works side by side, we expect a great treat. Their specimens here, of course, illustrate the Yellowstone National Park and its wondrous natural beauties, as well as Indian life, railway travel, mining, manufacturing, and what-not that pertains to that splendid

country which is being so rapidly developed. Two suggestive pictures hang close to each other. One is a group of Indians sitting in their pow-wow, while near it we see the sign-board post on which reads, "Lake Superior, 1198 miles; Puget Sound, 847 miles;" while below this is a picture of the good steamer, with her various passengers, crossing Snake River in full push, the water at her stern wheel improving the composition. Railway construction is also illustrated by a number of these views. Mr. Haynes also exhibits a frame of portraits of North American Indians, which represents his best work.

Montana. In the Montana section we find a series of 11 x 14 views illustrating the mining interests in that section, together with views of the cities, public buildings, smelting works, mills, crushers, and other structures devoted to the interests of that great region. A view of Helena, Montana, in 1866, tells of the hardships and deprivation which the early settlers must have endured.

Washington Territory. In the department of the Washington Territory, we find a very pretty cabinet of natural scenery of seatile, by Mr. Peiser.

Idaho. Mr. Wm. H. Jackson, of Denver, again comes to our help, and illustrates the scenery of Idaho, which we find displayed in that section. Also a series of views by Watkins, of San Francisco, of Columbia River scenery.

Kansas. In the Kansas section we find a photograph illustrating the stock yards of Kansas City. A double panoramic view, 16 x 40, without name. Some of the apartments of the yard are filled with live cattle, and near by are the railway appliances for moving the stock to various parts of the world. The school buildings of the State are also illustrated by means of photography here, but we expected to see a much better display of our art from Kansas than there is.

Chicago, Milwaukee & St. Paul R. R. A very pretty structure, made up of grains and grasses on the Chicago, Milwaukee & St. Paul Railway, is very finely decorated by means of photographs of scenes along the route of this great line of travel, by W. A. Armstrong, of Milwaukee, Wis. The interior of the structure is decorated with

photographs of the Exposition by the Centennial Photographic Company. These photographs are very tastefully framed by a picturesque arrangement of ferns and grasses. The whole structure is a very pretty illustration of what may be done by means of art and agriculture combined. A fine series of stereoscopic views, by Elmer & Tenney, Winona, Minn., decorates the western end of the structure, and very excellent views are they, indeed. Mr. Arthur G. Phillips, an amateur of Sioux Falls, D. T., gives us a fine frame of views. A frame of very excellent stereoscopic views by Mr. Muson at Sioux Falls is also here. Photography is also represented in some public school buildings of the States along the line of their railway, by Mr. Butler, a photographer of Vermillion, D. T.

Massachusetts. Massachusetts gives us a good many illustrations of bits of the industries of the "centre of the world;" among the finest of which we find some photographs by Mr. A. H. Folsom, of Roxbury, Mass., of the wharf and fish market of Boston, and other views representing the fishing and shipping interests of Massachusetts. Some fine views of the Hoosac Tunnel along the line of the Troy & Greenfield Railroad, by a nameless photographer, also help to make beautiful the Massachusetts section; and another series, illustrating the State Normal School at Bridgewater, is also very fine. The interior views of the art room, class room, assembly room, laboratory, and dining room, are also very excellent. A rather antique series of larger photographs gives us a fine series of views of the public school buildings in various cities of Massachusetts. Another series, largely of diagrams illustrating the machinery and timber used in the construction of the Hoosac Tunnel, is also fine. The Massachusetts Institute of Technology, where there is such a fine photographic laboratory under the direction of Prof. Pickering, does not fail to illustrate its architecture, at least, by a series of very excellent photographs. Another series from the same source is of the celebrated test machine used in the Institute, and of the various mechanical departments, such as the forge shop, filing shop, drawing room, machine shop, foundry,

pattern shop, carpenter shop, mining and laboratory, apartment of mechanical engineering, and the Harris Corliss engine, with a variety of pumps, test gauges, dynamometers, and other things used in that splendid Institute. A fine view of Chauncey Hill School hangs over the office door of the Massachusetts Commissioner, and is well worthy of that honored position. The Heliotype Printing Company, James R. Osgood, Boston, make a fine display of their works, principally of art subjects. Some of them in color are very nicely done, indeed. The work of this Company is so celebrated that it needs no more than a passing notice. Some examples of silk and satin are also very fine.

New Hampshire. In the New Hampshire section we find some of the famous views of the White Mountain region, by Mr. D. W. Butterfield, Cambridgeport, Mass. Mr. F. W. C. Kimball, Concord, N. H., is honored by the hanging of his splendid picture of the State Capitol over the door of the Commissioner's office. Some enlargements of White Mountain scenery hang in the New Hampshire Department, but they are without name.

Dakota. Mr. H. Butler, Vermillion, D. T., makes a fine display of photographs of scenery, the gem of which is a picturesque view of the first schoolhouse in Dakota. Some pictures of farm scenes are very well taken. Mr. J. M. Walker, Hillsboro, D. T., makes one of the most lovely displays of scenery in the Red River valley. A list of his views has already been published. It represents harvest scenes, farm life, the lumber interests, bridgebuilding, milling, and manufactures in this interesting country, and is a representative collection. One of the best pictures is the interior of the "Banner Printing Office," at Hillsboro, D. T. A similar series of views is shown on the other side of the Department, but by a photographer whose name we cannot find out. The big things done in Dakota are finely illustrated by means of our art, and help very much to an understanding of the splendid exhibit made by this section of country.

Nebraska. The public buildings of Nebraska are splendidly illustrated by a series

of some sixty views by Mr. E. L. Eaton, Omaha. A fine group of portraits of members of the Senate and House of Nebraska, by Clements, of Lincoln; a life-sized crayon portrait of J. W. Dawes, Governor of Nebraska, by Noble, of Lincoln; and a very interesting collection of Indian pictures, made some years ago in New York, grace the walls of this Department. One of a group of Winnebago Indian chiefs, under the care of Governor Furnas, who was agent for them at the time, and who is now U. S. Commissioner for the State of Nebraska at the Exposition, hangs at the door of the headquarters. Over this frame hangs a portrait of John Ross and his wife; John was a Cherokee Indian chief. Also another group of uneducated Indian chiefs taken in Washington is here. We must not neglect to mention a fine life-sized portrait of Gov. R. W. Furnas, by W. W. Abbott, of Brownville, Neb. Some illustrations of scenery in the far northwest of Nebraska also hang here, and the village of Long Pine. The pine may be very long, but the single street of the village is like the street called Straight, in Damascus, a misnomer. Nebraska fruit, Nebraska sod houses, Nebraska asylums, Nebraska distilleries, and Nebraska scenery are all well represented. Our friend Mr. Noble, of Lincoln, also exhibits a very fine case of cabinet and card portraits, which do him great credit. His groupings of children are particularly creditable, and we are glad to see his enterprise in making such an exhibit as this, although we believe it would have been better placed did it hang in the photographic section of the exhibit proper.

Rhode Island. The Rhode Island section includes some examples of work by the Lithotype Company of Providence, illustrating the moulding rooms of the Builders' Iron Foundry of that city. A very interesting series hangs in this department, also, of native island trees, the most unique collection of its kind; but, alas! without the name of the photographer attached. It must be the work of an amateur, since no practical photographer would probably have time to make such a splendid collection. A series of illustrations of views of Brown University, Providence, R. I., and the American College are very fine. Among others is one

of the first public meeting house, erected in 1775, "for the worship of Almighty God, and to hold commencements in." Some groups of the children at the Froebel School and Kindergarten, Providence, R. I., are very pretty and well taken, though they will be better taken when the artist who did them tries again with quick plates. Several albums of photographs lie upon a table in this department, containing views of the public buildings, the educational and charitable institutions, the fire and police stations, and the public school houses. How strange it is that the photographer has failed to insist upon his name being placed upon his splendid work! Another series of views is of the "Friends' School" at Providence, R. I., a school founded in 1784.

Vermont. The State of Vermont has made good use of photography in illustrating the manufactures of "the Industrial Marble Company" at Rutland, Vt., hundreds of pictures being hung here of various sculptured work of that important industrial establishment. Some views of other manufacturing interests in the State are also hung here, with no name. The Vermont Novelty Works Company does not forget to make use of photography in illustrating its manufactures of children's carriages, toys, and invalid chairs, which fact shows clearheadedness on the part of the far-seeing Company.

Connecticut. The Connecticut Commissioners have likewise applied to photography for the decoration of the neat little pavilion devoted to their office purposes. On each side of the front door are frames of views of the public buildings of New Haven, together with a fine view of Temple Street, with the grand old elms on each side, and the buildings of old Yale showing beyond. We did expect the photographer in the Nutmeg State would have his name upon his work, but he has failed to do so. Several frames close by contain some forty views of Yale College, of the buildings, exteriors and interiors, and of several of the dormitories, where the boys had their rooms photographed. The work is very excellent, but who made it we cannot guess. The Waterbury Watch Company exhibit two fine views of their factory, made by J. Rennie

Smith, Newark, N. J. The Scovill Manufacturing Company, from their Waterbury factory, send a very fine collection of photographic cameras and other apparatus, of amateur outfits, of gun cameras, printing frames, plate holders, etc. "Almacenes Para la Venta, 423 Broom Street, New York. Enviase for Catalogos Descriptivas."

Maine. Photography makes the first appearance in the Maine Department in the way of a series of views of the grammar and high schools of Auburn, Me. These are followed by a series of views of the school buildings of Bangor, Gardener, Lewiston—no name. Mr. J. C. Higgins, Bath, Me., shows himself more widely awake than many another photographer, by seeing that his name is printed on a great part of the set of views exhibited in the Maine collection. Mr. C. G. Carleton, of Waterville, Me., is alike wide awake, since we find his name upon a splendid panoramic photograph of Colburn University. A series of excellent photographs of old Bowdoin College, Brunswick, Me., together with some excellent groups of pupils, is found lying upon the table in the Maine section, and near it are some views of the normal school at Gorham, and of the Maine State College. These latter are made by Jackson & Clough, at Brownville. Another series of the summer resorts of the State is shown, but the name of the photographer is not given.

Minnesota. Messrs. Hoard & Penney, of Winona, make the beginning in their department of their own State by some views of the Porter Mill Company and Flour Mills, which are very excellent. The Willowbrook State Fishery and Hatchery has been most carefully photographed by Mr. T. W. Ingersoll, St. Paul, who exhibits a fine collection of views in connection with the fishing interests here, showing the working of the hatchery in all its various departments; from the natural brooks which run through the hatchery, to the apartments for depositing the spawn, and then of groups of fish. A frame of portraits of Crow Indians, one of the most interesting collections of its kind in the exhibition, is placed in the Minnesota section by Miller, of Minneapolis. The pictures have been spoiled somewhat by indifferently coloring; but beneath this, one can

see that the photographs are excellent, and the group very natural and skilfully arranged. The State capitol of Minnesota and University of Minnesota have been finely photographed and proofs hung here by some one, but who that some one is, the photographer or some one else has neglected to tell us.

The Minnesota department of lakes and summer resorts is very finely illustrated by stereoscopic and other views, made evidently by various photographers. We notice among the names of the artists, Mr. J. A. McCall, Brainard; T. W. Ingersoll, Wm. Caswell, and Chas. A. Zimmerman, St. Paul. Fishing and hunting are also finely illustrated by a number of photographs. The Minnesota winter industry of harvesting ice is also amply illustrated by a series of photographs which represent the workmen cutting ice, floating and hauling ice, etc. Some fine large views of Lake Minnetonka make beautiful the headquarters of the Minnesota Commissioners—"Ye gods, we wish we knew who made them." Over the doorway, Mr. H. Manderfield makes a fine display of Maseca. A frame of portraits of the distinguished gentlemen of Minnesota, including Oliver Gibbs, the Commissioner from Minnesota, and Col. Adams, his able assistant, also hangs from the walls of the office of the Commissioner. They were made by the various photographers of the State, many of whose names are familiar to all our readers. The central figure is of Gov. L. F. Hubbard, made by Greenleaf, of St. Paul. The other end of the office of the Commissioners is decorated with a series of photographs of the Minnesota exhibit, made by the Centennial Photographic Company. In one corner of the office is a 14 x 17 group of four young ladies—sisters—who, near Jordan, Minn., alone, and without the help of man, conduct the work of a large farm. Two frames of views of the construction of the conduit of the St. Paul water works, in the Minnesota section, are well taken, and illustrate the progress of the important public work, thus again proving the usefulness of our ever-useful art.

Iowa. Messrs. Simmons, Letteer & King, Waterloo, Iowa., grace the Iowa section by a fine view of the Irvine House, made on a

Ruby dry plate, manufactured by W. A. Langridge, Clinton, Iowa. A long line of residences, public buildings, and churches is also displayed here, of rather good quality, but without any clew as to the dark-room wherein they were developed. The clouds in some of these views are exceedingly unnatural; it is quite a mystery to us to know how they were produced.

Florida. A very pretty series of photographs of picturesque Florida meets our vision upon entering this interesting department of the Peninsula State, and reminds us of some happy days in Egypt at one moment, and then of scenes in sunny Spain. The collection is very well chosen, and we wish we knew who made it. Another series of similar views of scenes on the Halifax & Hillsboro Railroad, east coast of Florida, represents almost every variety of tropical scenery, splendid live oaks, lean and lofty palms, rich orange groves, avenues of palmettoes, lakes, rivers, apiaries and parks in great number, and all wonderfully interesting.

South Carolina. Upon the wall of the headquarters of the South Carolina Commissioners' office, are some good photographs of guano manufacture; they are excellent in quality, and do credit to the name of the photographer, whose name is unknown, however. The same photographer probably is responsible for a series of fine photographs of the phosphate works of South Carolina, near Charleston. They are well taken on plates 14 x 17, and these are the only representations of photography in the South Carolina section.

North Carolina. In the North Carolina Department we find some very interesting photographs representing the fishing interests of the State; one of a tremendous whale, of fishing with the long line, of some twenty fishermen engaged in their work, are very well taken. At the rear of this exhibit are several photographs representing scenery on the various railroads of the State, some of which we find are by our friend Mr. James Mullen, Lexington, Ky. Some of these represent the construction of iron bridges, and are exceedingly interesting as well as photographically first class. The University of North Carolina is very finely photo-

graphed in its various departments, outside and in. The gem of the collection is a view of "Memorial Hall" during its construction. A view of the campus is also very well done, and an example of excellent photography; all were made by Dr. B. Von Herff. A large collection of photographs of this gentleman is in the office of the Commissioner for North Carolina, showing him to be an amateur of no mean talent.

Virginia. In the West Virginia Geological Department we find Mr. F. Jay Haynes, of Fargo, D. T., again represented by a series of the Yellowstone region, which has been noticed in the Wyoming section already. Fish culture and fishing are again illustrated by means of photography in this department, with a fine series of views better taken than others that have been noticed. Some 17 x 21 views of Luray Cave are also shown in the Virginia Department, made by Mr. C. H. James, Philadelphia, Pa. The same gentleman exhibits a series of about two dozen panoramic views from 15 x 30 plates, of views in Shenandoah Valley, of the Natural Bridge, and on the Norfolk and Western Railroad, which are not excelled by anything else in their line. What a splendid appearance this exhibit would make in the regular photographic department! We are satisfied that the reason that department is so deficient is, that the railroad companies have shown more pride in collecting illustrations, than the photographers have shown of pride in their art. A smaller collection of views of the resorts of Virginia is also here shown; they are of excellent quality, but we regret to say that no clew is given as to who made them. The Lee Gallery, Yorktown, Va., contributes a collection of views, the gem of which is one of the old Moore House at Yorktown, Va. The manufacturer of the celebrated meat juice at Richmond, Va., uses photography to illustrate the various departments of its manufacture, and a living specimen of the source from which the meat juices are obtained—a live bull. A manufacturer of cedarware has also made photography useful to him in exhibiting his very beautiful exhibit placed near by. A frame of the officers and Faculty of the Richmond College of Virginia is here; the

pictures are by Foster Campbell & Co., Richmond. Photography is made use of in the Virginia section to show us the faces of our ancestors by reproducing a large collection of crayons, oil portraits, drawings of the old-time Governors and other public officers of Virginia.

New York. Mr. F. Waller, of New York, displays a series of twelve 14 x 17 photographs of the manufacturers of the John Stephenson Car Co. Here are cars and omnibuses, manufactured, not only for our own country, but for Mexico, China, and other countries, of the various kinds with which the travelling public is familiar. Neilson, of Niagara Falls, exhibits six frames of views of the great cataract, which are simply magnificent; they are from 17 x 21 plates. Helped by the natural beauty of the scenery, Mr. Neilson has perhaps been able to display the finest effect of light and shade in the whole exhibition. Now we find photography used in the New York Department to illustrate remarkable excavations, rich buildings, locomotive construction, and elevated railways, but we have not an idea who helped. The Delaware & Hudson Canal Company have collected a magnificent series of views of natural scenery along their route, in the most of which we think we recognize the individuality of our friend Mr. S. R. Stoddard, of Glen Falls. But here we must stop until our next.

HYPO IN GELATINE NEGATIVES.

WHEN is the hypo out of gelatine negatives? was asked from the question box, Philadelphia Photographic Society. This important question got but few answers, and those but "ill-digested." The writer has for guide, viz., plates that develop and fix quick, hypo washes out of quickly. Plates slow in developing, and very slow in fixing will be very slow in having the hypo washed out—in fact, with such plates one is *never* sure that the hypo is *ever* got rid of. Such plates give up the hypo better by soaking than being washed directly under the tap. Hypo in gelatine negatives is not so destructive as in collodion, but finally will destroy them. I have negatives, gelatine,

five years old that have hypo in them, and yet are used to produce good prints from them. The test whether hypo is out of any gelatine negative, take a plate that has been given the supposed washing to rid it of hypo, put it on a levelling stand, cover it with water, let it remain there some twenty minutes, now pour this water into a weak solution of bichloride of mercury; if a precipitate is produced the plate has not been sufficiently washed; if the mercury solution remains clear, one can be reasonably sure that the *hypo is out*.

BELL, Photographer,
Philadelphia, Pa.

SOCIETY GOSSIP.

THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the regular meeting, held Wednesday evening, May 6, 1885, the President, Mr. Joseph W. Bates, in the Chair.

The Lantern Exhibition Committee presented a report stating that an exhibition had been held April 8th, at Association Hall, at which 169 pictures were shown, 145 were from negatives made by 52 members, and 24 were selected from pictures taken in India by Mr. Charles R. Pancoast.

The Excursion Committee proposed a trip to Taughanock Falls, N. Y., as offering great attractions. It met with general favor, and a number of gentlemen signified their intention of participating.

A communication from the Exhibition Committee was read, calling attention to the circular issued in regard to the proposed Photographic Exhibition, and urging the members to give it their hearty support to make it interesting and profitable.

The Committee on Incorporation reported that the charter applied for had come up for action before the Court of Common Pleas, on April 18th, and had been approved. It was recorded by the Recorder of Deeds, April 24th, from and after which date it took effect.

In order to reorganize as a new body under the provisions of the Charter, the meeting was then adjourned *sine die*.

A meeting of those present was then organized with Mr. Galloway C. Morris, in

the Chair, to form "The Photographic Society of Philadelphia," under the provisions of the Charter granted and recorded as above.

The officers of the old organization were reelected to their several positions.

With Mr. Bates in the Chair, on motion of Mr. Fox, the by-laws of the old Society were adopted as a whole.

The Standing Committees of the old Society, as provided for by the by-laws were reelected to serve until the annual meeting, also provided for thereby.

On motion of Mr. Coates, it was agreed that all obligations and liabilities of the old Association be assumed by the new Society, and also that all rules, regulations, standing resolutions, etc., governing the old Society be adopted for the government of the new one.

Mr. Burroughs moved that a seal be adopted of the same design as the cut in use by the old Society for that purpose, adding inside of the circle containing the name, the words "Incorporated April 24th, 1885." Carried.

A question in the box asked, "How do you keep up the strength of the silvering bath? Is it done by the addition of nitrate of silver alone, or by adding also the other chemicals composing the bath?"

Mr. Bell stated that his method was to add one ounce of nitrate of silver dissolved in ten ounces of water, for every twelve sheets of paper sensitized.

Another question asked, "Should gelatine negatives that have been treated with alum after fixing, be washed longer in order to eradicate the hypo?"

One of the effects of alum being to harden the film, and make it more impervious in consequence of an astringent action, it would probably increase the time necessary for washing. It was generally recommended to use alum before, instead of after, fixing, though as much time would be necessary for washing in one case as the other.

The use of alum was sometimes claimed to interfere with processes of intensification in which bichloride of mercury was used. This difficulty was caused not by the alum itself, but from imperfect elimination of the hypo, any of which being left in the film,

would decompose the bichloride of mercury. The astringent action of the alum necessitated thorough washing in all cases to remove the hypo entirely.

Mr. Coates asked if there was any variation in the actinic power of the light noticeable in the Western States, or on the seashore, as compared with the region around Philadelphia. Negatives he had taken on the New England Coast were considerably overexposed, and he called attention to a letter from Mr. York, of England, recently published in the *Photographic Times*, stating that he had found on his trip among the Western States that, to expose properly, it was necessary to change an *f* 11 stop for *f* 16, though the former had been right in the Middle and Eastern States.

Mr. Browne thought that travellers photographing in the West were apt to take subjects which from their size and other peculiarities, and the general absence of foliage, reflected large quantities of very actinic light resulting in overexposure.

Mr. Vaux had found Colorado views taken by him underexposed, indicating the reverse of the experience above quoted.

Mr. Rau, who had done a great deal of work in the West, had noticed the same effect, which, though the light had great actinic power owing to the rarity of the atmosphere, he laid to the extremely heavy shadows cast by the powerful sunshine.

To bring out these shadows it was necessary to give exposures sufficiently long, to overexpose somewhat and soften down the more brilliantly lighted parts of the picture.

Mr. Barrington showed a concave reflector made of silvered mica, which used at night with a common bat-wing gas burner, he had found to give sufficient light to copy engravings, and also to make lantern slides by reduction. The reflector was about 12'' in diameter, and the burner was carefully placed in the exact focus of the converging rays from the reflector.

For copying an engraving, the light was placed about two feet from the picture, the exposure being from forty to seventy-five seconds with a Carbutt special plate. A lantern slide made in the camera from a $6\frac{1}{2}'' \times 8\frac{1}{2}''$ negative, required three minutes on a Carbutt B plate. In this case, a shield

of tissue paper was placed between the negative and the light, close to the former, in order to diffuse the light thoroughly.

Mr. Walmsley showed a large portrait negative $18'' \times 20''$, and prints from the same, taken with an 8 x 10 Beck rectilinear lens of $13''$ equivalent focus. The picture was taken on a dark day with *f* 16 stop, and one minute exposure. The back focus when making the picture was about $26''$. In the gallery where it was taken, this lens had taken the place of a very expensive and bulky portrait lens, and with rapid dry plates was amply quick in its action.

Messrs. Wilson, Hood & Co. showed a number of new cameras by the American Optical Co., among which was the "Manifold," which from its novel construction and adaptability to various requirements attracted much attention.

Other interesting exhibits were: a Scovill detective camera, a small portable incandescent electric light for use in the dark-room, etc., and a tin developing tray of Belgian manufacture covered with a white composition said to be impervious to photographic chemicals.

Mr. Wood showed a number of platinum prints of flower and figure subjects. Among the latter was one taken under a skylight at 7 A.M. with a drop shutter.

Messrs. Corlies, Barrington, Bement, and others showed a number of excellent marine pictures taken in New York Harbor.

Forty-seven members and three visitors present.

Adjourned.

ROBERT S. REDFIELD,
Secretary.

THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—This Society proposes to hold, during the fall or winter of 1885-6, an exhibition of photographs.

Amateur and professional photographers are invited to send specimens of their best work for competition in accordance with the rules and classification appended.

The recent rapid progress in artistic photography and the growing interest in the subject, lead us to hope that a collection of photographic pictures may be brought together, which will be worthy the critical attention of our friends and the public.

A diploma will be awarded, by a Board of Judges, for the best picture in each class. Every precaution will be taken that the conditions of classification are complied with.

The place of holding the Exhibition, and the date, will be announced in a future circular. It is proposed that it shall remain open to the public about one week.

The attention of contributors is particularly called to rules Nos. 4, 5, 6, and 7.

To facilitate the hanging of pictures by classes, it is requested that, as far as possible, pictures of different classes be not included in one frame.

Intending exhibitors are requested to advise the Secretary as early as possible, so that entry blanks, labels, etc., may be sent them in good time. Early notice in regard to transparencies and lantern slides is particularly desired, in order that proper arrangements for showing them may be made.

For all further information, entry blanks, labels, etc., please address the Secretary, Mr. Robert S. Redfield, 1601 Callowhill Street, Philadelphia, Penn.

JOHN G. BULLOCK,
FREDERIC GRAFF,
S. FISHER CORLIES,
CHARLES R. PANCOAST,
ROBERT S. REDFIELD,
Exhibition Committee.

Pictures will be received for competition only, and in accordance with the following rules and classification:

RULES.

1. Both amateur and professional photographers may compete in all classes, unless otherwise specified.

2. No photographs will be received on single mounts less than 5 x 8 inches (except stereoscopic). All smaller than this size must be grouped on a larger mount for convenience in hanging. No unmounted prints will be received except from foreign exhibitors.

3. The same picture may be entered in more than one class, but can only be awarded one diploma. No diploma will be awarded in any class in which the pictures are of insufficient merit, as decided by the judges.

The Committee reserve the right to reject all or portions of any exhibit offered.

4. All entries must be made on blanks, which will be furnished on application, and which must be filed with the Committee at least five days in advance of the Exhibition, giving (when possible) the following information: Number of pictures, size of frame or mount, classification, subject, lens, plate, if for sale, price, exhibitor, address, Society.

Ten per cent. commission will be retained by the Society for any pictures sold during the Exhibition.

5. Each print must have a label attached by the exhibitor, so as to read from the front, stating class, subject, lens, plate, exhibitor. Blank labels will be furnished on application.

6. All expenses for transportation to the Exhibition must be prepaid by the exhibitors. Return charges will be collected by carriers.

7. No pictures will be received later than five days prior to the opening of the Exhibition.

8. No pictures shall be withdrawn before the close of the Exhibition.

9. The Society will not be responsible for any loss or damage that may occur to any exhibit, but will use all reasonable care to prevent such occurrence.

10. Advertising in any form, in connection with any exhibit, is strictly prohibited.

CLASSIFICATION.

1. Landscapes—any size—by professionals only. 2. Over 5 x 8 inches. 3. 4½ x 6½, to 5 x 8 inches inclusive. 4. Under 4½ x 6½ inches. By amateurs only. 5. Marine views—surf. 6. Sail. By professionals only. 7. Surf. 8. Sail. By amateurs only. 9. Figure composition—over 5 x 8 inches. 10. 4½ x 6½, to 5 x 8 inches inclusive. 11. Under 4½ x 6½ inches. By amateurs only. "Figure compositions" are to include groups, and all pictures in which one or more figures make the principal interest of the picture, and which are not included in the "Special composition," Classes No. 15, 16, 17, and 18. 12. Landscapes. 13. Marine views. 14. Figure compositions. By ladies only. 15. Cottage door. 16. Way-

side fountain. 17. Village smithy. 18. Ploughing. Special compositions. 19. Animals. 20. Still life. 21. Flowers, fruit, etc. 22. Trees. 23. Snow and ice. 24. Architecture. 25. Interiors. 26. Sculpture. 27. Machinery and other manufactured objects. 28. Microphotographs. 29. Enlargements. 30. Instantaneous effects, not otherwise classified. 31. Platinum prints. 32. Gelatino-bromide or chloride prints. 33. Porcelain pictures. 34. Transparencies. 35. Set of 6 lantern slides—negatives and slides to be made by exhibitor. 36. Set of 6 to 12 pictures, taken in a foreign country, or by a foreign exhibitor. 37. Pictures by any new process not before publicly exhibited.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS.—392 Bowery, N.Y., May 7, 1885. President Power in the Chair.

Mr. Geo. C. Silvers was elected a member of the Association.

Mr. Mildenberger reported that on account of illness, Mr. Gubelman could not be present to deliver his lecture on "Instantaneous Photography."

The various journals were received, with thanks of the Association.

The business of the meeting having been disposed of, the question box was opened, and the following questions read:

Does diaphragming a lens down increase the area of the circle of light on the ground glass? For instance, it is said of a lens that it will cover a 11 x 14 plate, or by diaphragming, it will cover a 14 x 17 plate.

Mr. Bühler: It is a mistake to say that diaphragming a lens increases the area of the circle of light on the ground glass; diaphragming only increases the sharpness of field at the expense of rapidity.

Mr. Main: It depends upon what you are doing with the lens; you can take a lens that will only make a 5 x 8 view, and by diaphragming, can make a 14 x 17 copy with it.

Mr. Bühler: If you use a 5 x 8 lens to make a 14 x 17 copy of line work, the edges will not be sharp or true; in copying you can enlarge to any extent. Diaphragming does not increase the circle of light, but only sharpens the field.

The next question read was: What is the cause of a metallic lustre on tintypes?

Mr. Schaidner: The color of a tintype should be a creamy white, but I have seen them with a silvery metallic lustre, the cause of which I do not know.

Mr. Bühler: I think the bath must have been overcharged with organic matter.

Mr. Power: I think I had the same thing happen to me one time; my plate was oversensitized, overexposed, and the cyanide solution was too strong; on remedying these things the metallic effect was not apparent.

Mr. Faulkner: It seems to me there was too much acid somewhere, either in the bath, or in the developer; and possibly there was overdevelopment. A too acid bath, and very thin collodion produce the same result.

Mr. Bühler: If we could see the work, we could tell better. In overdevelopment you are building up silver as on a negative.

Mr. Schaidner: I stop development when detail begins to show in shadows. I have made tintypes before with the same collodion and obtained excellent results.

Mr. Faulkner: See that your bath is not too acid, and use one-half the usual quantity of acid in your developer.

Mr. Schaidner: I have always understood that a tintype bath wanted to be quite acid.

Mr. Faulkner: That is an old theory that I contest. I think a too acid bath makes trouble.

Mr. Power: I would like to ask the printers present how they precipitate the gold in their waste toning bath.

Ms. Spootle: The best way is to throw it down with sulphate of iron.

Mr. Mildenberger: You should first acidify your toning solution.

Mr. Bühler: Furnish me with a fifteen grain bottle of gold, and I will put it in a toning bath, precipitate it, and recover every grain of gold without acidifying the solution.

Mr. Main: The action of light will precipitate the gold in the toning bath.

Mr. Faulkner: Those who make a business of refining wastes, recommend acidifying the toning solution before precipitating. I asked one of them the object of doing so,

and was told it was to get rid of the excess of iron in the precipitate. Sometimes they wash the precipitate, and then draw a magnet through it to extract the iron.

Mr. Power: I think I have saved more gold since acidifying my toning solution before precipitating, than I did before.

Mr. Bühler: You can't get pure gold by precipitating once, but by cutting up again with nitric and muriatic acids, and then adding one hundred grains of iron for every twenty grains of precipitate, you will get the pure gold.

Yours respectfully,
W. EDDOWES,
Secretary.

SOCIETY OF AMATEUR PHOTOGRAPHERS OF NEW YORK.—A special meeting of the above Society was held on Tuesday evening, April 28, to view the work of Mr. George B. Wood, of Philadelphia.

No higher praise can be awarded Mr. Wood than to say that everything he showed, without exception, was a *picture*.

The slides first shown were views in the environs of Germantown and Philadelphia, and at Bedford Springs. Then followed several views of New York buildings, both interior and exterior, among them the Tiffany House, on Madison Avenue, and a number of interiors in the Villard mansion, also of studios, those of Mr. William M. Chase's studio being particularly noticeable.

Then followed some shutter views of steamers, one of the United States man-of-war "Kearsage" attracting especial attention.

Several views of rural scenery in England were next shown—a village scene in Cornwall was a charming study.

Passing to France, a series of views of the picturesque architecture of the old French towns followed. These were felicitously chosen and arranged, and of great beauty, apart from their historical value.

Succeeding these came views in Florida, on the St. John's and Indian rivers, and in the Adirondacks. Some flower studies of apple blossoms and altheas were then thrown on the screen; one of them showing rain-drops on the petals, was by many considered the gem of the evening.

A series of figure studies then followed,

mostly from child models, in all sorts of artistic poses. These included the pictures that won prizes at the last Boston Exhibition—"Indecision," "Happiness," "Hay-making."

Mr. Wood's slides were all reductions from 4 x 4 and 5 x 8 plates, and made by the wet process.

At the close a vote of thanks was extended to Mr. Wood for his kindness in favoring the Society.

ROCHESTER PHOTOGRAPHIC ASSOCIATION.
—Regular meeting held April 6, 1885.
President Wardlaw in the Chair.

Minutes read and approved.

Under the head of discussion of photographic subjects, Mr. Williams reported in regard to his test of bromide of ammonium and bromide of potassium as restraining agents, showing samples of negatives with each restrainer, and reported in favor of bromide of ammonium as the stronger agent.

Mr. Inglis suggested that a note be made in regard to time of appearance of high lights. He was strongly in favor of gradual and continuous development either with the wet or dry plate. He thought the gradations much more fine.

Mr. Wardlaw agreed with Mr. Inglis "that the race was not always to the swift."

Mr. Inglis thought this point identical with wet or dry plates.

Mr. Wardlaw, in support of his theory that dry plates kept better in a damp place, produced a plate that showed marked signs of fog, except where it had been kept moist.

Mr. Dumont suggested that a little hypo in the developer would clear fog, and thought that the water might have taken the hypo from the paper mat.

Mr. Inglis said that agreeable to a suggestion made some time ago by President Wardlaw, he had taken an exposed dry plate that showed signs of fog, and immersed it in a weak solution of hypo before development, and then found on development that the fog was entirely destroyed.

On the subject of the best reducer for gelatine negatives, Mr. Wardlaw suggested nitric acid and permanganate of potash.

Mr. Inglis offered Newton's formula of citric acid and bichloride of iron.

Mr. Wardlaw thought a negative reduced with the latter formula had more of a tendency to go back in strength.

Mr. Lee had seen negatives too intense to be reduced by the nitric acid and potash.

Mr. Bush had used the nitric acid and potash quite weak, and had found the reduction gradual and complete.

In regard to print toning on the surface, Mr. Fox thought that the practice of first putting them in warm water had a tendency to coagulate the albumen and retain a portion of the free silver.

Mr. Wardlaw thought the warm water expanded the paper, and the cold water then contracted it and held the silver. He advised using only cold water with the addition of a little acid to the first washing.

Mr. Inglis thought the only true test of a well-toned print was to look through it. If it still retained the red color, then tone further. He thought prints should be toned as plates are developed, by looking through them.

The Committee on Lantern Exhibition reported that all slides for exhibition must be handed to the Committee on or before the date of the next meeting.

Mr. Lee called attention to Mr. Walker's offer of a volume of *London Photographic News* for 1884, and suggested that the Association subscribe for the present year.

Mr. Lee also called attention to Mr. Walker's donation of two photographs of the moon, the frames to be presented by Mr. Gillis.

Mr. Willis Love moved a vote of thanks for the above donations. Carried.

The President, Mr. Wardlaw, presented a communication from J. Harris Stone, M.A., editor of the *Amateur Photographer*, 22 Buckingham Street, Adelphi, London, W.C., England, donating to the Association copies of his magazine.

A vote of thanks for the same was unanimously carried.

The following new members were elected, Mr. Lehnkering active member, and Prof. Chas. Forbes, M.D., associate member.

The President appointed Messrs. George

Eastman and Willis Gove to read original papers at the next meeting.

Meeting adjourned.

Regular meeting held April 20, 1885. President S. D. Wardlaw in the Chair.

After the reading of the minutes, Dr. Forbes was called upon in regard to the advantage of using glycerine in pyro and ammonia developer.

He could not say anything in regard to the origin of this developer. The glycerine had been recommended by many. His experiments showed it simply acted as a restrainer, and took the place of bromides. Formulæ show less quantities of bromide where glycerine is used. He had often found fog where glycerine was omitted. By increasing the quantity of glycerine sufficiently one could do away with the use of bromides altogether in the developer. He thought it simply acted as a restrainer.

Mr. Williams: In Eastman's normal soda developer there is no bromide or glycerine used.

Dr. Forbes: The sulphite of soda took their place, and was the restrainer.

Mr. Wardlaw: Some samples of sulphite of soda would act as a restrainer.

Mr. Learned: Had the glycerine a tendency to reduce the number of air bells?

Dr. Forbes could not say.

Mr. Lee: How long will the pyro remain active when dissolved in water?

Dr. Forbes could not say, but thought it would keep indefinitely dissolved in alcohol.

Mr. Lee: Would it be safe to make up a pound in water?

Mr. Wardlaw thought not, as business was at present. Questionable if it would be judicious to purchase a pound.

Upon the question of whether dry plates should be retouched before or after varnishing, Mr. Knapp thought they should be retouched before, and then one had a chance to retouch again after varnishing. All seemed to agree on this subject.

Mr. Fox said he considered it an advantage, as often with wet plates he had found trouble in retouching sufficiently with one process.

In answer to the question, "What is the cause of black specks like comets on gela-

tine dry plates, which show only after fixing? Dr. Forbes thought they were caused by particles of iron combining with the pyro developer.

Mr. Wardlaw: It often comes from particles of iron in the hypo. He had never noticed them with an old fixing bath, and thought the particles of iron were destroyed when the hypo bath became old.

Mr. Lee had noticed that the spots seldom appeared when fixing vertically in a fixing box.

Mr. Wardlaw thought they were formed immediately on entering the fixing bath, while a portion of the pyro developer was in the film.

Mr. Bannister: Would dry pyro have the same effect?

Mr. Wardlaw thought not.

Mr. Lee: Is citric acid a bleacher of iron stains?

Mr. Wardlaw: Yes.

Mr. Wardlaw produced negatives showing the stains, and all seemed to agree that they were due to small particles of iron coming in contact with the pyro developer.

A vote of thanks was tendered the Scovill Manufacturing Co. for donation of Spaulding's *First Lessons in Amateur Photography*.

Mr. Dumont read a communication from the Boston Society requesting an exchange of lantern slides.

Dr. Forbes kindly offered his laboratory for the proposed lantern exhibit of the Association, which will probably take place early in May.

After changing regular meeting night to alternate Fridays, the meeting adjourned.

Semi-annual meeting held May 1, 1885.

At the above meeting the following officers were elected for the ensuing six months:

President.—S. D. Wardlaw.

Vice-President.—Charles F. Pomeroy.

Secretary.—W. H. Learned, 16 State St.

Treasurer.—J. M. Fox.

Financial Committee.—Clarence Williams, C. F. Hovey, and John E. Dumont.

Executive Committee.—A. M. Brown, H. D. Marks, President, Secretary, and Treasurer (*ex officio*).

The thanks of the Association were voted to the Scovill Manufacturing Co. for the offer of the use of photographic novelties whenever desired.

Mr. H. D. Marks exhibited a new detective camera, also an electric light for the dark room kindly furnished by Scovill Manufacturing Co.

W. H. LEARNED,

Secretary.

GERMAN CORRESPONDENCE.

The National Photographic Convention—Medals in Germany—Gaslight for Photography—Experience with Azaline Plates—Improvements in the Steinheil Aplanatic Lenses.

I HAVE just received an invitation to the Buffalo Convention, connected with the Exhibition of the National Photographic Association. At this instance I cannot fail to think of the beautiful exhibition at Milwaukee, which I had the honor to see two years ago. The exhibitions confer exceeding honor upon the National Photographic Association, as no medals can repay the exhibitors for the trouble taken. Here, in Germany, it is quite different. We have numerous small exhibitions which are nothing else than occasions for distribution of medals. Mr. Wilde, in Gorlitz, mentions a singular occurrence. An invitation had been sent from Liegnitz to Herr Wilde by the exposition there, desiring him to act as juryman in photographic awards. By mistake the letter of invitation was delivered to a gentleman of the same name who had been a stonemason. This gentleman, not aware that an error had been made, obeyed the summons. He set out for Liegnitz, and acted in the function of juror in decisions of photographic objects, pictures, apparatus, utensils, chemicals, etc., and solely in this capacity inasmuch as the other juror, Mr. Liebe, did not put in an appearance. The committee was subsequently apprised of the state of affairs, but did not take it seriously to heart.

Now what value are medals awarded under such circumstances. The fact is that the chief aim of many exhibitors is to secure medals for the sole purpose of decorating their mounts, bill-heads, etc., to make an

impression upon the public. One medal for the purpose will do as well as another, and it is a matter of no serious moment by whom they may be awarded. Of course, it is understood that only one class of photographers are of this opinion. Berlin, for instance, gave in 1879 a proof of this. When the photographers there assembled, had determined to pass decision on the exposition, they disregarded from the first the giving of medals.

Much has been written in photographic journals about the employment of electric light. Now endeavors are being made for the employment of gaslight in photography. Mr. ——— has constructed an apparatus which with good dry plates gives the same result in the same time of exposure as wet plates. He remarked at the Association for the Advance of Photography, that he had achieved very satisfactory results with the electric light apparatus, but unfortunately it is somewhat complicated and costly. The plant demands a considerable capital, and even the daily cost is considerable. This is of moment in a small business. In small towns, moreover, it is not always possible to secure the electric light, and, hence, he has turned his attention to the employment of gaslight. He first of all substituted for his electric light, in the illuminating apparatus, a pair of powerful Siemens' regenerative burners, but found that the light was too weak. The light of these burners, applied directly, gave strong disturbing shadows upon the background, laying aside the fact that it was too weak. An increase in the number of these burners was not practicable, because they gave such an intense heat. Recourse was had to Argand burners. Four of the same of sixteen candle power were made use of, placing them over the head of the sitter; fourteen more were placed in two rows upon a revolving crane, used for the speaker's electric light apparatus, whose axis was over the head of the sitter. The burners were provided with the so-called Schumann silver reflectors, consisting of silvered glass, and acting without doubt as the most powerful reflector as yet invented. Upon the revolving crane, inside a white lacquered diffusor, was hung a Siemens' burner of two hundred candle power. With

this contrivance portraits were taken in twenty seconds; the crane, of course, revolving slowly during the time of exposure. This apparatus in its workings is analogous to that used by Mr. Kurtz, of New York, who in his electric light operations places the sitter upon a turn-table. Several examples of photographs taken by the above method were exhibited. They were freely exposed and not inferior to those taken by daylight. The products of combustion of the gas flames were conveyed by pipes to the outer air. The increase of the temperature is not considerable; with several hours burning it increased from 66° F. to 73° F. The speaker remarked that he had used at least twenty different developers, but preferred the usual oxalate of iron developer. Before developing, he laid the plate in a bath of hypo, 1-1000. The latter has been repeatedly tried by the process-monger; I mention, therefore, that bathing in hypo is only of value in connection with the oxalate developer.

Azaline plates are being used more and more for taking photographs of oil paintings, carpets, bronzes, colored architecture, landscapes, etc. You know that these plates exhibit their value for colored originals only when a yellow glass is put in front or behind the objective. So far, I have used yellow mirror glass; these glasses vary, however, very much in their color, and absorb often very much light. The best is white mirror glass covered with yellow collodion. I make such collodion with help of aurantine, an aniline dyestuff manufactured here. The ordinary aurantine of commerce is not always reliable. Lately a sample of aurantine turned up, which is very difficult of solution, one part requiring fifty cubic centimetres of alcohol. Dissolved in collodion it gives too thin a film. It is, therefore, well to coat the two sides of the plate, the second coating is applied from the corner where the first was poured off, diagonally. The company for the manufacture of aniline colors at this place has a new variety of aurantine, easily soluble in alcohol, which satisfied all demands, but is higher priced. This sample dissolves in one hundred parts of alcohol without a residue, likewise in collodion. The latter appeared

deeply colored. Four grains of the new color were sufficient for one hundred cubic centimetres of collodion. How very different are the times of exposure with azaline plates in taking different objects, according to their nature, will be seen by the following table of practical results in the taking of oil paintings with diffuse light with azaline plates with use of aurantine disk :

OUR PICTURE.

PERHAPS there is nothing in the whole range of art more difficult to depict in their true relations than the sea and the sky. There is a harmony existing between the two so exquisite in its whole scale, from high to low, that the slightest discordant element, which the painter may introduce, jars upon

Subject.	Lens.	Time.	Illumination.	Duration of exposure.
New oil painting of Gude; sea-view, light painted.	Voigtländer euryscope, 4' stop, v. o.	April 13, 3.30 P.M.	Bright sky with diffused light.	8 minutes.
New oil painting, by Breitbach Smith; dark painted.	Voigtländer euryscope, 4' stop, v. o.	April 20, 3 P.M.	Bright sky with diffused light.	19 minutes.
Colored print, by Hageburg.	Steinheil ordinary aplanatic, 5' stop.	April 24, 2 P.M.	Bright sky with diffused light.	2 minutes.
Old oil painting, by Menzel; very dark-brown tone.	Steinheil aplanatic landscape with reversed prism 2' stop.	April 18, 2.4 P.M.	Bright sky with diffused light.	75 minutes.

I have mentioned the fact that in sunlight the exposure may be effected in fourteen times less time.

Recently I had an opportunity to compare a Steinheil aplanatic lens of fifty-four centimetres focus, older construction (No. 8 of price list), with a new one of the same size. The latter can be drawn out—that is, the distance between the two lenses can be changed. If the instrument is drawn together so that the lenses are closer together, we have a somewhat contracted field, a certain focal diffusion, so that the image appears deeper. In this capacity the instrument is well adapted for groups. When the instrument is drawn out—that is, on further separating the lenses—the image was flatter and sharper at the edge, in which capacity it is suitable for reproductions. A more careful comparison with an old instrument, gave in fact the superiority to the new arrangement. The edges upon the ground-glass, it is true, did not appear to the eye to be any sharper, but the copy showed it plainly.

Yours truly,
DR. H. W. VOGEL.

the feelings of those whose souls are tuned to its concord.

There is not a moment in which the sea and the sky are not creating new and beautiful combinations—whose glory they can see

“Who meddle not with crime,
“Nor avarice, nor over-anxious care.”

The sea infinite in variety of changing forms and hues, unwearied in manifestations of graceful motions, unconquerable in power and majesty, eludes the subtle touch of the most skilful painter to render its truth upon the canvas.

Who can paint

“the rude imperious surge,”

or the

“visitation of the winds, which take the ruffian billows by the top.”

“Curling their monstrous heads and hanging them

With deaf'ning clamors in the slip'ery clouds.”

The eye is not quick enough to catch any one phase of the sea's lovely inconstancy, or any one form of her fury. Even in her

gentler moods, when with soft murmurs she breaks upon the beached margin of the shore, the exquisite modelling of her waves is so mockingly transient that we perceive only a portion of their form and beauty.

And so of the sky, there is an exhaustless energy in constant play evolving from its bosom form after form of loveliness; fleecy masses of wind-fretted clouds, soft filaments of fine-spun vapor, interpenetrated with light, or multitudes of dense white clouds wandering in thick flocks.

"Shepherded by the slow unwilling wind."

Is it any wonder that painters fail in representing such loveliness as is the hourly, momentary work of

"Heaven's profoundest azure."

As Wordsworth has expressed it :

"Clouds separately poised,
Innumerable multitude of forms
Scattered through half the circle of the sky !
And giving back, and shedding each on each
With prodigal communion the bright hues—
Which form the unapparent fount of glory.
They had imbibed and ceased not to receive.
That which the heaven's displayed, the liquid deep
Repeated, but with unity sublime."

The older painters seldom attempted the representation of the sea as a separate study. Even the Venetians, who lived upon her very bosom, have left us no instance of marine studies; sometimes we catch little glimpses in the backgrounds, which show that certain patches of green or blue are intended for sea, because they have ships represented as floating upon the surface. What the old masters painted of the sea is purely conventional, and considered only in its relations to human interests. They never studied the volume of the moving waters for its own beauty.

Modern painters have produced some faithful renderings of particular phases of marine phenomena, Turner standing pre-eminently. He comes very near nature in her actual forms. He gives the impression of mass and volubility, of transparency and mobility, the lapping and curling form of the waves whose crests are marked with tracery of intermingling lights and shades,

and the sea between, broken up into little surges and ripples from the falling spray. Yet even Turner fails to catch that perfect freedom in the flow, the laxity at the top of the wave when the spray seems in its inconsistency to waver between the bidding of the winds and the restless onward urging of the volume of water eager to gain the shore.

We have no notion of exalting photography above art. We know her limitations, we know that she will not usurp the domain of the painter, but as an aid to the study of form she has no equal. She can gather up and treasure those transient shapes of beauty which the eye despairs of following, which the pencil fails to record.

Therefore, as far as outward form is concerned, leaving out of consideration the glorious modulations of hues, we must confess that we have seen more faithful rendering of clouds and waves in photographs than painters even of high rate have been able to give us upon their canvas. Divorced from the beauty of coloring, and the soft gradations of light and shade, with which skill has arrayed them, the forms are often very crude and far removed from the graceful sinuous windings and turns of nature. Men in general have not a very definite idea what a cloud or a wave is, or rather their idea is too definite. It is too often a conventional conception, a sort of hieroglyphic, which passes current for the representation of these phenomena. A mass of shapeless white upon an opaque field of blue is praised as nature's own handiwork. A rolling, twisting contortion of green capped with dashes of white, passes current for the flow of old ocean's tide. Indeed, these ideas for which painters themselves are too often responsible, are so fixed in men's minds that when an artist of keener perceptions comes nearer nature's heart, the critics will denounce his productions as presumptuous; and so when the quick pencil of light registers the beautiful pose of the waves or mirrors the clouds, men look at them askance and strangely, yet there they are with nature's image and superscription.

It is, therefore, with pleasure that we give our readers the series of beautiful sea views, the production of Mr. I. W. Taber, of San Francisco, Cal. With true artistic feeling

he has watched the sea in her protean forms until the favorable moment, and then with the most sensitive plate caught for our delight the lovely sea changes which we have before us. The originals from which these reproductions were made, are 8 x 10 in size. The negatives are upon plates of Mr. Taber's own make. They need no praise. In richness of quality and softness in the gradations of light and shade combined with delicacy of detail it seems impossible to go beyond.

"The sun is couched, the sea fowl gone to rest,
And the wild storm has somewhere found a nest.
Air slumbers, wave with wave no longer strives,
Only a heaving of the deep survives—
A tell-tale motion! soon will it be laid,
And by the tide the water swayed;
Stealthy withdrawals, interminglings mild,
Of light and shade, in beauty reconciled,
Such is the prospect far as sight can range."

"With ships the sea is sprinkled far and nigh,
Like stars in heaven, and joyously they showed,
Some lying fast at anchor in the road,
Some veering up and down, one knew not why."

The prints are made upon the extra brilliant N. P. A. albumen paper furnished by E. & H. T. Anthony & Co., of New York.]

PHOTOGRAPHIC EXPERIENCES AT THE NEW ORLEANS EXPOSITION.

BY G. HANMER CROUGHTON.

By the time this is seen by the readers of the PHILADELPHIA PHOTOGRAPHER, the New Orleans Exposition will be closed and our work here finished. It has not been all pleasant work, nor has it been easy work, but the experience gained has been varied and profitable, and, take it all together, I can say it has been good for me to have been here. I have made the acquaintance of many good fellow-operators, printers, etc.—I hope to our mutual benefit, and when we leave here to be scattered all over the States, east, west, north, and south, I believe we shall all carry away a pleasant remembrance of the time spent together here, and shall part with feelings of mutual regret.

My seven months experience of exposition work has given me a very thorough

acquaintance with American apparatus, lenses, and dry plates, and has thoroughly converted me to the use of carbonate of potash as a developer, for although I still adhere to my first statement that the ammonia pyro, as published in my first article, is the best developer for all dry plates, I have come to the conclusion, from an extended use of the potash developer (Hoover's formula), that you can do with it all that you can do with the ammonia with this advantage, that you can use the potash developer over and over, while the ammonia developer will only serve for one plate.

I have tried many modifications of the formula as suggested by different makers; sometimes reducing the quantity of bromide, sometimes reducing the sulphite of soda, but always with the same result, viz., to return to the original formula.

My experience here has also confirmed me in the opinion formed in England, that it is a mistake to judge of a dry-plate negative as you would of a wet plate; they are totally different, and it is those negatives which are most like a wet plate in appearance which disappoint you in the printing. This it is which makes it so difficult for a photographer, using both processes, to make even work, and it also tends to confirm him in the opinion that he cannot produce such good work with the dry process as he can by the wet, because he judges his dry negatives by a wet standard and tries to get them as near a wet plate in appearance as possible, and the nearer he succeeds in this the more disappointed he will be with the resulting prints.

All the negatives which produce the best prints here are quite unlike a wet plate—in fact, judging from the standard of a wet plate operator, he would doubtless pronounce them overexposed and flat, the shadows are not so clear as they must be in a wet plate to produce a brilliant print, and the highest lights are anything but opaque, but they produce a print which is at the same time soft and brilliant, full of gradation, and yet with a snap that is seldom seen in a wet plate which has such soft delicate demitints.

I think that every dry-plate maker gives in his formula for development the fullest

amount his plate will stand of the accelerator, and I find it best to give exposure enough to enable me to use less of the accelerator than the formula given with the plates. I am quite sure that I get better results than by a shorter exposure and full strength of normal developer given by the platemaker; of course, there are subjects which must be made as rapidly as possible, such as street views and drop-shutter exposures, and there is one advantage the Inglis plate has over all others we have used here; for such work they are, as he says, absolutely insoluble, and a long development will not cause them to frill during the warm weather we have had the last two months. I have had to take extra precautions; the developer is mixed with ice water, the plates are only just rinsed and then put into a standard solution of alum which is kept cold with ice. Ice is kept in the fixing bath, and a solution of chrome alum mixed with the hypo; yet in the washing the gelatine will swell and become so tender that they will mark at the slightest touch. Now the way I treat an Inglis plate which has had an exposure of a fraction of a second, or any underexposed Inglis plate, is this: when I find that under the normal developer it is coming up slowly and the highest lights are gaining too much intensity while the shadows remain unseen, I put in a large amount of water, sometimes as much as four times the amount the development was commenced with; for instance, I develop a 10 x 12 plate with four ounces of water, to which have been added two drachms each of pyro and potash solutions (normal developer). On finding that the plate has not received enough exposure, I put in four, eight, or twelve ounces of water, and increase the accelerator till I have had as much as twelve drachms of accelerator to two drachms of pyro in sixteen ounces of water. The progress of development is slow, sure; in one instance, it took three-quarters of an hour to develop one 14x17 plate, it was an exhibit which could only be taken when the machinery was stopped during the dinner hour, and the hour was insufficient time. We had been three times for that exhibit, and I was bound to get it somehow, and I did get it.

Weakening the developer with water kept down the intensity, and the potash had time to work, and the result was a success, but no other plate we have used here would have stood the prolonged soaking without frilling all to pieces; this freedom from frill is doubtless due to the use of chrome alum in the emulsion, and I cannot understand why all the makers do not use it. I know that in England there was an idea that adding chrome alum to the emulsion slowed it, but this is altogether an error, the chrome alum has not the slightest effect upon the chemical, or, rather I should say, the actinic qualities of a plate, while its addition is a great boon to the operator, preventing that worst of all his enemies—frill—from making its appearance.

One application of photography was made here, which was both novel and interesting, and was the cause of settling a disputed will case. One morning early, some gentlemen brought some letters up and wanted copies made of them; they would not leave them, and would only allow me to handle them one at a time in their sight, they were seven in number. I copied them upon Cramer's plates, pressing each letter into contact with the glass of a printing frame to insure their being flat; the exposures were made rapidly, one after the other, and the plates were developed after all the exposures were made. These letters were genuine letters of Mrs. Myra Clarke Gains, and a will and confidential letter which the descendants of Mrs. Gains said were forgeries. From these negatives seven lantern slides were made by contact upon the same maker's plates, developed with a sal soda developer very much restrained. The lawyers got the judge to appoint an evening setting of the court, to have these slides thrown upon a screen very much magnified, and I had to be present as a witness to prove the production of the slides from the original letters.

When the judge arrived the court house was darkened, and by using a pair of lanterns, two letters were placed upon the screen side by side, each being magnified to about eight feet, one being an acknowledged genuine letter of Mrs. Gains, and the other one of the alleged forgeries; the letters being so much magnified, the difference in the

writing was very apparent, and although the lawyer on the other side made all kinds of objections, the result was that the judge gave his decision that both the will and confidential letters were forgeries. Thus photography and the magic lantern helped to secure justice for the descendants of Mrs. Myra Clarke Gains.

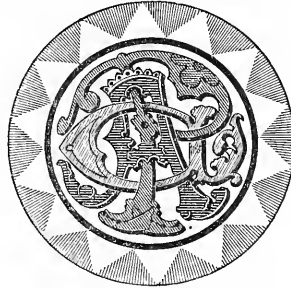
Some dodges, which we have found useful here, and may be useful to my readers, will close my experience at the New Orleans Exposition. It has been found necessary sometimes to intensify parts of negatives in those places where parts of the exhibits have been under the gallery. This has been done with an intensifier known as Edwards. It is made by mixing a saturated solution of bichloride of mercury with a saturated solution of iodide of potassium, till there is a slight red precipitate, which is dissolved by adding a small crystal of hyposulphite of soda. This can be applied with a brush to any part which it is wanted to intensify. This will be found a very valuable dodge.

Another dodge is just reversing the above, and is used for local reduction or for reducing the intensity of the whole negative where it is too intense. The negative is flowed with a strong solution of red prussiate of potash, washed, and put into the hypo bath, and this can be repeated till the negative is thin enough, or parts can be reduced by applying the prussiate of potash solution with a brush to those parts only, followed by the hypo.

Dodge third: We have been troubled during the hot weather with the rapid discoloration of the developing solutions and consequent coloring of the negatives, which has not been taken out by the alum bath, but in all cases the most obstinate stain has given way to an application of Mr. Carbut's clearing solution (one and a half ounce of powdered alum, twenty ounces of water, and one-half ounce of sulphuric acid). And now my work and my experience here being ended, I will say good-by till we meet at the Convention.

Don't fail to read what is said about the Buffalo Convention. It will be the great photographic event of the year—a positive success.

PERTAINING TO THE



TO THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA.—The time is now at hand for our sixth annual convention, and I hope every photographer who has an interest in our beautiful art is preparing an exhibit for Buffalo.

Our Local Secretary, Mr. McMichael, has been indefatigable in his efforts to make the convention a success. We may expect a wonderful display of fine photographs. The most celebrated photographers of this country have promised to exhibit.

Mr. Gennert is now in Europe, and intends to secure some fine work from there for exhibition. Interesting papers of practical value will be read by Messrs. J. Trail Taylor, E. L. Wilson, J. F. Ryder, and many others eminent in the profession, including prominent English photographers, and a novel lecture on lighting and posing, by Mr. LaFayette W. Seavey.

Our programme for proceedings of each day, railway and hotel rates, etc., will be published July 1st in detail. Every member of this Association has a part to perform. The success of the convention is not dependent upon the Executive Committee alone, but each one should do his duty by making an exhibit and taking an active part in the proceedings.

Fraternally,

J. LANDY.

President.

THE success of any enterprise is almost entirely dependent upon the ability with which it is managed by those who have it in control. Even under the most favorable circumstances, lack of energy or skill on the part of those who are appointed to conduct the scheme may turn every well-meant effort

into a stumbling-block. But, when a man of energy undertakes to guide the affairs, even obstacles are made the stepping-stones to success. We rejoice that we have such a man for our coming convention at Buffalo, as local secretary, Mr. H. McMichael.

We are confident that this convention will be the pole-star for all future conventions. In the face of all objections, the reproach of bad management of the last convention, and the dissatisfaction of the whole profession, Mr. McMichael inspired his hearers with confidence and won their promise to aid in the good work. But not this alone. After all the details of arrangement had been completed, and the space of six thousand feet laid out, the place in which it was intended to hold the convention (Music Hall) was burned. Nothing daunted, Mr. McMichael, with characteristic energy, secured at once (within forty-eight hours) permission from the State authorities to occupy the State Arsenal for the purpose. Just as he had completed the diagram of the new allotment, the printing establishment which had the matter in charge (*Buffalo Express*) was also burned, and the imprint, together with the constitution and by-laws, were destroyed. But our Secretary was equal to the occasion, and now we have everything in readiness. Almost all the space has been taken up, and we are informed that many of the leading photographers of New York—Sarony, Mora, etc., intend to make an exhibition of their work.—EDITOR.]

BUFFALO, N. Y., May 15, 1885.

Editor PHILADELPHIA PHOTOGRAPHER :

The following are the rates fixed for hotel accommodations during the P. A. of A. Convention :

Genesee House, .	\$3.00 to \$5.00 per day.
Trift House, . .	3.00 to 3.50 "
Mansion House, .	2.50 to 3.00 "
United States, .	2.00 "
Stafford House, .	2.00 "
Beusber House, .	2.00 "

The space for stock exhibits is nearly all sold, and orders are coming in very fast for space for photo exhibits.

Very truly yours,

H. McMICHAEL,
Secretary.

Editor PHILADELPHIA PHOTOGRAPHER :

DEAR SIR: Having just returned from Buffalo, and looked over the ground touching the progress and outlook toward the coming Convention, I am able to say through you to the thousands who are interested in the success of our Association, that the promise of a great meeting never looked better.

Secretary McMichael has everything in the best possible shape, and upon a true business plan. The great drill-room of the *State Arsenal*, some 200 by 140 feet, without pillar or post for obstruction to the great floor, is laid out like a young city in avenues and squares, where every manufacturer and merchant in photographic requirements rents a block upon which to place his exhibit, and open his office. Every man gets a corner lot, for which he pays fifteen cents per square foot, the same as his neighbor. All being served alike none can be dissatisfied.

Nearly all the space for floor exhibits is taken already, which insures the largest display of goods ever brought together, representing the photographic business.

The capacity for hanging space is larger than we ever had, and the prospect is good for a big show in photography, many having applied for space, and others signified their intention of doing the same.

All things considered, the Association is in splendid condition, and Buffalo will have the honor of calling together a larger gathering of photographers than have ever assembled before.

It is no longer necessary to urge upon the fraternity the importance of participating in our meetings. They understand and will be there.

Yours truly,

J. F. RYDER.

MENTION is made of a paper manufactured in Japan from the fibre of aquatic plants. This paper would be very suitable to take the place of glass, as a support of the photographic film, on account of its transparency and its strength. It can be used instead of panes of glass in cash.

SOME OF THE BEAUTIES OF DRY-PLATE WORKING.

BY THOMAS PRAY, JR.

(Continued from p. 154.)

To continue the subject, it might be necessary, and, perhaps, desirable to enumerate some few further items with regard to the changeability of the same makers of plates, and the uncertainty which attends the amateur, even with his best directed efforts, and any increased amount of skill gathered by experience. Our professional friends, having once become used to a plate, having almost a known quantity of light, and by long experience having made themselves perfect, can judge of the exposure by the complexion of the person, the amount of light at the time, knowing their lens, their stops, and the sensitiveness of the plate; but the amateur seeks new and inaccessible nooks and corners, and very frequently is obliged by the movement of trains, of teams, or of the company in which he may happen to be for the time, to accomplish a certain thing at a certain moment or hour of the day, not at all convenient or desirable as if he were to choose his subject, his composition, or his location. Added to this our "immature" friend is very frequently misled by the man who sells lenses. So-and-so's extra fine, perfect, fast working lens will do the business in about half the time of another, so our friend starts out; he may choose a landscape, an architectural subject, a group, or some other equally impossible thing; he may be obliged to work at short range or an exceedingly long range, without the time or possibility of choosing a stand; in other words, he must do the best he can, with a very limited amount of minutes at his command, with a very uncertain factor in the sensitiveness of his plates, and a great deal too much confidence in So-and-So's patent bust-em-all-to pieces lens.

But we will ignore these facts of too common occurrence, and start out with our supposition based on the three lenses to which we have previously referred. These have now been reduced to two, Ross and Dallmeyer, with an occasional using of the Suter for snap pictures. Let us suppose

then that we choose a landscape where we have not exactly the light we want, in which architectural subjects come in to make up the composition; we have a bright sunshine, a bright blue sky, positively cloudless, with all the heights and depths that it would be possible, even by prearrangement, to put into such a picture. Our exposure is made for the average, expecting that the sky may be a little too dense, but our landscape, in which fine foliage trees, a handsome lawn, trim trees, and a fine house must be brought out to print well, else our picture amounts to nothing. Taking all the pains that is possible with adjustment, exposure (and we hardly know what a light-struck plate is), we then find upon the development of this, that our lens has done its work beautifully, but on development we find perhaps everything except an inch or two of one end of the plate has developed beautifully, the lens has covered the plate completely, we do not know what a ghost is by personal experience, we know nothing about a plate partly covered, and from the centre to the edge varying from beautiful delineation to a complete blur, but here we find one end of our plate, commencing at the end, working down an inch or more from positively bare glass down to the edge of the film. Sometimes the edges of the plate are in the same condition, and we find two, three, four, five six, one after the other; sometimes we have found these strips across an 8 x 10 negative, after having brought it three or four hundred miles, perfectly packed, perfectly protected from light, only to be disgusted, first with ourselves, next with the much abused developer, and after lengthy and expensive experience, only to find that the platemaker in order to save a cent or two in the cost of his plates, or to adopt some new-fangled notion, has packed (?) his plates, we might say, how? When some of the best platemakers in this country have changed their methods of packing three times in twelve months, five times in sixteen months, we may well enough ask whether the platemakers are experimenting on the credulity of the amateurs, or whether they are experimenting at the expense of We, Us and Company, not in the comical characters of

the play with that title, but meaning We, Us and Company, the body of amateurs.

Our own experience in this respect has covered very slow plates, medium plates, and the very high-speed plates, by more than one platemaker. Some of these (and the stockdealer must take a part of this to himself), referring to the plates, have been packed with string between the plates, others have been packed with pieces of blotting paper; we have seen some plates packed with little strips of wood, and we have plates packed with a cheap, coarse, brown paper put upon the film of one plate with the back of another plate resting upon it. With some of the plates, especially where these strips of blotting-paper have been, we have found the pieces of paper shucked forward of the little stops glued in at the sides of the box to prevent their moving more than so far, and after a great deal of guesswork, and some comments more forcible than polite, and a great deal of provocation and expense, we find that the stockdealers have helped to carry out what the maker has thoroughly given an opportunity to do. Not long since, we visited one of the stockhouses of New York, asking for some plates; we were shown where the plates were packed up, and we saw seven dozen 11 x 14's, packed flat, one dozen on top of the other, fourteen packs of 5 x 8 plates, one on top of the other. Some 14 x 17's made on double thick glass were packed flat to the height of six packages or three dozen. The platemaker had carelessly put in by the cheapest help little strips of blotting-paper, which as every one knows is very absorptive, presumably we do him no injustice when we say that he bought his blotting-paper at eight or nine cents a pound, not guaranteed hypo-clear, instead of buying at twenty cents a pound, positively guaranteed all hypo eliminated. When by carefully weighing the pieces of paper taken from between a dozen plates, we find the cost between blotting-paper at twenty cents a pound and eight cents a pound, in packing 5 x 8 plates, would amount to almost one-eighth of one cent for one dozen plates, and in the case of 8 x 10 plates, packed in the same way, it would amount to precisely three sixteenths of one

cent for one dozen plates. This paper having been cut a trifle too short, the plates undoubtedly packed on edge, and, perhaps, when they left the platemaker, had been packed on edge in boxes, the continual jarring of the cars, and the spreading apart by the plates, if different thicknesses of glass have been used, the plates not having been packed firm, these little bits of paper assume all sorts of positions between the plates, as they were jolted along on their journey, then the stockdealer, wanting to economize room, having packed them flat, here is where the mischief began. Then we learned after our exposure all our trouble, expense, and the waste of time, we have a streak right across in any direction, completely spoiling our negative, and this streak is invariably far wider than the strip which had been put there for safety (?). In the case of rough paper, which is very cheap, we took pains to take from a dozen plates made by a prominent maker some cheap, sleazy, poorly finished, yellow paper; and also from the plates of another maker, who formerly packed plates in the best possible manner, some thoroughly calendered, hard-finished yellow post-office paper. On obtaining the price from the papermaker, and figuring the exact weight, we found the total cost of the finely finished yellow paper was a trifle above three mills for a dozen plates, 8 x 10; while the cost of the cheap stuff was a fraction below two mills. This shows that dry-plate makers can be very economical.

We have found plates of all thicknesses, from that of a silver three-cent piece in the smaller-sized plates, up to a plate which was both thin and crooked, and lately, we regret to find, as shown a few weeks ago at a lantern exhibition of the New York Society, plates with from one to six bubbles on the transparency plates, all of which showed up beautifully on the screen.

But to return to the packing. We have lately procured a dozen plates from one of the stockdealers in New York. We took them home Saturday afternoon, the sun was shining brightly, and the temptation was very strong to spoil a plate or two. Having a very bright boy of ten, who is also interested when he gets a chance, we adjourned

to get our cameras fixed and make some exposures. On looking the box over, we found the outside of it as smooth as though it had been all one piece of paper. It was a bright colored box; upon turning it over we found no sort of key as to how to approach it; the stereotyped caution to open only by ruby light, and the name of the maker were all that we could find that was intelligible; here was a conundrum. We finally decided to be on the safe side, and having used our window-screens, we started with a jack-knife taking off about two inches of what appeared to be the bottom of the box. Matters did not look very promising, and then we went for the end of the box; after whitling around this carefully, while holding the box up to see what would happen, a dozen plates properly packed in another cheap straw-board box slid out of the end of the case. Supposing we had attempted this in another light, even in a proportionate examination, it would have been all right and light-proof. For champion botchwork, we give these plates the biscuit or gingerbread, as the case may be. This shows the lack of simple directions on the part of men, who expect us to buy anything and everything they try, or, as one of my friends recently remarked when speaking of it, "the platemakers seem to consider that they can throw their plates pell-mell into the box in any shape, and expect us to buy a pig in a poke, without asking any questions or making any objections." But we do object; object not only to making a box of a certain size in which to pack plates, and then using glass of all sorts of thicknesses, varying from one-sixteenth of an inch up to a good plump eighth or thicker. Some of these pieces of glass are so crooked that nine or ten will properly fill the box, and there is sure to be a smash when they go in a printing-frame, others are so thin that the box is never full, and as they are transported around the country, the little particles of glass, from imperfect cutting, litter down between the plates, and are quite as apt to attack the film as the back of the glass, and on development we find any quantity of spots where the emulsion has been clean ground off the glass, and we have 8 x 10's to-day with a spatter-like,

looking spot, seven-eighths of an inch long, showing anywhere from five to fifteen of these abrasions. But when the glass does not litter off, then the packing which was put in between gets into creases, gets partially out from between the films allowing all the more chance for the hypo from the cheap, trashy boxes to do its work, which is quite as fatal to the film as the white light. Sometimes the edges of the plate are completely clean, unless considerable bromide is used, in which case instantaneous plates frequently show a metallic lustre for from one-eighth to three-quarters of an inch, sometimes on one or both edges of the plate, and sometimes both edges and both end.

One of the prettiest packages of plates which have ever come into our possession is a package of extremely rapid plates, which were nicely packed in chemically neutral needle paper which we have carefully tested for hypo, with a soft fibrous paper in a continual strip, which runs backwards and forwards from one to the other plate from bottom to top, so packed that there is no possibility of its getting loose or getting between the plates even if it were charged with hypo. These plates were packed by Samuel Fry & Co., of London. We have never yet seen an American plate so well packed, or so absolutely insured against racking or sliding one way or the other, or against any contamination by the hypo, if it was in the box, as this brand of plates. The package of plates itself was wrapped in the needle-paper closely, and the package was then filled in the box, and a wrapper pasted about it; the cover sliding on to the lower part of the box in such shape that if the glass were thick the cover partly protected, and if it was thin the cover partly down, and the outside wrapper held all firmly together. It is also the cheapest packing as well as the most perfect that it has been our own good fortune to see.

It would neither be proper to encroach on space, nor possible to spend time to enumerate the particulars of many of the mispacked plates which are put on the market, and for that reason our end will be answered if reform shall begin; and platemakers may rest assured that the several amateur societies will shortly positively re-

fuse to purchase certain plates in the market unless improvements are made in packing. To anticipate a question which may, perhaps be asked, our own purpose is not to study how platemakers shall best pack their plates. Let them perfect their manufacture without further experiment upon amateurs. Let stockdealers be impressed with the idea that plates must be handled carefully, packed correctly, kept away from the dampness (and this is possibly the reason why many good plates have been ruined, by storing them in the cellar, or in the wash-room or bath-room, where water was convenient, without thinking that the occasional use of the bath, and the ever-present water, even in minute quantities, passed away in the form of moisture or fine particles of water suspended in the air, and that this is the most penetrating of any application of water to a pasteboard box, except actual immersion). We believe this is what caused Mr. Carbutt to change his packing from finely finished, neutral paper between the plates, to strings or small bits between the ends of the plate; provided the plates are packed solidly together, film to film, with hard-finished, neutral paper, and then some wrapping of a tough, fibrous paper, free from hypo, free from iron or from the chemical used in bleaching or acidifying the paper or cardboard—then, if the plates are too thick, they will pack tight; if too thin, let the packer be taught to fill up with felt or with some positively neutral material, so that when the plates are once shut out from the light, they shall also be packed so as to prevent bucking in the boxes. Then, if proper care in eliminating chemicals has been exercised, both professionals and amateurs will, we are sure, be made to rejoice in their Summer tour which is now upon us, by the elimination of many of the difficulties of the season of 1884.

(To be continued.)

AN ATTEMPT TO PHOTOGRAPH THE CORONA.

BY W. H. PICKERING.

Photographic Laboratory, Mass. Inst. Technology.

It occurred to the writer that the late partial solar eclipse would be an excellent

chance to repeat Huggins's experiments on photographing the corona. A three-inch refractor of about forty inches focal length was employed. A drop-shutter was attached to the lens, giving an exposure which was estimated at about a fifth of a second. A piece of deep-violet glass was procured, which could be inserted just in front of the plate, or removed, at pleasure. By its use a negative image of the sun's disk was obtained, but without it the plate gave a reversed image; the sun being a positive and transparent, while the surroundings remained negative and were dark, the appearance being strikingly similar to that of a photograph of a total solar eclipse. Both bromide and chloride plates were provided; but, as with Mr. Huggins, the latter proved to give much the better coronal effects. A ferrous-oxalate developer was employed, which contained a large proportion of potassium bromide. The weather throughout the eclipse was wholly favorable; and we began photographing at ten o'clock, two hours and twenty minutes before the eclipse began, and continued to work until five minutes past four, or an hour and ten minutes after it had terminated. Photographs were taken every half hour, with extra ones interpolated at the more interesting phases, making twenty-nine pictures in all.

Very corona-like effects were certainly produced, faint rays here and there shooting out perpendicularly to the sun's surface. But, unfortunately, no two of the pictures were alike, and the corona in front of the moon was quite as well marked as that on the other side of the sun. Indeed, the most corona-like ray produced, appeared in one photograph stretching directly towards, and terminating at, the centre of the moon. Nine photographs taken in succession showed one side of the halo stretching to a greater distance than the other; but in one of these the darkening was carried so far out, that it became nearly separated from the rest of the corona, and appeared as a distinct dark circle of the same size as, and by the side of, the image of the sun. This, of course, showed it to be merely an internal reflection of that image, and nothing more. During the course of the experiments, the object-glass was revolved about its optical axis,

photographs being taken in four positions. No effect, however, was discernible upon the plates.

The conclusions I should draw from my experiments are: 1st, that, though it is very easy to obtain a corona-like image, one may readily be deceived in such matters, and the same effect be obtained by our atmosphere, without the aid of the solar corona, combined with little defects in the gelatine film (this, I think, is conclusively shown by the extension of the pseudo-corona in front of the moon); 2d, that chloride plates are more suitable than bromide for obtaining an atmospheric corona, just as Mr. Huggins has claimed, that they are more suitable for taking a solar one; hence, I think, one must not rely too much on the ultra-violet region sensitiveness of the chloride plate for a separation of the two; lastly, though my experiments fail to corroborate Mr. Huggins's results, they do not, of course, show that his corona may not be solar, but merely indicate that under very favorable circumstances I could obtain no trace of it.

I have before me a print made from a negative by Dr. O. Lohse, in October, 1878, showing effects very similar to those ob-

tained by myself, except that his view was not taken during an eclipse. He considers that the halo is wholly atmospheric, and not coronal.

THE following developer, of which M. Roger gives the approximate formula, has variable proportions, according to the necessities of the case. The following substances are used: Solution of sulphite of soda to saturation; of carbonate of soda at 25 per cent.; of carbonate of potash at 25 per cent.; and of bromide of potassium at 10 per cent.; and, lastly, pyrogallic acid in powder.

To make a bath suitable for developing a print 18 by 24 centimetres, the following mixture is made:

Water,	200 grammes.
Carbonate of soda,	10 c.c.
Carbonate of potash,	10 c.c.
Sulphate of soda,	3 to 4 c.c.
Pyrogallic acid,	1 gramme.

If underexposed, use the developer more highly concentrated, and force a little in carbonate and sulphite of soda. If there be overexposure, force in carbonate of potash with the addition of bromide of potassium.—*Paris Moniteur.*

Editor's Table.

PICTURES RECEIVED.—From Mr. H. FRANK BEIDEL, Shippensburg, a number of well-selected views of scenery along the Western Maryland Railroad. They are excellent as photographs and evidence much artistic taste on the part of the operator. From Mr. GRONEMAN, Fort Dodge, Iowa, several portraits well lighted, with excellent taste in the arrangement of the backgrounds. From Mr. CARMANY, a boudoir portrait very soft and pleasing in gradation of lights and shades, bearing evidence of skill and judgment in the arrangement of the lights.

Mr. W. J. STILLMAN, Associate Editor of the *Photographic Times*, being about to go over to England, where his family have been sojourning, was entertained at dinner on the evening

of the 22d ultimo, at Delmonico's by a number of the leading photographers of New York City. On the day following Mr. STILLMAN sailed by the Adriatic. The editorial staff of the *Photographic Times*, representatives of the *Nation* and *Evening Post*, and a number of friends were present to wish him *bon voyage*.

THE attention of our readers is called to the advertisement of Mrs. W. W. SLOAN, of Jefferson, Texas. We know Mrs. SLOAN personally, and know that she will not misrepresent anything pertaining to her property. It seems to us like a very good chance for somebody.

THE PHILADELPHIA PHOTOGRAPHER is now in its twenty-second year. Besides being the oldest

monthly on photography, it is certainly the best. It is edited and owned by Mr. EDWARD L. WILSON, who has charge of the Photographic Department of the New Orleans Exposition, and who is the standard American author on matters pertaining to his art. His book, *Wilson's Photographics*, is not only the largest but the most complete work ever issued on photography. The May number of the PHILADELPHIA PHOTOGRAPHER contains a picture of a Michigan girl that is certainly one of the loveliest portraits ever produced. Michigan can now take its place at the head of the class in the matter of beautiful women. The photograph was taken by Mr. W. WYKES, of Grand Rapids, and it is a triumph of posing and in the treatment of light and shade. The girl with the perfect profile wears one of those picturesque cartwheel hats that is the delight of the artist and the despair of the man who sits behind it in the theatre. The PHILADELPHIA PHOTOGRAPHER goes in a good deal for Michigan portraiture, and it is needless to say that each picture is worth more than the whole year's subscription. In the December number last year it gave a picture of a little boy, the son of Mr. W. H. ALLEN, of Grosse, Ill., that is probably one of the best pictures of a child ever photographed. Of course the choice of a subject has much to do with the attractiveness of the picture, and this little fellow, with his chubby face and long curls, would have made a pretty picture in even the roughest sketch.—*Detroit Free Press*.

SAN FRANCISCO, May 2, 1885.

Editor PHILADELPHIA PHOTOGRAPHER.

SIR: Your picture in the April number of the PHILADELPHIA PHOTOGRAPHER, and your kind words of praise were duly appreciated by the members of the P. C. A. P. A., and on their behalf I beg leave to thank you.

At the March meeting the following officers were elected for the ensuing year:

President.—Mr. SIDNEY SMITH.

Vice-President.—Mr. W. H. SOWDEN.

Secretary and Treasurer.—Mr. W. M. SPEYER.

Corresponding Secretary.—Mr. W. B. TYLER.

The Association now comprises some thirty members—all active members. That the office of corresponding secretary may not be a sinecure, I intend to keep you posted hereafter on matters of photographic interest generally, and the doings of our Society in particular. I shall at all times be ready to answer the queries of your readers on anything appertaining to pho-

tography in California, and our members are willing and anxious to exchange prints with eastern amateurs. Letters and photographs addressed to me will meet with prompt attention. We extend a cordial invitation to all amateurs visiting California to come and see us, and we promise to make it as pleasant for them as we know how. Will send you reports of our next and succeeding meeting. W. B. TYLER.

ANOTHER REDUCTION IN PRICES OF DRY PLATES.—We see by the circular before us that with one or two exceptions the dry-plate makers have made another reduction in the price of plates. The value of any article is limited by the supply and demand. If the demand increases the supply will increase and the exchangeable value decrease, but there is a certain limit to this decrease in value beyond which there ceases to be a reasonable profit, and when this happens the natural tendency is to deterioration in quality. This cut in prices by the dry-plate makers looks very much like a war of prices, and as the readers of this journal know our views on this subject there is no need of repeating them here. Photographers may hail with delight every diminution in the cost, but it does not seem reasonable to expect plates of first-class quality to be bought for much less than their present rates. If the lowering of the price is forced upon the makers by a few who are anxious to gain a transient popularity, we fear that no alternative will be left but an unwise economy in material, and a consequent deterioration of the plates. Dry-plate makers are not anxious above other men to shine as philanthropists, and we should not expect them to give an ounce of silver in the sensitive films for three-quarters of an ounce in money.

EVERY month brings improvements in the manufacture of camera-boxes. We imagine that the limits of convenience and compactness, combined with practicability, have been reached, only to find that some new addition or modification has caused a manifold increase in the value of the old form of apparatus. The BLAIR TOURGRAPH AND DRY-PLATE COMPANY, of Boston, merit high praise for the ingenuity and skill they display in the compactness, lightness, and convenience of their cameras. They have many points to recommend them to amateurs and professionals. The feather-weight plate-holders are constructed on a plan which insures great lightness, and are kept in position upon the camera by a novel contrivance which obviates the removal of the ground-glass.

Specialties.

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ADVERTISING RATES FOR SPECIALTIES.—Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to *secure* insertion. Advertisers will please not ask us for recommendations. ~~We~~ We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement. **Postage-stamps taken.**



BACKGROUNDS, ETC.

Coming out weekly. New designs for the Spring and Summer Season. Replenish your stock now? Do not wait until July or August. From our six hundred designs all climes and conditions can be suited.

Twenty Second-hand Backgrounds, some as good as new, at half price. Trees, Walls, Balustrades, Garden-seats, Gates, etc., in stock for immediate shipment. Call and inspect our show-room.

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Studio, 216 E. Ninth St., N. Y.

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GEORGE H. ROCKWOOD,
Business Manager.

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EVERY photographer in want of excellent lenses, for *any purpose*, will best serve his interest by consulting the new illustrated price-list of Messrs. BENJAMIN FRENCH & Co. before purchasing.

ADDRESS T. W. POWER, N. Y., Secretary of Association of Operative Photographers of New York City, for operators, printers, and retouchers, 392 Bowery, or 487 Eighth Avenue.

Vogel's Progress of Photography,
LATEST—BEST—\$3.

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No. 18. VIGNETTE **No. 18.**
 PAPERS,

The old form of No. 18, Waymouth's Vignette Papers, oval, has been discarded, and a *new pear-shaped* style is now ready in its place. It is a beautiful piece of gradation and prints perfectly. Price \$1.25 per dozen. For sale by all dealers. See advertisement for all sizes.

No. 18. NOW READY. **No. 18.**

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The new book by E. Long, on the art of making portraits in crayon on solar enlargements, covers the entire ground, and is sold for the low price of fifty cents. For sale by

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 1125 Chestnut Street,
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WE ARE READY.

Owing to the sudden increase in the demand for the Rockwood Dry Plates, we were obliged through the months of July and August to decline many orders. We have now more than *quadrupled* our facilities, and introduced improvements which will, we hope, enable us to fill orders with promptness, and give us plates possessing, if possible, still more sensitiveness and uniformity. For price-lists and *samples of work* done by the "Rockwood Plate,"

Address J. A. RANDEL, Manager,
 17 Union Square, New York.

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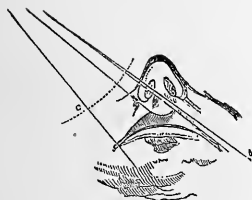
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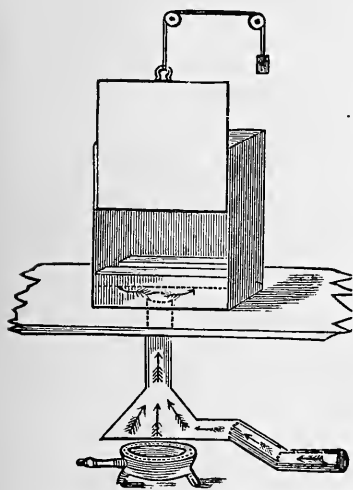
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In a first-class gallery, by a competent operator, copyist, and retoucher of artist work. Samples of work and best recommendations furnished. Address Wm. Schaeffer, Market St. and Bridge, West Philadelphia.

As printer and toner. Reference, Fredericks, Ninth and Broadway, N. Y. Address John F. Goehrig, 524 Adeline St., Trenton, N. J.

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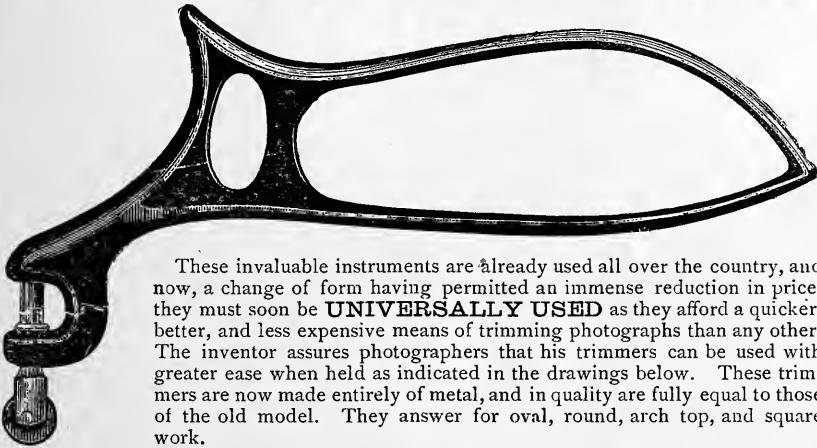
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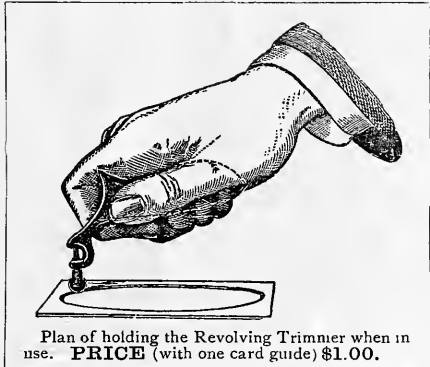
This drawing is of the full natural size and shape of the New Model Revolving Trimmer. The Straight Cut is of same size, varying but little in shape.



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2 ¹ / ₂ x 3 ¹ / ₂	3 x 4	5 ³ / ₈ x 7 ³ / ₈	2 ¹ / ₈ x 3 ¹ / ₈	2 ⁵ / ₈ x 4 ¹ / ₈	3 ¹ / ₈ x 5 ¹ / ₈
2 ³ / ₈ x 3 ³ / ₈	3 x 5	5 ³ / ₈ x 7	2 ⁵ / ₈ x 3 ¹ / ₈	3 ¹ / ₈ x 5 ¹ / ₈	4 x 6 ¹ / ₈
2 ³ / ₈ x 3 ³ / ₈	4 x 5	5 ³ / ₈ x 7	7 ¹ / ₈ x 9 ¹ / ₈		
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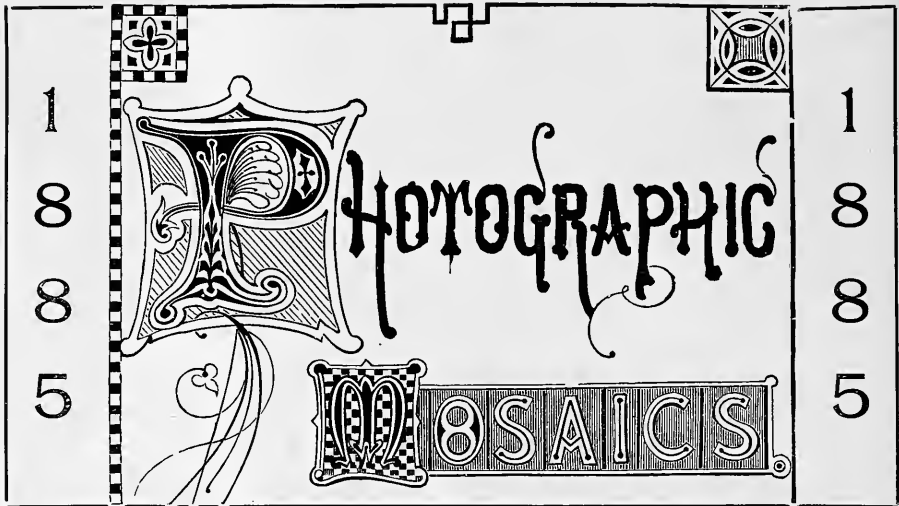
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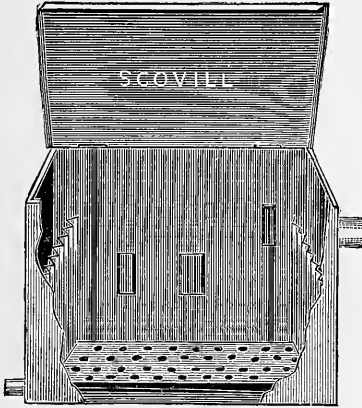
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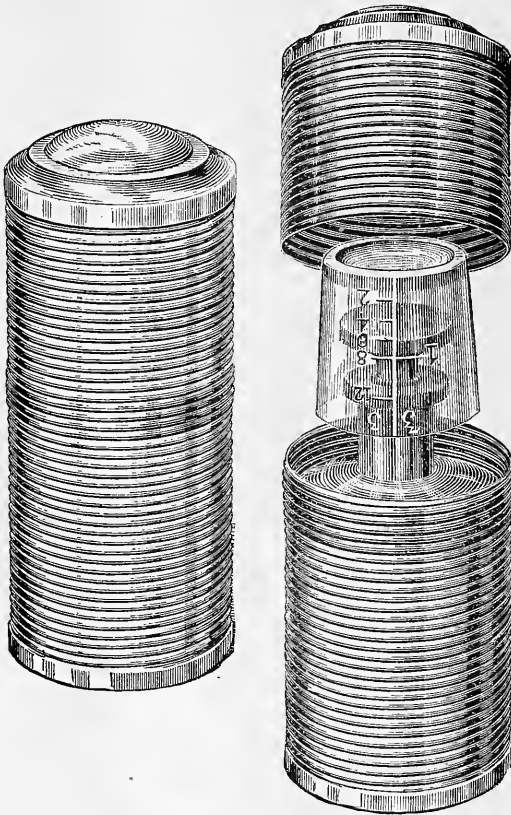
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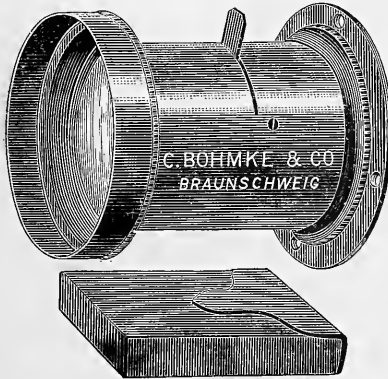
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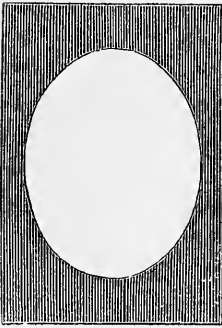
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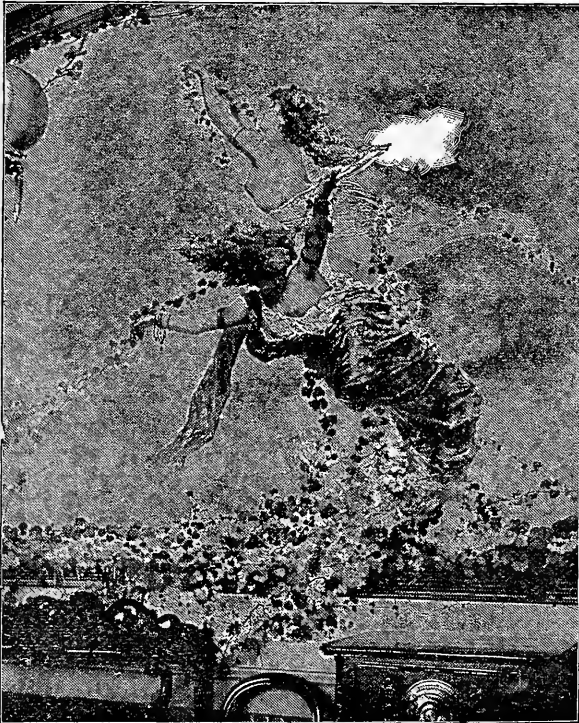
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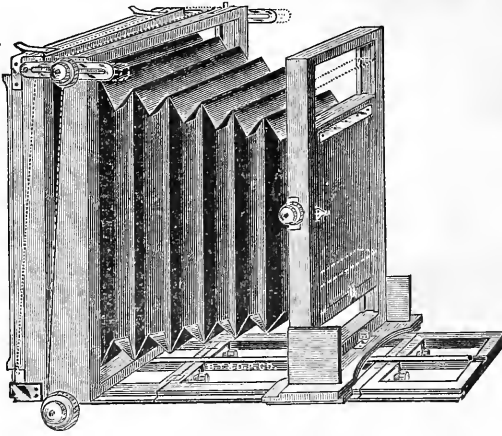
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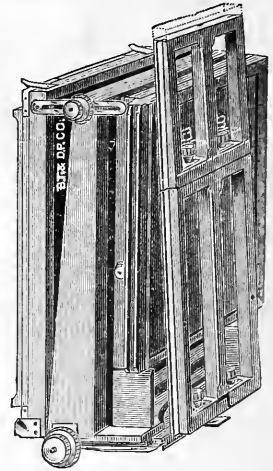
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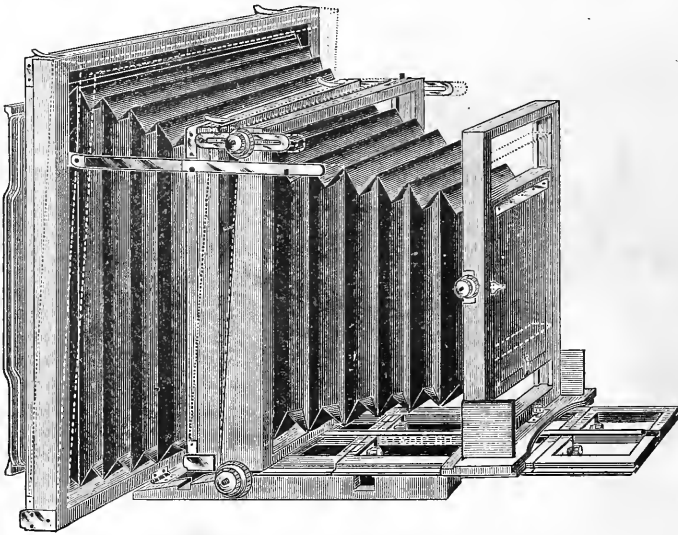
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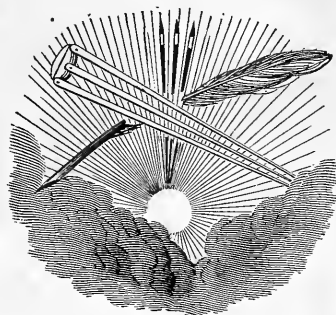
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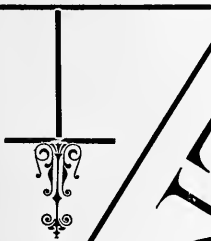
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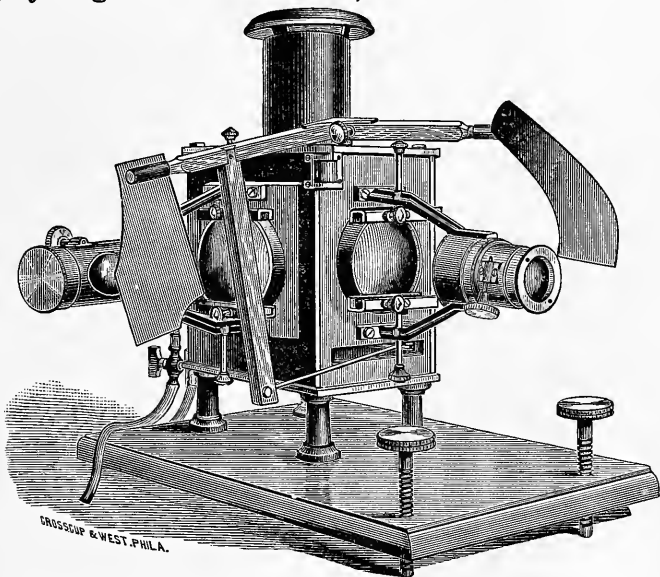
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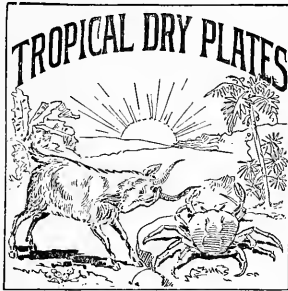
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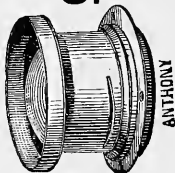
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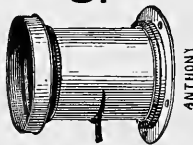
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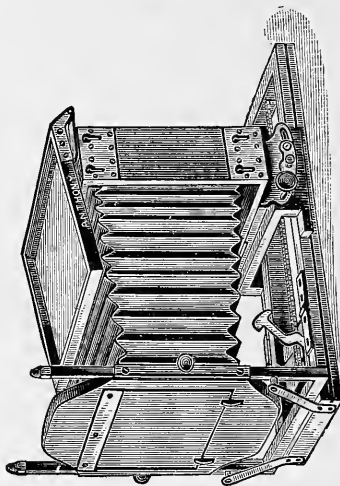
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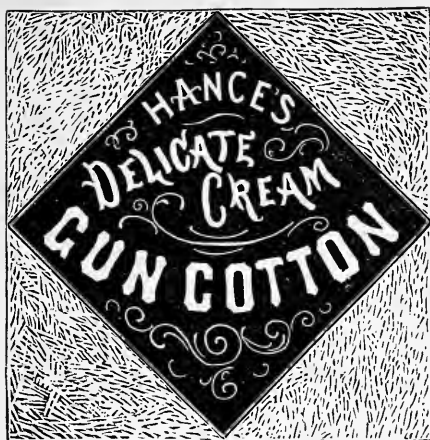
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THE CHAPTER ON PHOTOGRAPHY FOR AMATEURS.

INTENDED ALSO AS A SUPPLEMENT TO THE THIRD EDITION
OF THE HANDBOOK OF PHOTOGRAPHY.

Revised by EDWARD L. WILSON, Editor Philadelphia Photographer.

Translated from the German by ELLERSLIE WALLACE, Jr., M.D.

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(SEE OPPOSITE PAGE.)

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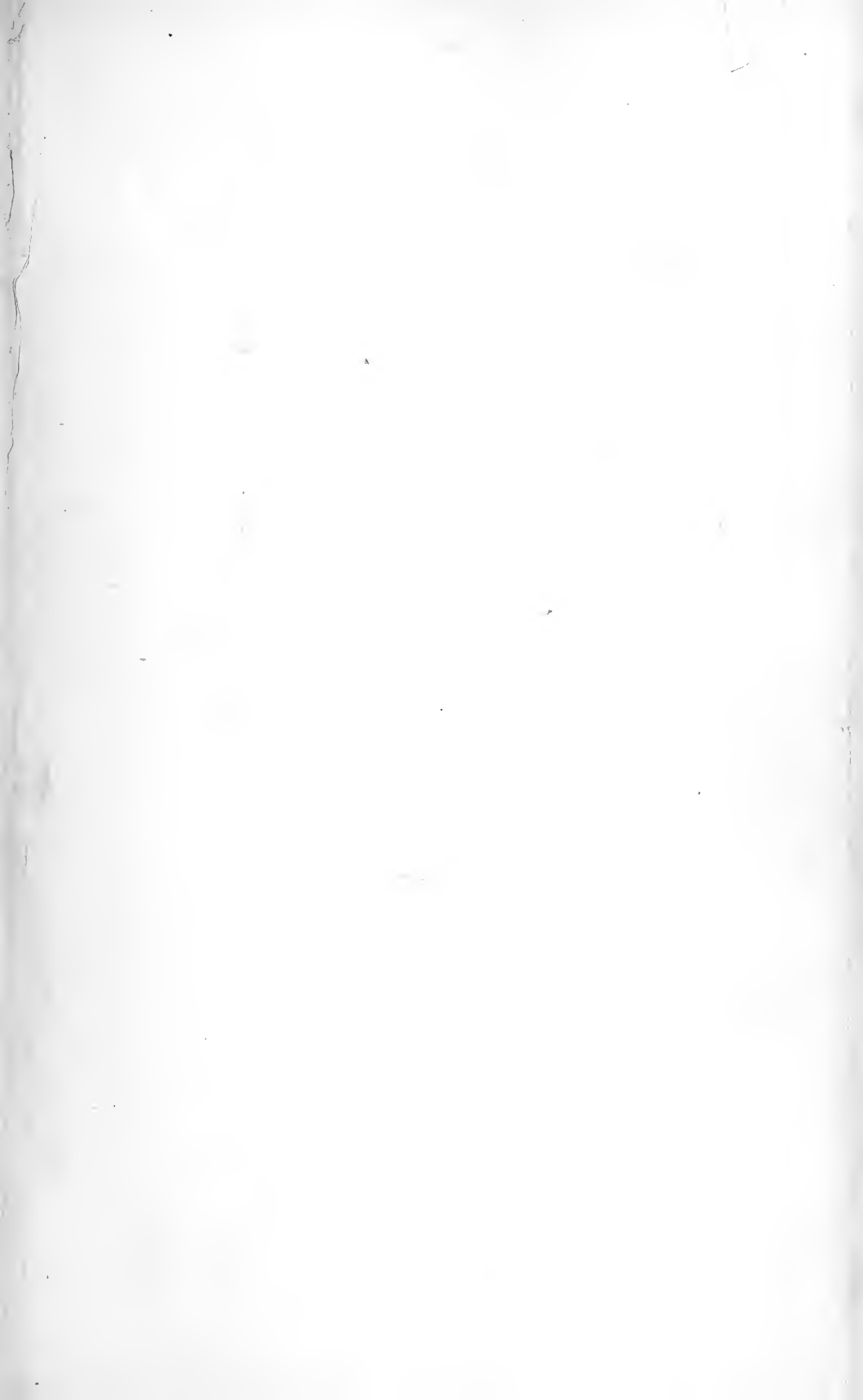
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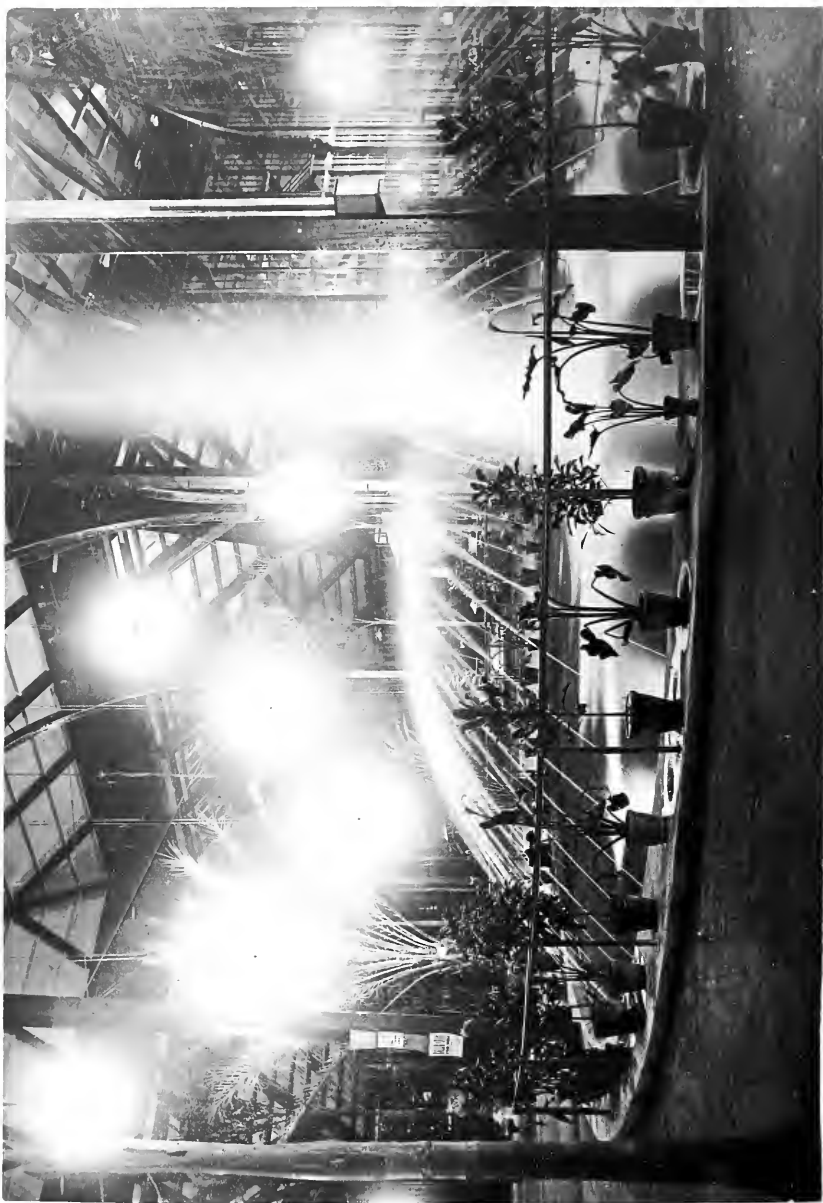
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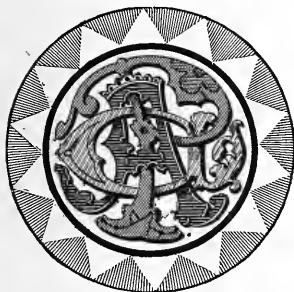
EDITED BY EDWARD L. WILSON.

Vol. XXII.

JULY, 1885.

No. 259.

PERTAINING TO THE



CINCINNATI, June 25, 1885.

THE arrangements for our sixth annual Convention and Exhibition, to be held at the new State Arsenal, Buffalo, July 14 to 18, are now completed. There will be good light, and ample room for all. We have been successful in procuring practical papers, and several subjects of great interest will be discussed. I can safely say that the building in which our Convention will be held is the largest and best adapted for the purpose of any we have ever had. The spaces for exhibitors have been liberally taken, and the photographer will see such a display of photographic apparatus and novelties as he has never seen before in our collection; besides, the specimens of photographic work of this country and from Europe will be most interesting. Some of the European exhibits have arrived, and are pronounced very fine. Great efforts have been made for this Convention, and the success of the Association depends on it. Therefore, let all

decide at once to go to Buffalo. Round trip tickets at reduced rates can be had on all the different lines by presenting photographers' certificate, which can be obtained from any stockdealer throughout the country. The hotels have reduced their rates.

Faternally, J. LANDY.

Editor PHILADELPHIA PHOTOGRAPHER:

I begin to realize that the sixth annual Convention of the Photographers' Association of America is near at hand. Our house is in order, and lamps trimmed and burning, as will be seen by the following programme, list of exhibitions, and diagrams showing the amount of exhibits of photographic requisites:

Programme.

Photographers' Association of America, July 14 to 18 inclusive, to be held in new State Arsenal, Buffalo, N. Y.:

Tuesday, June 14; 10 A. M.: Address of welcome by Secretary McMichael.

Address and opening of the Convention by the President.

Roll call of members.

Reading minutes of last meeting.

Reports of standing committees, consisting of Chairmen of Executive Committee, by W. A. Armstrong, and Progress of Photography, by C. Gentile.

Appointing committees to nominate officers, and to select location for next Convention.

Miscellaneous business.

Annual report of the President, consisting

of a review of the progress, needs, and benefits of photography.

July 14, 2 P. M.: Paper by E. L. Wilson—“The Dignity of Photographic Art.”

Discussion—“The Deterioration of Gelatine Dry Plates.”

Paper by J. F. Ryder—“How to See.”

Discussion—“The Best Method of Lighting a Dark-room.”

Paper by J. L. Hurd—“Photographic Portraits and Camera Pictures.”

Paper by J. Burton—“Development.”

July 15, 10 A. M.: Reading minutes of last meeting.

Unfinished business.

Reports of committees on nominations and location.

New business.

July 15, 2 P. M.: Excursion to Niagara Falls.

July 16, 10 A. M.: Reading minutes of last meeting.

Unfinished business.

Reports of committees.

New business.

Lecture by Dr. Garrison, Chicago—“Dry Plates.”

2 P. M.: Opening of Question Box.

Paper by J. Traill Taylor—“Certain Defects Incident to the Construction and Use of Combination Lenses.”

Paper by W. A. Armstrong—“Our Mistakes; Let us Correct Them.”

Paper by Col. Stuart Wortly.

July 17, 10 A. M.: Reading minutes of last meeting.

Unfinished business.

Reports of committees.

Election of officers.

Selection of location for next Convention.

July 17, 2 P. M.: Paper by J. Landy—“Prices.”

Paper by G. M. Carlisle—“Backgrounds; their Use and Abuse.”

Paper by H. P. Robinson, Tunbridge Wells, England.

Paper by W. M. Ashman—“Portable Support for Washing Plates.”

Discussion of prices.

Paper by G. A. Douglass, Chicago.

July 18, 10 A. M.: Unfinished business.

Closing ceremonies.

H. McMICHAEL, Sec'y.

One of the injunctions of the Apostle to the early Church was, “Forsake not the assembling of yourselves together, as the manner of some is.” The great Teacher had wisdom to see that all growth and progress depended upon the combination of motive for the engendering of a common interest, and I think that the photographic fraternity would benefit by taking regard of this precept. In a few weeks one of the most important events in American photography takes place in Buffalo. Need we say it is the Convention? We are so assured of its success that we cannot refrain from giving a last injunction. Fail not to attend.

No one, however great his knowledge or ability, will advance, even at a snail's pace, if, snail like, he shut himself up in the confines of prejudice and narrow opinion. But it is unnecessary to urge this upon those who do possess knowledge and ability. They are the ones who are ever foremost in their endeavors to secure the great advantages which accompany and flow from the coming together of kindred spirits. Look at our own Convention. The men who have been most zealous in its support in the past, and who are at present holding up its hands, are not the obscure and unknown, but those who stand the highest in our profession. They know how to value the harvest it yields, and if they estimate its advantages so highly, surely every photographer who is desirous of advancing in the art should also avail himself of the great privilege which is born of the free interchange of ideas. Although the management of the last Convention was not just what it should have been, we are convinced that the mere assembling of the fraternity stimulated to subsequent effort, which resulted in an advance in the artistic feeling and technical excellency of the work of the past year.

Photography demands a freedom in the circulation of opinion, and this circulation can best be accomplished by the Convention. What glorious prospect we have for the approaching P. A. of A.! Those who have the management under control have inspired us with thorough confidence, and we prophesy a grand success. Fail not to attend.

W E S T S I D E S I D E

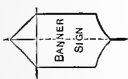
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SOME OF THE BEAUTIES OF DRY-PLATE WORKING.

BY THOMAS PRAY, JR.

(Concluded from p. 187.)

WITH the coming of beautiful weather, the vacation season, and the increased interest in amateur photography, it is not unlikely that many of our amateur friends will, during the present summer, meet with some of the obstacles which have already been enumerated. If each one would keep a careful record of the maker of the plate, from whom they were purchased—and one important point we would urge upon both “immature” and professional, examine the appearance of the plate in the dark-room by a perfectly safe light in order to see what may sometimes occur there—make record of all these matters. I have now adopted the practice of marking every plate as it is put into the holder, with certain letters for each maker, and for their speed of plate as well as the number of emulsion. Take a moderately hard lead-pencil (the letters and numbers need not exceed one-eighth of an inch in width), make them on the very edge, where the holder protects it from the light, and where no good printer ever prints, before it is exposed; when it develops the pressure of the pencil on the film leaves an indelible record and a permanent one. Thus, if I am using Carbutt's special I mark the plate with a Faber, No. 3, medium blunt point, C. S., 1818, or whatever the emulsion may be. If I use a Cramer plate, it is marked C. R., 1521, or the emulsion number. If I use the English plate it is marked 2 N. S., and the emulsion number, a scheme of these numbers being prepared in ink and nailed up in the dark-room as well as in the negative-room, for with three thousand negatives I require some little space. The time at which these plates are purchased is entered in a record book, and note books of exposure, after having been used, in the field, where they are filled in with a pencil, are at once transferred into what is growing into a large journal, and every entry and particular are made in ink, while in the margin I enter in shorthand, any peculiarities of observation. While this requires a little time, it is invaluable

for reference, particularly when the peculiarities of some platemaker have brought out disagreeable experiences, and in this way there is no possibility of making any mistake as to whose plate is in the holder after exposure.

One of the recent and most disagreeable experiences in this whole dry-plate working was discovered the same month in two different platemaker's plates of recent emulsion, which were inquired for from the stockdealers as expressly for a test in the field. On one of these plates, which is not a rapid one, we found on examination, while filling the holders, some dull spots on the coated side which were quite as plain as though a drop of water had been allowed there. These spots varied in size from that of a pinhead up to nearly an eighth of an inch. Three boxes, of a half gross, were opened, marked with the same emulsion, the plates from each box were kept carefully separated from those of the others, and these spotted plates were only found in one box of the three. These were carefully marked, and six of them were exposed the same day, while fifteen of the other twenty-four were also exposed the same day. Upon development a peculiarity in the slow plate showed itself by what apparently was a decided weakening of the film at the point where these dull spots on the coating of the plates were noticed, which seriously interfered with the printing of the proposed negative. On the fast plates, by another maker, spots which were not quite so apparent, but which were perfectly discernible, gave positively clear glass after development and fixing. Thinking we might be alone with this, no mention was made of it, but within the past few days, in speaking with a friend of ours in another city, we find that in using a grade of instantaneous plates, which are beautiful in their detail as well as their density, he had noticed the same markings only after he had succeeded in making several beautiful plates, and found he had to turn to Gihon's opaque, where the bare places were. We gave our experience, and a few days after leaving him he wrote us that on examining the box from which the negatives he had shown us came, he had found very distinct

markings on the plates, which were perfectly kept away from the light, but which when developed and fixed gave positively clear glass in spots which looked something like a rocket or meteor, seeming to have a nucleus and a tail following it, so that these spots which showed on the emulsion in his dark-room show that some change has taken place, or, at least, whatever the cause may be, that one portion of the plate has been acted on chemically either by imperfectly cleaned glass or imperfectly mixed emulsion, or some other reason which we simply guess at but do not know. When development acts in one way on one maker's plate and in another way on another's, or in either case furnishes a vast amount of annoyance to the person who has spent the time to find a pretty piece and then taken all due precaution to get a fine negative, and finds when his negative is finished and the print made from it, that he has produced chemically a most beautiful piece of work, but it has been ruined by an imperfect plate.

We hear so much of fast plates and snap-shutter exposures, that it may perhaps be worth while to refer to some of the beauties of this kind of working. In a recent showing of a number of snap-shutter exposures from which transparencies had been made, it was painfully apparent that the snap-shutter craze is bound to be condemned by many who are seeking for perfection in photography. It is no use at all to deny the fact that except a very large lens is used in proportion to the plate, and a most decided skill exhibited in the development, that snap-shutter exposure pictures frequently show very decided leanings towards imperfect work, and if we attempt to bring out the outlines of a ship, a horse, or a locomotive, we are bound to destroy something else, and to fail in realizing that perfect harmony which makes a picture that is always a "thing of joy," etc. In many of these instantaneous plates, which we believe are as much overrated as some of the lenses on the market, we are told that they are most uniform. We have developed with sufficient intensity and clearness to give every detail and all the modulation, from the plates of seven different makers, which we

have so far tested; we have found only two that were equal to the task, and not more than two or three in a dozen of those which would give us a good snap-shutter picture of a house, with sky, trees, some shade, and those little details which at once go to make up a complete picture and a fine photographic print. In other cases we find that unless about all the circumstance are present to favor the exposure, the development is long, consequently it is tedious, and in ten out of twelve cases it needs a good deal of blue paint, opaque, or what is frequently used, black asphalt or black lead. On the other hand we find that an exposure of two, three, or four seconds with a lens of sufficient power, gives in the majority of cases a negative (if the development is properly managed) that, aside from some of the difficulties we have enumerated, is beautiful in all its modulations and surroundings, sharp, clear, and crisp, without being harsh. And while on this point, we believe there are two single things which militate more against the amateur photographer than all other causes except imperfect plates—the first of these is using lenses which are really overrated or using a lens having an actual capacity of less than the size of the plate and the speed of exposure; the other of the two points is that of underexposure, which is followed by protracted, tedious, and uncertain development. Some experiments upon this point would be very interesting, and while the article may perhaps be hard upon some of the dry-plate makers' failings or foibles, let it be understood that with the increasing enthusiasm among those amateurs who really enjoy a good negative and delight to see beautiful prints made from their own work, and many of whom have adopted the same rule that we ourselves have done, viz., that of never allowing any retouching, painting out, fixing, or dodging a negative, it becomes somewhat expensive to buy plates which have been hypo-struck, or the emulsion on which has been scratched by particles of glass by the careless packing, and it is exceedingly provoking, too, to take out plates which are nearly a quarter of an inch thick, and varying all the way down to that of a fine crystal glass, not much thicker than a watch

crystal. The thick glass, thin glass, crumbs of glass, and bubbles, to say nothing of the aggravation of plates which vary from one-sixteenth of an inch wider at one end than your holder, to an eighth of an inch wider at the other end, with no possibility of your changing just as you are ready to leave for a trip—these are things that the average man does not look at with complacency.

We will say a few words as to the unevenness of coating. We have lately opened a box of plates from one of the best makers, where the emulsion is entirely lacking for a quarter to five-eighths of an inch, where it has been floated on at one end, and is twice or three times as thick as the other, while on the other side of the plate, which should be approximately clean, there is emulsion enough to cover the bare part of the emulsion side six times over, perhaps more. We have, in a previous article, referred to the fact that emulsion makers have seemed to study for the last fifteen or sixteen months what the least possible amount of emulsion was, and at the same time to obtain portrait softness rather than the proper amount of contrast. The unevenness of coating is one of the things that the amateur should not tolerate; one side of the plate develops thicker or denser than the other, and if we attempt to correct the development upon the off side, so to speak, to that point to equal the heavy side or dense side, we shall get one of two results, a harsh plate on one side of the picture and a very weak, overdeveloped plate on the other, and while upon the amateur work an experiment was made upon this very point, while the writer was living in Boston, in which four different members of the Boston Amateur Society joined, in which different plates were used by the same party, consisting of four persons, on the same subjects, the same day, with different lenses, the development was then completed and a comparison made. The plates of three, if not four, different makers were used, taken from stock, and the plates of an amateur, a Mr. George Fowler, of Boston, were used in addition to the plates from two regular makers. 5 x 8 plates were used in all cases, and everything from an instantaneous plate down to one as slow as was in the market.

The finest negatives obtained in that day's trial were from plates coated by my friend Fowler upon glass which had previously been used, some negatives of which I still have, and they are among the most brilliant in my whole collection. The amount of emulsion on these plates was double that which any platemaker at this time was putting on, and we should judge that it was three or four times as much as that which is put upon some of the very fast plates of to-day. If we remember aright, Mr. Fowler used two drachms on a 5 x 8 plate, and the cost of emulsion amounted to some two or three cents even with that amount.

But to return to the chemical part of the question, a little surplus emulsion gives a plate which with proper exposure and development will shut out all of the weak film discolorations, shown by printing upon sensitized paper, and will give a sky which shall approximate to the sky under which we are waiting, that of a clear blue, and will give it a sufficiently high light so that a person would not mistake the sky in the picture for the lawn, and perceive his mistake only when he finds that he has the house or horse wrong side up. There is one point connected with this, which it may be of interest to amateurs to notice. In the annual address of the President of our New York Society of Amateur Photographers, we notice a question which has been raised a thousand times in our own experience, viz., "That of sensitizing paper so as to obtain a purple-toned print." The average "instantaneous views," lightning express," and various other names for the quick plates, are no more capable of producing a print which can be toned a fine lilac-purple than they are capable of exposure five minutes in bright daylight and development. But with such a plate as we have spoken of, made by our amateur friend, where there is a density which does not approach harshness, we can print until the shadows are bronze, and then by proper washing and toning, make a beautiful purplish-lilac tone, which, so far as our own experience goes, is most desired by every one, and which cannot be obtained by any snap-shutter negative we have ever printed from or have ever seen.

In the making of transparencies, there is another point to which we shall call the attention of amateurs. We lately made from a Carbutt A plate, or the old-fashioned transparency plate, and from the Anthony transparency plate, some lantern slides, which were sent abroad. These slides were both made from a collodion negative of a photomicrograph; they were developed in pyro, and they came as black as black could be, while the high lights were absolutely clear glass. The plates were taken from the same box of each maker's plates, exposed under the same part of a negative, for the same length of time in the same light, as nearly as possible, both are negatives which were properly developed from a medium slow plate, and also from snap-shutter plates, neither one of which approximates in clearness, or in density, or color to the transparencies made from the collodion plate. The snap-shutter pictures if the objects were properly brought out on the transparencies, were discolored in the high light, what should have been clear glass.

This may answer the question of amateurs as to why they don't get brilliant transparencies; taking the medium slow plate with proper density, a better print can be obtained without using several thicknesses of paper, without any blue paint dodges, without painting out by opaque, etc. Examine carefully, therefore, your plates, and if you find them unevenly coated, take them back. Hypo streaks we have referred to; some new experience has recently come to us in which streaks have been found in different parts of the plate, and very recently we showed a plate in which the mat had become cockled or twisted, and several dozen plates packed up one on top of the other, and a streak varying from three-eighths to five-eighths of an inch in width, and of exactly the form of the twisted mat, was pronounced by quite a number of those who saw it to be from floating on the pyro in development. The fact was not at that time stated that the plate in question was developed by plunging into one of Anthony's glass baths, just as we plunged the collodion plate to sensitize it. The development in this case was carried on by a Carbutt

lantern set beside the bath until we could perceive the figure through the plate. Two points were accomplished, the plates in question required but a very small amount of pyro and soda to the ounce, the development was carried as far as it could be, and the hypo stain was one of the most prominent traits developed.

There are so many points upon which information has been sought, and the article, which was first written only for a single number, has so far exceeded our own expectations, and it still falls so far short, in more than one of the difficulties which are found, that we may as well rest for the summer, at least, as to carry them further. The idea has been to obtain information, which has been expensive, and the few points which have been given in these articles have been gathered from an experience of fully four years, from the carrying of cameras from a half plate to 14 x 17, probably twenty-five thousand miles; and as we close this article, engagements have been made to follow out certain experiments during the summer, which may form the basis of an interesting article in the future, if the publisher of the PHILADELPHIA PHOTOGRAPHER, and his kindly disposed aid, shall consider them worthy of the space. Meantime, it is the writer's hope that amateurs or others may put on record, not only the difficulties they find in dry plate working, but any suggestions which they may be able to make from chemical information or experience, for we have received a number of letters with reference to the first two articles from platemakers, asking us to experiment and report, for they are as anxious to surmount these difficulties, if not more so, than the amateur is to have it done. Reference has not been made to the maker of any particular plate, and we, with justice to ourselves, say that we have never exposed a plate furnished to us gratuitously by any stockdealer or platemaker, and are under no obligations to either party in any way, nor have we any preferences or prejudices; the idea has been to arrive at the fact for the benefit of a very intelligent class of men who devote a large amount of money each season, to what has resulted in some of the most important improvements in pho-

tography, as well a vast deal of pleasure to themselves.

DR. PASSAVANT'S LECTURE ON CARBON PRINTING.

GENTLEMEN: I shall this evening endeavor to show you the practical workings of the carbon process. In the first place, I desire to say that carbon printing is a very simple and easy process. It is within the reach of you all, and though there are many details connected therewith, each of these details, when understood, is simplicity itself.

First, as to the tissue. This is an article of commerce, and may be obtained from Anthony, of New York, or from various European makers. The tissue obtained from Anthony prints remarkably fast. This may be due to our clear actinic atmosphere and light, as I have not yet been able to compare this tissue with the German-made tissue which I have been in the habit of using. The tissue may be obtained in several different colors. For our use the black and warm brown will be found the best.

Before sensitizing, the tissue may be kept for an indefinite time, care being taken to keep it from moisture. After sensitizing it will not keep good, generally, for over forty-eight hours. It is true, in some instances, I have succeeded in obtaining good prints on tissue four or five days old, but it cannot be depended upon. The best way is to sensitize the evening before using.

Make a solution of bichromate of potash from two to five per cent. strong; add from 0.001 to 0.005 of carbonate of ammonia. This must be used cold, and will keep, and may be used for a long time; of course, it will gradually become weaker. If you have thin negatives to print from, use a strong solution; that is to say, a solution from four to five per cent. strong of the bichromate. If, however, the negatives are hard, use not over two per cent. of the bichromate. Always bear in mind the stronger the solution the softer the prints, and vice versa. Now, immerse your tissue, face up, in the solution. Look out for air bubbles, and if they appear have a camel's-hair brush ready, and brush them off. The tissue

should be floated from three to four minutes. This may be done in subdued daylight, as the tissue, when wet, is quite insensitive. In taking tissue from the bath draw it over a glass rod. [Mr. Gibbs here remarked that he always laid the tissue down on a piece of glass and used a squeegee to remove the superfluous moisture.] The tissue is now sensitized, and it must be hung up to dry in the dark. Hang it up with clips, the same as silver paper. It must dry spontaneously, and not too rapidly. From eight to ten hours is not too long.

The tissue is now ready to print. As to exposure, no exact time can be given. It will print from four to six times as fast as silver paper. A photometer may be used, but after a little experience this will not be necessary. The print which I will now develop had an exposure of one minute and fifteen seconds, under a rather thin negative in direct sunlight. The negative printed from should always be masked, so that the light will not creep under the edge of the tissue and spoil the picture. If you wish a strong print, print in the sun; if a soft one, print in the shade.

So far, the operations have been the same for both double and single transfer. I will now illustrate the double transfer process. Take a clean piece of glass, a little larger than the tissue to be developed. Flow the plate with a solution of benzine and yellow wax. The wax must be pure and not mixed with tallow or other foreign substances. Use one part wax to about one hundred and fifty parts benzine. The solution must be prepared two or three days beforehand, and must be filtered until perfectly clear. Let the plate dry for a minute or so, and then take a piece of old flannel and rub the plate in a circular direction. Do not rub so hard that all the wax is taken off, but rub lightly, till the glass loses its ground-glass appearance and looks like ordinary polished or clean glass. Now flow the glass with plain collodion. The collodion must not be too new; about a week old will do. When the collodion is dry enough to be no longer "tacky," immerse the plate in a tray of cold water. Now place the piece of exposed tissue in another tray of cold water,

and allow it to remain until it lies perfectly flat and gets a little soft. Take the plate out of the water and lay it, face up, on a flat table. The plate must be perfectly wet and show no streaks. Lay the tissue face down on the plate. Cover the tissue with a thin piece of rubber cloth and rub it flat upon the glass, using a broad squeegee, and being particularly careful that the tissue is rubbed down perfectly smooth, and that all the air bubbles have been rubbed out. Let the plate stand from five to ten minutes, or until the tissue has had time to set.

Now immerse the plate in a tray of warm water, about 100° F. In about a minute you can easily lift one corner of the tissue from the plate. Pull off the tissue slowly and gently. The plate, as you now see, is covered with a thick, black film. Rock the tray gently, but do not touch the body of the plate. As you see, the black film is gradually washing away in the soluble parts, leaving the developed picture on the plate.

The picture is now developed, and, though somewhat underexposed, will do for our purposes this evening. The plate being developed, is now washed in cold water, and after that in a three per cent. solution of chrome alum, and then washed again in cold water. We have now on the face of the glass a reversed positive. If we were making lantern slides we would not have to proceed any further, as simply reversing the glass gives us a correct positive. What we now desire is to get a correct positive on paper. We will proceed as follows: First, we must prepare our double transfer paper. This, I believe, is an article of commerce, though I always prepare it for my own use. Float ordinary "Rive" or "Saxe" paper on a bath composed of 100 parts of water, 10 parts of gelatine, 1 to 2 parts of glycerine, and 10 cubic centimetres of a saturated solution of chrome alum. The water, gelatine, and glycerine are first heated and the alum then added.

I have in my hand a piece of the double transfer paper, which I immerse in a tray of lukewarm water, letting it remain about thirty seconds. Now take the developed plate from the washing water, lay it on the table, and apply a piece of double transfer

paper using the rubber cloth and squeegee as before. Now lay the plate by and let it dry spontaneously. As this will take some hours, and as I desire to explain the whole process, I have brought a plate along with me already to strip. We will suppose, then, that the plate and paper have become perfectly dry. Take a sharp knife and run it along under the paper around the edge of the plate, so as to loosen the collodion. Now gently strip the paper from the plate. The paper, as you see, takes with it the developed print, collodion, and all, and the result is a beautifully enamelled, finely toned, and brilliant carbon print.

If you prefer a mat surface, you may use ground glass and omit the collodion, using merely the wax solution. As the single transfer process on paper is rarely used by amateurs, so few of them taking, or caring to take, reversed negatives, and, as it is getting rather late, I will not now take the time to go into that process at length. It is very simple, however, after learning the double transfer. The tissue is transferred directly from the washing water to the paper, and then developed in the same way as before. The single transfer paper is prepared by flowing the paper with a solution made as follows: Three parts of shellac, 1 part of borax, and 30 parts of water. I will close by pointing out a few of the difficulties that you will probably have, and the cure therefor:

The gelatine flows off the tissue. Reason: The temperature in drying has been too high, or the chrome alum solution too strong.

The tissue will not come in contact with the negative, or cracks. Reason: Tissue has been dried too quickly.

The wax on the glass plate does not polish. Reason: The plate is too cold, the wax impure, or the flannel damp.

The tissue does not adhere to the plate, or the edges raise. Reason: Overexposure, tissue too long in water. May oftentimes be rectified by putting a weight on the plate.

Air bubbles on the back of the tissue. Reason: Water too hot.

Collodion film cracks. Reason: Collodion too fresh.

Numerous little cracks in the picture.

Reason: Tissue too long in chrome alum bath, or chrome bath too warm.

The picture has a network appearance. Reason: Tissue not long enough in cold water, or not long enough in contact with the transfer plate, or the tissue may have been dried too quickly. If this be the case, coat the tissue with thin collodion.

Cloudy appearance in picture. Reason: The alcohol in the collodion was not properly washed out.

Film frills in developing. Reason: Water too hot.

These are a few of the many things you will have to overcome, but a few trials will teach you how to conquer them.

RIVER SCENERY.

BY XANTHUS SMITH.

At this season of approaching holidays, and when amateurs are fitting themselves out for photographic campaigns, more or less extended, a few remarks upon choice of landscape subjects may not come amiss. Those who are more ambitious than to be satisfied with mere bits or parts of pictures, and have another end in view than simply taking views of places interesting on account of associations only, and not as pictures, will find river scenery, where the country is hilly, particularly adapted for agreeable, extended views. The rolling hills, islands, strips of projecting shore, constantly varying with the bends of the river, fine groups of trees, and foreground rocks, embody the essentials of fine landscape compositions. Subjects of this kind are suitable almost solely for horizontal views, and often, of a long proportion, the 5 x 8, for instance, so much used, though the 5 x 7 size will frequently give more agreeable results, as it is difficult, generally, to extend a view very far both to the right and left without getting something unessential to the picture, and tending to distract the attention from the main features. Strive to get a good mass on either one side or the other of the subject, and do not let it extend far enough into the picture to cut off too much of the distance, if the latter is good. If there should be so much of interest in a side group that you must extend it very far across the plate,

make it the subject, sacrificing the rest. When you have a fine side group of trees with a good profile, an agreeable combination of curves, straight passages, and angles, for instance, do not cut the top off it, but let some sky appear above, by retiring further; or if this is not practicable, using a wider angle lens. In other instances, where there is a high blank wall of uninteresting or monotonous foliage, with a very interesting passage of stems underneath, then advance closer, cut off much of the top, and aim for one of those pretty compositions in which a passage of distance is seen beneath overhanging or overspreading boughs. Water willows form some of the best material for such subjects, with their gnarled, knobby, and twisted stems, with deeply cleft bark, and long, extended limbs, often broken down and lying partly or wholly upon the ground. It is generally a gain rather than a loss with them to cut off the upper foliage, as its want of separation into masses, its fine leafage and yellowish-green in early spring, and decidedly yellow color late in the season, and, above all, its susceptibility to motion from the least wind, make it a risky thing to manage. The deep, quiet passages of shadow cast upon the earth under spreading trees give breadth and effect to a subject, and when it happens that a stump, or rock, or cow, or some such object can be relieved in high light, by being a little nearer and cutting against such mass of shadow the effect is greatly heightened. There is no kind of accessory better suited to meadow scenes under willows than groups of cows. They so thoroughly belong to the subject, and, on account of forming points of deep shadow and high light, give not only brilliancy and effect to the picture, but the interest that life always gives.

One of the great drawbacks in landscape photography is often the barrenness of the foreground. Many a good subject, where there is a good distance and side group, falls flat because there is nothing to give interest to the foreground. In such cases it will be found well worth while to seize upon anything suitable within reach which can be rolled or dragged into a position to form a point, and carry round the composition. A fallen limb, loose stump, stones, or an old

fence post even, will be better generally than nothing.

A considerable amount of atmosphere will be found of advantage in extended river scenes, as it separates different passages, causing the more distant to recede, thereby adding to the look of perspective or retiring of the distance; and, moreover, it gives mystery, which is an agreeable quality in art. There may be, for instance, a factory, furnace, or group of ice houses, or other such commonplace structures, with partially surrounding trees, upon a middle distance, or distant point of land running into the river, which, if a good deal obscured by atmosphere or shadow, as in the morning and evening, when the sun is low, will make fine points to give firmness in a composition, their direct lines and flat masses contrasting nicely with the rounded foliage, and which, if lighted up by a noonday sun and robbed of all atmosphere, would yield up as completely all their commonplaceness and actuality as to destroy the sentiment of a picture. It is of great advantage to have calm, or very nearly calm, water, the reflecting of passages of deep shadow preventing too sharp cutting of shore lines, and also removing the difficulty of the whole water in the picture being a cut out light patch of equal brightness all over. It is a fortunate time if water can be got perfectly calm under hills or rocky bluffs, with their deep, quiet reflections underneath, and streaked by puffs of air, causing strips of bright light making it appear more level. Boats or skiffs are a great improvement in water scenes if they happen to be in a fortunate position. In the middle distance they measure the size of the scene, by comparison and as foreground features, with their deep touches of shadow form good points of interest, but will always be preferable if not full side view or directly end on.

There is nothing so delights a true lover of nature as an excuse for a ramble along the shore of a large stream or river, especially in the morning or evening, when nature puts on her choicest charms.

MODERN DRY PLATES.

Our position at the World's Exposition has enabled us to make some very careful

studies of dry-plate work, and our readers shall presently share the benefit thereof, when we shall conclude our experiments and observations. We are all the time in correspondence with dry-plate workers, and get from them some very amusing and interesting letters. One correspondent, whom we combated with a long time, trying to get him to take up dry-plate work, is now one of the most sanguine operators of the new process, and yet sometimes he is puzzled to know how to get along with it. Here is what he writes in a recent letter: "Here I am, developing my recent exposures. It ties me down considerably, but I love it, and the new dodges and wrinkles that come to me every day make it interesting, and help the good work on, for photographing, such as I have, is, I think, the noblest work I ever put my hand to, though I sometimes feel inclined to secure larger results, irrespective of bread and butter. For the present, however, I shall be content with my stereoscopic camera, for I know there is no other work that would content me. I can see more to take every day than would occupy me a lifetime, though I should grow as old as Methuselah. I am of your opinion to the core, that too quick plates are not best for my work for many subjects. I like a good quick plate, but not the quickest, for when I get a full exposure with one two-hundredth part of a second, then the plate is too quick, and I have even had to use a restrainer when developing such plates. In such cases I do not get as good results as I desire. The old No. 25 Inglis plate I prefer. I have had some that I have carried several thousand miles within the last two years; I recently exposed a lot of them, and they turned out honest and true. I did not miss a single plate out of three dozen exposures made, everything coming out just as I saw it with my eyes and upon the ground glass. The negatives are worth their weight in gold, although they have crossed the ocean twice. I hope all the manufacturers will not aim entirely at quickness. Very pretty plates are secured for the eye, but the printing quality does not come up to time. I have been very much deceived and disappointed in this direction, for some plates that pleased

me exceedingly, turned out to be very bad printers when developed. I am sometimes led away in my enthusiasm by the detail which I see in my plates, forgetting that a good deal of this will be lost in printing. I wish I never had to make a paper print. I like quick plates for studio work, and do not think there is anything that I cannot do with them. I only want them for moving subjects, for a quarter of a second is as short a time as I want in nine out of ten of my exposures out of doors. With a dry plate that will work in that time, I feel that I know what I can do. A medium quick plate with thunder and lightning for contrast is all that is required—not too much contrast between the thunder and lightning, either."

Will not some of our readers give us their experience in printing dry plates?

GERMAN CORRESPONDENCE.

Amateur Photography, Amateur Lenses—Isochromatic Processes—Application of Azaline Plates for Different Purposes—Yellow Glass and Isochromatic Photography taken without Yellow Glass—Reversed Negatives with Azaline Plates.

AMATEUR photography is gaining here more and more importance. The dry plate has broken the way, and photographic industry follows. A great drawback to its progress was hitherto the procuring of the requisite apparatus, which demanded a considerable outlay, especially the lenses. The amateur had recourse to opera glass lenses and such contrivances to supply his needs, but now extremely cheap lenses can be had. There is a firm (Busch) that supplies them to the trade for covering a 5 x 7 plate at the low price of \$1.90.

Our amateurs, by the by, are becoming more ambitious than they used to be. They are no longer satisfied to take landscapes and groups; they are also desirous of taking colored objects. Since the introduction of azaline plates the subject has not been attended with those difficulties which previously beset it. Because the dry plate is daily conquering new fields, it does not follow that the wet process is entirely superseded by it. On the contrary, our great reproduction in-

stitute still employs it, and the importance in which the color-sensitive-collodion-eosin process is held by it is shown by the recent photographs taken at Brunswick, which are now on the market. Prof. Dr. Meyer, one of our art critics, says, concerning these pictures: "All the photographs taken by the old process, notwithstanding the amount of care bestowed upon them by retouching, are now worthless; they should all be taken over by the new process."

I am very much obliged to Mr. Ives for calling the attention of the fraternity to this new field of photography which I opened twelve years ago; but he will kindly allow me to correct several mistakes in his article published in the May issue of your journal on page 141. Mr. Ives there says: "Dr. H. W. Vogel who was one of the first, though not the first, to devote attention to this subject (isochromatic photography), in 1873," etc. If I am not the first I would request Mr. Ives to tell me who before me discovered the principle of making bromide of silver sensitive to yellow, green, and red rays by the addition of dyes absorbing those rays. I do not believe that Mr. Ives is sufficiently acquainted with the German, French, and English photographic literature to answer exactly that question; therefore, he will kindly allow me to send him succor in the person of Captain Abney, F.R.S., who says, in the *Photographic Journal*, June 27, 1884, p. 152, that "to Dr. Vogel undoubtedly (in 1884) belongs the credit of having first called attention to the action of dyes in general." Further, I call attention to Dr. Eder, whose name I think is very well known in America. Dr. Eder, in December, 1884, published a paper in the Reports of the Imperial Academy of Vienna (p. 1115), wherein he says, "Prof. H. W. Vogel discovered, in 1873, the fact that dyes added to bromide of silver made it sensitive to green, yellow, and red rays." I think the verdict of such authorities as Dr. Eder and Captain Abney will settle the question. Mr. Ives speaks also concerning my theory. I would kindly request him to study the principles of spectrum analysis before speaking of matters not sufficiently known. He speaks of chlorophyl absorbing *only red light*. I would

like to call his attention to my *Handbook of Practical Spectrum Analysis*. He may there learn that chlorophyl absorbs not only red rays, but also orange, yellow, green, and even blue rays. It has really seven absorptive bands in different parts of the spectrum. Further, Mr. Ives asserts that isochromatic gelatine plates are *comparatively insensitive to red*. I request him to make a trial with my azaline plates, and he will change his opinion very speedily. It is even not true when he says that the isochromatic gelatine plates must be developed in almost total darkness. Mr. W. Kurtz, of New York, who has been working with my azaline plates several months, will be so kind as to give him further information on the matter. At the New Orleans Exposition there is a Prang chromo of the Midnight Sun, showing a red sun with red clouds, and a reproduction from it with azaline plates to prove to every one that red clouds are reproduced by these plates better than Mr. Ives asserts. At least I recommend to Mr. Ives a very good French book, published in 1878, *Traite Pratique de Photographie des Couleurs*, where he will find a special description of the chlorophyl process experimented upon by the authors.

In my former letter I recommended the use of aurantine collodion instead of the colored glasses. My experiments have in the meanwhile been confirmed and proved satisfactory in the hands of other experimentalists. Herr Scoliak, in Vienna, writes: "In especial, I can assure you that the aurantine collodion disk recommended by you not only satisfies me most extraordinarily, but also Mr. Victor Angerer to such a degree, indeed, that the latter at present employs exclusively such yellow disks. They are much to be preferred to the common yellow disk, inasmuch as they occasion no difficulty in their preparation." Herr Scoliak has in a like manner expressed himself in the Photographic Association at Vienna concerning the application of aurantine disks.

Since at present very many reversed negatives must needs be taken for the calotype process, a method of effecting such reverses with the color-sensitive plates cannot fail to be of interest. Herr Obernetter

writes concerning this: "I polish the back side of the azaline plate perfectly clean, and flow it over with yellow collodion. I then lay the plate, reversed, in the kit of the plate-holder, and focus, allowing for the thickness of the glass. By so doing I obtain, without the interposition of a special yellow plate, a suitable negative for the lichtdruck (phototype). The proportions I use at present in the constitution of the yellow collodion are as follows: I do not make it stronger than 0.3 grammes of aurantine to 100 c. of collodion." Schumann recently made known the fact that azaline plates were better developed under brown light than with red light. He recommended softened light coming through brown silk paper, double fold. Eder has likewise found the same advantageous. I have often been asked whether the color-sensitive process can be employed without the use of yellow disks. I can now answer the question affirmatively, at least as far as concerns the collodion process. It is maintained that Dr. Albert and Braun make use of a process not requiring the intervention of yellow disks. Particulars are not known, but the study of eosin silver conducts to processes which tend to the same direction. Also, as shown in my article on this paper (1884), the yellow disk is not always necessary. The processes are capable of certain modifications, so that at times the yellow sensitiveness may be required to be increased, and the blue to be still more depressed. I have shown the following facts connected with eosin silver films sensitive to light: 1. Eosin silver alone is sensitive to yellow-green and green of the spectrum. With long exposure the effect extends but little beyond the light blue. If a comparison be made between eosin silver and pure bromide of silver, as regards the action of the yellow rays of the spectrum, it will be found that eosin silver is about three times as sensitive to the yellow as indigo-sensitive bromide of silver. 2. Eosin silver with bromide of silver gives considerable yellow sensitiveness, at least sixty times as great as the yellow-green sensitiveness of an uncolored bromide of silver plate. The yellow-green sensitiveness of an eosin bro-

vide of silver film is about ten times as strong as the blue sensitiveness. 3. Eosin silver with a slight percentage of iodide of silver gives a yellow-green sensitiveness about four times as sensitive as the blue sensitiveness. Addition of bromide and iodide of silver increases, therefore, the blue sensitiveness. Strongest with iodide.

Now, the intention is rather to diminish the blue sensitiveness than to increase it. Apparently the best would be to photograph alone with eosin silver, but that is not sensitive enough. Addition of bromide of silver increases the sensitiveness for white light more than twentyfold. Iodide of silver in small quantities increases still more the sensitiveness, and contributes essentially to the cleanness of the plate. These facts caused me to use some iodide of silver in my collodion recipe for color-sensitive plates.

The question arises whether in repressing the blue sensitiveness it were not better to diminish the amount of blue-sensitive bodies (therefore bromide of silver), and hence the quantity of the green-yellow sensitiveness to increase (eosin silver). These questions I endeavored to answer empirically. I left out, accordingly, in my recipe the exclusively blue-sensitive iodine of silver, and experimented first of all with a bath free of iodide and an eosin collodion of only one-half the power of bromine. I took photos of the color scale. In consequence of the absence of the bromine salt in the collodion, the images of necessity were thin and flat. Now, in order to obtain strong shadows I returned the original bromidizing, and increased the contents of eosin to tenfold the former recipes. Here I recognized, indeed, the diminution of the blue sensitiveness and the increase of the yellow sensitiveness in a striking manner, so that the color sensitiveness took place without the yellow glass. To be sure the preponderance of the yellow in this case was not great. The ultramarine acted, for example, stronger than chrome yellow, when it should be the reverse, as chrome is brighter than ultramarine. Menigi red lead, in consequence of the red of the eosin silver, was far behind the azaline.

The experiment was now continued, as I sought to increase the quantity of eosin even

to twenty times that of the original experiment. The constitution of the collodion and the other solutions remained the same as in my beforementioned recipes. The result was that I obtained in this manner a plate which, without the interposition of the yellow glass, to be sure, rendered the chrome yellow stronger than the ultramarine blue, but the results did not correspond to that produced upon an azaline plate exposed behind a yellow disk. The action of the chrome was far above that of ultramarine likewise, red lead above cobalt, whilst red lead in the eosin collodion plate scarcely showed an effect, but the convenience of working without the yellow disk is not to be undervalued, inasmuch as its use increases the time of exposure. A more exact comparison showed that the eosin collodion without the yellow disk could be exposed as quickly as an azaline plate with aurantine. To be sure, the effects were more striking in the case of the azaline. For oil paintings with dark blues, if the rendering of the reds is of no importance, the collodion eosin plate without the intervention of the yellow glass may suffice.

Very truly yours,

DR. H. W. VOGEL.

BERLIN, June 1st.

NOTE.—I mention here that my first paper on the new process was published in Germany, December, 1873; in England, January, 1874.

SOCIETY GOSSIP.

THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the stated meeting, held Wednesday evening June 3, 1885, the President, Mr. Joseph W. Bates, in the Chair.

The minutes of the last meeting having been approved, the Secretary reported a donation to the library, by Mr. Victor Guilloû, consisting of five volumes of Sneling's *Photographic and Fine Arts Journal*, dated 1854 to 1858 inclusive, also vols. i. and ii. of the PHILADELPHIA PHOTOGRAPHER, and a copy of *Leaf Prints*, by Charles F. Himes, Ph.D. These books had been the

property of Mr. Constant Gilloù, the first President of the Society, which gave them an especial value to this organization. On motion, a vote of thanks was tendered Mr. Guilloù for the donation.

The Excursion Committee reported that the trip to Taughanock Falls had been made by a party consisting of Messrs. Joseph W. Bates, Frederick Graff, F. T. Fassit, S. Fisher Corlies, Samuel Sartain, W. D. H. Wilson, Frank Bement, Frank G. Rogers, W. L. Springs, and Charles Barrington, members of the Society, and Messrs. John L. Keen and Paul Sartain, visitors. They started Thursday, A.M., May 21, from Ninth and Green Streets Depot in a special car, arriving at the Falls, after a pleasant ride of ten hours, at 7 P.M. Their accommodations were very comfortable. In addition to Taughanock Falls, they visited Enfield and Glenwood Falls, Ithaca Gorge and Falls, and the grounds of Cornell University. The trip lasted one week, and the results were entirely satisfactory. Seven hundred and seven plates were exposed, varying in size from one-quarter size to whole plate.

The Exhibition Committee reported favorable progress. A large number of circulars had been distributed among Societies and individuals likely to be interested, both in this country and in England, and a number of responses had been received indicating that large and interesting exhibits would be sent from other Societies.

The Presentation Committee reported that they had selected from the pictures, entered in competition for the Presentation Prints for 1885, a view, "Nea: Seal Harbor, Mount Desert," by Robert S. Redfield, and a figure composition entitled "Crossing the Brook," by Mr. Frank G. Cauffman.

The Committee on Membership reported the election of active members as follows: Dr. George A. Piersol, Dr. John G. Lee, and Messrs. Charles L. Royce and Horace P. Gillingham.

Mr. Walmsley showed an "instantograph shutter," arranged with a pneumatic trigger and the speed regulated with a coiled watch-spring, the tension of which could be readily adjusted for different rapidities.

Adjourned. ROBERT S. REDFIELD,
Secretary.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS.—Meeting held June 3, 1885. President Power in the Chair.

The Secretary was directed to communicate with the various stockhouses with a view of placing bulletin boards in them, on which applications for help could be posted when they could not be filled from the Association.

Mr. Eddowes: I should like to ask the retouchers present, what kind of leads they use, and why they prefer them?

Mr. Acker: I use the metallic leads almost entirely; some say that the metallic lead oxidizes, but I have seen negatives retouched with it six years ago, and have never noticed any oxidation.

Mr. Faulkner: Is it customary to retouch dry plates before or after varnishing?

Mr. Schaidner: I use graphite leads entirely, and find they answer every purpose, both for wet and dry plates. I retouch my dry plates before varnishing, as I think this plan gives a softer effect; if the face is very rough, I can retouch it again after varnishing, and so make sure of getting it smooth. I find that metallic leads if soft lose their point, and if hard do not cover enough.

Mr. Bühler: While I was at Sarony's some years ago, they used Siberian leads, using nothing on the negative to make the pencil take, and the effect was much nicer than where the surface of the varnish was prepared; of course, the varnish has something to do with it.

Mr. Schaidner: If it is a very rough surface, the negative cannot be varnished so the lead will take properly, without preparing the surface. For this purpose I find nothing so good as pumice-stone; if you get too much lead on you can grind it off again. If the freckles are deep, you must prepare the surface in some way.

Mr. Acker: I have retouched without preparing the surface of the varnish, and found that it gave a hard effect. I prefer to use pumice-stone; don't care for the balsam of fir or turpentine, as they are sometimes slippery, and sometimes "take" too much.

Mr. Bühler: A negative that has had pumice-stone used on it, will show the application in solar prints.

Mr. Acker: I can grind a negative with

pumice-stone so no lines will show outside of the face. Of course, the grinding intensifies the negative, and the fine scratches show plainer when enlarged.

Mr. Eddowes: When retouching, I used to enclose my pumice in two thicknesses of muslin, and sift it on the negative, grinding with an old lead-pencil eraser; in this way I could take the oily surface from the varnish, and scarcely show the application of the pumice-stone.

Mr. Acker: If your pumice is so coarse that you have to sift it, it is better to get a new lot. I do not like the rubber, as you never have the same feeling as when you apply the pumice with your finger.

Mr. Schaidner: It is hard to get fine pumice-stone, but if you put your pumice in a quantity of water, shake well, and let stand for five minutes, the coarser particles will settle to the bottom, while the finer will be held in mechanical suspension; decant the water through a filtering paper, add more water to the pumice, shaking up as before, etc. Repeating the operation two or three times; then dry the pumice that is left on the filter, and you will have it as fine as it is possible to get it.

Mr. Eddowes: A great objection to turpentine and balsam of fir is that the dust sticks to them, and, as a consequence, dirty prints result.

Mr. Acker: Turpentine and Venetian turpentine mixed in equal parts, have not the sticky properties of balsam of fir.

Mr. Schaidner: I find that the more I heat my negatives, the harder and more glossy the varnish becomes, and the more difficult to retouch without preparing.

Mr. Faulkner: I have heard that if the negative was chilled a little while varnishing, it could be retouched without preparing the surface.

Mr. Power: By chilling the varnish, you kill the printing qualities of the negative.

Mr. Acker: Heating the negative after varnishing has a great deal to do with the "taking" qualities of the varnish; if the negative is overheated, and you attempt to use the needle, the varnish will chip off. A little water added to the varnish gives a slightly chilled effect, and enables you to retouch without preparing the surface.

Mr. Faulkner: I understand that if a little collodion is added to the varnish it will have the same effect.

Mr. Bühler: By adding collodion you make ground-glass varnish.

Mr. Power: Yesterday I took a pound of silver and made it into stock solution; I tested with litmus paper and found it very acid. To-day I tested the same solution, and found it alkaline. Can any one account for the change?

Mr. Faulkner: I once had a similar experience, and attributed it to the action of light.

Mr. Power: The solution was in my dark-room.

Mr. Mildenerger: I test my bath to-day after silvering, and it shows acid; to-morrow, although I do not use the bath, it tests more acid.

Mr. Bühler: I do not think it possible to give an explanation unless a chemist takes the silver and examines it.

The various journals were received with thanks of the Association.

Respectfully yours,

W. EDDOWES,
Secretary.

THE SOCIETY OF AMATEUR PHOTOGRAPHERS OF NEW YORK.—A special meeting was held on Tuesday evening, May 26th. The members were called to order at 8.30 by President Beach, in the chair.

Mr. C. A. Needham was then called upon to set up and show his apparatus for holding backgrounds, which was done before the audience, and its working illustrated.

A swivel allows the horizontal arms to be turned in any direction. One of the arms is intended to support a reflecting screen. The background can be raised or lowered at will. The light from a side window is about as near an approach to a good gallery light as can be found. When the light comes from the top it gives very deep shadows under the chin and nose. The ordinary parlor window makes a good and efficient light. We have long needed some good way of supporting backgrounds, and that need this device is supposed to meet. How near it comes to it, I leave the amateurs to judge. It is designed mainly for

amateurs' use, where the light comes from an ordinary window.

The extension rod at the top is held by a ratchet. It is adjustable to almost any height of ceiling, from eight feet up to fourteen or fifteen feet. It can, however, be constructed for even higher ceilings than this.

The background shown is intended for a Rembrandt effect. The head is posed with the illuminated side against the dark portion of the background, and the shadow side against the lighter tint; the illuminated side of the face is thus relieved against the dark background.

The Secretary then explained and exhibited some cameras and tripods sent by the manufacturers. A tripod, and the "Fairy" camera, by E. & H. T. Anthony & Co., was first shown. The tripod is of the "Taylor" pattern, two metal plates on each side of the lower length taking the place of the usual pegs and holes, to prevent the legs bending inward when set up. The tripod top has on the lower side three brass springs which fit between the two separable parts of the upper portion of the leg when in position, and keep them firmly pressed into the supporting pegs.

The camera shown was an 8 by 10. The points alluded to were the use of two hooks to hold the folding bed extended, thus doing away with the loose screw generally employed; the focussing by rack and pinion, the easily adjusted swing-back, the front rising and falling on the metal guides, and especially the reversing arrangement. The back portion of the box is detached from the bed, the front portion of the bellows makes a quarter of a revolution, and by key-hole slots the back portion is again fastened to the bed, thus bringing the length of the plate the opposite way to what it was before. The light and convenient slides, and the portability of the whole outfit, were noticed.

The Scovill Manufacturing Co. sent their new sliding tripod, which is extremely light and compact when folded, and admits of adjustment to unequal ground, a point often of much importance. With this was a "Petite" box, of quarter size, nicely made of polished mahogany, though of the "cheap outfit" class. In this camera the use of a screw for rendering the bed rigid is also

done away with, a sliding bolt taking its place. The single swing-back is simple and easily controlled.

The "Manifold" camera, also made by the Scovill Manufacturing Co., was then set up. This has an extension bed in three pieces, and an unusually long bellows, a point of great advantage in using long focus lenses. Ordinarily, the box is front focusing by a rack and pinion; when the extension bed is used, the screws controlling horizontal and vertical swings are released, and the approximate focus is obtained with the rear portion of the camera, the fine focus by the rack and pinion. The ground glass is not detached, but so fastened that the slides can be pushed in in front of it. There are no holes through the front board, thus lessening the risk of light being admitted. A spring holds the front in position; the lens can be raised or lowered by a slight pressure. The plate-holders accompanying this camera are of the "Daisy" pattern, and very light and convenient. The back of the box is reversible; the box being made square. The arrangement for vertical and horizontal swings is the invention of Mr. W. J. Stillman. Altogether this camera presents many novel features.

The President announced the presentation to the Society, by Mr. Atkinson, of a stereoscope and a number of stereoscopic views made by himself, and then showed a newly devised "portable dark room," recently patented by William Wrightman Walker, of Troy, N. Y.

The President also showed an arrangement for saturating water with sulphurous acid gas, made by A. Boake & Co., of Stratford, England.

When the use of sulphurous acid for preserving pyro in solution was first recommended, considerable trouble was experienced by many in finding sufficiently pure and strong samples here, that generally offered being unreliable. The apparatus in question was imported, and Mr. Beach said he believed it to be the only one of the kind in New York, and offered to supply any member who wished to experiment in this method of preserving pyro.

The apparatus consists of a glass bottle like a mineral water siphon, which is tested

up to 200 pounds per square inch, and which contains the liquified sulphurous acid gas, this exerting a pressure of about 30 pounds to the square inch. Connected with this by glass and rubber tubing is a smaller wash bottle, in which is placed the distilled water intended to be saturated, and which is connected with a second small bottle containing a solution of caustic soda. By turning a milled head on the siphon, the pressure is relieved, the liquid acid is converted into gas, which bubbles up through the distilled water and gradually saturates it; any excess of the irritating gas passing into the second bottle, where it is absorbed by the soda solution and prevented from escaping into the room. The wash bottle used is known as the "ether" form, and is made wholly of glass, no cork stopper being used. Only a few moments are required to saturate sixteen ounces of water, which will preserve eight ounces of pyro in solution.

The lights were then turned down and about one hundred slides were shown on the screen. About thirty of these were sent by the Philadelphia Society, and were very much admired, especially some views by Mr. Randall, and a winter scene by Mr. Walmsley. A series of views by Dr. Mason, illustrating the incidents of a ride in the country, was the most extensive contribution from the members, and was extremely well done. A deserted mill elicited hearty applause. Slides taken on an excursion the previous Saturday, by Mr. Brush, showed the value of lantern slides as souvenirs of such pleasant occasions, and the celerity with which a view can be presented before a number of people at once. Views of the Capitol at Washington, and of a child on horseback, in Mr. Brush's usual successful manner, also several excellent slides of steamboats by Mr. Benjamin, and of landscapes by Mr. Black and other members, were shown; followed by a number of instantaneous views of vessels and other subjects, by Mr. Atkinson, mostly on collodion plates.

It had been intended to have the slides criticised by the members, but most of them seemed to prefer to say nothing, so that part of the programme was scarcely a success.

The meeting adjourned at 10.30.

A regular meeting of this Society was held at their rooms, 1260 Broadway, Tuesday evening, June 9, the President in the Chair.

The Chairman announced an excursion up the Hudson for the next day, and invited members to join; also, the plan of another later this month, when it is proposed to charter a tug for a trip around the harbor, which will give a chance for shutter work.

The Secretary read part of a letter from D. T. Kendrick, concerning the advisability of compressing different chemicals into tablets, like chlorate of potash lozenges; also, a letter from E. & H. T. Anthony, accompanying the gift to the Society of seven prints taken on Decoration Day with a Prosch shutter; also, a telegram from the Secretary of the State of New York, stating that the incorporation papers had been filed that morning.

A synopsis of the previous minutes was read and adopted.

Messrs. H. G. Piffard, Wm. H. Sanford, J. L. Williams, M.D., Geo. H. Cook, and A. H. Borman were elected active members.

The report of the Executive Committee was then read by the Secretary, as follows:

Report of the Executive Committee. In accordance with the resolution passed at the regular meeting of May 14, 1885, instructing this Committee to cooperate with the Committee on Incorporation, and also authorizing it to prepare a revised Constitution to be in harmony with the change necessitated by incorporation, we have to report that the matter has undergone careful consideration, and we herewith present for your attention a copy of the Constitution as revised.

It has been the object of the Committee to widen the scope of the Society and to provide different classes of membership, which, it is hoped, will accommodate amateurs in varying circumstances, and thus enable all who are worthy to become members.

The Committee has also borne in mind the need of separating the business of the Society from the general meetings, in order that more time may be given to the discussion of topics relating to photography, and to this end a Board of Directors has been established, who will be responsible for the

business affairs of the Society for its proper management.

Proper precautions have been inserted to have fair elections and to meet any ordinary emergency which may arise.

We approve the measure as presented, and ask that we may be discharged from its further consideration. Respectfully,

[Signed.] H. J. NEWTON, Chairman.
R. A. C. SMITH,
GEO. H. RIPLEY.

NEW YORK, June 9, 1885.

On motion of Dr. Janeway, the report was accepted and the Committee discharged, and consideration of the report postponed till later in the evening.

Report of the Committee on Incorporation. In pursuance of the power conferred upon this Committee by the resolution passed at the meeting of May 14, wherein we were instructed to have this Society incorporated, as suggested in our last report, and also to coöperate with the Executive Committee on the revision of the Constitution, we have to report that we have this day received notice from the Secretary of State, Jas. B. Carr, at Albany, N. Y., that the certificate of incorporation has been officially filed and recorded in the city, county, and State of New York, as required by law. The Society is therefore incorporated.

The following are the names of the incorporators: F. C. Beach, Dr. John H. Janeway, Charles W. Canfield, Joseph S. Rich, George H. Ripley, Robert A. C. Smith, Gilbert A. Robertson, Dexter H. Walker, and Charles Volney King.

In addition to the above named gentlemen, Messrs. Charles W. Dean and Henry V. Parsell, making eleven in all, have signified their willingness to assume the responsibilities of a Director for the first year.

The object for which this Committee was appointed having been accomplished, we ask that it be discharged. Respectfully,

F. C. BEACH, Chairman.
C. VOLNEY KING,
GILBERT A. ROBERTSON.

NEW YORK, June 9, 1885.

On motion, the report was accepted and placed on file and the Committee discharged.

The report of the Committee of Arrangements

was then read, as follows: This Committee reports the fixing of October 27 as the date of the Fall Exhibition of the work of members.

On motion, this report was accepted and placed on file.

The President remarked that the Philadelphia and probably also the Boston Society had projected exhibitions for the fall of 1885, on which account it has been deemed inadvisable for this Society to hold a general one; but that it was the duty of members to make this exhibition a success, by contributing prints, and bearing it in mind during their summer's work.

It is designed to make the exhibition as full as possible, and let every member's work be seen.

Mr. Beach also said: I have here a specimen of paper negative made on paper, coated with gelatine, and developed with pyro, and made transparent by means of castor oil. You will notice that it is quite clear. I have no positive print made from it here to show you, but I am told that they are very clear, and show no grain of the paper. This paper is made by the Eastman Dry Plate and Film Company, and they hope shortly to place it on the market.

Mr. J. Traill Taylor said: I would kindly ask the President to extend to me the honor of introducing to the Society a gentleman well known to you all, at least by reputation, and whom you will be pleased to receive—Mr. Gentilé, of Chicago, editor of the *Photographic Eye*.

Mr. Gentilé was introduced, and said: I thank you very much, indeed, for the honor paid me, and am happy to make your acquaintance. I don't know that I can say very much that will interest you, but I certainly must congratulate you in having the best Photographic Society in the United States. The amateurs are doing good work, making rapid improvements, and I think American amateurs will not be behind in giving information. As a professional photographer I have not the slightest feeling of jealousy, and I think I speak for my fellow-professionals. I am pleased to notice that so many gentlemen and ladies are taking up the art as an amusement, and shall no longer feel a hesitation in acknowledging myself

as a follower of the "black art."
I again thank you for the kindness shown me.

Mr. Beach remarked: My attention has been lately called to the prevailing custom of manufacturers of dry plates, of putting plates of irregular sizes in their packages. One of our members recently told me that he purchased six packages designed specially to fit small holders made thin, so they would be sure to go into the grooves of the holder; but he found on an average each of those packages contained from one to six plates which were irregularly cut; they were made wedge-shaped, and were too large at one end to fit the holder. And not only that, but they invariably put in packages of small plates, three or four plates—what I should call double thick plates—twice the thickness of the groove in which they were intended to be inserted. And from the numerous complaints coming in, it seems to me that we ought, every member of us, to make a memorandum during the summer—in fact, be a committee of one—to keep an account of the number of packages which we use, and find out the average number of plates in each package which will not go into the holders. Now, there is no excuse to my mind why a dry-plate manufacturer cannot, with reasonable diligence, use a glass of proper thickness for small sizes, and also employ skilled enough labor to have them cut accurately. I hope that all the members will keep this in mind during the summer and make a report to me or to the Committee on Dry Plates whenever they feel disposed.

I have received a lengthy communication from Mr. Henry Loudon, of San Francisco, whom I invited to send to us a plan and description of how he made his emulsions, and, by way of preface, I will pass around these pictures (some of them have been shown before), so that you can see the results which he obtained by this process. I have placed on the blackboard the formula. To begin with, he has a lantern which he claims is rather larger than the ordinary size—10 inches high by 6 inches square—and he has the two sides of the lantern covered with a coating of two thicknesses of Post-Office paper about the color of

this envelope, and the front of the lantern is provided with one thickness of this paper.

Mr. Beach then proceeded to explain the method adopted, by means of diagrams of the apparatus which he had drawn on the blackboard.

In reply to a question by Mr. Roberts, Mr. Beach said that Mr. Loudon sensitized his emulsion by boiling twenty minutes, and also used ammonia.

Mr. Newton: I judge, from the fact of this process being given, that it is presumed that some of our amateur photographers will be likely to try the experiment of making their own plates. There are one or two things that are well to know in reference to mixing your compounds to form the finest texture of emulsion. A year ago now, when the weather had become rather warm, one of our manufacturers of dry plates came to me and said he had met with great difficulty since the warm weather commenced, on account of his emulsion curdling when he mixed the solid gelatine and silver together. The curdling of the solution frequently occurs when the salts of silver are mixed with a solution containing a bromide and an iodide. It is somewhat difficult, and requires some knowledge and experience to mix a bromo-iodide, either in forming a collodion emulsion or a gelatine emulsion, but not nearly so much in the case of gelatine emulsion. One of the causes is the unequal proportion in a given quantity of emulsion of either one or the other, the silver solution or the salted solution. Supposing you have a quart solution of gelatine with your silver in it, and another quart with your salt solution. You commence to pour one into the other. At the commencement you have unequal proportions of the salt and the silver in that vessel at the same time. To avoid the curd, you should have them mixed as they go together. Take two funnels and introduce them through a cork in the neck of a wide-mouthed bottle, and pour your two solutions together, so that when they come together there is no excess of proportions of either at any time, and you will avoid the curd. I offer these suggestions that you may know how to put the two emulsions together so as to get the finest textural emulsion.

I would like to ask a question in reference to those paper negatives, so called, that were handed around among the members. I would like to ask if this is made on this paper, or has it been transferred?

Mr. Beach: It is made direct on the paper.

Mr. Newton: You said it had been oiled with castor oil. Now, I have tried oiling of paper with castor oil, and it is not a good thing. Any one who will look at the back of this paper will see what is going to happen; it will dry out and leave this negative unfit for use in a month. If they had left the oil off and used paraffine, or something of that character, or not used anything at all, it would have been better.

Mr. Beach: I didn't prepare the article myself, but I was told that it was made transparent by castor oil.

Mr. Newton: I presume that is so. I would like to show to the Society some negatives without anything added to clear the paper, and also some with paraffine. I experimented with all the vegetable oils and all the different kinds of wax, vegetable waxes, stearine, and everything you can think of, and I advise any one who desires to make paper negatives not to use oil of any kind. Of course, of all the vegetable oils that we know anything about castor oil is the whitest, and it is also the slowest drying; and that is the reason why it is the whitest, because it does not oxidize rapidly. But it will oxidize finally. It is just a matter of time, that is all.

Mr. Beach: They have a patent process of transferring the film to glass, and then when it dries taking it off so that it will be just the film by itself. Specimens of negatives of that kind were shown here last November.

Mr. Atkinson: I wish to say that I can endorse Mr. Newton's remarks. I have made paper negatives and have tried castor oil, and find it a decided failure. I have now some paper negatives 11 by 14, that I made transparent by paraffine. They have been made fourteen years, and they are as good to-day as the day they were made.

Mr. Newton: I have a number which I will be glad to show this Society that have

been made twenty years and haven't changed at all.

Mr. Beach: The next business will be the exhibition of tripods.

The Secretary then showed some apparatus which had been sent in for exhibition. The Scovill Manufacturing Co. sent their recent detective camera. This is covered with leather so as to be inconspicuous, resembling a sample case. The shutter is easily set from the outside, and none of the machinery is visible until the whole is turned over, when are seen the release, the regulator for varying the speed of the shutter, and also the index and register for focussing at certain distances without looking at focussing screen; also a screw which allows the lens to be taken out and removed, to be used for other purposes, when desired. There is also a plate to receive a binding screw by which the camera can be used on a tripod for making time exposures. To aid in this purpose a ground-glass focussing screen is supplied, which slips one side when the slide is inserted, but is not detached. There is an aperture in the rear end of the box through which the focussing screen can be seen and the picture arranged, when used in this way, for time exposures. For other exposures there is a supplementary lens and small screen, as usual. Six holders may be packed in the box.

A tripod, called the "Fairy," sent by Messrs. E. & H. T. Anthony & Co., packs up into very small compass. It is in four lengths, so hinged together that, when folded, it can be packed in a trunk or good-sized valise.

Anthony & Co. also sent an example of the "Schmidt" detective camera, with latest improvements, consisting of a regulator to change the speed, and an arrangement for setting the shutter from the outside by pulling a knob; also having the auxiliary lens and screen lower down in the camera than usual.

Mr. E. M. Rogers, of Brooklyn, showed an arrangement for obtaining dissolving effect with a single lantern; a travelling, double-slide carrier is pushed from side to side by the hand. Attached by a pivot, under this moving frame, to the permanent frame, is a grooved wood wheel, about 2½

inches in diameter. Fastened to the wheel is a frame of wire, covered with tissue-paper or gelatine. A cord runs from the lower side, at each end of the travelling frame, under the wheel, on the bow-string principle. By pushing the travelling frame to the other side, the cord automatically rotates the wood wheel, which at the same time brings the attached screen up in front of the slide, and cuts off the picture during the change.

Dr. R. Van Gieson, of Brooklyn, N. Y., showed a plate-lifter, made of metal, which held a plate clamped between its spring jaws, and which facilitated the transferring of a plate from one dish to another without dipping the fingers in the solutions. He also exhibited a drop-shutter, having a flat spring attached to the upper part of the slide, so arranged as to break the force of the shock on the lens caused by the fall of the drop, which he thought might in time prove hurtful to a valuable lens.

Mr. Beach: The next thing in order is the consideration of the Constitution which has been submitted by the Executive Committee.

Mr. Newton: I move that the consideration of the Constitution be postponed until the special meeting, which will probably be on the evening of the 19th of June.

Dr. Janeway: By Mr. Newton's permission, I will amend his motion by adding that when this meeting adjourns it adjourn until the 19th of June, at eight o'clock.

Mr. Newton: I accept the amendment.

Mr. Rogers then announced to the Society that an electric light was in process of manufacture for use for lanterns and would soon be ready for exhibition, and asked if any one knew the power of the oxyhydrogen light.

Mr. Rockwood replied that it averaged 350 candle power.

The meeting then adjourned until Friday, June 19, 1885, at 8 o'clock.

THE PACIFIC COAST AMATEUR PHOTOGRAPHIC ASSOCIATION.—Regular monthly meeting held May 7, 1885, at the Association rooms, No. 318 Pine Street, Vice-President Lowden in the Chair.

After regular routine business, Mr. Lowden exhibited a new instantaneous shutter,

the work of Mr. McConnell and himself. Many of the members considered this shutter nearer perfection than any yet exhibited. As the P. C. A. P. A. makes a specialty of "instantaneous" work, the subject of shutters is always a leading one.

Without diagrams it would be impossible to describe Mr. Lowden's shutter. These diagrams I hope soon to obtain, and will endeavor to forward them in my next letter.

On this subject I must mention an ingenious invention of Mr. McConnell's, exhibited a short time ago, nicknamed the "Butterfly," a revolving shutter built on the middle "stop" of a No. 1 Darlot hemispherical lens. So delicate and minute are the different parts, that it was not necessary to enlarge the slot in the lens, but the stop, shutter, and all slip neatly into place. Some exquisite little pictures have been made with this shutter on 4 x 5 plates.

Mr. Tyler exhibited a set of fifty instantaneous views taken with an Anthony novel half-plate camera, a No. 2 Darlot lens, half inch stop, and Passavant's C. 2 P. plates; exposure one-one-hundredth of a second. Mr. Tyler travels to and from his home in Alameda every day on the ferry boats crossing San Francisco Bay, and the negatives from which these pictures were made were all taken in transit. No tripod was used but the camera held in the hand, and the exposure made with a very simple but rapid drop, working behind the lens. None of the negatives have been doctored or intensified, and they are all sharp and brilliant. When it is remembered that these negatives were taken in the month of April, at from 8.30 to 9 o'clock A. M. and from 5 to 5.30 P. M., and many of them under a very cloudy sky, the results must be considered remarkable. Truly photography has made vast strides when a busy business man may leave his home in the morning, carrying a little light hand bag, make half a dozen exposures on his way to business, develop in the evening, print and tone on Sunday, and at the end of a month have fifty artistic and interesting pictures to show for his pains, without losing a single minute of his working time.

It is with a great deal of pride that I announce the fact that the artists of San Fran-

cisco have at last become enthusiastic over photography, and we expect to count at least a dozen of them among our members before the year is over.

At first they scoffed at the idea of photography being able to help them. "Mechanical," "unprofessional," "inartistic," said they. At last they are convinced, and now some of the men who were the greatest scoffers, have become wildly enthusiastic. This is right and proper, and we shall not be envious, though they leave us far behind in the production of photographs that are "pictures." Technically perfect as we may be, we can never hope to obtain the cultivated artistic sense of these artists, and though their negatives and prints may not equal ours in tone, in detail, and in brilliancy, yet there is an indispensable something about them which distinguishes them from the work of a mere photographer.

Perhaps I am straying from my subject, as I started in to write a simple report of a meeting of the Association, but there are so many things photographic to write about that my pen is determined to stray.

Dr. Passavant, after the close of the business meeting, delivered a lecture upon carbon printing,* showing the practical workings of the single and double transfer process. I enclose a report of the lecture, which you may make such use of as you see proper. After a vote of thanks to Scovill Mfg. Co., THE PHILADELPHIA PHOTOGRAPHER, and the *Amateur Photographer*, of London, for favors received, the meeting adjourned.

W. B. TYLER,
Cor. Sec. P. C. A. P. A.

CHROME ALUM IN SILVER SOLUTION FOR ALBUMEN PAPER.

THE question will be asked, Of what use is it there? The answer to this is, it allows a much weaker solution of silver to be used, equalling one in which almost twice the amount of silver has been used to produce the same result, viz., brilliancy and the absence of softening of albumen on paper silvered on weak solutions of silver at low temperature. But as it gains here it also increases the tendency to blister; but this

can be avoided by the use of ammonia in hypo, and also in the salt bath after the hypo; also by not taking them out of the salt bath, but letting the water into the salt bath gradually. Paper (silvered on this solution) one day old becomes very difficult to tone unless a very large amount of alkali is used in the toning bath, the action of the alkali being to soften the now insoluble albumen and allow its being toned. I add the formula, that has worked well on the brilliant albumen papers in the market:

Nitrate of silver, . . .	437½ grains.
Water,	12 ounces.
Nitric acid,	3 drops.
Chrome alum,	5 grains.

After silvering twelve sheets upon this solution add the same amount of silver solution, composed as given. By experience it has been found that one ounce of silver will silver one dozen sheets of paper. By doing this constant good prints are obtained, and poor ones when this is neglected. Chrome alum added to an alkaline silver solution will be precipitated. Its good effects are to be had only from an acid silver solution. Hoping this may be a benefit to your readers,

I am yours,
BELL, PHOTOGRAPHER,
Philadelphia, Pa.

OUR PICTURE.

THE great amount of actinic force in the electric light early suggested its value as a means for photographic illumination. Various means have been successfully devised to secure beautiful results, involving elaborate machinery and appliances, so that special studies of lighting may be made as well by night as by daylight. But it is not often that such excellent results are secured, without any special arrangement in the distribution of the light, as have been obtained in the picture with which we present our readers this month.

It represents a view of a portion of the beautiful horticultural exhibition at the World's Fair at New Orleans. The fountain, with its numberless jets and clouds of spray, is finely rendered.

One curious effect will be noticed. The most brilliant portion of the electric arc is

* See page 200.

rendered darkest in the photograph; the intensity of light there centered has had a reversing action, and a positive has been produced upon the glass instead of a negative.

The prints are made upon the celebrated N. P. A. brilliant albumen paper, furnished by E. & H. T. Anthony & Co., 591 Broadway, N. Y.

VICISSITUDES OF GELATINE.

BY RANALD DOUGLAS.

In a former article I have spoken of spots. Further experience induces me to speak again on the same subject. Repeated experimenting has convinced me of the correctness of my observation that the keeping of emulsion before use tends to do away with spots, besides it favors uniformity of sensitiveness from edge to edge. Take fresh emulsion and coat a plate and dry it and try it. You will probably observe that it works somewhat irregularly, and that those parts that were slowest to dry are the most sensitive. By keeping the emulsion the strain is taken off and it dries evenly. I think nothing of giving my emulsion a full month to ripen. I always put in a few drops of carbolic acid and a little alcohol, to prevent decomposition. The alcohol must be of standard purity, for inferior alcohol contains fusel oil, which is detrimental to the purity of the emulsion.

The best way to avoid spots or scum markings, is by carefully skimming the gelatine solutions, after allowing them to stand, say ten minutes, before adding salts and silver. By allowing gelatine to stand it will be seen that scum collects on top, which, if permitted to remain, will certainly spoil the emulsion. As far as my observations go, it makes no difference whether emulsification is carried on at a high or a low temperature; these spots will come or not all the same. Washing has no difference either. Skimming and ripening do the work very effectively.

It seems now many makers simply polish the glass instead of using a substratum. Unless the polishing is carefully done, it certainly gives lines and streaks on plates, as though they were scratched especially on strippers. Why not use silicate of potash? It is easily applied, cheaper than albumen, and

the emulsion flows over a silicate substratum as easily as varnish does. I have never observed a reappearance of old picture with the new one on plates thus treated.

The practice of packing plates between separators cut out of poor quality straw boards is to be severely condemned. They contain substances injurious to the fine chemical composition in the plates, and give rise to insensitve patches and borders so often complained of. Plates packed with separators cut out of good No. 1 photographic boards do not seem to spoil, at least not in my experience. Alas! for all warning voices we can raise, it seems the manufacturers only laugh at us, and continue in the same old ruts, give us bad separators, and think they know more than we poor consumers do (?). I hope to hear from others on the subject, so I close.

PHOTOGRAPHY AT THE NEW ORLEANS EXHIBITION.

(Continued from page 172.)

THE scenery in Watkins' Glen is also carefully attended to by ten 8 x 10 views of excellent quality, of which the photographer need not have been so ashamed as to refuse to give us his name. The walls of the New York headquarters are decorated with a large collection of photographs of public buildings of New York and Albany, and a large series of interior views of the residence of a New York millionaire, photographed by F. L. Howe, of New York. The Notman Photographic Company, of Albany, N. Y., are represented by a frame of views of one of the collegiate institutions of the State. This same Company exhibit their combination picture of the members of the Senate and House of Representatives of New York; also a fine series of the Capitol at Albany and other public buildings, interior and exterior, which are very fine. Mr. F. L. Howe is again made useful by the exhibit of a series of views of the Camp of Instruction of the National Guards of New York. Vassar College makes a fine display of photographs, probably by some of the students, of the various departments of its work, the library, the chapel, the art gallery, the studio, the dining room, the

museum, the observatory, and various other views of the college. In one of the views of the observatory, in a group, is a fine portrait of Miss Maria Mitchell, the veteran astronomer. The quality of these photographs is admirable. The educational institutions of New York, and their various departments, make a fine display of their buildings, and of their professors, by means of a series of heliotypes, or phototypes, made by _____.

New Jersey. In the New Jersey department we find photography used to explain to the interested public the advantages of the watering places of the New Jersey coast, the scenery upon its railroads, and the attractions of its colleges. Among the photographers who are made useful in this direction are Mr. J. Reid, Patterson, N. J.; Gilbert & Bacon, Philadelphia; Pach Bros., New York; W. C. Thomas, Vineland, N. J.; and R. Newell & Sons, Philadelphia. Some fine interior views of New York residences have crept into this section, made by Pach Bros., and are hard to beat. Some New Jersey "farm homes" are illustrated by two frames of fine photographs; the series includes over fifty views, but by whom they are made we know not. The New Jersey State Lunatic Asylum at Trenton, N. J., is finely illustrated also. Schrieber & Sons are again represented by a fine frame of photographs of Jersey stock, underneath which hangs a frame of portraits, by Pach Bros., of very excellent quality. Among these the portraits of Dr. Oliver Wendell Holmes and Professor Henry W. Longfellow are seen.

Pennsylvania. Pennsylvania employs photography to illustrate the features of her Indian Industrial School at Carlisle, Pa. Several frames are here containing views of the school, of classes, of the various apartments and departments, and the work of the pupils. One group of the students contains as many as two hundred Indian children. Choate was the photographer, at Carlisle, Pa. Near these we find a collection of views of cascades and waterfalls in Pike County, Pa. The manufacturer of "Ideal Tooth Powder" uses photography here very largely to illustrate the advantages of his manufactures. J. D. Harper, manufacturer

of carriages, employs photography for a similar purpose, and the Lehigh Valley Railway Co. is most liberal in its display of photographs of natural scenery along its route. Messrs Newell & Sons, of Philadelphia, exhibit several very fine views, exterior and interior, of Girard College; those of the dining-room, the iron and wood work departments, are very creditable. The Geyser Manufacturing Company, Waynesburg, Pa., illustrate their manufactures of farm engines, truck engines, sawmills, and farm machinery by means of photography, together with a panoramic view of their manufactory. The coal interests of Pennsylvania are very amply illustrated by photography. One view, 17 x 21, of a coal breaker, is a very fine photograph. The services of Mr. H. Frank Beidel, Shippensburg, Pa., are used to show us the beauties and advantages of the stock farm near his residence. The work is excellent. The scenery along the Pennsylvania Railroad is carefully attended to by Mr. F. Gutekunst, Philadelphia, in a long line of panoramic views, some of which are at least forty inches in length. Photography in this department of Pennsylvania seems to have taken rather an industrial turn, and we find that in this service Messrs. Smith & Nichols, Samuel McMullen, Jr., J. Reid, and R. Newell & Sons have been largely made use of. The Taylor Manufacturing Company, manufacturers of gauges, mills, and agricultural implements, also display a very beautiful series of photographs of their manufactures.

Maryland. The Western Maryland Railroad makes a fine display of scenery along its various routes, from negatives by Bachrach Bros., Baltimore, and H. Frank Beidel, Shippensburg, Pa. These vary in size from stereoscopic views to 14 x 17, and some of them are remarkably fine. Mr. W. H. Jackson, Denver, Col., is again called into service by the Baltimore and Ohio Railroad Company, and well has he responded. Some of his views here are simply magnificent. One of them, a sectional view, is nearly six feet in length. The work is magnificent, and in Mr. Jackson's best style. No people seem to understand better the advantages of photographic advertis-

ing than do the managers of picturesque railways; no people are more attracted by picturesque scenery than are the American people, and the railways well understand that if they can place pictures before people, they attack nothing with more avidity than that enterprise which is devoted to finding out the truths of photographs by actual inspection. Photographers are becoming so artistic now-a-days, and the public possess so little the faculty of seeing bits, that sometimes a view has to be fully explained before it becomes understood, lest the photographer should be mortified by hearing the exclamation, "Why, where is that?" The Baltimore Manual and Training School exhibits a series of four large photographs of its school, and of groups of the pupils. Harlan & Hollingsworth, car builders, display several frames of photographs of their most beautiful conveyances.

Delaware. Also in the Delaware section we find the manufactures of Messrs. Helles & Jones carefully photographed in a large series of photos.

Arkansas. Mr. F. F. Tyler and Calohan Bros., both of Eureka Springs, Ark., exhibit three frames of fine views of natural scenery and bits of the springs.

Missouri and St. Louis are not represented by photography in this building, as far as we can find. Neither is Alabama.

United States Government. We now leave the States departments, and come upon the United States collection of photographs found in the various exhibits of the United States Government. We start with the North, and meet, first, the collection from the negatives made by the Greely Arctic expedition, a series of views that has been frequently noticed in this magazine before, and is a most interesting one. It consists of the natural scenery of the country, groups of the natives, of the islands, of the coast, of the workings of the ill-fated crew, of their ships, dogs, groups of members of the expedition, and what-not, making a most sad but interesting series. Here, too, we see represented the steering gear, the sledge, scenes on the decks of the various ships, the church at Godhaven, loaded sleds, fish drying (an interesting scene), the toboggan sled, and

last, though by no means least, the photographer and his camera, his head under the focussing cloth, busily at work. In this collection, too, we see pictures illustrating the whaling interests of this cold northern country; implements, whale fishing and whale hunting. The saddest of all the scenes is a view of Camp Clay, where Greely and party were found, taken a few minutes after the discovery. The tent had been propped up by the officers of the "Alert" and "Bear." The apologetic note at the bottom of the picture says, "Picture badly taken owing to the severe gale blowing at the time." In keeping with this, close by is the funeral procession of Frederick Christensen. The whole series tells us more truthfully than anything else that photography can tell of the preparation, hardships, and endurance of men who, for the sake of science, risked life and all that is dear, and also how they sometimes pay the penalty by the loss of life.

Near these the Arctic expedition of 1869, by our good friend, Mr. William Bradford, the famous painter, is seen. A number of the original drawings of Mr. Bradford accompany this collection. Their general character is much the same as those of the Greely expedition, though not so numerous.

The United States Lighthouse establishment uses photography to show us the various lighthouse stations of our country from the Pacific coast to the Atlantic, and from the Lakes to the Gulf. Some of them vary very much from the typical lighthouse which we are accustomed to see, such as those on the New Jersey coast, where we find very pretty architecture. "The old Sandy Hook Lightship" is included in this series, and helps make up the interesting variety.

The United States Treasury Department exhibit the court houses, the post offices, and a very fine collection, not only of the complete buildings themselves, but of some of the details of architecture. The latter are exceedingly fine. Among them we see studies from the United States buildings at Memphis, Tenn.; Atlanta, Ga.; Boston, Mass.; St. Louis, Mo.; and Philadelphia, Pa. The photographer, as usual, is submerged by the architect, and his name is

not given, but the architect resorts to photography to make a display of his drawings, which have been very carefully photographed by some one, and make up a part of this collection.

The United States Department of Agriculture likewise employs photography to illustrate its buildings and grounds, and here the collection is not only a very interesting, but a very beautiful one. The views are splendidly taken, and are of the conservatories, library, sorghum factory, sorghum fields, weighing room, room of the botanist, various kinds of trees, flower gardens, terraces, lawns, nurseries, graperies, families of pond lilies, vineyards, and a large collection of the departments devoted to the packing and distribution of seeds, including various views of the seed building, of the microscopist, the laboratory, the folding room, the packing room, commissioners' room, museum, a hundred methods of stamping and packing seeds, and last of all the mail wagon, which carries the product of this great and useful establishment to the post office, whence it is distributed throughout the world. The collection devoted to trees, shrubbery, evergreens, etc., is a magnificent one, which displays skill on the part of the photographer in working instantaneous plates equal to that of the photographer in the Zoo.

In the Patent Office Department of the United States, lying in among the myriads of models, is a fine collection of photographic copies of engravings of some of the old-time inventors of our country. We also see among these a life-sized portrait of our veteran and lamented friend, Henry T. Anthony, Esq., together with a number of other specimens of work by the Air Brush. Mr. T. W. Smilie, brave man, puts his name on his work.

The United States National Museum exhibits in this department a large series of enlargements, 50 x 80 inches, of the various public buildings of Washington, showing the Smithsonian Institution, Bureau of Engraving and Printing, Pension Office, Department of Justice, Treasury, and, in fact, all the principal public buildings of Washington, probably the largest solar enlargements ever exhibited. They are carefully

worked over, but are marvellous bits. At the end of the Patent Office Department is a frame similar to the one in the photographic section, by the Moss Photo-Engraving Company, New York, illustrative of the photo-engraving process practised by them. The negative, the positive, the plaster cast, the stereotype plate, and the electrotype plate, followed by the proof made from the finished plate, are all here. A large series of blue prints, illustrative of water works machinery, is also displayed here.

The United States General Land Office exhibit makes a larger use of photography than any other department. Here, again, our friend Mr. Jackson comes into service with a splendid series of views of the Rocky Mountains. Then we have other collections illustrating mining, quarrying, transportation, travel, the oil interests, and the topography of our country, almost without limit. A fine portrait of Prof. N. C. McFarland, Commissioner of the United States General Land Office, attracts our eye as we enter the doorway of this splendid department. Another one, of Dr. L. Harrison, Assistant Commissioner, hangs over the other doorway.

The United States Geological Survey and Bureau of Ethnology is also dignified and elaborated by fine collections of photographs. Mr. Jackson again comes into requisition, and from his negatives we see a magnificent collection of scenery in Colorado, Idaho, along the Southern Pacific Railroad and Central Pacific Railroad, Nevada, Arizona, etc. These illustrate bridge building, railroad construction, the natural scenery and geology of the country, its lakes, mines, canons, horns, and snow-clad peaks to perfection. The collection includes a copy of Mr. Thomas Hill's painting of the scene which occurred near "Promontory Point," Utah, May 10, 1869, at the junction of the Union and Pacific Railroads, called "Driving the Last Spike," a picture full of thrilling interest. What a country this is, and how little we should know about it were it not for blessed photography. The United States Geological Survey is certainly entitled to a premium for the best collection of transparencies that the world ever knew. Here, against the eastern windows of the

Government Building, is a collection of ninety-six transparencies, 27 x 33 inches, illustrating Indian life in Utah, Arizona, Colorado, New Mexico, etc. Here are not only groups of Indians of various tribes, but natural scenery, eroded rocks, adobe villages, grand canons, elk skin tents, roaring rivers, cave homes, lofty peaks, Indian transportation, natural monuments, cathedrals, cascades, and impregnable gates, which seem to be of another world, on such a magnificent scale are they. Thanks to the Creator of all these natural beauties, we are fully informed as to the photographer of the occasion, who is our talented friend, Mr. Hillers, of Washington. Mr. Hillers' grand composition group of "Two Old Boys" is unique, and a decided ethnological and entomological gem.

A series of about two hundred or more views illustrative of the fishing interests of our country, which it shows from the time the vessel sets sail for the fishing banks to the packing and shipping of the finished product. Here the homes of the fishermen, men hauling in their nets, the packing of fish, shipping glue, in fact everything that pertains to that important element of food for the market. Some pretty instantaneous views of fishing schooners are included in this series.

The Smithsonian Institution and United States National Museum have contributed very much to the artistic enjoyment of visitors to this department by the exhibition of a large collection of Braun's carbon prints of the works of art in the museums of Europe. Old familiar friends are found in this collection, such as we have studied in the Vatican, in the Museum of Florence, and in the Louvre. Added to these is a collection of silver prints, from various sources, of the gems of the collections already named.

The United States Taxidermic collection is also materially beautified by a collection of photographs of animals and birds.

Coal mining is illustrated in the Department of Economic Geology by a series of 30 x 40 solar enlargements, which are of coal planes, slopes, interiors of coal mines, and drills, tunnels, drifts, inclined planes, coal railways, and machinery for breaking, assort-

ing, and loading coal, a very interesting series, taken undoubtedly by magnesium light, but by whom we are not told. Another series of views illustrates the quarrying of marble and building stone in various sections of our country, also drilling and tunnelling, together with machinery for use in salt and oil well boring, and the diamond drill for boring artesian wells. On the last named photographs we have made a happy discovery; we note the name of the photographer, Mr. C. F. Cook, of Wilkesbarre, Pa. Rolling mills, locomotives for the transportation of oil, coal, and other specialties are also illustrated in this section by means of photography.

Around the beautiful moresque building of the United States Post Office Department are lines of photographs of the post office building in Washington, interior and exterior; of the United States Government Post Office Building at the Centennial Exposition, 1876, interior and exterior, particularly the part showing the post office work there. Then there are photographs, without number, of groups of post office officials, attendants, letter carriers, etc. The photographs of the Foreign Post Office Buildings are also hung here. One very pretty photograph, by C. Lang, Chur, is of the post station at Chur, where some forty postal carriages are in line at each side of the building; a very excellent picture. The same may be said of the photograph of the "Voiture Postale," 1060, which reminds us of the old-time days when stage coaches were used. A very curious photograph of the post office at Bale, Switzerland, represents a curious case of distortion. The photographer has evidently erected a structure upon which to place his camera, and then, looking downwards, has taken his building almost diamond shape. Other photographs are of steamers, coaches, buildings, cabriolets employed on local routes, railway postal cars, and other equipments pertaining to the postal service. A very pretty group of the postmaster and staff of Nashville, Tenn., is here, and it is a pity that the name of the photographer should be hidden from the public because of his good work. The interior of the post office at Louisville, Ky., by our friend, J. H.

Doerr, is quite pretty, and a group of officials of the post office at Chicago is placed here by Mr. C. D. Mosher.

Then we have photographs of letter boxes, pouches, and other paraphernalia pertaining to this department, all of which go to show how useful photography is. Near the entrance of the building is the St. Louis post office group, very prettily mounted, with a photograph of the post office by our friend, J. A. Scholten. The San Francisco post office official group, however, takes the palm, not exactly because of the good photography of Mr. Nieman, but because of the very pretty and elaborate design by Eisenchiemer which surrounds it. The New Orleans post office group is embellished by a very pretty design by Annie M. Gulick, but she has forgotten to balance her own name by that of the photographer on the other side. "Pity 'tis, 'tis true."

(To be continued.)

GLEANINGS.

MR. BARKER has just given to the Photographic Association of London his formula for the preparation of positive paper with the chlorineted emulsion. He takes

Gelatine (Nelson & Coignet),	
equal parts of each,	175 parts.
Chloride of Ammonium,	16 "
Rochelle Salts (Tartrate of Pot-	
ash and Soda),	50 "
Nitrate of Silver,	75 "
Methylic alcohol,	120 "
Water,	2400 "

The salts are dissolved in water, then the gelatine is added; after this last has soaked a short time, heat and melt; the temperature should reach about 101° Fah.; then the nitrate of silver is to be added. The emulsion is kept at this temperature for ten minutes, before adding the methylic alcohol, after which the emulsion may be poured out to set. Very little washing is sufficient and, if necessary, it can be used without washing.

At the London Photographic Society a discussion arose in regard to the different modes of drying gelatine plates. Mr. Davids advised the use of a drying box in which there should be two inches of interval between the plates, so that there may be a free

circulation of air. Mr. Cadet uses a metallic box with a double bottom, heated by gas, for small operations, but for large ones, he says, nothing is better than a room heated by hot water. Mr. Debenham remarked that it is not absolutely necessary that the drying should be limited to from eight to twenty-four hours, as has recently been stated by a photographer. Mr. Spiller uses quicklime in the drying box as being better and more economical than chloride of calcium.

THE following formula for a rapid positive paper was recently communicated to the photographic section of the Polytechnic Society of St. Petersburg, by its secretary:

No. 1.

Nitrate of Silver,	100 parts.
Citric Acid,	100 "
Water,	1000 "

No. 2.

Chloride of Sodium,	35 "
Bromide of Potassium,	25 "
Gelatine,	40 "
Water,	1000 "

Mix the two solutions at a temperature of 140° Fahr., then add 250 parts of Heinrich gelatine, which has previously been soaked in water. When the whole is set pass it through canvas having openings of one-sixth of an inch; the filaments thus produced require but an hour of washing in running water. After washing, melt again and add two ounces of glycerine. The paper is now coated. It should be of a uniform texture and previously moistened.

MR. LEON VIDAL has just made some interesting experiments on the dissolving action of sulphocyanide of ammonium, either in the development of carbon points, or in the making of gelatine reliefs. These experiments were entirely successful. Without heat, sulphocyanide dissolves the mixtures of gelatine and coloring matter, such as are used in the carbon process; and in regard to the Woodburytype or other reliefs, a much more rapid result is obtained than with warm water alone in dissolving all the gelatine not acted upon by the light. It is interesting to note that the sulphocyanide of ammonium has no action whatever on the exposed bichromatized gelatine; there is

nothing, therefore, to fear for the delicate half-tones. This solution is considerably quickened by heating the bath. It is a curious fact that this product does not act in the same manner upon pure gelatine sheets. After an immersion of twenty-four hours in a 15 per cent. cyanide bath, a sheet was considerably swollen but not dissolved; the

addition, however, of a little warm water to the bath, sufficed to produce immediate solution, and the gelatine, immersed in pure water for the same length of time, was only half as much swollen. The present, therefore, constitutes a valuable resource for those who have to do with exposed bichromatized gelatine.

Editor's Table.

In our extract from the *Detroit Free Press* (Editor's Table), wherein comment is made upon the excellent photographic work of Mr. W. H. ALLEN, of Detroit, Mich., an error was inadvertently made by giving the place of abode of Mr. ALLEN at Grosse, Ill. The gentleman, in a pleasant and courteous letter, reminds us of the mistake, asking "Where is the place? Grosse, Ill., which seems to be nowhere, least of all in Michigan. Mr. ALLEN's residence is at *Grosse Isle*, Mich., a Detroit suburb, but his business and sale of the celebrated Suter Lens is carried on at Nos. 14 and 16 E. Larned Street, Detroit, Mich. We are sorry for the blunder, but are glad that we have just here an opportunity to speak of the wonderful properties of these lenses, which have an extraordinary depth of focus, a clearness of definition, and a rapidity of action, which leave nothing to be desired.

We have received a little pamphlet from Dr. CHARLES F. HIMES, of Dickinson College, Carlisle, Pa., setting forth the advantages to be derived from a sojourn with the Summer School of Photography, the second session of which is to be held this year from July 22d to August 5th, at Mountain Lake Park, a tract of over eight hundred acres of beautiful country in Garrett County, Md. Upon the east is the romantic Seventeen Mile Grade, upon the west the still more wonderful Cheat River Grade, with its magnificent scenery. A few miles away, at Eagle Rock, the edge of the plateau is gained and a broad outlook is given over the Potomac Valley, or in another direction, at the distance of ten miles, the summit of the loftiest range of the Alleghenies is reached, from which the country may be viewed over a radius of thirty miles. Abundant facilities are offered for excursions to these points at trifling cost. The school is under the direction and control of Dr. HIMES, who is an amiable scientific gentleman thoroughly

versed in all the details of the science—a most efficient instructor. The school offers every facility to those desirous of gaining proficiency.

All inquiries for information in regard to the Summer School of Amateur Photography, and all applications for admission to the School, should be addressed to MOUNTAIN LAKE PARK ASSOCIATION, Box 434, Baltimore, Md.

We have received a leaflet from Messrs. BUCHANAN, SMEDLEY & BROMLEY, the enterprising stockdealers of this city, announcing that they have succeeded in securing reduced rates for the fraternity to attend the great Buffalo Convention via the beautiful Lehigh Valley route. Through express trains leave Ninth and Green Streets, Philadelphia, at 9 A.M. and 8 P.M. Round-trip tickets from Philadelphia \$9.00; tickets good for fifteen days (July 10th to 25th, inclusive). Orders for tickets on the Lehigh Valley R. R. Co., 836 Chestnut Street, Philadelphia, at these special low figures, can be secured only by applying to the above firm, 25 N. Seventh Street, Philadelphia.

PICTURE RECEIVED.—From Mr. W. H. KIBBE, Johnstown, N. Y., several views of animal life, remarkable not only for the technical qualities of the photographs, but also for their novelty and artistic excellence. One in especial, representing a woodcock seated upon its nest surrounded by shrubbery, bears witness not only to Mr. KIBBE's good taste in selection, but also testifies to the marvels which modern dry plates can achieve. We have also received from Mr. A. E. RINEHART, of Denver, Col., a series of artistic portraits, including many choice renderings of child-life subjects. Mr. RINEHART has caught the peculiar individuality of his sitters, making his portraiture especially valuable to the artist. In technical quality they stand very high, being pervaded with a breadth of rich modulation of tone, and a harmonious blending

of lights and shades which make it a pleasure to look upon them.

We have received from Mr. H. A. HYATT, St. Louis, Mo., a circular announcing that arrangements have been made with the Bee Line Route for transportation of photographers to the Buffalo Convention at the low rate of \$18.25. Tickets good on any train from July 12th to 14th inclusive, and return till July 31st. Should the number going at any one time be sufficient an elegant palace sleeping car will be at their disposal; tickets \$4.00 extra. Any further information desired will be furnished by the committee.

Mrs. T. H. FITZGIBBON,
G. CRAMER,
R. BENECKE,
Committee.

We are in receipt of the Constitution and By-Laws of the Sixth Annual Convention of the Photographers' Association of America, to be held at State Arsenal, Buffalo, N. Y., July 14th to 18th, inclusive.

BROTHER PHOTOGRAPHER:

In order that the Sixth Annual Convention at Buffalo, 14th to 18th of the coming July, may be the grandest ever held under the auspices of the P. A. of A. it will be necessary to spend quite a sum of money in fitting the splendid hall (State Arsenal) to render it complete for our purpose.

It is therefore desirable that members remit their annual dues that the officers may be kept in funds to meet current expenses as they arise. Those who remit their dues will, by presenting their receipt at the office of the Treasurer, immediately receive their badge, whereas if you wait until you arrive at Buffalo your account must be looked up, your money entered to your credit, and a receipt written while you and hundreds of others are waiting, which consumes much valuable time, therefore remit at once and benefit yourself and oblige

Yours truly,
G. M. CARLISLE,
Treasurer.

PROVIDENCE, R. I., April 10, 1885.

BOOKS RECEIVED.—From SCOVILL MANUFACTURING Co., Series No. 18, entitled *The Studio and How to Use It*, by Mr. H. P. ROBINSON, of Tunbridge Wells, England. The name of ROBINSON is sufficient endorsement for any book on photographic literature, and we are not surprised in finding the contents such as are of great practical value to the profession. The long and varied experience of the author in studio work and the construction of studios, is given with

his characteristic freedom, and in his peculiar pleasant and concise style. The chapters on posing and management of the sitter are full of new ideas, and contain many valuable hints for securing artistic effects. What we especially like in Mr. ROBINSON'S methods is the great amount of freedom and unassumed grace which he secures in his arrangements of individuals and groups. They do not seem to follow any special or preconcerted plan, notwithstanding he gives explicit directions for posing and arranging. Coming from a practical man who also possesses a high degree of artistic feeling in all that he portrays, there are no abstruse theoretical principles, no doctrines of the "subtle luminosity of backgrounds" or of the objectivity and subjectivity of photography, about which photographers care nothing. We cheerfully recommend this little book to everyone desirous of gaining a practical method for securing the best results in posing and lighting the subject. From Prof. CHARLES F. HIMES, of Dickinson College, Carlisle, Pa., a pamphlet containing his lecture on actinism, delivered before the International Electric Exhibition, held in this city in October last. Prof. HIMES, in his usual lucid style, clearly sets forth all the recent investigations in this important branch of physics, which have such a practical bearing upon photography.

We recently had the pleasure of seeing a number of beautiful portraits painted upon porcelain in oil colors, the work of Mr. D. SCANNEL, of this city. They are remarkable for the softness of finish and the artistic manner with which the lights and shades are blended. The colors are also harmoniously chosen, and altogether the effect is exceedingly pleasing, and they present all the appearance of a finely executed porcelain, which has been rendered permanent by firing, and we are assured they are as durable. We are informed that Mr. SCANNEL has secured space at the Buffalo Exhibition, where photographers may have an opportunity of seeing an excellent display of his work.

We hail with pleasure the advent of a new photographic society, the Pittsburg Amateur Photographic Club. We learn that appropriate rooms for practical work are being fitted up at 59 Fourth Av. The following are the officers:

President.—Mr. A. S. MURRAY.

Vice-President.—Mr. J. A. BRASHEA.

Secretary.—Mr. N. S. BILL.

Treasurer.—Mr. W. E. VON BONNHERST.

The value of photographic societies in the advancement of the science cannot be too highly appreciated. The freedom in the interchange

of ideas, and the stimulus given by the comparison of individual work, have a very beneficial effect. The publicity which is given to the thoughts and discussions tends to increase the knowledge and widen the interest of the whole fraternity, both amateur and professional. We extend a hearty welcome to this new limb of the great body photographic. The Secretary's address is Mr. W. S. BELL, 66 Fifth Avenue, Pittsburg, Pa.

AMERICAN PHOTOGRAPHERS.—Among the various conventions which are slated for Buffalo during the present year, none is of more importance or greater general interest than the sixth annual meeting of the Photographers' Association of America, which will be held here from the 14th to the 18th of July inclusive, and it is confidently expected to be one of the most successful in the history of the organization.

In conversation with a reporter of *The Courier* last evening, the President, Mr. J. LANDY, of Cincinnati, said that "these meetings serve to demonstrate to the public the importance of photography, the progress that is being made in improvements connected with the business, and the really artistic effects that are obtained." Interesting papers of practical value will be read by eminent members of the profession, including prominent English photographers, and a very novel feature will be a lecture on lighting and posing, by Mr. LAFAYETTE W. SEAVEY, of New York, who will use a model in demonstrating the truth of his argument. Some idea may be gained of the number who will probably be present from the fact that thirteen hundred delegates attended the convention held at Cincinnati a year ago. It is not unlikely, Mr. LANDY says, that many more will come to Buffalo, because this city, he thinks, is one of the most delightful and conveniently situated for convention purposes. With its natural attractions, cool evenings, splendid park and beautiful drives, and Niagara Falls at its door, about to become a free resort for the world, there is every inducement for public bodies to come here for their annual deliberations. More than that, the hotel men are liberal in special rates, and to this is to be added another fact, Buffalo's importance as a railroad centre, it being readily accessible to people from all parts of the country, more so than any other large city that Mr. LANDY could name. The photographers will have an extra attraction offered this year, and that was the demonstration to take place at Niagara Falls on the second day of their convention. On that day no

business will be transacted, and the Association will go in a body to the Falls. A special train is to be run to Buffalo from Chicago for the accommodation of the western delegates.

The business sessions are to be held in the drill-room of the State Arsenal on Broadway, while the new drill hall will be utilized for the exhibition. This will doubtless rival any previous display ever made, and the interest taken in it by the photographers, manufacturers of supplies and others, is shown in the fact that but little space is now available for exhibits. A wonderful showing of fine photographs by leading artists, among them the celebrated Sarony, is expected, and especially interesting will be those from foreign countries, including Germany, giving the public an opportunity of seeing what kind of pictures are made abroad. Then there will be elaborate exhibits of chemicals, appliances, apparatus, papier-maché work, etc.

The Recording and Local Secretary of the Association is Mr. H. McMICHAEL, of this city, upon whom has devolved the labor and responsibility of making all the arrangements for the Convention. The able and satisfactory manner in which he has discharged his duties is thus chronicled by the PHILADELPHIA PHOTOGRAPHER:

"The success of any enterprise is almost entirely dependent upon the ability with which it is managed by those who have it in control. Even under the most favorable circumstances, lack of energy or skill on the part of those who are appointed to conduct the scheme may turn every well-meant effort into a stumbling-block. But when a man of energy undertakes to guide the affairs, even obstacles are made the stepping-stones to success. We rejoice that we have such a man for our coming Convention at Buffalo, as Local Secretary, Mr. H. McMICHAEL.

"We are confident that this Convention will be the pole-star for all further conventions. In the face of all objections, the reproach of bad management of the last convention, and the dissatisfaction of the whole profession, Mr. McMICHAEL inspired his hearers with confidence, and won their promise to aid in the good work. But not this alone. After all the details of arrangement had been completed, and the space of six thousand feet laid out, the place in which it was intended to hold the Convention (Music Hall) was burned. Nothing daunted, Mr. McMICHAEL, with characteristic energy, received at once (within forty-eight hours) permission from the State authorities to occupy the State arsenal for the purpose."—*Buffalo Courier*, June 8, 1885.

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ADVERTISING RATES FOR SPECIALTIES.—Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to *secure* insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement. **Postage-stamps taken.**



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designs all climes and conditions can be
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as good as new, at half price. Trees, Walls,
Balustrades, Garden-seats, Gates, etc., in
stock for immediate shipment. Call and
inspect our show-room.
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Studio, 216 E. Ninth St., N. Y.

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AND

ACCESSORIES,

REMOVED TO 68 WEST FOURTH ST.,
4 BLOCKS WEST OF BROADWAY, N. Y.

My new studio is fitted up with all the modern improvements, and the most refined demands from a critical public can be satisfied. A visit to my establishment, which has the largest showroom, containing the greatest amount of stock of any place in the world, will be gratefully appreciated.

I have again added numerous new designs to my great variety of patterns for *backgrounds* and *accessories*, and keep also in stock a large quantity of goods for parties to select from, saving time and delay on orders.

ROCKWOOD SOLAR PRINTING CO.

17 Union Square, New York.

TIME.—It is our intention that every order received in the morning's mail (when not to be put on stretchers) shall leave this establishment the same day or the following morning. If too late for the morning work, it is sent on the second day. Having our own engine and electric light, *we are not at all dependent on the weather.*

GEORGE H. ROCKWOOD,
Business Manager.

VOGEL'S PROGRESS OF PHOTOGRAPHY, LATEST—BEST—\$3.

EVERY photographer in want of excellent lenses, for *any purpose*, will best serve his interest by consulting the new illustrated price-list of Messrs. BENJAMIN FRENCH & Co. before purchasing.

ADDRESS T. W. POWER, N. Y., Secretary of Association of Operative Photographers of New York City, for operators, printers, and retouchers, 392 Bowery, or 487 Eighth Avenue.

Vogel's Progress of Photography, LATEST—BEST—\$3.

No. 18. WAYMOUTH'S **No. 18.**
VIGNETTE PAPERS,

The old form of No. 18, Waymouth's Vignette Papers, oval, has been discarded, and a *new pear-shaped* style is now ready in its place. It is a beautiful piece of gradation and prints perfectly. Price \$1.25 per dozen. For sale by all dealers. See advertisement for all sizes.

No. 18. NOW READY. **No. 18.**

PORTRAITS IN CRAYON.

The new book by E. Long, on the art of making portraits in crayon on solar enlargements, covers the entire ground, and is sold for the low price of fifty cents. For sale by

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No. 26 GILT BEVELLED-EDGE CARDS.

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	Each.
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FOR SALE.—A first-class photograph gallery in a growing southern city of 12,000 inhabitants. Everything first-class. Good reasons for selling. The only gallery in the city. Address

A. M. I.,
care BUCHANAN, SMEDLEY & BROMLEY,
25 N. Seventh Street, Philadelphia.

FOR SALE.—Stuart's studio, 186 Seneca Street, Buffalo, N. Y. Good location; good business. Write for particulars. Will sell half interest to right party. The above-named studio is doing a good paying business, Address

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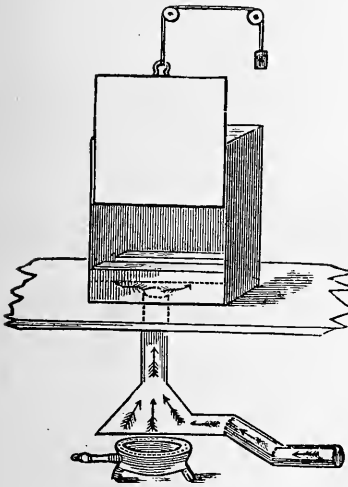
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All about emulsion work and plate making—a whole big chapter. See index.

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Gunnison, Col.

WANTED, OPERATOR.—First-class man, chiefly for posing. None but first-class need apply. Send samples and state salary expected. Address

A. HAUSHOLD,
514 Market Street,
Pittsburg, Pa.

AN opportunity to purchase the finest gallery in western New York is open for some one desiring a location and business. The gallery is spacious, well furnished, is in the choicest spot in the city of Buffalo, and has a long lease. To be appreciated it must be seen and examined. Special advantages can be gained in the way of printing and finishing. Price \$1000. Messrs. Tucker & Co., stockdealers, have kindly allowed us to use their names as reference. Address

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In a copying house by an experimental photographer, equal to all demands peculiar to trade work. Rapid, even worker. Correct likenesses, fine finish. Can furnish air-brush and operate successfully on small and large work. Address J. S. Hunter, Philadelphia, Pa.

By a young lady, to retouch and do crayon work. Has had nine year's experience, and can come well recommended. Address H. L., 663 Superior Street, Cleveland, Ohio.

By a first-class printer and toner; active, temperate, and capable. Best recommendations. Address Charles E. Pearsall, 184 Washington Street, Brooklyn, N. Y.

As operator, by a competent young man, who can also print, tone, and retouch. Eastern or Southern States preferred. Address William S. Nelson, care C. T. Pomeroy, 30 East Main Street, Rochester, New York.

As operator, by young man well up in dry-plate work, either indoor or out. First-class certificate from Gresham College of Photography, London. Address H. Paterson, care Mr. R. Souter, 54 Twelfth Street, Norwich, Conn.

By an experienced operator, whose experience has been in leading establishments. Proofs offered and correspondence invited. Address William Hamilton, Hyde Park, Mass.

As operator, by a practical photographer of twenty years' experience, most of which was in business for himself. First-class in portraits or views, the latter preferred for the summer. Can furnish 8 x 10 and 11 x 14 outfits. Address Practical Photographer, 1120 Sixth Street, N. W., Washington, D. C.

By a gentleman. Address C. C. Clark, Nile New York.

In a good gallery, by August 1st, as printer, retoucher, and general assistant, by a young man of steady habits. Address W. B. Todd, Box 249, Salamanca, New York.

With a travelling photographer, by an experienced printer, who can assist in retouching and printing. Address Photographer, 654 West Baltimore Street, Baltimore, Md.

By a young lady as retoucher and printer. Best of reference. Address Box 169, Ashtabula, Ohio.

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5 x 7 " "	1 0o	17 x 20 " "	12 0o
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GENERAL AGENTS FOR THE SALE OF MATERIALS.

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- 7. *Cabinet, lady (¾ length).*
- 8. *Cabinet, lady (bust).*
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EVERY EMULSION GUARANTEED. COATED ON BEST ENGLISH GLASS.

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3¼ x 4¼,	\$0 45	\$0 45	8 x 10,	2 40	2 30
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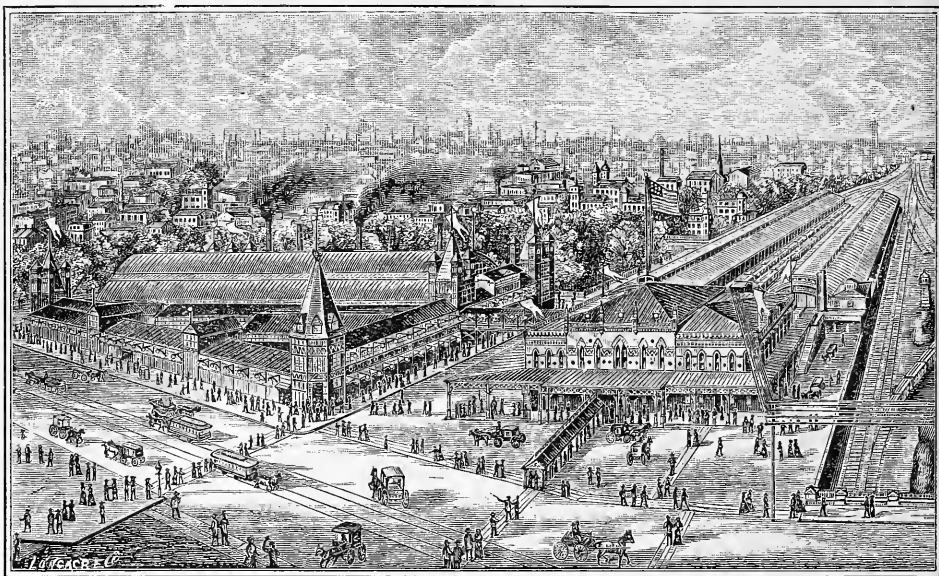
The last chapter is on a subject entirely new and fresh, and is finely illustrated.

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5 x 7,	1 75	10 x 12,	5 00	18 x 22,	24 00

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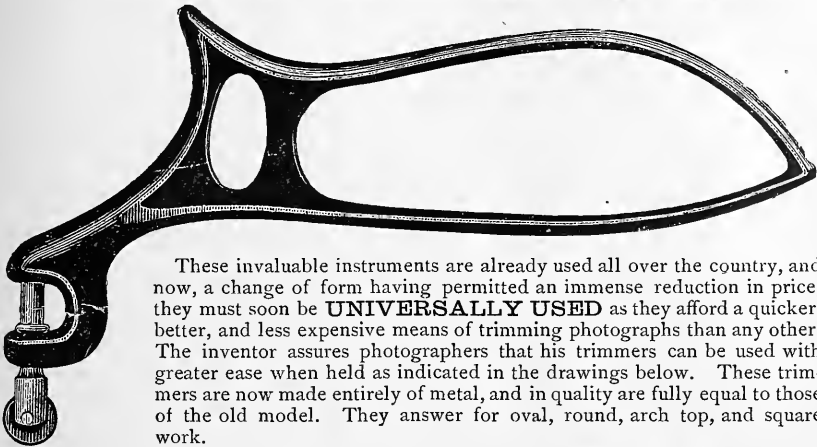
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194 Worth St., New York

720 (5 gross) of these trimmers were sold to one party in July.

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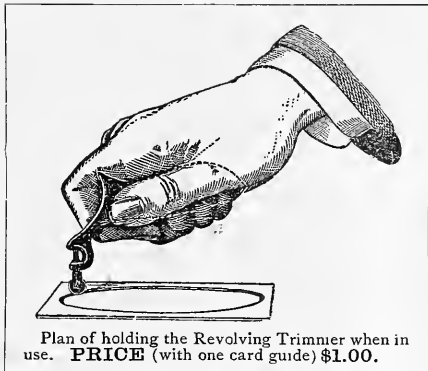
This drawing is of the full natural size and shape of the New Model Revolving Trimmer. The Straight Cut is of same size, varying but little in shape.



These invaluable instruments are already used all over the country, and now, a change of form having permitted an immense reduction in price, they must soon be **UNIVERSALLY USED** as they afford a quicker, better, and less expensive means of trimming photographs than any other. The inventor assures photographers that his trimmers can be used with greater ease when held as indicated in the drawings below. These trimmers are now made entirely of metal, and in quality are fully equal to those of the old model. They answer for oval, round, arch top, and square work.



Plan of holding the Straight Cut Trimmer when in use. PRICE, 50 CENTS.



Plan of holding the Revolving Trimmer when in use. PRICE (with one card guide) \$1.00.

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2 x 4	3 x 5 ¹ / ₂	5 ⁵ / ₈ x 7 ⁵ / ₈	7 ¹ / ₂ x 9 ¹ / ₂
2 x 4 ¹ / ₂	4 x 5	5 ⁷ / ₈ x 7 ⁷ / ₈	7 ³ / ₈ x 9 ³ / ₈
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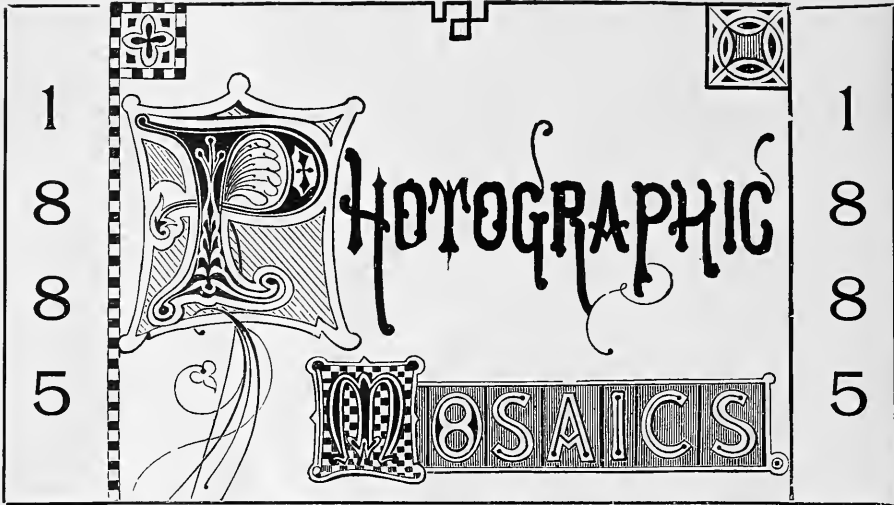
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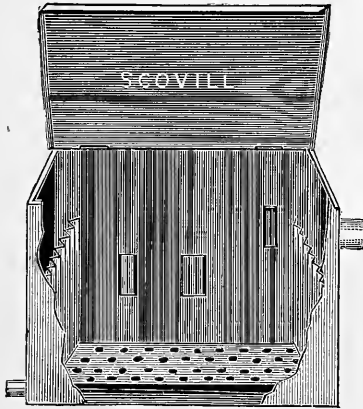
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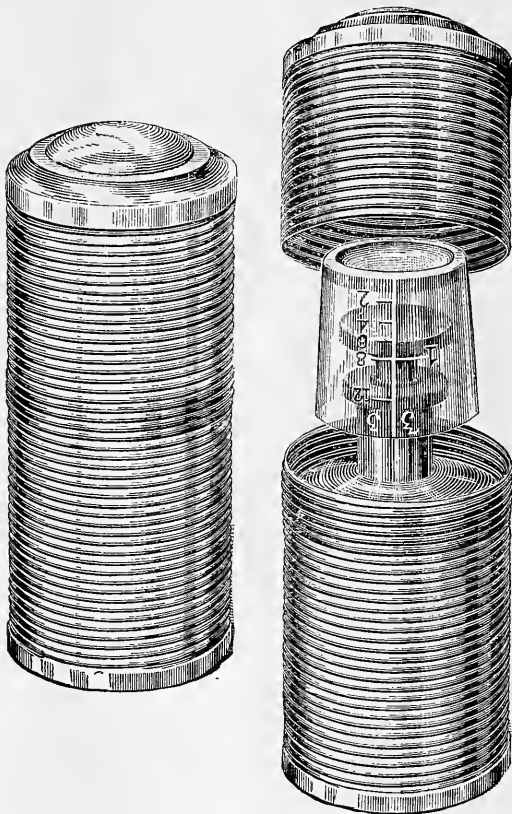
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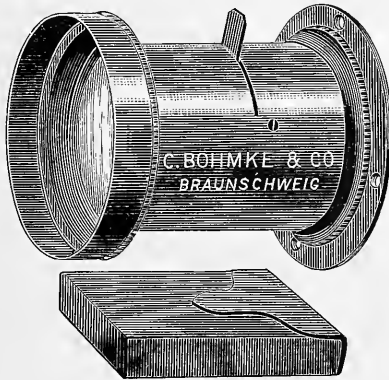
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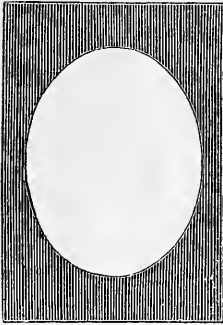
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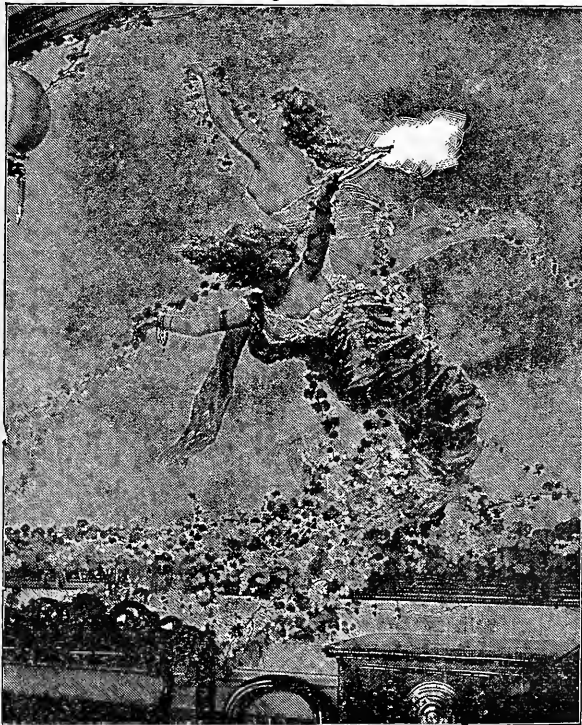
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<table border="0"> <tr> <td> <table border="0"> <tr> <td>New England, . . .</td> <td>21.5 per cent.</td> </tr> <tr> <td>Middle States, . . .</td> <td>24.1</td> </tr> <tr> <td>Southern States, . . .</td> <td>16.4</td> </tr> </table> </td> <td> <table border="0"> <tr> <td>Western States, . . .</td> <td>24.4 per cent.</td> </tr> <tr> <td>Canada, . . .</td> <td>8.3</td> </tr> <tr> <td>Foreign, . . .</td> <td>5.3</td> </tr> </table> </td> </tr> </table>	<table border="0"> <tr> <td>New England, . . .</td> <td>21.5 per cent.</td> </tr> <tr> <td>Middle States, . . .</td> <td>24.1</td> </tr> <tr> <td>Southern States, . . .</td> <td>16.4</td> </tr> </table>	New England, . . .	21.5 per cent.	Middle States, . . .	24.1	Southern States, . . .	16.4	<table border="0"> <tr> <td>Western States, . . .</td> <td>24.4 per cent.</td> </tr> <tr> <td>Canada, . . .</td> <td>8.3</td> </tr> <tr> <td>Foreign, . . .</td> <td>5.3</td> </tr> </table>	Western States, . . .	24.4 per cent.	Canada, . . .	8.3	Foreign, . . .	5.3
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Western States, . . .	24.4 per cent.													
Canada, . . .	8.3													
Foreign, . . .	5.3													

Thus giving the best means of advertising, and thus securing the best circulation among the active votaries of the art.

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For 1885 we have some useful schemes and novelties under way, which will be presented from time to time. Our old subscribers are asked to **renew now for 1885**, so that the January issue will reach promptly. **IT WILL BE A GEM.**

Contributions from both *Actives* and *Amateurs* are invited. Proceedings of Societies are very useful and should be sent promptly.

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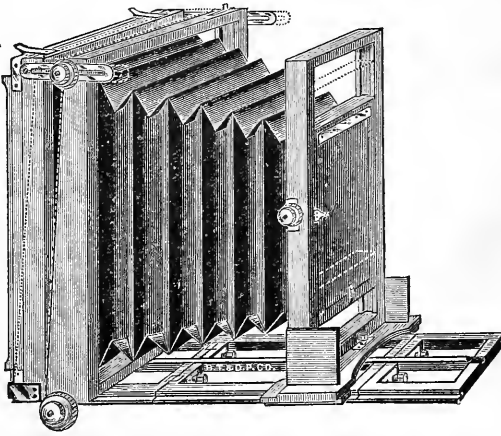
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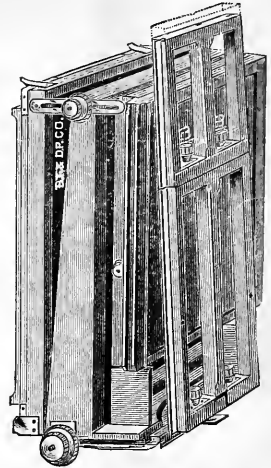
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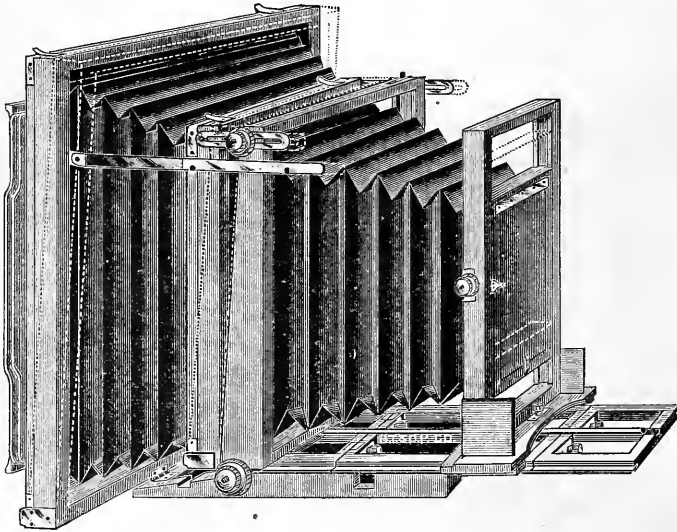
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22d YEAR.

AUGUST, 1885.

37

Number 260.

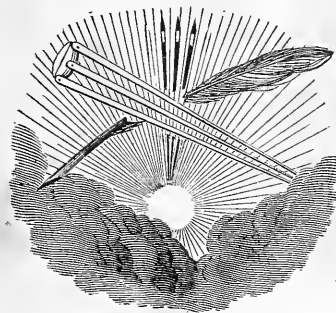
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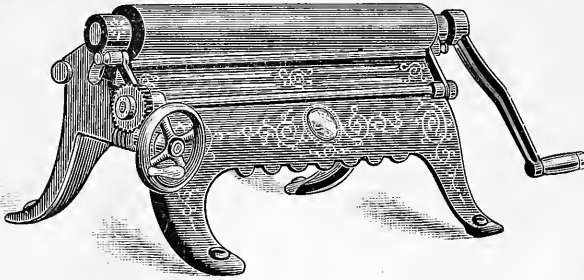
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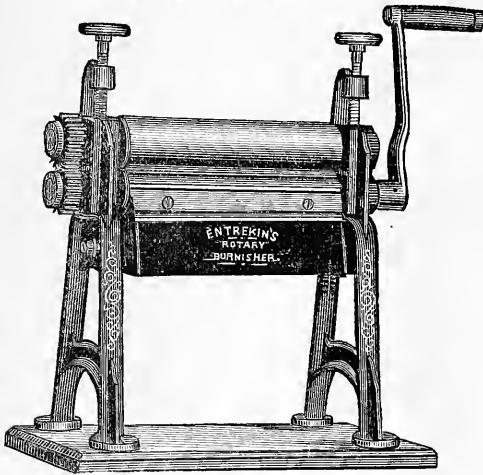
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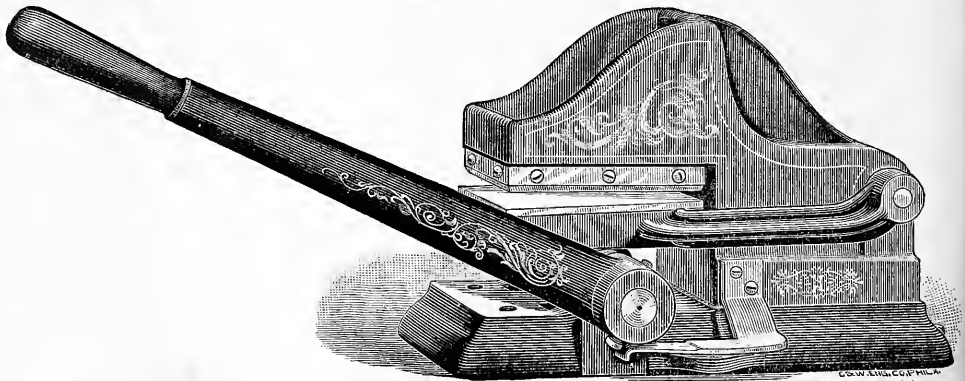
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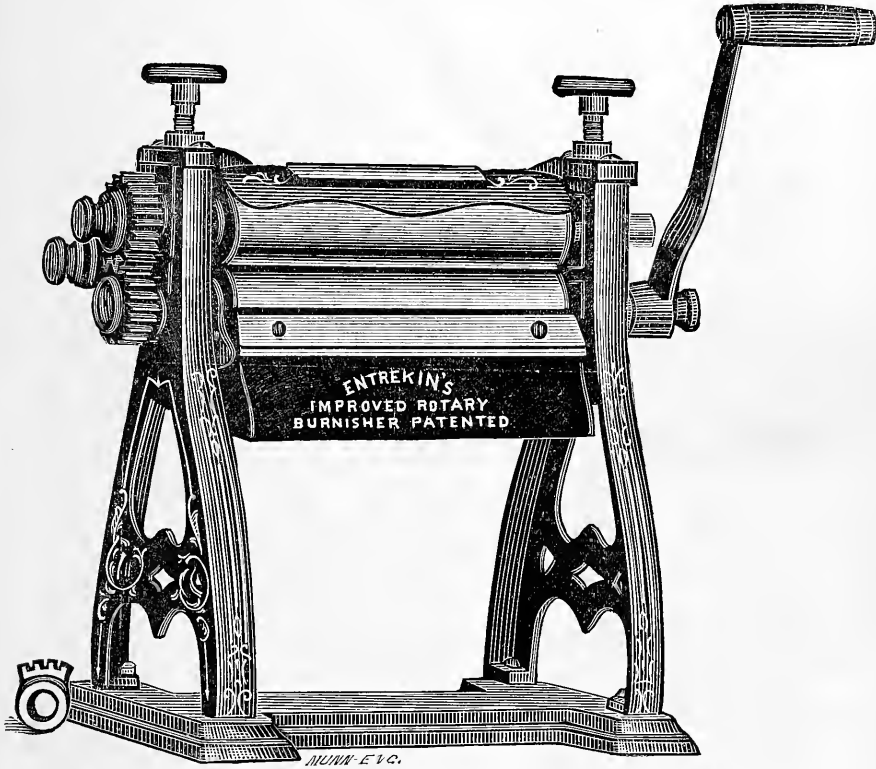
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IMPROVED

DUPLEX ROTARY BURNISHER.

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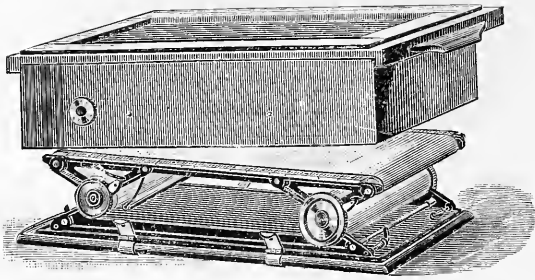
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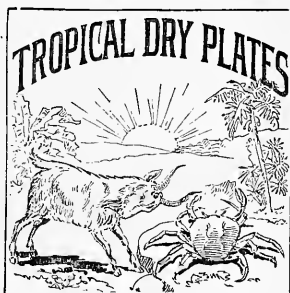
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5 x 7, "	1 10	17 x 20, "	13 00
5 x 8, "	1 25	18 x 22, "	15 50
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4¼ x 5½, "	85	14 x 17, "	10 50
4¼ x 6½, "	1 05	16 x 20, "	14 50
5 x 7, "	1 30	17 x 20, "	15 25
5 x 8, "	1 45	18 x 22, "	18 00
6½ x 8½, "	1 90	20 x 24, "	21 50
8 x 10, "	2 80		

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4¼ x 6½	· 90	16 x 20	· 12 50
5 x 7	· 1 10	17 x 20	· 13 00
5 x 8	· 1 25	18 x 22	· 15 50
6½ x 8½	· 1 65	20 x 24	· 18 50
8 x 10	· 2 40		

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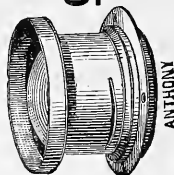
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BUY THE BEST!

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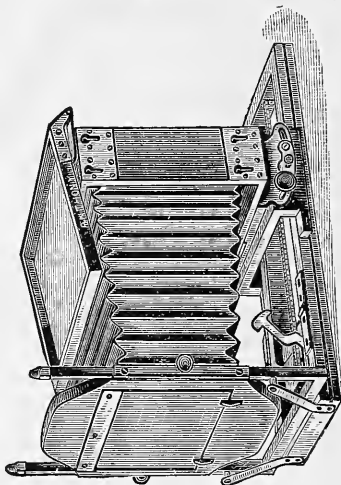
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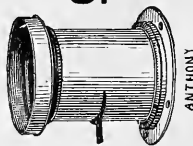
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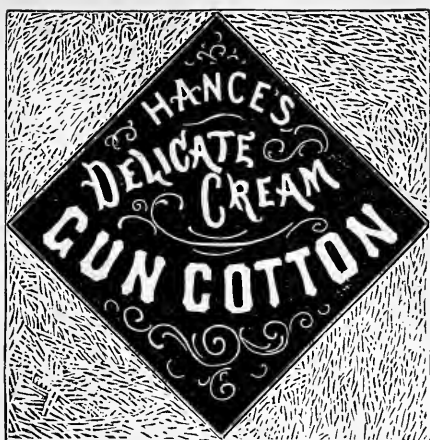
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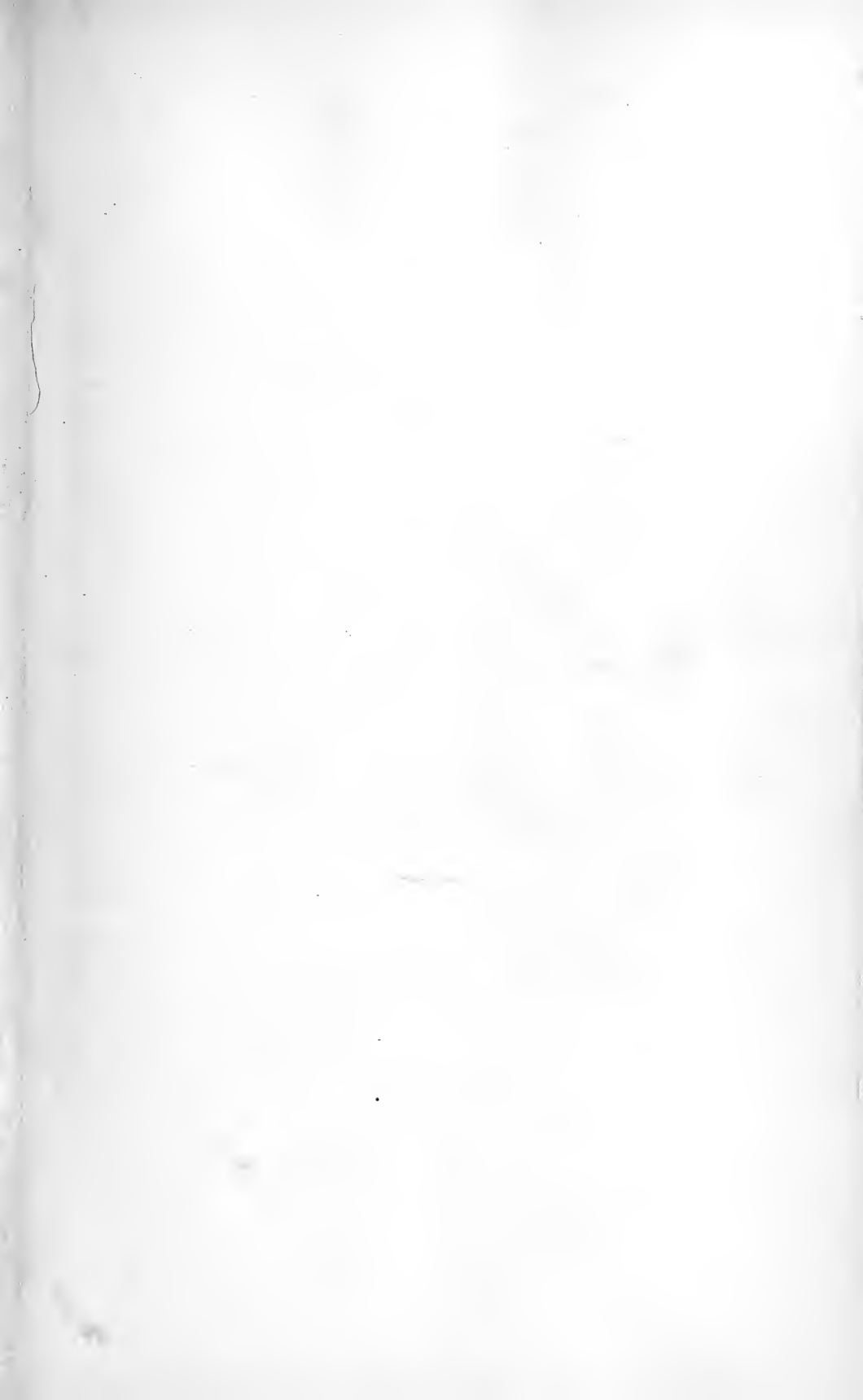
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PERTAINING TO THE



BUFFALO, N. Y., July 14, 1885

THE sixth annual session of the P. A. of A. was convened this morning in the Arsenal building at 10 o'clock. The Association was called to order by the President, Mr. Landy, and there not being a quorum present, on motion of Mr. Cope, of Philadelphia, the Association was adjourned until 3 o'clock, P. M.

AFTERNOON SESSION.

The Association met at 3 o'clock, P. M., when the following address was made by the Secretary, Mr. H. McMichael :

This is the day and the hour for the opening of the Sixth Annual Convention of the Photographers' Association of America, and I have the honor and pleasure, on behalf of the photographers and citizens of Buffalo, to welcome you most cordially to the hospitality of the city, trusting that your stay here will be one of pleasure and profit.

This is not all. We hope your stay here will contribute largely to our satisfaction and experience. Entertaining these feelings, I welcome you with pleasure to this city, to which, aside from its great terminal aspect, we attach an especial significance. You come here not alone for pleasure and experience; not alone for a brief season from the busy scenes of life, and from the pressing cares of business, but we trust you will come to advance the interests of photography and to elevate the fraternity, as well as for the building of a foundation whereupon you shall hereafter erect a future structure.

In the adjoining hall is to be found the best results of genius, the experience of the most advanced workers; results of every description known to photography. I behold this assemblage with pleasure and pride, and I trust that the time is not far distant when every photographer in America can hold up his head, and with pride say, "I am a member of the P. A. of A." (Applause.) I am not expected to say much at this time, because I have been talking for about six months, and I am getting pretty tired. So you will excuse me. I have now the pleasure of introducing to you a man who thirty-five years ago was buffing away at an old daguerrotype; a little further on he becomes famous; a little further on he wins laurels across the sea; a little further on he wins laurels in uniting his works with those of Shakespeare in the "Seven ages of

man;" he has now the pleasure of holding the highest office in the gift of this Association, and it is with pride that I now introduce him to you—our President, James Landy, of Cincinnati, O.

Mr. Landy: Mr. McMichael, on behalf of the Association, I thank you, and, through you, the hospitable people of Buffalo. Your city is rapidly becoming known as the invention city. On every hand are the evidences of the *con amore* spirit with which you have performed your duty, and largely to you do we owe our meeting to-day in this beautiful City of the Lakes. It is to your prompt action to which we are indebted for the use of this great Arsenal, secured in a few hours after the burning of Music Hall. The thanks of the Association are also due, and no doubt will be formally extended, to Col. Thomas Waud, for never before has this Arsenal been used for any other than military purposes.

The Convention is now open for business.

On motion, the calling of the roll and the reading of the minutes of the last session were dispensed with.

The President: The report of standing and special committees is now in order. The Chairman of the Executive Committee, Mr. W. A. Armstrong, of Milwaukee, will make his report.

Mr. President, Ladies, and Gentlemen: A few years ago a fellow-member of our craft made a call upon a few stalwart photographers, soliciting aid as a guarantee fund to help bear the expenses of a place to convene. The call for the meeting followed, and the ready response it met was the occasion for launching upon the sea of life a little bark known to the world as "The Photographers' Association of America."

In the period since the cruise of this craft has been an eventful one. With adverse winds she first drifted east. Then, with a prosperous tide, west. Again, south. And now, in the fifth year of her pilgrimage, she casts her anchor near the great Falls of Niagara, registered as a full-rigged ship.

The voyage of our craft has not been all smiles and sunshine. She has had to breast the winds of jealousy, avoid the shoals of cupidity, and round the bar of impotency, to get here. But as she drops anchor in the

beautiful city of Buffalo, she is free from debt and freighted with a rich cargo.

The number of members attending the last three Conventions has not varied materially. There are many strange faces to be met at each new place of meeting, but there are a corresponding number who remain away on account of the change in location. Each separate town at which the Conventions are held appears to be the nucleus for a certain surrounding territory whose resident members seldom venture without the pale of its limits. Thus we are continually adding new names in one State, who from lack of attendance drop from the list in another. To avoid this, and keep up the prompt payment of the annual two dollar dues, the new membership fees were raised to five dollars.

There are a few old war horses in the profession whose presence can always be counted upon.

Year after year rolls on, and age leaves its mar upon the veteran, yet the distance is never too long or the obstacle too great to prevent his annual appearance.

And right here I would say, I do not think any professional photographer can afford to stay away from these gatherings, for while the old in years renew old-time memories, the young can but glean new ideas to advance their personal interests and fresh hopes for an upward career.

And now, gentlemen, as I look upon the happy faces of the respectable assemblage before me, I can but repeat that the affairs of the Association are in excellent condition, and I sincerely hope that your deliberations here will result in keeping them so:

The President then called for the reading of the report of the Committee on the Progress of Photography. Mr. Gentile then read his report, as follows:

Report of the Committee on the Progress of Photography.

Many would claim that there has not been any marked advance in our profession since our last Convention. It is true we have no new inventions to chronicle, but that photography progresses, in spite of exceedingly dull times, is evident. There is greater knowledge of photography among the public than there ever was.

Photography is in greater demand than ever.

It is now introduced in nearly every branch of business and profession. Take, for example, our own city of Chicago. The police department has added a photographic outfit as a necessary appendage; the detective camera is now called into play when any important event occurs.

Our hospitals are not now considered complete unless a skylight is available to enable doctors to photograph their "brilliant" cases, which they most successfully do. I predict it will not be long before every newspaper of any importance will have a photographer attached to their staff.

Amateurs are rapidly increasing in numbers all over the country; they are forming numerous societies, which have shown in the past year that they are willing to work harder than our professionals are willing to do to disseminate freely the information they possess. The amateur frequently has more leisure than the professional, and is imbued with an over-increasing desire to obtain "more light."

The professional is naturally more jealous than they of his little secrets, if he has any. We expect to get the majority of our improvements from amateurs, because, if we look back into the history of photography, and consult the authors who have written on the subject of photography, and from which our knowledge is derived, we find that the majority of them were amateurs, and we see no reason why we should expect to learn less from amateurs now than formerly.

It must be admitted by all that during the past year the majority of papers read on photography have been by amateurs, showing conclusively that the amateur will occupy a prominent rank in our literature, as they have always done in Europe.

During the past year very creditable exhibition of photographs, both by professionals and by amateurs, has been made at New Orleans, which attracted the attention and admiration of visitors.

Many improvements have been made in the manufacture of dry plates. As a matter of course, the past few years' experience has taught the manufacturers many lessons, which they have not been slow to avail themselves of. There has certainly been a most marked reduction in the prices of plates, which has benefited the photographer.

Commercially the past has been a bad year for photographers; prices have been reduced lower than ever before, and it is impossible to foretell the time when we may look for an amelioration of the present condition of affairs.

It is very doubtful if this Convention now in session can conceive any plan by which photographers can be made to unite in some general

agreement which would enable them to obtain better remuneration for their labor.

The stagnation has been universal in Europe as well as in this country; however, let us hope for better times in the near future.

In Europe recently a most successful exhibition of works by amateurs has been held, and at a day not far off we shall expect to see a Convention of amateurs held in the United States.

Photographic journalism has made considerable headway in the West. A little over a year ago there was not a weekly photographic journal published here; now we have two. *The Photographic Eye*, of Chicago, was the first weekly published, and later the *Photographic Times* issued a weekly paper; *Anthony's Bulletin*, which was a monthly, is now a fortnightly. Dr. Garrison has issued a quarterly.

Among other improvements in photography, we must not omit to mention that the Eastman Dry Plate and Film Company has introduced a paper negative, and also a film which is stripped from its support after development.

Many improvements have been made in the manufacture of bromo-gelatine printing paper for positives, and we may look for still greater improvements in the materials to be used in their manufacture.

There is no reason why we should not give greater attention to the making of positives direct in the camera, especially as low rates for photographs predominate in many of our large cities. Ere long we may expect to be furnished by our stockdealers with plates ready coated with an emulsion, so that we need not resort to the bath and collodion for even a tin-type. We have seen a good tin-type made in this manner; consequently we should not be surprised to see the much despised tin-type brought prominently to the front.

The past year has not been remarkable for the number of improvements that have been introduced for developing dry plates, but doubtless much valuable information on this subject will be obtained during this Convention.

Great advancement and much skill and ingenuity are observable in the manufacture of apparatus used by members of our profession. The great increase in the demand for light, portable field cameras has made our manufacturers vie with one another until they have almost arrived at perfection, as will be seen in the varied and magnificent display at our Convention.

Since we last met, photography has lost a friend whom we all respected; he was a man universally loved by all who knew him, and it will be a long time before his place can be filled. Those who

knew him well are fully aware that the world will never know of the many acts of kindness that were performed without the least ostentation by that noble-hearted and true gentleman, the late Mr. H. T. Anthony, of New York. His memory will be revered by all of us. Few men have done as much for the advancement of photography as he, and under the circumstances some appropriate testimonial to his memory should emanate from this Convention before we adjourn.

In Europe one of the chief losses to our profession has occurred in the person of Lord Mayor Nottage, who built up a most successful photographic business, which was the means of raising him to the highest and most honorable position attainable in the first city in the world, the great city of London, of which he was its chief magistrate at the time of his death. This is the first instance on record of a photographer, by his business tact, perseverance, and ability, attaining to so high a position. It is an example worthy of imitation by all of us.

Another death in England occurred at the time we were holding our last Convention in Cincinnati—that of Mr. Cornelius Jabez Hughes, a well-known photographer, and a man who was universally esteemed. Photographic journalism in Europe has also suffered a loss in the death of Mr. Henry Greenwood, the founder and proprietor of the *British Journal of Photography*, which his ability and energy made the most successful photographic journal ever published.

In conclusion, it forcibly occurs to one who studies the progress of photography in this country, that greater advancement would be made in our knowledge, and also a better feeling would exist among the fraternity, if some means could be devised to induce the leading photographers in our cities to attend the meetings of the photographic societies, and to devote a little of their time to the promotion of the best interests of the profession from which they make their living, and to which we all owe a debt.

The President: I will now announce the names of the following gentlemen as the Nominating Committee for the officers for the ensuing year: J. F. Ryder, Cleveland, O.; G. Cramer, St. Louis, Mo.; E. Cope, Philadelphia, Pa.; D. W. Clark, Indianapolis, Ind.

On motion, it was agreed to postpone the proposed excursion to Niagara until Thursday.

President Landy then read his annual report, as follows:

Fellow-members of the Photographers' Association of America: Without trespassing upon your valuable time, it seems well that I should sum up the situation and the prospects. As an association we have made substantial progress. Each year has marked an advance of which we are proud, and now we find in the main hall an exhibit exceeding that of any former Convention, in the superiority of its photographic work, while the manufacturers and scenic artists have also eclipsed former efforts. With a feast for all lovers of our beautiful art as a stimulus, there is bright prospect of an interesting time. The reunion at Cincinnati was a memorable one, reflecting credit upon the officers who conducted it. It shall be our effort to do as well. The Executive Committee have spared no effort to achieve success, and failure will not be the result of their leaving any stone unturned. I trust that our deliberations will be harmonious and productive of general good. Valuable papers on themes of great interest to each of us are to be read, and attendance upon the daily meetings is urged upon all. If earnest attention is given the discussion, every man of us will return to his studio well repaid for the time given to mutual consultation. Perhaps the most vital matter to be considered by you is that of prices. It had been my intention to prepare a special paper on this subject, but I have concluded that it will be better to leave the matter open for debate and action, without more than general suggestions. Were it not *partially* from the universal depression in all kinds of business that the profession is suffering, and were the trouble not to pass away with the coming of good times to the country at large, the financial outlook for photography would be very appalling. The low prices at which photographs are being made is degrading, without bringing about the desired result (steady sales), for the people cannot be forced to purchase what they do not want, at *any* figure. A brief sensation may be created by making a picture at cost, and sending a carriage for the subject, but it is short-lived, and the result is humiliating. We can never have the respect accorded other professions if we have none for ourselves.

Unless fair prices can be maintained young men of ability will not continue to enter the profession, and its future need not be pointed out. I most earnestly hope that the Convention can solve the difficult problem, and find some means to change the downward course upon which we are drifting.

It seems to me important that every member should make an exhibit of his work at the annual reunions, and to be also desirable that we should reciprocate, when possible, the courtesy of our foreign brethren in sending to our collection such noble specimens of their work. The work of the photographer has great fascinations, yet it is so filled with details, and accompanied with vexations, that no class of men more needs relaxation.

This it is proposed, that our annual reunions shall furnish, as well as benefit, from an educational standpoint. The Executive Committee has, therefore, arranged an excursion for to-morrow. It goes without saying, that it is to Niagara Falls, standing, as we do, almost within hearing of the roar of the great cataract—Mecca of all artists.

Mr. E. L. Wilson was then called upon to read his paper on "The Dignity of Photographic Art."

The Dignity of Photographic Art.

Mr. President, Ladies, and Gentlemen: Soon after the July number of the PHILADELPHIA PHOTOGRAPHER had been sent out, an "artist" friend of mine came into my office and expressed the hope that I would not risk my reputation by addressing you upon the subject announced as my topic: "The dignity of Photographic Art." For, said he, *photography is not an art*, and, secondly, I cannot see where the *dignity* comes in. He was very curious, he said, to know how I was going to wriggle myself out of such an embarrassment as I had brought upon myself.

Accustomed as I was to hearing such assertions, I answered *I do not know*, when he made his departure, with a look of pity upon his face which I shall not soon forget.

And even now, I confess, I do not know how I *am* to wriggle out of the embarrassment which has been brought upon me by our otherwise excellent Secretary, in placing me first upon the list to address you.

I ask your forbearance while I try.

Before I can say much for the *dignity* of photography, I must, I suppose, in order to make

happy my painter friend, establish the fact that *photography is an art*, and that its productions may be justly considered as *works of art*.

I will endeavor to be brief. I must, I suppose use somebody's artistic measuring rod as my standard. I will choose one of a sort that is popular among painters, and one whose honesty cannot be questioned.

During the past winter it was my privilege to listen to a very learned talk by the distinguished orator, Monsignor Capel. His topic was "*How to Look at Pictures*."

He began by explaining his understanding of what "art" meant, and then tried to reveal its rules and to explain how to understand whether a picture was or was not painted according to the said rules.

He maintained that art did not consist in simply representing the person or scene as it is, as photography and low-grade artists attempt to do.

Many think *likeness*, or an *illusion*, to be the first thing in art. "But," said the reverend orator, "illusion is not art." Instantaneous photography pictures you just as you are, but this is not art. A photograph can never be a work of art, though it may be artistic.

And this is true of a painted portrait. It may have form, feature, color, and be true as to every detail of face, hair, body, etc., and yet it may in no sense be a work of art.

You ask me, then, *in what does art consist?* A French author has answered the question for us in saying that "*style is the man*."

We all have our own peculiar way of doing things—*our individuality*.

This may illustrate what I mean by art.

The portrait painter of the first order does not represent on canvas the form, figure, and appearance of his subject, but he studies the life, temperament, and character of the one he desires to paint, and fills himself full of the ideal man; and this he pours out in living thought, so that his picture is a representation of his own conception—a creation of what he has conceived the person to be.

A second or third-rate artist, however, will not produce a picture that is life-like, though he may delineate carefully and particularize every detail.

Furthermore, declared the learned orator, and with consummate truth, "in every work of art the mind of the painter must be so expressed that we discern both the thought and the style of the artist. And in order to appreciate properly the work of the great masters, we must place ourselves in their position and endeavor to possess ourselves of the great thoughts which were in their minds.

Raphael never painted but to set forth a dogma.

In Titian's famous compositions we could always discover the effort to secure sympathy between the figures and nature.

And thus far only did our orator reveal to his audience the rules of art; not advancing one thought as to the rules and forms of composition or of *chiaro-oscuro*.

His method was a wily one, for he knew full well that thus he could stab the ordinary painter and the progressive photographer where it would hurt the most. He did not tell the whole truth.

I maintain, in face of all his arguments, in face of his assertion that "a work of art is a *conception*, but that a photograph is only a likeness," that a *photograph can be both*, while a painting is *very rarely both*.

During my work at the World's Exposition last winter, I had no skylight. But when people came to me for *likenesses*, I led them out into the beautiful park, by the lake, or near the rustic bridge, or beneath the moss-hung live-oaks, and there, in groups after my own conception, arranged them agreeable to the rules of art as I had studied them, and made a likeness of the whole conception.

Am I a presumptuous impostor, an anti-æsthetic Bohemian, if I flatter myself that some of my results were worthy enough to be called *works of art*? If not, then why do painters buy them for studies?

Monsignor Capel, though he may be a fair amateur painter, and a clever amateur photographer, need not leave his own native England to discover some grand works of art in the conceptions of H. P. Robinson, of Tunbridge Wells, painter and photographer, likeness-maker, and "artist!" in every sense.

Rather would I die, than give up my faith in the ability of photography to produce *works of art*.

When we look at a picture we should become *one with it*. It will talk to us and we may talk to it. We first examine its lines, its light and shade, and decide whether or not the rules of art are complied with. And then we endeavor to discover the conception of the artist and study out to what extent he has secured what he attempted.

How often have we seen the same subject treated in widely different ways by various painters—how variously photographers will pose and light the same person! Take the Madonna's for example: engravings of them will show you just what I mean.

In the *Dresden Madonna* we see the staring eyes of the Mother of God expressing surprise that she should be chosen for such an office. In

another the true, tender feeling of the solicitous human mother predominates; while in a third the artist prefers to secure a look of humility and timidity. These differences are differences of conception! And who shall say to us that *we* cannot, if we will, secure such differences with our cameras? That we cannot, if we will, secure all the elements of art in our pictures, both under the sky and under the skylight?

The moment I look upon a photograph which approaches a work of art, I involuntarily begin to measure it by the rules—to quiz it as to the intention of the "likeness" taker who produced it, just as surely as I do when I am feasting in a gallery of paintings, and even now I am impatient to complete this reading, that I may go into the adjoining hall and feed upon the works of art there. And now, having, as I believe, established the claims of photography to a place among the arts, *what*, may I ask, do we understand by the *dignity* of our art?

I maintain that it is that element which consists in its being thoroughly believed in, respected, and sustained by those who practise it. That *its* dignity is commensurate with the amount of dignity thus imparted to it, by the *parties* mentioned, in the *ways* mentioned, and by the quality of work which they produce by its help. I need not add even a partial list of its accomplishments in order to *maintain* its dignity. We all know how the stars are caught by its aid, as they whirl through space; how the pale-faced moon is mapped for us; how the mysteries of the ages are revealed; how science is helped by it; how art and industry employ it as a right-hand workman; how it brings the beauties of the world to every door; how it gives the most truthful representations possible of "the human face divine—how it almost creates." With all its works and ways we are familiar. They alone would uphold its dignity beyond all question, did those who practise it do their duty just as well. But, alas! I fear they do not. It seems to me that I never knew our art to hold so low a position in the public estimation as it does now. It seems to have become so cheapened as to have scarce any market value at all. The idea seems to be growing that photographs cost nothing to produce, and the ignorant patron cannot or will not regard one quality of productions worth any more than another. He holds that, because he sees cheap prints hawked about the streets, that good ones cannot cost any more, and the artist photographer must *argue his cause* every time he asks a living price for his work.

My countrymen, this is *indignity* and not *dignity*! How long shall it last?

I have heard the poet sing :

"All my life long I have beheld with most respect the man who knew himself and knew the ways before him, and from amongst them chose considerably, with a clear foresight, not a blind-fold courage, and, having chosen, with a steadfast mind pursued his purposes."

But, alas! I fear many of our co-workers have "chosen" well enough, but have not "pursued with a steadfast mind." Our only hope is in a wondrous change.

Last Saturday night, as I came hitherward, I looked out from my seat and saw the great veil of spray which arose from nature's mightiest wonder—the greatest living picture—Niagara Falls. I felt that I was coming into a great presence. I took off my hat, and gave way for a moment to memories of the past. Then when I came into full view of the great cascade and again heard its mighty voice calling to me, an oppressive feeling of awe came over me. Never before was I so impressed with the *dignity* of the scene as at that evening hour. And just such feelings of respect and wonder and endearment should and would *our art* awaken, if its votaries would maintain its reputation as they should.

You ask :

What shall you *do*? Make your own lives all they should be.

What *shall* you do? Produce better work.

What shall *you* do? Join heart and hand in securing full value for what you produce.

Oh! What a beautiful structure could our most marvellous of arts become if *we but willed it!*

About ten days ago, I stood near the base of the recently completed Washington Monument. What a *mighty* work it is, lifting its aluminium apex above the clouds. Stone by stone aloft it rose, each addition increasing its dignity, its pure whiteness contrasting with the clouds beyond. How proud is the whole nation of that glorious shaft! How proud were other nations and individuals to give a block towards its erection!

So may *we* all, *if we will*, add a block to *our* artistic structure, which in time will lift its proud apex far above calumny and maintain it as the *highest* of the arts. The clouds of libel and scandal will only make it the more beautiful by contrast, and every time we contemplate it, we shall be able to give a loud and *hearty* huzzah for the dignity of photographic art.

The President: The next subject will be a discussion on the deterioration of the gelatine dry plates. It is something that is very important. We all see that there is a deterioration going on, and we would like

to have the subject well ventilated. Can any one give us any points on that subject? If so, we would like to hear them.

A running discussion followed on this topic, opened by Mr. Inglis, who said: I would be very happy, indeed, to say something on this subject, but I know so very little about it that what I would say would be of very little interest to this audience. But what I do know about them is this, that there are some plates that do not deteriorate, and there are others that do. (Laughter.) Now that is about as much as I know. (Increased laughter.)

President: I for one have noticed a deterioration in dry plates that I have on hand for a long time. This I have thought was caused by the separator. I think that a fresh plate is better than an old one. I don't know the reason. I naturally supposed that it was the separator; some material in the separator.

Mr. G. Cramer: I did not understand the point at first, whether you wanted to talk about the deterioration of the plates or the deterioration and fading of the negatives. I now understand that you are speaking of the deterioration of the plates.

President: Both; I notice that the plates get a little thin after some time has elapsed.

Mr. G. Cramer: Now as far as deterioration of the plates is concerned, I believe that there is a great difference in the plates. For example, those made with an excess of ammonia and extremely rapid plates will not keep as long as those that are less rapid. Then you have mentioned the separators as being the cause of the deterioration. They are, in a great many instances, the cause of producing a fog, which appears first at the edges of the plates and then extends to the interior.

It has been our aim to find out the most suitable material for separating plates, and so far we have not found anything better than separators made of straw board.

Now, as to the second point, the deterioration of the negatives. I claim that when a dry-plate negative is properly treated and washed, that it is not as liable to change as a plate of the old style—a collodion negative. If you were to see how careless a great many work, if you were to look at

their faded pictures which suffer by the jaundice, you would not wonder if you found that their negatives did not remain unchanged. I have wondered many times when visiting galleries in some places. For instance, the dark-room is so small that they can hardly turn around in it, and they have no supply of water, no selection of dishes, and it is a wonderful thing to me how they can work in such places at all, but it is no wonder why their plates should fade. I believe the dry-plate negative should be washed as carefully as a print. It should be well fixed in fresh hypo. It should not be used too long, and it should be left under the water a sufficient time, and afterwards should be well washed in a current of water.

Mr. Inglis: When first I began making plates, I was very much like the photographers that Mr. Cramer has spoken about, having a small place, and not very many conveniences around, and, therefore, did not finish the thing as it ought to be. I do remember well plates that were exceedingly good in their way, but full of spots, and many other miserable things that no photographer likes to see any more than I do. This was not brought about by any different way in the making of the emulsion from what it is made to-day. The plates I make to-day will last very well, and I have no doubt that the President might take them from here to California, and come back six years afterwards and make good work out of them. He can try it if he likes. (Applause.)

I was astonished when last year I read in the *English Year Book* an article telling us how to obtain a soft negative, and how to obtain strong ones. Now this was just as opposite as the North is from the South, the way by which I would obtain these two things. Now, though I have said a little in opposition to what Mr. Cramer has said, I will not say that what he has said is not correct, followed on a certain line. What I do say I repeat with all the emphasis that I can that it is not because of the extra sensitiveness of the plate that it deteriorates. For the fact is I have made plates of the very highest order of sensitiveness which have not deteriorated, but the very opposite, they have become even more sensitive than

otherwise. That is the proof I have to bring forward that extra sensitiveness don't deteriorate.

Then in regard to the negatives. This morning I heard a gentleman at my side say, that he was afraid that he would have to give up dry plates altogether, inasmuch as when he came to print duplicates from these negatives, he could never get a good plate again. Now this, I say, is not the fault of the plate. It may be entirely from another cause.

A friend of mine writes that at least three or four years ago he made some plates, and that he used them lately, and that they were just as good as the day he made them. Now, if this is so in this case why should it not be so in a hundred other cases, provided they stand the same test.

A gentleman this morning said to me that a half-hour's washing was not sufficient, and he was going to quit having anything to do with them. Well this is a free country, and he can do as he likes. This friend that I spoke of left them in the water over night, and he washed them, frequently changing the water during the day; put them in a fresh lot of water at night. The next morning he took them out and rinsed them, and set them aside, and that is the way that he washed his plates. I think that labor that he gave to them has certainly rewarded him many fold over the one who wants to have them finished in a half hour or five minutes—some come down to five minutes.

Now it is not necessary that the negatives should be kept in running water, but, as Mr. Cramer has said, plates should be washed just about in the same manner that prints are. The film being so very different from the collodion film of the wet process—the film of gelatine, being more like a sponge, requires to be soaked out. We cannot squeeze it out as we could the paper prints, or squeeze water out of a rag. If we could do that we could squeeze it out at once, and then the thing would be clean from all that would deteriorate it afterwards. Since we cannot do that we can only do that which will be proper—that is, to soak it out. If this is done I think the negatives will keep just as long as the collodion negatives.

Mr. Clifford: I wish to state a few facts

in regard to my experience in keeping dry plates. Within the last month or six weeks, I have exposed plates which were made four years ago. They came out very beautiful, brilliant, soft, clear, and entirely perfect all over their surface, as good as I have ever worked. These are the facts to which I attest.

Mr. Page, of Connecticut: What I would like to know is the cause and the cure of the deterioration of the plates. Now, I have used dry plates a little over a couple of years, and looking over my negatives a short time since, I could not find one out of the lot that was made two years ago that is perfect. I have a good dark-room, and good accessories. I could not find a plate but what is more or less discolored. Those that I make, at the present time, are subject to a great deal of washing. I calculate to wash a plate after it is fixed about half an hour⁹ I left one in the dish one night, and let the water run on it all night to see how much better it would get than the others. The consequence was the next morning that the glass was there and that was all. (Laughter.) Now I use great care in my work I believe. I make good pictures; have a fair trade, and keep up my business. While others speak of the depression in business, my business is good. This has been the case for the last two or three months. I don't know what the reason is exactly, but such is the fact nevertheless. I go to work, at the time, at my level best, and if there is anything I can get to make the thing better, I get it without regard so much to the price. I want good work, and I want to have it so that I am proud of it when it comes out of my place of business. I feel interested in it. I love it. I love photographic work. I expect to make my living out of it. I have so far, and I expect to continue doing so, and I want to get the very best results I possibly can. I believe that the people of the community where I live do appreciate it in some manner. While, of course, there are a good many people that don't know one kind of picture from another, there are others who do, and I believe that we can educate the people up to it, so that they will appreciate the difference and stand by us in our prices for our work. If we do that,

and if we all do it, there will be better times for us, but I want to get out of this difficulty that is now before us, the difficulty of plates discoloring. I have only used two kinds of plates with the results just spoken of. They discolor, and they do not work as well, and if there is any way out of this difficulty I would like to have somebody explain it.

Mr. Bellsmith, of Chicago: Immediately after removing the negative from the hypo, and placing it in a solution of alum, I wash it under the faucet, then place it in my washing tank where it remains until I am ready to go home, when it is taken and rinsed again and placed in the rack.

My experience with dry plates has been almost the same with every brand of plate. I have used some six brands of plates within the last six years. In reference to deterioration I find that they grow more intense with time, and become slower printers. And although you have a negative that is weak, thin, and a poor printer when you put it away, if you take that negative out six months or a year afterwards, it will make a very brilliant print, while if you have a negative that is very strong, cold, and crisp, and makes a very beautiful print for its first order, when you come to print from the same plate a year or two afterwards you will find it will print very hard, and will give you a very unsatisfactory result.

The President: It is very strange, I have had the opposite experience myself.

Mr. Beidel: I would like to ask Mr. Cramer to give me the formula for the eliminator.

Mr. Floyd, Lock Haven: I find that I have some of my plates discolored that were not thoroughly fixed apparently when they were taken from the hypo. They look as though they were fixed, but in two days they commenced turning a brown color. I think that we people who have trouble with dry plates, if we would fix them thoroughly, we would not have the trouble.

Mr. Cramer: In answer to the question propounded by Mr. Beidel, in the remarks made by him, and also the remarks made by Mr. Inglis, I wish to add a few remarks to what has been already said. When I said that a very sensitive plate was more apt

to deteriorate than a less sensitive plate, Mr. Inglis did not seem to concede what I said, but he says himself that the plate gains in rapidity by age. I think that this is the very first step towards deterioration of the plate, and the plate gets finally so sensitive that it cannot be developed in any light, even the ruby light, without fogging. I have found that the more sensitive the plates are, the more sensitive they are to all other influences, either by long keeping, or by the separators, or by anything else. A slow plate may not be injured by chemicals contained in the paper which makes the separator, while very sensitive paper will show the marks very soon.

Now about the keeping of the negatives, I could tell the probable cause of that very soon. I have seen some parties make nice negatives from the same plates resembling the wet collodion plate which was liked so much, with regard to color and quick printing, which another man makes from the very same plate, a yellow negative, nasty looking; so that it must be altogether in the treatment.

I think that the first reason may be in the developer. A developer which is old, or has decomposed pyro, will produce a yellow negative; when a fresh solution of fresh pyro will make a gray negative. Furthermore, there should be sufficient care taken in the washing of the plate before putting it into the fixing bath; otherwise the plate will carry a certain amount of alkali into the fixing bath, be it either ammonia, or carbonate of potassium, or carbonate of soda; and, if the hypo bath contains a good deal of alkali, it has also a tendency to color the negative yellow. The fixing bath will also produce a yellow color if it is used too long; if it is saturated with bromide of silver, it is slow in fixing. It has been mentioned before, the plate should remain in the hypo sufficiently long to secure perfect elimination of all the soluble salts of silver which will still remain in the film, after a plate has been apparently fixed, of which you can convince yourself. If you take such a plate into the light, and show it to your customers, as one of the gentlemen has spoken of, you will find that the plate will turn yellow very quickly. It ought to be left in the hypo bath for a

sufficient length of time, and should not be exposed to the light until it has had some washing. I think that, if all these provisions are carefully observed, there will be no more complaint about yellow negatives. Also the addition of alum to the hypo bath will produce gray negatives easier than the plain fixing bath; alum has a tendency to produce a gray color, and not a yellow color.

A gentleman was asking me about the eliminator and the formula that I published. I would say I published that only to be used in cases of emergency, when there was no supply of water. It was a diluted solution, commonly called the eau de javell, made of the chloride of lime and potassium. I said at that time, and still say now, that it is only in cases of emergency, only in a season when a sufficient supply of water cannot be had. I do not recommend anybody to make a general practice of it. We insist upon a thorough washing of the plate in all cases in every way.

Mr. Potter: I have used dry plates for a little over four years, and used oxalate three years, and pyro also. Judging from my experience, I think where negatives grow yellow, and intensify, that they are not properly fixed and properly washed; but where they grow thin, they are properly fixed, but not properly washed. (Applause.)

Mr. Bachrach urged the oxalate development. I believe our Baltimore friend will make a mistake if he goes to the oxalate. Not that I am down on oxalate, because I have some fine negatives in oxalate, kept properly. This is the point I make. In using large negatives, I suppose it is the experience of every one who uses them that a great many of the plates are very much spotted in the centre. You will notice that they are fixed all around but in that one spot in the centre. And as to the hypo—about the rapidity of fixing. The plates will vary a great deal, because the same plates will fix more quickly, and in another case fix very slow in the centre. My experience has been that it applies to the oxalate as well as to the pyro; that, when slow fixing goes on usually with the large negative, you take it out and show it, because you are trying to get the best result you can; you take it out and you lift the plate up, and the milkiness disappears;

you take it out and go to washing. Now that plate is not properly fixed in that spot. Now I have plates all perfect, except in that spot. This is the reason that some of our negatives are slow in fixing, and are discolored. Negatives three or four years old show no particle of discoloration anywhere else except right in that spot. (Applause.)

How I wash the negative all the same, so that I know it is not the hypo. I do not varnish the negatives. The moment you get a bad print out in the centre, you get hypo in your print. That is the way you can find out your trouble.

Now this discoloration has not spread, and I feel very positive, where it is the case, the fixing has not been properly done, has not gone to a proper extent, and there is a combination of hyposulphite of soda. Your discoloration, in the course of time, probably in the mechanical combination of the gelatine, causes this discoloration; but, if the negative is properly fixed, properly washed, they are just as firm as the wet one.

Now, then, about the washing. The reason is that I wash my plates, taking a swab of cotton as soon as they come out of the hypo—I use hypo and alum together; as soon as they come out, I put them under the tap, turn on the full force of the water, take this swab of cotton, wash them all over, and thus get rid of all sediment from the hypo bath on the negative, and they will wash in half the time when they are freed from sediment.

I use hard water. I leave the negatives of a smaller size wash for fifteen minutes under the tap. If I have many negatives, I have two or three taps, and I set them around so the water will drop on them. As soon as I think it is washed enough, I put in another negative, and so on until they are all washed. I give them all a washing under the tap always for fifteen minutes, making allowances. Now, before I put the negatives away, I take this same swab of cotton and take off whatever sediment that may come from the water. Hard water will leave somewhat of a sediment on the negative. By doing this you will have a much brighter and cleaner print.

Mr. Inglis: Just one word more, and I will not inflict myself upon you for a very

long time. Now, ladies and gentlemen, I think the nail has been struck upon the head, and we have found the cause, but they don't tell us the cure. Now this is the cause of those yellow stains, without doubt. I will give you an instance. Two years ago, in Philadelphia, Mr. Gilbert asked me up stairs to look at some negatives, and he wanted to know what was the cause of those yellow stains. He said that different explanations had been given by dry-plate makers. He said that he had asked the opinion of every one. I instantly said it was an unfixed negative. Well, said he, that is the opinion I have myself. Mr. Carbutt had told him something else. Perhaps Mr. Carbutt can tell us about it afterwards, but that was the cause of it. Some large plates were sent down to us last winter, and they were sent back, with the comment that they were good for nothing, because he could not fix them in the night; there were spots like the spot described exactly. He said, "I cannot pay you for these; I have lost such and such a number, and you can have them back." I wrote him back what to do, and I never heard any further word from him. He did not want to pay for those he had thrown away through his ignorance. I want to tell you what to do, and how he succeeded. You will notice, if you take a plate out of the fixing box, and put your finger upon it, that it is as tough as leather; it is as hard as anything. If you will take it and put it under the tap for a few minutes, it relaxes out, the pores open, and then you can put it in the fixing box, and it will fix out as before. If you will do this, you will succeed every time with the most obstinate. This has been my case. You will cure that trouble if you do as I suggest. These yellow films that come from age are, as it has just been decided here, from an unfixed negative. Then, in regard to the lime, I always prefer to put my plates—and let me tell you I do not photograph to any extent; I merely test plates; but, in testing them, I prefer putting them into a lime before putting them into the soda. I always had a clearer plate by this means. I also kept the soda clean. Then I would recommend, as the gentlemen over here has said, always to set the plate on the edge, and not to lay it flat.

It will always drop down if you lay it flat.

Now, then, lastly, but not the least in importance, our friend here looks as if he was combating with me, and now I must have it out. You know, when the truth, or, rather, when a thing is put with a show of truth, it is the most deceiving thing imaginable. What Mr. Cramer said was true—in part. (Laughter.) I said that my plate at least became more sensitive with age. I did not mean that he tried to make you believe that they go on; unfortunately he said, and become good for nothing. I have plates made over twelve months ago; they were excellent when they were made, and they are more excellent to-day, and they are lovely in every way. Now I have also made plates more than twelve months ago, and they were not worth that (snapping fingers); it shows the contrariness of emulsions. Why it is, I don't know anything at all about it. But that is the case. Let me impress upon you that the extra sensitiveness, if it is a good plate, will not deteriorate any more than if it is a slow plate. Furthermore, I will produce the best picture seen on earth with extra sensitiveness the more so than with one less sensitive. I can give you a reason for it, but that is not a point for discussion just now.

Mr. Beidel: I want to say just one word in relation to what Mr. Inglis has said. I always rub the surface of my plate before it is put in the water with a camel's brush—before I wash it.

Mr. Carbutt, of Philadelphia: Ladies and Gentlemen, I agree with the remarks that have been made both by Mr. Inglis and Mr. Cramer, in a measure. There is, as you will find by experience in working, a difference in dry plates. In regard to what causes certain changes. First: I would like to touch upon the keeping of plates. Perhaps I have had the longest experience in making plates of any man in America. There came into my hands, a month ago, a sample of plates made years ago. I was glad to get them. I had not myself any plates made as long ago as that. They were tested and found to be in a perfect condition. They were put up with interleaves without any blemish whatever on them. With re-

gard to the staining caused by separators, there are two causes, and one is partially due to the dry-plate makers themselves, though I think in this way that frequently the plates are picked out when they are not thoroughly dry, you may say bone dry, yet to all appearances they are dried, and the chemical impurity that has been in the material forming the separators. The plate has absorbed it, and has caused this staining. Now, I have taken some pains to investigate the material out of which the separators are made. I have had a machine for making my own separators so as to get the stock from a source where I would know whether there were any impurities. I obtained the information I wanted from the party from whom I got the strawboard. Many are under the impression that the hyposulphite of soda gets into the cleansing mill. I am assured by those who make the material that such is not the case. I am assured that hyposulphite of soda is not used in the making of strawboard. Lime is used in cutting out the material, destroying the fibre of the straw, the material is afterwards washed with the washing machine, and the hypo does not enter into the process. They do not find it necessary to use it. But recently I have found out that both Mr. Cramer and myself have been investigating in the same direction, as to source of supply for separators, and the manufacturers have assured me, and I have no doubt that Mr. Cramer has the same information as to the material out of which strawboard is made, if he wants it for use. Up to the present time I have found that the best means of separating my plates were separators. Paper when it is used, as it is also used, if it be put between the surfaces of the plates there is a slight concavity in all glass; unless great pressure is brought to bear there will be no touching of the film, but it is where plates are carried for a long distance, and by the friction of travel they will rub a little on the surface and in this way injure undoubtedly the plate. Where the films are kept slightly separated by material that is not in any way injurious, this will not take place. I have been investigating this subject very closely with regard to keeping plates, it is an important matter to have the

information as to the plates, as to whether they can be carried for a great distance.

There is one matter that I am glad to speak about. At the time Captain Howgate was fitting out the expedition to go North, I was called upon to supply the plates for the unfortunate photographer who lost his life. The plates did not go any further than St. John, and were sent back again. Then the plates were stored in an outhouse, I was told, in Washington during the winter. They were brought back to Philadelphia, and he and I, so that there might be no mistake about the examination of the plates, opened all the packages, and took plates from here and there among them, and tested them as to their goodness or not; whether they should be sent out again with an increased supply added to to them. In some cases the packages taken out were wet. The moisture had been absorbed, and when the plates were separated the interleaves were found to be wet. Where the plates were not interleaved, the surfaces were found to be perfect in all respects. I do not think it is taking too much credit to myself, but I think Mr. Clifford will permit me to say that the plates that he first referred to were the plates that I made for him.

Mr. Clifford: That is the case.

Mr. Carbutt: I was only getting at this point, as to what care is taken in keeping the plates. As to that, we shall have to depend upon the platemakers of this country. They are doing their level best to get the very best material that can be procured, to both make the plates and to put them up properly. I know that during this last week I put some up, with the very best cardboard obtained from Collins & Co., who supply me. I believe that they have the purest that can be had; it is so considered by the trade for photographic purposes. Where a plate is simply marked on the margin, and where the change does not travel any further into the middle of the plate, that I believe is caused by pressure. I believe the more sensitive the plate, the more sensitive it is to that pressure. When the separators are made of this material, we unfortunately have to depend upon those who make them. The manufacturers, at

first, did not know what we wanted. We now insist on knowing what impurities are used in cardboard, and whether it contains any chlorine. If there is any chlorine, it will cause a discoloration over the film. I have not observed it on any of the plates that have passed through my hands, in which the separator has been made out of the same material, and I don't think, from what I know of my brother competitors, that they would use for the sake of saving the cost of it, which is so infinitesimally small; it is simply the cost that is a small matter, but we have not been able to get the right thing yet.

Now as to the keeping of the negatives. Some of you remember the negatives taken at Chicago amongst the first of the gelatine negatives taken five years ago. They were made at the time of the Grant procession or parade at Philadelphia. I can assure you those negatives are as fresh and as good today as when I finished them, and developed them with pyro and ammonia, and reasonably washed. But photographers, to get out of this difficulty of having their negatives deteriorate, must give a little thought to the material they are using; gelatine has so much body compared to collodion, and it holds so tenaciously any salts in its interstices that it takes a long time to wash it out. So that if there will be any cause of decomposition, like the putting in any unwashed plates into the hypo or putting alum into the hypo, decomposition commences, and when the decomposition commences in the film it is hard to get at it. I agree that the plate should be thoroughly washed, putting in the alum when I think it is needed, especially in the summer-time. I put it in as a matter of precaution in the summer-time, as it is advisable to do it. I would further put into the solution of alum the plate—the solution of alum and ammonia, because I think it is the safest. It will not deteriorate like chlorine solutions. Put it into the fresh solution of alum. After a thorough washing, and then a good rinsing, put it away to dry; and then have a little thought in using the plates. If this was the case, there would be less talk about the deterioration of the negatives. Also keeping the plates—keep them in a dry place,

free from ammonia or any gas that would injure them.

The reading of Mr. Ryder's paper was deferred until to-morrow.

Mr. Cramer urged his objection to the appointing of a committee from the Association to award the prizes offered by E. & H. T. Anthony & Co., as they were of only personal interest.

Mr. Cramer made a motion that ten medals be given by the Association, at the next exhibition for prizes and offered to subscribe five hundred dollars for that purpose.

Mr. Bachrach then moved that the Association adjourn until ten o'clock the next morning. Adjourned.

BUFFALO, NEW YORK, July 15, 1885.

SECOND DAY.

The Convention was called to order at 10 A.M. The first business in order was the Report of the Committee on Nominations.

Mr. Ryder, of Cleveland, read the Report, and it was recommended to him to be given to the Association to-morrow morning.

It was moved to reconsider the motion fixing Thursday afternoon for the visit of the Association to Niagara Falls, and it was decided to go this afternoon.

The President then called upon Mr. J. F. Ryder to read his paper:

How to See.

Mr. President, Ladies, and Gentlemen: A good deal may be seen by an observing man by simply keeping his eyes open. It is, indeed, a popular fancy that that is the only necessary effort to accomplish that simple feat.

A positive man might be ready to bet five dollars that was all there was to it, while others lean to the belief that through the other faculties enough may be seen to satisfy many a doubt shrouded in darkness. A man may see things he never saw. What to one man is as plain as the nose on his face, is to another oblivio. The man who fully sees, sees with his nose, with his ears, with his fingers. With another man's tongue, as a blind man sees with a string tied to a little dog, or with the end of his cane punching the sidewalk.

Without attempting, however, to prove second sight or double sight, let us consider the advantages of seeing carefully and intelligently.

Seeing carefully or carelessly is a matter of habit, which when once formed is as easily fol-

lowed as breathing. The habit of observation becomes a pleasure and a study not to be put aside and taken up at will, but the following out of the routine of life.

As considered in the pursuit of our profession, the portrait photographer has a constant study in the faces he meets and in watching the play of light and the fall of shadows over them, while the landscapist is adapting a tree, a clump, or a rock, for a foreground and suiting it to a middle distance. I speak of the habit as in my own experience; although I have not made a business of personally handling the sitter and camera for the past fifteen years, the habit formed nearly forty years ago has been pursued with as active diligence as when I was my own operator. If I fancied I had claims upon the democratic party and wanted a post-office, and was interviewing President Cleveland with a view to that end; while showing him what heroic work I had done in his interest, and how evidently he is occupying the Chair through my efforts, I should at the same time be mentally lighting his head for a portrait.

The visitor in my house, who by his conversation seeks to interest me, or who I am trying to entertain as becomes the host, is turned to account as a study upon whom I am at work, discovering the most favorable point of view, and the best direction to light from: I do not feel I am taking an unfair advantage of him. I am simply studying from force of habit, and because I cannot help it. Whether in the business office, the private house, the church, the street car, wherever the light falls from a given point, and particularly if favorable to developing strong characteristic points of a head or face, immediately the work commences.

The unconscious model gives, without the asking, naturalness and ease of pose, which would be sought for in vain with a camera pointed toward him. Then is the time to pursue the study, to observe carefully each point of vantage, and to store up the knowledge for future use. Accidental findings are as good as knowledge sought for at a cost of much labor. Good teaching in free lessons is constantly offering itself. Those who choose may profit; it is only a question of seeing or not seeing.

I remember, some years ago, a particularly fine sunset over Lake Erie, as I was homeward bound for the east on the Lake Shore Road. The color and cloud effect was gorgeous. To see it, was to stir one's love for the beautiful. I was quite enraptured; could almost fancy I was looking into another world; it was like enchantment. The impulse to have some one sympathize with

me in the pleasure, inclined me to call the attention of a man in the seat just ahead of me to the grand spectacle. I nudged him and pointed at it. He looked out of the window and then inquiringly of me, showing clearly he did not understand. I then said the beauty of the sunset what I pointed at. He looked sort of bewildered, turned to me again and said, "Yes; it's red, aint it?" What to me was a glory and a joy, was to that man something red. Had it been a farmhouse or a barn made red from a paint-pot, it would have dilated his soul quite as much. From the habit of observation comes the study of comparison, an easy way of finding a fitness of things as considered in relation to each other. And here rises, as though to answer a roll-call, the three great powers most valuable to any business or profession—*harmony, order, and system.*

They may be considered captains of three potent forces, which when truly observed are invincible. Applied to the simple needs of our business as aids to success, their value is as clearly shown as to the railway builders of our country.

Considered in a business sense, the advantage of tasteful and harmonious fittings and furnishings of the photograph establishment, whether upon a scale of extravagance or the quiet simplicity of modest means is a thing never to be overlooked.

The visitor is favorably or unfavorably impressed on entering a photograph studio. The person of no taste will not be shocked with pleasant surroundings; a place may be never so attractive, he will take no exceptions. On the other hand, the æsthetic or finicky man might feel such discomfort at the violations of taste and harmony, frequently found in the reception or business rooms of photographers, as to have his confidence shaken in the skill of the proprietor and incline him to look further.

It may not be found in your bibles that a five dollar note from the pocket of a dude is as good as that of a puddler of iron or a tanner of hides, but it is just as true nevertheless. A well-scrubbed floor is better than dirty carpet, tidy simplicity better than luxurious shabbiness. An orderly establishment is attractive and interesting, it is the keynote to the proprietor's character and his business success.

The value of tidiness, clean rooms, clean hands, clean dishes, clean character, and habits, cannot be overestimated.

It is well to see that visitors and patrons be received with politeness, and shown respectful attention; that while in the hands of the operator, the sitter be brushed *with the grain*, and care be taken to encourage a comfortable cheerfulness.

A rude or surly attendant can tear down faster than the proprietor can build up.

To see your sitter's good and bad points photographically is your duty, to make the most of all the favorable, and to leave untold the uninteresting ones, is what you owe both your customers and yourself. Make your camera see the same as you do.

When your sitting is made, the plate developed, and brought into the light for final examination, when you stand over it, as judge and jury, *be honest*, don't compromise with an indifferent result; if it is not right, it is wrong. The proper question to ask yourself is: Can I better it? If, yes, do it at once. Your conscience and good judgment will uphold you in the conviction of having done your full duty. Your evident satisfaction impresses your sitter, and has much to do in settling any doubts he might entertain. If the photographer would inscribe a mental motto which should read

CAN IT BE BETTERED?

and hang it conspicuously upon the front wall of his mind, where it should be in full view and religiously consulted and followed as the text of his daily work, it would stand as a true guide-board upon the crossroads of success or failure in his business.

If there be a better talent than to see well, it is to perform fairly and fully all that can be seen which is profitable to put into a man's work.

And now, my brother photographers, assuming that you have seen as I have tried to show, may I ask you to look with me at the present status of our art and its possible future.

We stand to-day forty-five years old. From a bluish uncertainty in a little box-like case which could be seen with difficulty after much twisting, *then as a wonder* in 1840, we have only to look at the exhibition in the hall below to note the wonderful progress made in forty-five years. In these years, hundreds of thousands of people have found employment in departments of work tributary to the requirements of and in the practice of photography. Millions of money yearly flow through the channels of its traffic. Scarcely a home in the civilized world, from the palace to the hut, but in which will be found in costly or modest form the products of the camera.

The images in shadowed form of the "loved and lost" are treasured beyond comparison.

Photography has contributed to the interests, the tastes and happiness of mankind; it is entitled to place and consideration.

Many of us have travelled a long road with it, followed it over the rough and smooth years; in a

manner have grown up with it. Now in the strength and glory of its prime we have it—What shall we do with it? It is something to be cherished and protected, to be kept respectable, to be made more perfect, to toil for and be proud of—or shall it be prostituted and destroyed through the careless indifference which comes of low prices.

The future of photography is in peril. It is threatened by the folly of smart Alicks and Cheap Johns. Shall the men who have given the best years of their lives to the study and honorable practice of the art, whose aim has been to secure early all valuable improvements, who have expended money by thousands, and taken honest pride in producing masterly work, shall these men be controlled and degraded by those who have no pride or interest in the art beyond getting money by flooding their cities with inferior and carelessly made photographs? Shall honest endeavor and true merit yield to cheek and piracy? Gentlemen, to this you must find your own answer.

The paper of Mr. Ryder was received with great applause, and a vote of thanks given him for the same.

The President: The next subject will be "The Best Method of Lighting the Dark-room." Discussion. Any member having anything to say on this subject we will be glad to hear from. I think this will be the last thing we can attend to this morning, as we ought to have a short session, in order to give us time to get a lunch before we start for the Falls.

Mr. Inglis: I think the subject of lighting the dark-room is one of vital importance to photographers. The discussion we had yesterday, I am very glad to say, pleased me very much. I think that this subject needs discussion, as it is an important one. I find in many instances that men complain about the light used in the dark-room—the ruby light—and say, some of them, they can scarcely see the plates they are developing. This is on account of the fear they have that the light will fog the plate. I think that this fear is wholly unnecessary. As for myself, I have a great amount of light in my dark-room, but take care to be far enough away so that the light will not have any actinic power upon the plate. I don't know whether it is material—ruby

glass or paper, or green or yellow be used—I think the result or the effects amount to the same thing, provided the plate is not too near the actinic power of it. Use plenty of light in the dark-room, but stay very far away from its actinic power.

Mr. Clifford: Mr. President, having visited your dark-room when I was last in your city, I think that you should be invited to describe the lighting of your dark-room.

The President: I have one window 20 x 40, and six sheets of orange tissue paper forms the ruby light, and I have no difficulty with fogging. This is about the way I light my dark-room. The gas is outside, and the key inside, so I have no difficulty in keeping the room cool; and I have it ventilated all around with about fifteen or eighteen little 4-inch square holes in the lower part of the same, and above them little elbows, and in that way I prevent the penetration of light, and I get ventilation without light. In that respect my dark-room is two degrees cooler than any other room in the house in the summer-time. I first tried one sheet of orange tissue paper and exposed the plate to it, and found it to fog; then I put on two, and the fog was less, and so on until I put on six sheets, and then I enclosed those six sheets between two glasses to prevent any spattering of the developer, and I found no trouble with fog at all. I hold my plate right up to it close, put on the gas full if I want to examine it, and I have no trouble. There was one thing I forgot to mention. My gas is on the outside of the dark-room and faces the skylight; oftentimes there is a screen in front, and sometimes I have the daylight and the gaslight mixed. I have a sheet-iron box around the whole thing, so I have only the direct effect of the gaslight without anything else.

Mr. Brown: I have been sufficiently interested in this subject to make inquiries about it. I have found that using the ruby light has had an injurious effect upon my eyes, and the thought has occurred to me whether or not we were not always confused upon the subject by what we find printed upon our boxes. It says, "Open by ruby light," or something of that kind. What I wish to have decided is, are we safe to try anything but ruby light?

Mr. Cramer: The remarks upon ruby light and the directions upon our boxes were put there at the time of the first introduction of the dry plate, and when there was nothing else to use but the ruby light; but any light which is equally nonactinic will do. There is no color perfectly nonactinic; even ruby light will affect the plate if it is exposed to it long enough. We have tried that in many instances, and found that even our work lanterns, which are covered with ruby glass, have a slight effect. Orange glass will affect the plates when they are exposed to the lanterns for from two to five minutes. I would recommend the use of the ruby glass and orange glass combined, and then adapt it to the circumstances. This may answer the purpose if the light faces into the operating-room; it might not if the sun shines upon it. So you will have to use your own judgment. The idea is that the light should be sufficient, so as to allow you to watch the progress of the developing, but not so strong as to affect or fog the plate. I find a very good way, provided the light is modified to that extent, to take the plate which is in the developer, after the developer is poured on. Of course, you have to bring it near the light to see what you are doing, and then to raise it up above the level of the light, and move the dish, and bring it back to the light and watch it, taking care not to hold it to the light all the time. I have seen a green light in use by Garretson, and he seemed to be greatly in favor of the green light, but I have heard no more of it. It seems to me it has no advantages.

Mr. Bellsmith: There is one branch of this subject which seems to be lost sight of, and that is the effect upon the eyesight of the light used in the dark-room. It is a prevailing opinion among a good many of those who have thought upon this subject that the ruby light was extremely injurious to the eyesight, while the orange and green are not so much so. My experience has been that the ruby light has proven quite injurious to my eyesight. I have been using ruby light for three or four years. When I first commenced to use it I had remarkably fine eyesight, but my eyes are certainly failing. I have talked with a great many on

this subject, and they are of the same opinion. Talking with Mr. Seed a few months ago in St. Louis, he said that that had been exactly his experience, and that his eyesight has grown so bad that he had to use the strongest glasses, and he advocated the use of orange and green. He says that since he has adopted it he has felt an agreeable improvement in regard to his eyesight. This is an important matter to all those who work in the dark-room. I believe, from the little experience I have had, that the color which I have recently adopted is a great improvement over the orange alone or the ruby light.

The President: I have some foreign letters here concerning the foreign exhibits, but will read them some other time, as our time is now so very short.

Mr. Clifford: It occurs to me that when we go to Niagara Falls we ought to have a place for meeting, or we will not be able to find each other.

The President: I think we will all have to go to Goat Island.

Mr. Armstrong: I will read the report of the award of the prizes in the Stanley dry plate matter.

The Committee appointed to award the prizes for the best display of photographs made on the Stanley dry plates, gives the first prize for pictures larger than 14 x 17 size, consisting of a "climax" portrait camera 28 x 24, with all the late improvements, to H. McMichael, of Buffalo, N. Y. The second prize for cabinet size A—5 x 8 "Fairy" camera—to J. M. Brainard, Rome, N. Y. Signed, W. H. POTTER,
W. A. ARMSTRONG.

Adjourned, to meet at 10 A. M. Thursday, July 16, 1885.

BUFFALO, N. Y., July 16, 1885.

THIRD DAY.—MORNING SESSION.

The Convention was called to order at 10 A. M.

The President: The first thing in order will be the paper by Mr. G. L. Hurd.

Mr. Hurd read his paper as follows:

Photographic Portraits versus Camera Pictures.

Saxe has said:

A little dulness may afford relief
On some occasions, if it's very brief.

And I suppose your Committee had this in mind when they did me the honor to ask that I should read a paper before this Convention. These hasty thoughts may be neither entertaining nor instructive, but I shall ask you for your ears for a few minutes, while I talk about pictures that we make.

We have become so familiar with the results of photography as perhaps to have lost in some degree a sense of its importance, and may fail to realize the value of the discovery of the principles which underlie it. I thought to-day in looking at the magnificent display of work under this roof, how short was the step back to the time when all such pictures were unknown; forty-six years will cover the period from the first crude daguerrotype to the present hour. Even the first experiments of which we have any knowledge, looking in this direction, are embraced within the present century. It was in 1802, as you remember, that the *Journal of the Royal Institution of London* published an account of the attempts of Wedgewood and Sir Humphrey Davy to fix the image which they had succeeded in obtaining on paper; but failing to do so, the subject seems to have been dropped for some years. In 1839, we find Daguerre with the problem solved, and his discovery patented. The French Government promptly negotiated for the secret, and Daguerre retired to a Chateau nine miles from Paris on a pension of \$2000 a year. It was about this time that he sold the right to England for a large sum, and the process of making pictures with chemicals and light was now fairly launched upon the world. I wish the first daguerrotype ever made could be placed in the Exhibition Hall here that we might fully realize the point whence we started. We need not trace the newborn art through the days when the silvered plate received the impression, nor later when a variation of the principle brought in the collodion process, followed by the gelatine plate of to-day; step by step it has held its way, year by year the manifold improvements of working have been going on; the small number of the disciples of Daguerre have swelled to a countless host (not to mention the amateurs) in the last forty years, and the air is darkened with photographic productions. I am tracing its progress solely in relation to portraiture, without reference to its numerous and important applications in other directions. Think of it for a moment; the desire, which is as old as the race, to behold the lineaments of those we love in their absence, or when that absence comes which shuts them forever from our sight, has had but

the most meagre gratification until within the memory of those now living. True, the painters in each generation have left upon canvas with more or less fidelity a few portraits; there have been miniatures on ivory and other substances, and silhouettes, and in passing let me say that the silhouette has a very pathetic significance, the almost universal presence in the humble homes of the English-speaking race of this, the crudest form of portraiture known to civilized man, voiced the cry of the multitude for a semblance of their friends. We designate the period previous to the Christian era by the abbreviation B. C., pardon me if I seem to parody this by the suggestion that B. D. should stand for before Daguerre. By this little retrospective glance we are reminded that before Daguerre a very important factor in the humanizing of mankind was almost wholly wanting. The sun picture not only placed portraiture within the means of the masses, but gave results which before had been but dimly hinted at by the best artists. I allude to the accuracy and delicacy of expression. However much we may admire the canvases of our best portrait painters, as works of art, they never successfully rival the productions of our best photographers, in depicting the emotions conveyed by the face which has been their subject, nor is it possible, for the brush paints clumsily in comparison with sunlight. When the boy whistled in school, he excused himself by saying that it whistled itself. Photographic portraits produce themselves, in one sense, as he who steps before a mirror is duplicated with the utmost exactness as he is at the moment. This fact has led to a great misapprehension on the part of the public. It is thought that photography is simply chemical and mechanical—that it goes with a crank like a grindstone—that any man who owns a camera and possesses the secret of dark-room manipulations is a photographic artist. A landscape painter said to me, "Photographers have the same instruments and use the same chemicals, do they not—what then prevents one man from making as good pictures as another. I see that they don't, but I fail to understand why." I replied, your knights of the brush all use the same canvas, and brushes, and paints, why does one man's work have greater value than another's? "That answers me," he said, "but it never occurred to me before that the photographer had much to do with it." This prejudice is very deeply rooted in the minds of the community. If you make them a better picture than they have had before, they consider it a happy hit, that the light was unusually favor-

able, or the Gods smiled on the effort. Some very astute people have come to consider that brilliancy of chemical effect, fineness of retouching, and a high burnish are fairly within the skill, and denote the excellence of the photographer. The great essentials of portraiture—the study of the subject—the lighting, posing, the subordination of subordinate things, and general harmony of the whole are matters that not one in a thousand reflect for a moment, belong at all to the production of photographs; and yet there are some now listening to me who give this value to their sittings with little reward, I am afraid either of appreciation or money.

It is told of a man who had his portrait painted by an artist of distinction, that being no judge of art himself, he bethought him of a friend—a house painter—who surely ought to know if anybody. The critic scanned the portrait, and finally said: "So you paid that man \$150, did you? I assure you there isn't 20 shillings worth of paint on the whole canvas." This is the whole thing in a nutshell; are we selling the stock that enters into our productions, or is it our skill that we are offering the public? In the craze of cheap picture-making that is upon us it would seem to be the former. I do not propose to discuss the matter of prices, except in such wise as is inseparable from what I am trying to say. It seems to me that photography is in a transition state; we have achieved much, how much, the visitor of this Exhibition can judge. But there are causes operating to degrade our art, "that make the judicious grieve." Perhaps I can best illustrate this by stating what seems to me to be the difference between camera pictures and photographic portraits, camera pictures have a high popularity because they are cheap. They are made generally by men who have a level head for business, men who have organized a factory, if I may be allowed so to express it, for the production of photographs. The requirements of the public are carefully kept in mind. Brilliant chemical effects are not hard to attain. Retouching, the chief use of which is, as generally employed, to make people's pictures look less like them, is done (or overdone) with that free and easy defiance of the modelling of the face which makes the heads of old and young suggest nothing so much as a billiard ball; and thereby the public is pleased and flattered, the picture-maker wins the good opinion of old ladies of both sexes, and the shekels flow into the treasury. An establishment of this kind, well organized for business, and giving its sitters a set of

stereotyped positions can easily handle from 30 to 100 people in a day.

To make photographic portraits the conditions are essentially different. The operator should be an artist—a man of culture and refinement, acquainted with art principles, and all the resources of photography. He should have that subtle feeling for portrait effects which every man is not born with. Every sitter should be a study, and the sitting accomplished in the most leisurely way. If your appointment is with a stranger, seek to establish a little acquaintance, for until the restraint that exists between strangers in the first moments of intercourse has disappeared, the subject will not be at his best for a picture. Suggestions as to attire should be freely offered if anything is worn that will mar the effect. There are with most people many little things that mark their individuality beside the lines of the face; the postures they assume, the way of holding the head, etc., all these things should be noted before you attempt to secure a pose. A half dozen plates are none too many to use, and two hours none too much time to devote to your client. You are thus enabled to employ various lightings, try different views of the face and different attitudes, taking your subject in repose and action, and thus assure yourself that you are getting the most favorable result possible. Compare the proofs from your plates, and if you find that anything more to your satisfaction can be obtained secure another sitting. It is only when you are satisfied yourself that the sitter should be consulted, and only proofs shown from such plates as you are willing to work from. The further operation of retouching the negative and printing from it must be carefully supervised by yourself or all your pains and skill may come to naught. The soft, beautiful effect that a well-handled gelatine plate will afford leaves but little necessary working of the negative in a majority of cases; and that, I need not say, is the work for an artist. No cause, it seems to me, contributes so much to make abortions of photographs as the retouching we usually see. A distinguished portrait painter lately said that the photographs of to-day were worthless as aids to painting portraits, because of retouching.

It may be said that no more than three or four sittings could be made in a day if such methods as I have suggested were adopted. That would be quite enough. Make a charge for your services that would be made by any professional man, in good repute, for the same outlay of time. The ability and training required to make one competent for such work is

not a whit less than that required for any professional pursuit. We pay a lawyer \$50 or \$500, according to the importance of the case, for an opinion. We know that we are paying for skill. For special attainments. The public will pay for the exercise of great talents and skill in the landscape painter and the portrait painter. The trouble *is* photography has never been recognized as an art. I am afraid we must admit that it has not risen to that *dignity* of art, as it is generally practised, that might be wished, nor do I believe that every man engaged in it could practise it, in the manner described here, successfully; or that every hamlet in the land offers a field for such work. But I believe there are a dozen cities between the two great seas that wash us on either side, where an artist in photography would win a position in a few months. It seems to me that it must be some such departure as this that will rescue photography from the low estate in which it is hastening, financially and otherwise, and I venture the prophecy that in the future, perhaps not far distant either, there will be photographic portraits hanging upon the walls of affluent homes, where taste and culture preside, which will not be spoken of as "only a photograph," but will be prized for their *art* value, as well as for their qualities as likenesses, and the artist honored and paid for his genius and skill. Applause.

A vote of thanks was accorded Mr. Hurd for his capital paper.

The President: The next business in order will be the report of the Committee on Nominations.

Mr. J. F. Ryder, Chairman, then read the report of the Committee on Nominations, which was received and laid over for action at a future session.

The President: I have just received the following telegraphic dispatch:

DENVER, COL., July 15, 1885.

J. Landy, President Photographers Association, Armory Hall, Buffalo. May your Convention be the largest and most successful ever held.

J. E. BEEBE.

Also another dispatch from Clarkesville, Tennessee, dated July 15, 1885. To the President of the Photographic Association, State Arsenal Building, Buffalo, N. Y. Photographers in Convention assembled, greeting, although I am not there my heart is with you, good cheer to all.

J. T. HENDRICKS.

Mr. J. Traill Taylor then read a paper entitled "Scientific Development," by Col. Stuart Wortley, as follows:

Scientific Development.

My friend, Mr. J. Traill Taylor, having asked me to write a short article to be read at the Photographic Convention, I gladly do so; but I have nothing that is new, and, perhaps, nothing that may be interesting to say.

It will be remembered how great was the variety of developers introduced from time to time in the old wet process, but is nothing to the proposals that have been made as modifications of the dry-plate development by the great army of photographic "faddists."

I have before stated in print, and I repeat it now again, that the manufacture of a sensitive dry gelatine plate is a matter of absolute certainty, but that where talent and progress are shown is in working out a system of development modified at will for every class of negative and for every different kind of subject.

I have carefully investigated all developers that have been proposed in which there were reasonable grounds for hoping that an advance was made, but I am bound to say that I have never found any developer for any round work equal to that composed of ammonia and pyrogallie acid.

I have found a prejudice existing in certain quarters against this developer, from the fact that many of the formulas give ammonia and bromide of potassium ready mixed together as one of the solutions.

Now, this method of proceeding at once takes away the whole value of this method of development; it is absolutely essential that this pyrogallie acid, the ammonia, and the bromide of potassium should be in three separate solutions, and the developer thus capable of being varied at will according to the negative that has to be formed through its influence.

My own method of using these solutions is to have a standard solution of the strongest ammonia, 1 ounce to 9 ounces of water, every 10 minims of which will thus contain 1 minim of strong ammonia.

The solution of bromide of potassium is 15 grains to the ounce of water, while the pyrogallie solution contains 3 grains of pyrogallie acid to the ounce of water.

But now comes one modification on which I lay the greatest stress, and that is the addition of sulphite of soda to the pyrogallie solution.

The sulphite of soda solution is thus made: Take 1 ounce of pure sulphite of soda and dis-

solve it in 12 ounces of water; then by the addition of citric acid remove the alkaline reaction from the soda solution by adding the citric acid, little by little, till blue litmus paper is turned faintly red; this is a standard solution, and can be kept ready for use at any time.

To make the pyrogallic solution one precaution has to be observed, and it should be made as follows: Weigh out 240 grains of pyrogallic acid and dissolve it in 4 ounces of the above sulphite of soda solution, and then add water until you have 30 fluidounces of solution. Be sure to mix the pyrogallic acid with the sulphite before adding the water.

Now, here you have a pyrogallic solution which will keep any reasonable time in working order, and your three solutions of ammonia, bromide, and pyrogallic acid are thus always ready for use at a moment's notice.

There is one addition that may with advantage be made, and that is a drop or two of glyco-coccol to the finished developer, made according to a formula which I published years ago. Its tendency is to give a richer tone to the negative and to improve its printing qualities.

In my own practice with instantaneous pictures, I find it to be of the greatest use to give the plate a preliminary wash with water containing a minim of ammonia to every two ounces of water. It certainly increases the sensitiveness of the plate to the subsequent development, and since the time when I published this proposed modification I have had ample testimony given me as to its great value.

With standard developing solutions such as I have proposed, any class of picture can with certainty be made, and I need hardly tell those who understand dry-plate photography that it is impossible to develop all different classes of subjects with the same developer and really to do justice to the development of each plate.

I may mention, in conclusion, that a good standard developer for an average negative, composed of the above solutions, would be of the pyrogallic acid solutions, 1 and 1-4 ounce; of the bromide of potassium solution, 30 minims; and of the ammonia solution, 25 minims.

From this, which I may call a standard developer for an average negative, all modifications should start, bearing in mind that the pyrogallic acid has the greatest influence in increasing density; and that, when you have to photograph white dresses or horses, or other brilliantly lighted objects, the proportion of pyrogallic acid must be considerably reduced; and it should be remembered that, if prolonged forcing of an instantaneously exposed negative

should be required, it is wise, after the first one or two additions, in order to keep the shadows clear; and if the negative, in coming up, seems to be weaker than it ought to be, some of the pyrogallic acid should also be added.

I give these hints, as I have generally found that amateur friends who have consulted me as to difficulties, have continued to add ammonia, with the object of forcing a slow development, and have omitted to remember that pyrogallic acid and bromide are most important factors in scientific development.

July 2.

MY DEAR TAYLOR: Will you please add this paragraph? "It must always be borne in mind that a photograph is impressed upon a plate by the *action of light*, and is then developed. Many photographs are spoiled from insufficient exposure for the following reasons: If the *light* has not impressed the image on the plate, no modification of the developer can bring out an image; but, if too much *light* has acted on the plate, then a modification of the developer can control the *surplus* light, and thus produce a good negative.

Therefore, bear in mind always, that it is better to over-expose than under-expose a negative. In very short exposure the preliminary wash of ammonia in water may help; but even that is powerless if the light has not acted enough.

Yours, truly,

H. STUART WORTLEY.

A vote of thanks was tendered to Col. Stuart Wortley for his very able paper.

The President: The next business in order will be taking the ballot for the best collection of photographs in the exhibition. I appoint H. S. Bellsmith and D. A. Clifford as tellers.

A ballot was then had, and the tellers reported as follows:

Mr. Ryder, 93; Mr. Gehrig, 11; W. H. Potter, 6; H. McMichael, 4; Mr. Cramer, 3; Mr. Falk, 1. Total number of votes, 123.

The result of this announcement was received with a great deal of enthusiasm. The President then called Mr. Ryder to the platform and pinned a badge on his coat. Mr. Ryder said:

Mr. President and Gentlemen: I want to address you as my friends. I am very happy for the expression of kindness that you have shown to me this morning. I came here with a little fair exhibit of pictures, without

any idea of taking or attracting more than common notice. I have been made a little proud by the many comments that have been made favorable to it; and now, by the act of the Convention in voting me so fine a majority, it makes me, indeed, happy. I want to say that, in my paper yesterday, there might be the impression that I was working the camera, but I have not engineered the camera for a good many years. All the credit that I have got here belongs to the people in my house. I desire to make that remark. I thank you all very much, and I wish you were all as happy as I am this morning.

Mr. Cramer: I wish to correct a remark that has been made: that if the foreign exhibit has been made upon a certain brand of paper—I understand that is the assertion—it should be excluded. I assure you that that is not the case. I have had a good deal of correspondence about it, and a good deal has been addressed to Mr. Landy; some was addressed to me. I can assure you that Mr. Gennert has used very great efforts in Europe for the purpose of collecting the work from German artists.

The President: I have a letter here in reference to this matter. There is an invoice here of the different exhibits, and as it is from an albumen paper factory (as I judge from the fact of the letter being on one of their letter heads), it might lead me to suppose that something of the kind was the case. However, I will read the letter, and you can then judge; the letter is as follows:

DRESDEN, June 26, 1885.

To the President of the Photographers' Association of America.

SIR: Having been appointed a member of the committee for procuring foreign exhibits, I have the honor of reporting the following:

Through the photographic journals in Germany, I caused to be published an invitation to photographers to participate at the exhibition to be held at Buffalo, N. Y., from July 14 to 18, 1885.

As an inducement for as full a representation of German art as possible, I offered two prizes: the first a prize of 300 marks; the second a prize of 150 marks (both prizes

to be made by me personally), for the two best collections exhibited. The award is to be made by judges appointed by the Association, or, if this can not be done by the Association, the judges to be appointed by the President and the Vice-President of the same in their private capacity.

On my arrival in Germany I found that, although many had promised to send full exhibits, the time had not been sufficient for preparing them; five or six firms only were able to finish the intended work in time for the exhibition.

Although the object has not been fully accomplished, enough work has been sent to allow of a fair competition for the prizes above mentioned.

Having done the best I could for the short time, I trust that the Committee will accept favorably of my efforts, and that these may contribute to the completeness of the exhibition, and to the success of the Association.

The exhibits not finished in time for this year's competition, might be entered for next year's exhibition, so that the exertions may attain their intended object.

As the German photographers will also have an annual exhibition, I would suggest that the Association adopt a resolution requesting its members to send specimens of their work to Germany for the next year's exhibition (time and place to be published hereafter), and I would with pleasure undertake to send and to return said specimens, believing thus to create an international interest. The Association, I hope, will favorably consider this matter.

The balance of my time I shall devote to procuring the best of albumen paper, so that photographers may hereafter find it to their thorough satisfaction.

I have the honor to be,

Yours, very respectfully,

G. GENNERT.

The President: There is the first and second best; there are five exhibitors. I suppose the best two will get the prizes—first and second.

Mr. Porter, Indianapolis, Ind.: I think, now the voting is over, and we have disposed of this subject, that a vote of thanks

should be tendered to Mr. Gennert for the magnificent display of foreign pictures secured by him, and that a committee of three be appointed to award the prizes of the Association; I make this as a motion.

The motion was seconded, and agreed to.

The President then appointed the following Committee on the foreign pictures: Mr. G. Cramer, H. S. Bellsmith, and G. M. Carlisle.

Mr. Inglis then moved that, when we adjourn this afternoon, we adjourn until eight o'clock.

Agreed to.

Mr. Atwater: I see that some mention has been made of a matter that I think ought to be explained, and that an investigating committee ought to be appointed in regard to our former Convention. There are ugly rumors in regard to the matter, and I think that it should be explained, and that reflections ought not to be cast upon the officers in this way.

A committee of three was appointed to investigate this matter and report before the close of the meeting. The committee was Messrs. Atwater, Inglis, and Gentile.

Mr. Cramer: I would like to get the sense of this house, if they deem it proper, as to the offering of prizes or medals for exhibits; so I move that we offer ten medals for the next Convention. I think it is a stimulus to the bringing out of a fine collection of pictures, and if we award medals to more than one person, for instance to six, eight, or ten, there will be a good chance for others to get a prize. I think that this could be done, and it would have a good effect. In this manner we can reward the meritorious. I am well satisfied this feeling is entertained by a good many in this Convention. If there is only one, it might be difficult to decide who should have the medal; but, if there are several medals, several people will be made happy. I think it would be a great help to the Association, and it would bring out a good many fine exhibits which otherwise will not come. I therefore would like to make that as a motion, and offer \$500 towards their cost.

Mr. Inglis: I would like to inquire if this is in accordance with the rules of the Association to do this?

Mr. Cramer: Yes.

Mr. Inglis: Very well, gentlemen, I would say something with regard to this matter. I do not think that a mistake would be made if this was done. I think it will bring out the best exhibition of work that our Association has ever had. There will be a chance for every one, and this will stimulate to the highest attainment of their ability.

The motion was then adopted.

Mr. Inglis: Mr. Cramer will have an opportunity in this way of assisting the Association with the \$500 that he has subscribed.

Mr. Cramer: My intention was not to make a difference in the medals—that is to say, number them 1, 2, 3, and 4, but to make them all alike. They would then be awards of merit, otherwise there would be too much jealousy. I do not want this considered as a private matter at all, as it is very important. I only want my motion to be considered—that is, if the Association finds its proper and appropriate. I now move that this Association appropriate the sum of \$200, which sum may be increased by voluntary contributions by others, and that the full sum so made up be awarded to the ten best exhibits, reserving two for the foreign exhibits, and devoting eight to the American exhibits.

This motion was agreed to.

Mr. Inglis: If there are ten, that will be \$1000. Is that right?

Mr. Cramer: Yes, sir. We can make them of gold then.

Mr. Inglis then moved that the balance of money over \$1000 be paid in cash, pro rata, to each winner of a prize.

This motion was seconded.

Mr. Potter: I think that this is a very good motion, for this reason: It is an expensive thing to bring pictures here from a distance necessarily, and this will stimulate others to bring work, when they know they have a chance to recover some of their expenses.

Mr. Cramer: I accept the amendment of Mr. Inglis.

A motion to reconsider was then made, that the Association give \$200, and the balance to be received in the way of contribu-

tions, and that the excess over \$1000 be divided among the exhibitors pro rata.

The President: It has been moved and seconded that \$200 be donated by the Association for ten prizes: two to foreign exhibitors, and eight for exhibitors from the United States and Canada, and that, if the amount of the contribution should exceed \$1000, or be in excess of \$1000, that the excess over \$1000 shall be divided pro rata among the winners of the prizes in cash.

Agreed to unanimously.

Mr. Cramer: To make the thing complete, I will make the motion that the prizes shall be awarded to the members by ballot, and those receiving the medals shall be members of the Association. Those receiving the greatest number of ballots shall be considered the winners of the premiums.

Further discussion followed as to the proper regulations concerning the awards, but it was deemed best to leave the matter for future consideration.

Defects Incident to the Construction and Use of Rapid Combination Lenses.

The trade term "Little Giants" was not an inappropriate one by which to designate the class of lens of which I am now to speak, implying thereby great capabilities in small bulk. The term is quite as applicable at present as in 1866, when the first of the class made its advent.

I shall confine myself to principles, not individual productions, as none of the cemented and so-called rapid lenses of the present day differ in any essential respect from each other, or from that of 1866, which was evoked into being by a Munich professor on the requirement of the late Dr. Van Monckhoven. Already this lens bears from twenty to thirty different names, each dealer or each manufacturer introducing modifications in form of mount to warrant the coinage of a special designation.

The distinction characteristic of the objective is that it is *aplanatic*, or capable of being employed with full aperture, like a portrait lens; it is *rectilinear*, reproducing an object without curvilinear distortion; it is *symmetrical*, its front and back lenses being similar. The virtues of this lens are numerous and well recognized. There is, therefore, no need that I should speak of them. I therefore speak of certain defects met with occasionally in the productions of even the very best makers of this rapid and most useful class of lens.

A serious element of danger is to be found in the endeavors of some makers to produce lenses having what opticians term a greater intensity ratio than in those of others. The aperture of a lens is limited by the density of the glass of which it is formed. The large aperture of the modern aplanatic doublet is owing to its being formed of glass of much greater density than the ordinary optical flint and crown. The greater the density of the glass the more may the aperture be increased while still retaining those qualities for which this lens is famous, viz., good transmission of oblique rays.

But glass of this enhanced degree of density is unfortunately liable to decomposition with more or less rapidity. It seems impossible hitherto to get glassmakers to prepare glass of great density, in which, if it does not possess a well-marked degree of color from the beginning, soon acquires it by time, hastened by the action of light.

I have never yet known glass of this nature, which, if ground into a lens, would not show a well-marked degradation of color, if removed from its tube and pressed down upon a sheet of white paper. Rapidity of action obtained at such a cost is delusive. It is quite possible by employing flat curves to make a lens of safe glass which will define well in the centre of the field, and for a moderate distance away from the centre, but the definition invariably gives way rapidly towards the margin.

A well-known London optician once submitted to the notice of the Photographic Society of Great Britain three lenses all of the same class—that now under consideration. One of them represented an aperture of about the eighth of its focus, a second, a sixth, and a third, a fourth. The first of these, he had manufactured in the regular way. Knowing that at that time a continental maker, of a justly celebrated name, was introducing a lens reported to have greater illumination, I inquired why he allowed these quick-acting lenses to remain in abeyance, "Look here," he said, proceeding to a cupboard, from a shelf of which he brought down certain lenses which he banded me for examination, "these are the individual lenses I submitted to the Photographic Society. Observe how the glass has changed color. Anticipating this, I would not risk my reputation by making one for sale." The discoloration was of a most pronounced nature. The deduction from this is obvious. Let those who possess lenses for which special claims for rapidity are made, be careful to keep them under cover from the action of light when not in use, as the glass of which they

are made contains so much lead or analogous density-conferring bodies, as will insure serious discolorations, and consequent slowness of action before many years have elapsed. A lens having what may be considered a rather small aperture may work more quickly than one having an actual aperture larger in relation to its focus.

I now pass to another defect inherent in some of these lenses—that is, their tendency to give a ghost or flare spot in the centre of the plate.

Lenses prepared by the very best and most fastidious manufacturers occasionally show this defect, and in two lenses, ranking in precisely the same category, one may have it and the other be quite free from the defect. This often arises, singularly as it may seem, from the very perfection to which lens-testing has been carried in the better class of manufacturing establishments. A watch dial placed at a certain distance forms the test for definition, and when the central or axial definition of the lens has been found to be correct, then is the eye-piece (one of great power) by which the image is tested removed in a line strictly rectangular to the axis, until the image of the dial transmitted obliquely is found in line. It is here where the skill of the examiner is displayed. He has to adjust the lenses so as to strike the golden mean between flatness of field and astigmatism. It is a peculiarity of all combinations of lenses that if the field be made too flat, this quality is secured at the expense of astigmatism, or the inability of the lens to transmit an oblique ray under circumstances giving absolute sharpness. For example: If the object to be delineated near one margin of the plate be a white cross upon a dark ground, it will be found that when the vertical lines are focussed to sharpness, the horizontal lines will be out of focus, while by racking the lens in or out to insure the sharpness of the horizontal line, the vertical one goes so far out of focus as, in many cases, to vanish altogether, the full aperture of the lens being employed.

It would be out of place in this paper to indicate the methods employed by opticians to effect the necessary compromise between good marginal definition and flatness of field, but for our present purpose I may say that the distance at which the one lens is separated from the other is an important factor in such adjustment. But in aiming at securing the compromising in which lies such perfection as they consider attainable, opticians sometimes ignore an evil that, under certain circumstances, results from adopting the standard that they do.

With the most perfectly corrected lens it often

happens that when employed for out-of-door work, and used with a small diaphragm, there will be a distressing spot of luminousness on the centre of the plate. This is not peculiar alone to the cemented rapid lens, but was a well-recognized characteristic of the now unused globe lens. It is a peculiarity of almost every existing portrait combination, and sometimes also of single landscape lenses. When lenses are used in the studio for portraiture or groups it is never seen, but when a bright sky forms a portion of the included subject, then it is apparent, but mainly so only when there is a small stop, for the smaller the diaphragm the more pronounced will be the flare or ghost-spot.

I observe here, although slightly outside of my subject, that there is no lens made, even the simplest magnifying glass, that has not two foci, one of them the principal focus caused by the refraction of the transmitted rays, the other being much closer to the lens, and caused by an internal reflection to which a portion of the light has been subjected. This it is which operates in the case of a ghost, produced by a single landscape lens, and it is remedied by displacing the diaphragm from its position to the extent of from a quarter to a half inch, the ghost, in such a case, being an image of the stop which is in one conjugate of the abnormal transmission, the sensitive plate being in the other. Disturb the relation of the first, and the second vanishes.

This explanation does not meet the case where a combination is concerned. Premising that the ghost is never discernible when working inside a studio, but only when operating outside with a moderately bright sky, or when taking the interior of a church or similar building, I here repeat what I have recommended as being the best means by which to discover whether a lens possesses this propensity. Screw it on a camera, and bring it into a room lit by a gas-flame. Go to a distance of several feet and examine the flame on the ground glass. The image will be sharp, bright, and inverted. Now move the camera slightly so as to cause the inverted image to be a little to one side of the centre of the focussing screen, and in nine cases out of ten there will be seen a ghostly image at the opposite side of the centre. This secondary image is non-inverted, and upon rotating the camera it moves in the opposite direction to the primary image. The nature of this secondary image or ghost, and the cause of its formation, may be examined in the following way: Move the camera so that the ghost shall be near the margin, and then, placing the eye in the line of that

image and the lens, withdraw the ground glass, when the posterior surface of the lens will be found to be quite luminous. That the false image is, in this case, caused by a reflection from the back surface of the anterior lens is demonstrable by unscrewing the cell containing it until it almost drops out of the tube, and then, keeping an eye upon both the primary and secondary images on the ground glass, move or slightly wriggle the front cell, which by its being nearly unscrewed may now be easily done, when it will be seen that when the primary or legitimate image of the flame remains motionless, the ghostly image caused by the reflection from the front lens dances about all over the plate. But observe, further, there is a certain distance between the front and back lenses, at which this secondary image is sharp and bright, and in proportion as either the front or the back lens cells is screwed in or out, so does the image become more attenuated and expanded, till at last it ceases to be seen altogether, while all this time the real image is not seen to suffer in any way. This tendency of the ghostly image to pass out of focus with such extreme rapidity, upon separating the lenses by a few turns of the screw, or by making them come nearer each other, provides the means by which this evil may be cured. A rapid doublet may be excellent for portraits, groups, copying, and every other purpose, and yet break down when employed with a small stop in landscape work.

Within the past few weeks I am aware of a lens recently imported from manufacturers of the highest eminence, which, while perfect in every other respect, was defective as regards the ghost. As the result of careful testing in a temporary tube, it became apparent that a cure could be effected by shortening the tube about an eighth of an inch, which was done without flatness of field being impaired in any discoverable degree.

The most perfect mount for lenses of this class would be that in which the privilege was afforded the user of making an adjustment to suit work of any nature by the separation of the lenses to a very limited extent, so as to be used under the most perfect conditions for the special work in hand. With a lens of about eleven inches focus, a sliding adjustment of half an inch has been adopted with beneficial results.

On motion of Mr. Ryder, a vote of thanks was tendered to Mr. Taylor for his able paper.

The President announced that the group would be taken this afternoon at four o'clock

in the rear of the hall on a plate 18 x 22. A vote of thanks was tendered to Col. Wortley for his excellent paper, and also to the authors of papers which have been already read. On motion, the Convention then adjourned until two o'clock P.M.

THIRD DAY.—AFTERNOON SESSION.

The Association was called to order by the President at two o'clock P.M.

The first thing in order was a paper by W. H. Potter on the introduction and development of dry plates.

Mr. Potter then read his paper as follows:

The Handling and Development of Dry Plates.

Mr. President, Ladies, and Gentlemen: The subject will be briefly treated under three heads: the man, the light, and the development.

And, first, in regard to the man thought qualified to go through successfully with the various manipulations connected with the production of gelatine negatives: The critical dicta that "anyone can make dry plates, but it takes a genius to develop them," or that "one science only will one genius fit, so vast is art, so narrow is human wit," are rather sweeping to apply to development, which is only a branch of a science; but still the higher the mental training, and the more perfect the command of all the faculties, the greater will be the success of our man.

But no great thing is achieved in a rush; there is a great deal of preparation, a succession of events, preceding a crisis, or a great achievement; so the guiding hand, and the governing will, to be successful, must be disciplined by previous habits and modes of action. One must be ready for the decisive moment wherein the fit achieve success, the unfit suffer defeat. In the tide of one's affairs, how can he take it at the flood, if he has neglected his schooling in the methods which guarantee success?

The appearance of the beggar on horseback is but so much against him as is the pinched-up soul within which makes him unequal to the situation.

One's battle is mainly with himself; he stands alone in judgment, therefore he should not waste his time villifying his neighbors, but bend every effort and seize every opportunity for his own improvement, and that of his productions. He should also remember that low grasping ultimately defeats itself, and that those who labor solely for low material interests seldom receive the prize.

Neither will he delight in stained hands, besmeared clothes, and dishevelled hair; nor will he rush hither and thither, hoping thereby to convey the ideal of a driving business and of his own self-importance; nor any other kind of clap-trap or pretence, for this is the way of the unfit, and they cut a sorry figure in the eyes of the judicious.

"Oh, wad we had the giftie gie us,
To see ourselves as others see us."

But can every conscientious energetic photographer become master of dry-plate manipulation, or is it attainable only to the few?

Gifts to men have been distributed as bountifully as light and air, but unfortunately the many neglect their talents and opportunities, the few only make the most of them; these are sought after, those are neglected. It rests with each individual what shall be the measure of his success, as God helps them that help themselves.

What a man ardently desires and strives after, that shall he accomplish. The difference in men's talents is not so great as is their persistent determination; and this is susceptible of cultivation.

That a man's judgment and knowledge determine the quality of his negatives is sufficiently demonstrated by the knowledge that his negatives differ from every other man's, although made from the same emulsion and developed with the same kind of developer.

His every faculty enters into his conception of what a negative should be. Then is he governed by crude notions or guided by thorough theoretical and practical knowledge? The value of his opinions or productions can be measured by the answer to this.

Therefore, get understanding, get wisdom, great is the value of it. Have faith, have hope, have determination; no great poet sings; nor no great master paints without these. In fact, a certain amount of sentiment and enthusiasm, and even a little fanaticism, seems necessary to any great achievement in any one direction.

THE LIGHT.

In the attainment of perfect chemical results, the management of the light is of supreme importance.

It matters not how perfect the plates, the lens, or the development may be, if the lighting is defective, the result will not be a first-class negative; for in such cases, with the best materials, only a map representation can be obtained.

In portraiture, should one so light the face as to have crescents in the eyes, with possibly stars in the pupils for high lights, perfect modelling

or definition is out of the question, because the same flood of light, which has made a caricature of the eyes, has utterly obliterated the delicate curves about the most important features of the face.

This criticism is made because too many photographs, even to this day, have defects; and judging from these, too many that are considered first-class galleries, use the same quantity of light for dry plates that was found absolutely necessary for the wet. This charge lies mainly against those who, having clung to wet plates till they were compelled by the force of circumstances to use the dry, have gone off on a tangent trying to make all sorts of difficult positions without headrests, and to achieve this, flood the subject with so much light as to sacrifice definition to effect.

But it is now possible without risk of the subject moving or of underturning to model up the subject with light somewhat as a painter or sculptor would under similar conditions. This can readily be accomplished, the light is brought under absolute control by properly curtaining the skylight. For a twelve foot light there should be at least two curtains for the sidelight and two respectively fastened at the top and bottom of the top light.

With such an arrangement the light may be so adjusted as to bring the high lights in the eyes to a mere point, and, if at the proper angle, the whole face will be so lighted as to give good modelling and, with proper timing, good definition.

Under such conditions the pupils will not contract, nor will the subject frown. But what light you have, have it clear and brilliant, as it is folly to talk of brilliant chemical effects without a brilliant light. Proper or full timing will give all the softness required. Use rapid plates and light boldly for relief and brilliancy. Silver plates demand too much light or too prolonged timing to get the best results as to either definition or expression.

In regard to the exposure, the only safe criterion is the relative brilliancy of the images on the ground-glass; and one should school himself to judge critically of the brightness and color of the image; decide that this subject requires so many seconds, that, so many more or less.

Rely on and cultivate your judgment; there is great demand for it in lighting, posing, etc., if one cannot put confidence in himself, who should.

THE DEVELOPMENT.

This shall be confined to my present methods of procedure, and stated as concisely as possible.

Two kinds of development are used :

The Ammonia Pyro Developer.

Sulph. of Soda (cryst.) .	6 oz.
Brom. of Ammonium .	1½ oz.
Brom. of Potas. .	2 oz.
Pyro	4½ oz. (avoir.)

Dissolve thoroughly and add sulphuric acid, two to forty minims, and liquid ammonia, six ounces, and enough water to make eighty ounces of solution.

Use eight drachms of this stock solution, and from eight to eleven ounces of water.

The Soda Pyro Developer.

A. The pyro portion.

Water	96 oz.
Acid	96 grs. (dis.)
Alcohol	6 dr.
Pyro	16 oz.

B. Soda portion.

Water	210 oz.
Carb. Soda	16 oz.
Sulphite (Gram.)	16 oz.

Use one and a half to four drachms of the pyro solution, eight of the soda, and seven ounces of water.

The ammonia pyro and the pyro portion of the soda developers are kept in six ounce bottles, and will keep indefinitely.

Ordinarily, the developers are mixed as follows:

Three drachms of pyro solution, eight drachms of soda, and seven ounces of water. The ammonia pyro, eight drachms, and eight ounces of water.

Two trays are used in developing the smaller sizes; partly for expedition and partly because slight modifications may be made quickly in the mode of development.

The timing is judged to be absolutely right, but a little short, the soda developer is poured into the tray and the plate placed in it. Should development progress too rapidly, place the negative in it or the tray into which some ammonia pyro has been poured. Should the timing be considered a little full, start with the ammonia pyro first.

If the exposure be first right, the ammonia pyro brings up the image almost as rapidly as in wet-plate development, and the negative has a light straw color bloom with excellent printing qualities.

Should its exposure be much too short, it gives too much color and contrast. In such cases the soda developer is far superior. With the two developers combined, in various proportions, many modifications may be made.

There is a peculiar relief or atmospheric effect given to the negative, which is distinguishable from that of either alone.

In developing 18 x 22 or 20 x 24 plates, the ordinary method is modified in the following manner: in the sixteen ounce bottle are mixed three or four drachms of the pyro solution, two ounces of the soda solution, and the bottle filled with water; in another eight ounce bottle are poured three drachms of pyro solution, one ounce of soda solution, and filled with water; in another eight ounce bottle, one ounce of ammonia pyro, and the bottle filled with water; The developing tray partly filled with water, and the plate placed in it and allowed to soak a few moments, or till the water will run off without a ridging, when it is quickly poured off and the developer in the sixteen ounce bottle is dashed on and the tray rocked to secure even development.

Should the exposure prove short, this developer, weakened pyro, will save it; or the exposure proving about right, pour it in eight ounces of normal soda solution; or if full exposure is indicated, use instead the eight ounce ammonia pyro solution, which will check rapid development and give intensity without making a slow printing negative.

It has been noticed in the development of large plates, when the developer is any way near the right power or strength, the image will come up rapidly at first, but will soon check up and proceed quite leisurely, and the mode of procedure prove just right.

But if the shadows come up too much before the checking of it begins, without the addition of more developer stronger in pyro, the negative will have to be over-developed to get printing strength; or if the stronger pyro solution be added, when really it is not needed, the negative will then have too much contrast, and if not speedily checked too much intensity also.

It takes an exceedingly quick apprehension to realize, in time to correct a mistake made in the commencement of development, and what modifications are necessary to redeem the negative.

It is simply impossible in all cases to begin development just right. Ample preparation should be made for all contingencies, as one should not rely too much upon his wit to help him out of a tight box; and yet his mother-wit may be the ultimo theory in the redemption of an otherwise hopeless situation. The great thing is the ability to comprehend the situation in each particular case; the readiness to make possible modifications, and the grit and alertness to make them in time. It takes a brave man to

avoid getting rattled and winding up with a negative too thin, too intense, or with too much contrast.

We will close with an answer to the question, "Does rocking the plate during development secure contrast?"

That evenness and cleanness are obtained by it is not questioned so directly by the answer. The molecules of bromide of silver, disturbed or changed, by a proper exposure from the highest light to the deepest shadow, are in progressive diminution. All, or nearly all, of the bromide of silver on or near the surface of that portion of the plate which represents the highest light is changed, while but a small amount is a light effected in the deepest shadows.

These mechanical agitations of the developer cause a more rapid chemical action, so that before the developer has had time to penetrate the film to any considerable extent, the reduction in high lights has been carried to a much further point than it otherwise would, had the developer remained quiescent. The start the high light has secured over the shadows, is maintained throughout ordinary development; also the shadows requiring all or nearly all the changed silver, both in and on the surface of the film, to give proper definition, the high lights have time to darken sufficiently to produce proper contrasts.

But there is still another factor contributed to the same result. The greater amount of free bromine thrown off in the high lights, and combining with the quiescent developer lying immediately over the high lights, retards development in the lights, while in the shadows, the development being less retarded from this cause, progresses too rapidly to secure contrasts; but by agitation the power of the developer is kept uniform over the surface of the plates, and the high lights retain all other advantages secured in the exposure.

On motion of Mr. Taylor, a vote of thanks was tendered Mr. Potter for his very fine and able paper.

A paper was then read by Mr. Taylor, written by Mr. William Ashman, as follows:

A Portable Support for Washing Gelatine Plates.

An invitation to communicate anything upon such an important occasion as the present is an honor which has given me great pleasure, mingled with anxiety, lest the subject which might appear to me to be fitting, should prove to be identical with that chosen by one of yourselves, whom we, who have the opportunity of being

posted up in American photographic literature, know to be thoroughly practical. In fact, so much are some of us impressed with this idea that it appears questionable whether we can indicate anything of practical value which possesses the merest flavor of novelty about it, when it reaches the hall of your great Convention.

If, therefore, as I honestly suspect that I too have failed in this particular, it has doubtless been done in good company. Be this as it may, while in the dilemma just mentioned, my eye rested upon some negatives from which the fixing salt was rapidly passing away, and it occurred to me that a portable support would, at all events, be something to make and mail in time for the meeting.

It was thereupon settled, and I have asked our mutual and highly respected friend, Mr. J. Traill Taylor to introduce the result to your notice, with these few accompanying remarks.

A detailed description is hardly necessary, as Mr. Taylor will place before you the first and only frame that I know of, so that it will be sufficient to refer merely to its use from a theoretical as well as a practical point of view.

Starting then with a plate fresh from the fixing bath, we have a skin of gelatine swelled to its full extent with an aqueous solution of sodium thiosulphate, and possibly plus a portion of the double silver and sodium thiosulphate salt. The former we know to be soluble in water, and the latter is only soluble in an excess of the first named. For this reason it is customary for us to allow our negatives to remain a longer time in the fixing bath than is necessary to dissolve out the visible silver bromide.

From this skin we desire to remove all traces of the fixing salt, leaving it swelled with water or other suitable liquid, free from chemical contaminations of a harmful nature. The question then arises which is the easiest and, at the same time, the most expeditious method of bringing this state of things about. Obviously the plan of placing a negative film uppermost at the bottom of a vessel of water, has little to recommend it, for, as everybody knows, a stagnant pool is not the best place to cleanse anything. Another plan, that of passing a stream of water over the surface, possesses an advantage, as we know, over the last named; but the stream needs to run a long time before there will be sufficient dilution to permit complete removal of the salts from the under surface.

Soaking plates in vessels fitted with vertical grooves is an improvement upon the foregoing, but the plan, although in general use in Europe,

does not reach theoretical perfection, neither can a greater number of plates be washed in the same space than by the method I desire to bring under your notice.

All fixing salt eliminators, except alcohol and water, have a destructive influence upon gelatine, which renders their employment a matter of some delicacy, and unfit for general commercial application. Therefore, unless we discover some other specific, we must be satisfied to employ dilute alcohol or water for the purpose; of the two the latter is preferable, and, until some one proves to the contrary, I take it that a method of supporting films horizontally in contact with a body of water in gentle motion is as nearly correct in theory as we can get at it. The accompanying frame which may be as easily carried as a cabinet photograph, will when extended and fixed, support six half plate negatives (English size), and can be made by any one in a few minutes. The films are placed downward, and are not likely to get damaged, because the sharp edges of the glass plate are in contact with and wedged between the three supporting pillars, and may with safety be placed in a running stream of water until it is considered the negatives have had sufficient washing, when the frame can be placed in a current of air, and the negatives will dry without dust settling upon the surfaces.

It is convenient when travelling to have zinc tanks large enough to take one or more frames of this kind, and they might be made in the form of packing cases utilizable for the protection of lenses, bottles, etc.

If a metal exit tube is soldered in the base or perforations made in the lower corners, so that a constant withdrawal of liquid occurs, the same being replaced from a faucet, about sixty minutes of such treatment would be found sufficient to wash effectually a thickly coated gelatine plate.

Very little consideration will show that any soluble matter a negative may contain, such at all events as we are accustomed to deal with, must by the natural law of gravity pass through the gelatine into the water below, converting the film, as it were, into a kind of septum, and thus practically washing by dialysis.

In every-day practice I employ similar frames of rigid construction, but the example sent herewith represents the idea in a convenient form, which may be appreciated by the touring photographer and the holiday maker.

The question box was then opened, and some thirty questions were read. Some

were practical, some were silly, and some were frivolous. A few were practically answered rapidly as re-read by the President, but as all were such as may be found answered fully, over and over again, in the books, we spare our space for a full report of the most excellent debate which followed in the evening.

On motion, adjourned to 8 P. M.

THIRD DAY.—EVENING SESSION.

The President called the Association to order at 8 o'clock.

The President: I believe the first business will be the discussion on the development and handling of dry plates.

Mr. Bellsmith: Before that is brought up, I would like to read the report of the committee appointed on awarding the Gennert prizes. The report is as follows:

Mr. President, your committee appointed to award the Gennert prizes for the best two photographic exhibits from Germany desire to report as follows: That the first prize be awarded to Fritz Eilender, of Cologne, and the second prize to Frederick Müller, of Munich. In addition, we desire to express our appreciation of the extraordinary merit, the beauty, and general excellence of the entire foreign display. The peculiar style of the German work being so different in many respects from that prevailing among American photographers, the examples have proven extremely interesting studies, and we doubt not will lead many of our members to emulate the style of these most excellent examples from our German brethren.

G. CRAMER,
G. M. CARLISLE,
H. S. BELLSMITH,
Committee.

On motion, the report of the Committee was accepted and the Committee discharged with the thanks of the Association.

The President: Now we are ready for the discussion.

Mr. Inglis: I thought that this was going to be a subject that every one would be ready to make a grab at. They seem to be very slow to take hold, and I rise simply to open the discussion. In regard to the paper of Col. Stuart Wortley, that was read, I

was very much pleased with the peculiar way in which the developer was put together and given to us. Yet, nevertheless, as far as my experience has gone, I have changed my mind as to the very fine qualities of the ammonia developer. I have of late adopted the potash developer, for reasons which I think quite justifiable. There are objections to the potash developer which are not met with in the use of the pyro ammonia developer, and that is as Col. Stuart Wortley has said in his paper. Perhaps I am mixing the two papers together; I would not like to say, however. It is to this effect, that the pyro ammonia developer will develop much quicker than the potash developer. I know that the potash developer may be made to work very rapidly also; but in doing this, the good qualities in the plate are not brought out. As far as I have been able to use it, there is no necessity for saying anything as to how I use it—that is, how I compound it, inasmuch as it is in use all over, and any one may have it. Mr. Carbutt has a developer which works very much in the same way. It would not matter whether I used it the way he puts it together, or the way I have it put together; that would not make any difference at all. However, the beauties that I find in it are these, or some of them at any rate: If I have a plate that is very much undertimed, I can with much less care and difficulty bring out, down into the deep shadows with the potash developer, that which I was never able to reach with the ammonia. It certainly takes much longer time to do it, and I think it is because of its taking that longer time that I get better qualities.

I can also keep it from becoming hard—that is, I can keep the negative from becoming hard or harsh in any way whatever with the potash by using it exceedingly weak. Sometimes I will take one drachm of No. 1 and two drachms of No. 2, and I will take as much as twenty and sometimes thirty ounces of water to that very small quantity—that is, if the negatives have been very quickly exposed. It is impossible, I think, for any one to tell another exactly how to work. It seems to be an instinct. I seem to *feel* what is wanted. I only stated this as a sort of foundation that others may work

from. If the plate comes out showing any kind of hardness in the whites, I immediately add more water to it. Scarcely any one can realize the amount of water I add, governed simply by the appearance of the progress of this developer, and I have been more than once astonished myself at the results.

I have simply kept away the harshness that would otherwise come about, and I have never yet failed to bring the clouding out, as far as it seems to be possible to bring it out, without producing the slightest sign of harshness or contempt. I generally secure all that is to be brought out, yet have the negatives good. When I arrive at this stage I pour off the weak developer, as I rinse the plate and commence with the normal developer, or that which is more concentrated than the normal developer, and immediately the density will be increased upon the negative. I would also say here that any one trying this must have his wits about him and his eyes wide open to watch that it does not become thickened, otherwise there will be an unequal negative, and consequently longer printing required. If parties are careful in watching when they apply this concentrated developer, they will bring forth the picture with the proper density of color needed to be used as a printing negative. Now this will take a very considerable time to do, but you must have patience and go through sure with it. In cases of this kind where any one lacks the patience, or has not got the time to go through with it, they are just where they were before. They took negatives, and they have not got anything. I should also state how I work these plates from an opposite point, and here I would like to make this statement to this audience. And any one of you may not believe it unless you like to. There are some of you who won't. I will expose a plate and give you a print from the negative which will have the appearance of a full-timed negative, and you may consider it is over-timed; and I will take another portion of that same plate and expose it a thousand times longer and give you the two prints, and you will not tell me which is the longer-timed or which is the shorter-timed.

Now, if I have a plate which I know has

been timed too long, I proceed in this way: Instead of taking one drachm of No. 1 and 2 drachms of No. 2, and twenty ounces of water, I will take two or three drachms of No. 1, which is the pyro solution, as you all know, and I will take perhaps one-fourth or one-half drachm of No. 2, which is the accelerator of potash, and, instead of using the forty ounces of water, I will perhaps use an ounce and a half. By this means the plate is developed in the high lights. The lights are brought forth, and the density is got over rapidly and colored and the shadows have not been reached yet, and, before I get down to the shadows, I have sufficient density to stop. If I find I have not put in quite sufficient of the accelerator, I put in a drop or two, as the case may be; it will immediately respond with what I want. Therefore I advise all photographers to give one-half of the whole more time in exposure than what is necessary for the exposure of the plate. Then begin always with an excess of the pyro and with less of the accelerator, reserving in your own hands the accelerator to bring forth anything that you wish—that is, to bring forth the negative to the point that you consider will make the best negative. If you happen by any means to under-time, you have in your hands the power to bring forth a rich yellow negative; and, if you have over-timed, you keep a reserve in your hands; in either case, whether it be over- or under-timed, by weakening the developer in one case and strengthening it in the other.

Mr. Bellsmith: Mr. President, I made a discovery once by accident. In a hurry I put my plate into the tray, mixed my developer and neglected to put any pyro in the solution, and put the developer on my plate, and let it stop there for a minute and nothing appeared.

Mr. Inglis: What was your developer before you put your pyro in?

Mr. Bellsmith: Two sodas in equal parts—four ounces of each soda, thirty ounces of water, one ounce of solution to six ounces of water, and after keeping the soda on the plate from four to six minutes, I saw there was no evidence of its appearing so I threw it out, and made up my developer and I found out at once that I did not put in any

pyro. It was a picture of a child. It was very short-timed any way, and after putting in the pyro, the normal developer, the picture came up, and I made a full-timed negative from the original negative. I would like to speak of that. I don't know whether there is anything in that, or whether that system could be adopted on short-timed negatives or not.

Mr. Taylor: That is strictly analogous to the experience of Col. Wortley.

Mr. Croughton: I might say that during the last eight months I have had about as hot an experience at development as any man could have had at this Convention. I have had to develop negatives in the heat of June, in the City of New Orleans, and my practice certainly bears out what Mr. Inglis says. In England we have a preference for the ammonia developer. I think that if the subject was canvassed, you would find that eight out of ten use the ammonia pyro. On coming to this country I found that the potash pyro had just been introduced, and was meeting with favor. The use of the sulphite of soda was common to a far greater extent than it was on the other side of the water. I remember when I left there that the controversy with reference to sulphite of soda was very heated, some saying that it was no good, and others arguing on the other side. When I went to New Orleans the potash developer was recommended. I had never used it, and was sceptical about it. I tried it after the same idea as Mr. Hoover's developer—that is, that the restrainer, the pyro, and the bromide should be together in one solution, and the accelerator in another. Now there are some members of this Photographic Association present, who will say that that was a mistake; that if you put the bromide with the accelerator, you can have no control over the developer. If you put the bromide with the pyro, then you have both a restrainer and an intensifier together. You use then the accelerator whether potash or ammonia at your discretion, and have absolute control over your negative.

When I saw Mr. Hoover himself make up the pyro potash developer, and use such a large amount of sulphite of soda, I asked the reason, and he told me that after a series

of exhaustive experiments that he had decided that the sulphite of soda was of no use as a developer unless used four to one—that is, four of the sulphite of soda to one of the pyro. Well, gentlemen, I have used that now for nearly eight months, developing all day long, and far into the night sometimes (occasionally three nights a week until twelve o'clock at night), and I have modified it in every way from the formula, but only to return to the conviction that Mr. Hoover is right, that the sulphite of soda in that proportion, four to one, is best. I have published my experience in the PHILADELPHIA PHOTOGRAPHER, which is exactly coincident with Mr. Inglis's. I exposed a plate, and made a very difficult experiment. The plate had to be exposed at the dinner-hour as that was the only time during which the machinery was still. We made five exposures on that machinery, every one was undertimed. The reason was on account of the want of light. The plate could not be exposed for the proper length of time. The only way that I could succeed in getting over this difficulty, and taking the picture of that machine was to use four times the amount of accelerator to one of pyro, put water and water into the dish until my dish overflowed with water, and it took three-quarters of an hour to develop. The result was exactly as if that negative had been full-timed, even into the deepest shadows, and even the lines of the matched boards showed very plainly on the negative. That is the way Mr. Inglis means when he offers to give you one exposure, and then give you another a thousand times as long, and give you two plates identical. He means he will give you one-thousandths of a second exposure, and develop in that way, and then he will give you a second's exposure, and give you two negatives identically the same. That is, scarcely fair.

Mr. Inglis: That is fair sometimes.

Mr. Croughton: In my experience, gentlemen, I think that the direct tendency of the use of the dry plate is to underexpose. Where you underexpose you may get a good result, although you may not get a first-class result. My experience is based upon the exposing of plates which were developed

in New Orleans. If you want to get the full normal development in this way, you get as good a result as if you gave time enough to reduce your accelerator one-half. I would rather have an overtimed plate, and reduce the accelerator, increasing the pyro and restrainer by far. You get all of the detail that is necessary, and you may get an effect that you do not get with a plate that would require the normal exposure. I think the great fault is underexposure. We get so used to the rapidity of these plates, we think that they can do more than they can. In this way you do not get good results. It was continually impressed upon our operators that whatever they did they should not underexpose. You had better overexpose and then do as suggested. I think you may get a good picture with overexposure; you can never do anything with an underexposed one.

Mr. Mawdsley, being called for by many, said: I can mainly speak in confirmation of what Mr. Inglis and Mr. Croughton have said. My own experience when I have had a very rapid exposure has been the same. I have done a great deal in the line of instantaneous photography with gelatine plates. I have found by endeavoring to force the development by the addition of a large amount of the accelerator I got discolored negatives. That although they might first look tolerably well, yet after being kept they were very much deteriorated by a very deep color. Then I tried the effect of diluting the developer, and I think I went to a greater extent than Mr. Croughton says. When I had a plate with a minimum exposure my method of treatment was this: I took a slight quantity of the normal developer that I diluted with twenty, thirty, or forty volumes of water, simply putting my plate in a tray covering it up, and leaving it to take care of itself, knowing very well that my duties took me elsewhere when developing other plates, and when these were finished I could return and find a really first-class negative. Now, on the question of exposures I do not quite agree altogether with Mr. Croughton. I think that there is a right exposure for all plates; being a right exposure I say the normal developer should give the best results. We have got to con-

sider this question of the exposure. I think in the matter before us that the difficulties are very small indeed. It is a matter of judgment in the case of the camera exposure; with the light the same. That is what I mean to say, we have the control of it. If you watch it thoroughly you can work it. The only factor which gives rise to uncertainty is the power to light; that is the unit, and the only one to be taken into consideration, but having hit upon that I consider the normal developer sent out by the platemakers ought to be the best, as they try their plates under crucial conditions. With the proper exposure it will give the best results. All these other things are premises; if you have not had the experience you must try them, and do it in such a manner as to get the results. Therefore, as I said before, it is a premise, and the result may be fairly satisfactory or not. Of course, certain results can only be attained and arrived at from experiments.

Come again to the question of overexposure. There again I agree with what Mr. Inglis and Mr. Croughton said. I should indulge, I think, very much in the use of the pyro, and also the bromide as a restrainer, adding ammonia as the occasion requires. That is for my own use in the gallery, but when you come to landscape photography there is a difference between your camera exposures: it is not merely the power of light, but the light varies so much, and there are so many different conditions. In one case you may be working on the sea shore, and there you have the sun reflected, and everything favorable to a very short exposure. Again, under other circumstances you may be working in a glen or in a gorge where the angle is very short, and the light most powerful from above but tremendous shadows; this will necessitate a longer exposure. The shadows are so tremendous and intensified in that case, the development is all important; it is imperative that you should feel the way, beginning with a weak developer, and trying your details. If you find trouble arises, it is easy to wash off and mix a stronger developer.

Mr. Cooper: Mr. President, I am afraid I cannot express myself quite as loudly as I would like to. I have been talking so

much for the last two or three days, that it is almost impossible for me to hear myself think, much less to speak. But the topic suggested from the letter of Col. Stuart Wortley is something which has engaged my attention for quite a long period of time. Almost during the whole of my experience in development, I have aimed to find some method by which the exposure of the plate might be reduced to the minimum, but at the same time get out all that we possibly could. I found on one occasion that the addition of an alkali decidedly accelerated, but it needed to be a solution decidedly, and it set me to thinking. First of all, I attributed it entirely to the alkali. On one occasion I found, by taking a negative which had been exposed with a drop shutter, with two lenses of absolutely equal illuminating power, that I could wash one negative very thoroughly in running water and get from that one twice the exposure that I could from the other that had not been washed. That set me to thinking. I found further that, if I took a plate in the dark-room and smelt it, ordinarily there was no odor at all; if I took that plate out of the dark-room and exposed it to the light and then smelt of it, there was no odor present; if I dampened that plate, in a short time there was a very strong odor of bromine present. It suggested to me the question, How can the odor of bromine exist if bromine is not liberated, because we know that there is no free bromide in the plate? Then the idea came to me that the action of the water on the bromide of silver plate was to liberate the bromine. Then it came to my mind that the reason that an alkali had this accelerated action was that it took up the free bromine which had been liberated by the light, and formed in its chemical character or transferred it into a bromide, and the bromide, which, being very soluble in water, would be very readily washed away. The consequence was, I adopted that method of treating the plate with the alkali, and then washing it. You can treat it with the alkali, gentlemen, and not wash it, and you will get an accelerated action; treat it without alkali and then wash it, and your accelerated action is double. I demonstrated that fact unquestionably in the upper por-

tion of the store of Messrs. Anthony & Co., in New York, and showed conclusively, before one of the best experts that they have got in the dry-plate business—that is, Mr. T. C. Roche—that the thing could be done. This was done in the presence of an amateur who was extremely enthusiastic; he was here the other day; he insisted it could not be done. I went up stairs and in his presence I exposed some plates with the drop shutter on. It was an extremely stormy May day; it was raining; and the rain came down in torrents. I said, I will see if it is possible to cover up one-half of the negative treated with soda and then develop. This was done. The consequence was, one negative full time, and the other was not one-third timed. Mr. Roche came in; I showed him the negatives that were made. He said that it was impossible; that we could not fool him; that he knew better; that such a thing could not be done. Says he, “I have got some plates in the holder up stairs that I know about, and there is no fooling me. We will go up-stairs, you take one and I take the other, and see how it will result.” There was nothing on one plate, and on the other a full-timed negative. I demonstrated and experimented further, and found that, by the simple addition of soda or any other alkali, it most decidedly accelerated; that the washing was not to remove that which had been changed into a more simple compound than was removed from the film. The point is this: If there is any such thing as a restrainer in a film, it stands to reason the action of light is to restrain it. By removing it entirely you have no restrainer, and the consequence is, you get a full-timed negative. If that negative is as full-timed as the capacity of the plate will allow, so much for that part of it. (Applause.)

Now with reference to the idea of a weak, diluted developer, I have a concentrated formula—and I am not saying this for an advertisement, as I have nothing for sale; I am merely giving you my experience. I do not make it, and I do not ask any one to buy it. I have a concentrated developer, and, of course, I know what power I have. I know the kind of plate that I put into it. I use the developer in its concentrated form.

In using it, I have found that it facilitates matters to develop several plates in the dish at once. My formula calls for one ounce of the concentrated solution and three ounces of water. That is the ordinary developer I use for a very large plate. I develop a large number, and in doing so I use two ounces of the concentrated solution and thirty-six ounces of water. A sort of homœopathic mixture—that is, a sixth dilution, six times diluted. By that means the developer works a great deal better, and you can control it, and develop ten or twelve negatives at once. Examine them occasionally. If the first one is not sufficiently developed, allow it to remain and try another one; see what you have got on that. I get good results thus. I heard Mr. Inglis say that it was not advisable to use a weak developer. I think that is what I heard him say when I was coming into the room. I certainly disagree with him, for it has been my experience that that is, by all odds, the nicest way to work. In regard to the matter of exposures, Mr. Mawdsley, I think, took a little issue with Mr. Croughton on the proper exposure of the plate. We have got to use some judgment. The judgment of a man has got a great deal to do with it. And there is many a man who can find out the difficulty, who can manage the light very nicely, and determine what kind of light to use with a certain kind of plate which will work in such a time; but the conditions are entirely changed when you have to depend upon the subject you are going to photograph. When you photograph one thing, one plate of a certain degree of rapidity is excellent, and will do its work beautifully in a second or a fraction of a second. Take identically the same light; turn your camera around in another direction, and the circumstances are altogether altered. And you will have to change your method of developing to get the best results. Your results vary with the degree of common sense you use as to the time of your exposure. I do not know that there is any such thing as a rule which you can lay down absolutely to fix the correct amount of exposure. I don't believe it exists. (Applause.)

Many an amateur has said to me, “What

do you think is the best method of determining how much time I should give my plate?" That depends, my friend. It depends entirely upon what your plate is first; then, next, upon what you are going to photograph. I went to Niagara Falls once, and I saw an amateur there, a party with whom I was very well acquainted, who had started out to make a view of the Falls. You, gentlemen, have been down there, and have seen the results obtained by the photographers there. You might think that you could go there and obtain the same results yourself; but, if you would try it, I think you would be willing to admit they would be very far short from what you saw there. There is no question about that. Still we went out, and I have this much to say: that I am particularly and deeply indebted to the photographers of Niagara Falls, and I want to pay them this tribute: that they are the men who possess no professional jealousies for outside photographers, even if they do for those around them. There was not a man there who was not willing to take me and show me the points from which I could get the very best view to make a picture, and they said, "This is just the right light, and the wind is just right; you can secure your picture now." For it is a fact that at some hours of the day the wind is in such a direction that it raises a mist, and all you get is a fog, and no view of the Falls.

The gentleman I was speaking of when I turned my camera towards the light (the scene was over in a cloudy sky, and the camera facing the sun), said: "You don't mean to say you are going to photograph like that?" I replied "I do." "Well," said he, "what do you expect to get?" I answered him that "I expected to make a good picture I hoped." "Well," said he, "is that going according to the rules laid down in photography?" I said, "I do not know, but that there was a rule that suited me, and that rule was that I should make that picture in that way." It was an icy scene that I wanted to make; the light passing over the ice. Said I, "that suits me for a picture." He said, "you are going to fog your plate." I replied, "I shall if I don't look out." I pulled my slide, and I

held my hat above the lens towards the sun so that the sun would not strike the lens, and I made the picture, and I went a little while after and developed it. "Well," said he, "that astonishes me, and I have learned something," and I have no doubt it was a revelation to him. I had turned the camera towards the light, and I made my picture. I tell you this because it is sometimes very difficult on account of the condition of the light at Niagara Falls to get any picture. It is rather singular, but there is a vibration of the light there that don't seem to exist anywhere else. The light seems to be sometimes two or three times as rapid as that found anywhere else. Well, I made all my exposures for pictures (they were of icy scenery) with a drop shutter. I took pretty good care even in that case to use the diaphragm sufficiently large so that I could get plenty of time on it, and then I developed with a pretty strong developer with a very strong solution with a proportion of pyrogallic in it. I find a great many amateurs run away with the impression that if you have an instantaneous exposure you want to use plenty of pyrogallic solution. I have not found it so. I found I could take a plate that had been very short-timed, and with a little brush and a little dish of pyrogallic solution, I could start up the shadows instantaneously. That showed me that there was no theory about it. There was no mistake about it. It was apparent to the eye. I have adopted this method for use at the Falls and I intend to use it in all cases where I am engaged in working as described. I use plenty of pyro, and this you must do when you have very short-timed negatives, especially an instantaneous picture. If I was not afraid of taking up your time I would make some remarks relative to the exposure of the plate. (Cries were then heard from all parts of the hall for the speaker to go on.)

Mr. Cooper then continued as follows: In regard to instantaneous exposures of plates I would say that there are two methods by which exceedingly fine results can be obtained. I call attention to the fact that under certain conditions we have a brilliancy of light and intensity of the shadows necessitating a particular kind of develop-

ment. Where, as I said before, the pictures are made in a glen for example. Now, with that object in view I designed a shutter, which is on the market to-day, but not in my own name, so I cannot be accused of taking any undue advantage to advertise it. I invented it, and called it the "light developing shutter." It is designed for the purpose of allowing a longer exposure for the shadows, and a less exposure for the high lights. With this shutter I obtain the result that I desire, and the sky is cut off as much as it is possible. Several parties asked me how I would do in a case where the conditions were quite reversed—that is, where the light parts were below and the shadows above, for example, if I was going down the river in a boat on the Hudson making a picture of the Palisades and the highly illuminated water below. If those were the conditions, *I would reverse the shutter.* Thus, the smallest degree of light, or the least illumination, would be thrown on the water; while the greatest illumination would be thrown on the foliage or upper part. I think that there have been pictures made in that direction fully carrying out my views, and I hold it has been fully demonstrated that it is not simply a theory, but a demonstrated fact. Applause.

Mr. Inglis: With the concentrated developer or the developer which is spoken of by Mr. Cooper, I have another thought which brings me up once more. Of course, if I have understood him aright, it is in contradiction to what I said. He advises the use of the pyro. Perhaps he did not hear what I said in the beginning. The remarks I may make, and the remarks that any other one may make might conflict entirely, if we do not operate upon the same line all the way through. Therefore, it is necessary, gentlemen, to take into consideration what accelerator is used, whether it be ammonia, whether it be potash, or whether it be soda. I think there is a difference in the action that goes on, whether it is the one or the other. In the remarks that I made I would say they applied only to potash as the accelerator. I have a plate adapted to the use of the carbonate of soda as an accelerator. I did not intend to say anything about it. I will say this one thing,

however, that I have to work in almost the opposite direction since I have adopted the use of the salt of soda, from what I had to do with the potash. Therefore, it is necessary to take into consideration the accelerator.

Mr. Gardner: I would like to ask some old operator if it is possible to develop a plate with the pyro solution only.

Mr. Inglis: No.

Mr. Cooper: It depends upon how your pyro solution is made. If you make your pyro solution, as it is called, with alcohol, you can. If you make it up as an acid preservative, you cannot; if you make it up with the sulphite as a preservative, you very decidedly can. I think that there is more than one man who can say the same thing, provided you give time enough. That would be so in any case.

Mr. Cooper: I think that I will relate to you a very amusing incident with regard to my experience with a photographer in that respect. He was going to make an exposure in his camera. He did so and on development he found it impossible to get the shutter up because the camera had been defective. Light was admitted to it, so he had considerable trouble simply because there was too much light on the plate. He said, cannot you restrain the shadows? There would be some difficulty with a plate of that kind from over-exposure to "restrain the shadows."

Mr. Cramer. I would like to ask Mr. Cooper if he means an instantaneous drop shutter exposure can be developed by adding more pyro solution to the ordinary developer.

Mr. Cooper: Yes sir.

Mr. Cramer: I would like to ask if he means to add more of the solution to the developer containing alkali.

Mr. Cooper: I refer to the pyrogallic acid solution only. The combination with the solution of acid in the proportion in which I use it is this: eight to one. There is no bromide. I would say further that it is quite alkaline.

Mr. Cramer: It conflicts with my experience; I am not using any restrainer in bromide.

Mr. Cooper: You are using an acid.

Mr. Cramer: Salicylous acid and bromic acid I regard as perfectly neutral substances; pyrogallic acid is also called an acid, but it is also neutral. Salicylous acid has no effect except its action on the pyro.

Mr. Cooper: Its object is to preserve the pyro.

Mr. Cramer: The solution keeps so much longer.

Mr. Cooper: I have no doubt but that is the experience of the great majority. I myself have found that to be the case, that there really exists no necessity whatever for any acid at all. There are gentlemen who have seen the concentrated developer which I have put up while at Messrs. Anthony & Co.'s, which would keep six months when the sulphite was combined with no acid whatever, but a very large proportion in that, a full proportion is in the concentrated form.

Mr. Cramer: You are perfectly right in that. The concentrated solution will keep also. I have mixed an alkali developed ready for use with no concentrated solution in it in very little water; you can keep it a long time.

Mr. Cooper: There is no question about that, because it is quite as good as if it had some water. You get more oxygen. The oxygen is taken up, out of the water, unquestionably.

Mr. Cramer: The sulphite of soda itself is used in solution.

Mr. Cooper: That is my reason for preferring the concentrated solution.

Mr. Cramer: I wish to state that my experience is that the pyro developer also increases the contrast; this is so in every case. If the picture is over-exposed throw in a little more pyro, and you will get a strong picture, whereas otherwise you would have only a flat picture without any contrast.

Mr. Cooper: You refer to portraits.

Mr. Cramer: I don't see where the difference would come in.

Mr. Cooper: I will tell you where the difference would come in. You are perfectly right in your statement, but I am speaking of instantaneous exposures.

Mr. Cramer: The question has been asked if pyrogallic acid alone would develop the picture, and it has been decided that it will

not, except when in combination with an alkali it will develop. Mr. Cooper has stated that it also will do so in combination with the sulphite of soda. That is for the simple reason that the sulphite of soda, which we get in commerce, is also an alkali. It contains a trace of the carbonate of soda. A sulphite of soda itself will not make the pyro develop, but sulphite of soda in combination with pyro alone, will not develop unless it is alkali.

Mr. Cooper: I thoroughly agree with you unquestionably.

Mr. Cramer: I believe that we will agree in many things after awhile.

Mr. Cooper: Mr. Cramer and myself have joined our issues, and he thoroughly agrees with me. You will recognize this fact that my statement, as I said before, while Mr. Cramer has thought of many things, he has forgotten to take into consideration the exposure of the picture in which all the conditions are equal all over the plate. Now, I am able not only to develop a plate to a certain extent, in my poor scientific way, but also to try mechanically a method by which I control my picture. I will admit that if I attempted to develop a picture that had been exposed with ordinary dark shutters, so that I could give as much time as I would like, I could use the pyro, and the acid would destroy my result; but by reason of the fact that I have so completely removed the tendency to the hardness in the sky, I am enabled to experiment on my shadows with the result that I get far more out of them without spoiling my sky or intensifying those high lights than I otherwise could. You see the point, gentlemen; it is quite plain.

Mr. Inglis: I think I shall have to get up again. I think that Mr. Cooper now agrees with Mr. Cramer, and that I agree with both, notwithstanding what I said before.

A member: I would like to ask Mr. Cooper if he used instead of the pyro alone a little fresh developer with the accelerator it would not have the same action? My experience is that the pyro loses its power as a developer. It seems to me that a little fresh developer would have a better action than the pyro alone.

Mr. Cooper: A little fresh developer no doubt would. But I never found that it made a great deal of difference. I am willing to admit that it is quite possible it would, but I prefer using the pyro alone in these cases. I almost invariably, as I said before, apply it locally; that is, I have my dish ready and my ordinary developer; upon using this I take my brush and apply it locally where it is needed. The pyro solution contains a large proportion of alkali in itself, and, at the same time, it also comes in contact with a strong solution of soda, which has found its way into and has saturated the film. All I wanted was to increase the intensity in that locality. Let me say that I do not use in this case the full proportion of soda. The point was just this, I did not find that there was anything to be gained by the addition of the soda and the pyro also. Let me say further, that the gentleman said, the pyro is rapidly used up. That is the reason I put it in. Because the first has gone, and I have lost its power, the other was needed to supply its place. I did not need any more soda. The soda was there and was doing its work. The other was needed to supply the place of that which had gone.

Mr. Cramer: I am right that the treatment was upon a shortly exposed plate. You need not push the development too far with your developer, but make a new solution, and apply it so that the pyro gives an action. Again, the sulphite of soda, according to my experience, and the views of the journals, has the effect of destroying the yellow color which would be otherwise produced by the sal-soda or the potassium developer. And you can control the color entirely by using more or less of the sulphite of soda. The more sulphite of soda used, the more proper tone of the negative will be reached; and the less of it used, the more yellow the negative will be. I am astonished to see the ammonia developer recommended again, in the formulas from abroad and from Col. Stuart Wortley. I think since we have done away with the use of ammonia we do not get any more green fog, which used to be a very unpleasant defect in connection with the use of the ammonia developer. Further-

more, I do not consider it wise to use the free solution separate. It is true, if you combine the alkali that you destroy the accelerating effect of the solution also by restraining. But you will also prevent the fog. It would be because of an excess of the alkali, which will be invariably produced by adding an excess of ammonia to the developer. Your negative will be saved. You rescue that. The way of measuring out so many minims of this solution and so many minims of the other three solutions for each negative is, in my eyes, a little too complicated. We like to accomplish everything by the most simple means. And in either the pyro, sal soda, or potassium developer we have all the means in our power to correct over or under exposure. My idea is to use a solution of sal soda that is alkaline; potassium may be just as good in the same strength for ordinary purposes, the only difference being in the amount of pyro. Always keep in view that the greater amount of pyro increases the contrast, and the smaller amount of pyro will reduce contrast; consequently will be more adapted for short exposures.

I have found, by accident, a very good way for treating an undertimed plate. I treat the plate with a diluted developer; then, of course, the diluted developer works slow. It was at dinner time. I went away and waited. I put the plate in and just washed it slightly, rinsed it once, put it into a little water, covered it up a half an hour, and when I came back the negative was perfectly developed in all its details, and just right in the lights and shades. That shows that development, with a weak developer containing a little pyro, also will bring out the detail without compelling too much density on the high lights. Then, for a restrainer, I recommend the use of a stock solution of pyro, which is mixed with sal soda solution. If you add to this same stock solution of pyro twenty grains of bromide to the ounce you will have a very powerful remedy for overexposure. By adding a little of that to the developer it increases the pyro considerably; and also add bromide of ammonia, which I have done to restrain the shadows, making the light more intense in an overexposed plate.

I don't know of anything else, except some questions might be asked. If so, I will be glad to answer them.

Mr. S. T. Felt: I would like to ask a question here. It is this, Why do they use salicylic acid to preserve the pyrogallic acid from discoloring, instead of the oxalic acid? My experience is that the oxalic acid will preserve it for a much longer time than the salicylic acid. Perhaps Mr. Cooper or Mr. Cramer can answer that question.

Mr. Cramer: Many different acids have been tried. Oxalic acid—that may answer just as well. You have the addition also of sulphuric acid—that has been used a great deal, and answers the purpose also. You might use the oxalic acid. I see no reason why you should not. Objection has been made to the use of the pyro solution. It should be used as fresh as possible. Do not make it up a long time in advance; it is not necessary, and you have no means of preserving it.

Mr. Inglis: I want to say a word with regard to the accelerators used. I had not intended to say anything else, but I want to give my experience with them. It has been said by Mr. Cooper and Mr. Cramer that the use of more pyro, added to the accelerator, it being sal soda, that greater density is obtained. Now, that is exactly as I have found it with the sal soda, but I found it exactly the opposite with the carbonate of potash—exactly the opposite. I always add an extra quantity of potash, but if I want to bring out more density I do not add that extra quantity of potash. I sometimes renew the whole lot with an extra quantity. It is well to make a new lot, as I said at first. But with the sal soda as an accelerator it is different. I cannot gain in density by adding sal soda to the developer in an extra quantity, but I always can by adding an excess of the carbonate of potash. One thing more, in regard to the green fog that was mentioned. I think it was about three or four weeks since the gentleman from Buffalo was down in Rochester who put me up to the use of the sal soda. I certainly do like it, since he has put me upon it, but I do not follow his directions exactly. I leave out the bromide—the small quantity of bromide of ammonia which he re-

commended to be put into it. His developer was simply this: Six ounces of a saturated solution of sal soda and forty ounces of water, and a few grains of dry pyro added for the development of the plate, and, he says, if your plate is not going fast enough add a little more; it shows that it is underexposed; add half an ounce or an ounce to this saturated solution of sal soda, and this will bring it out and not give you too much density. Put the pyro in, and it will.

Now, I was taking some of those instances that I know of, where it rendered all the pushing that could be put into the work. I put in as much as two ounces of the saturated solution of sal soda, and I had a good developer, just as good as I ever saw. This was the sal soda and pyro. I think that that was very much of an improvement to anything that I had ever had before. I took a preparation which I had of pyro containing bromide of ammonia in it made up in quantity. I put in an excess, made a saturated solution, and I had no sign of green fog at all. Therefore, the bromide of ammonia prevented the green fog without any doubt.

Mr. E. L. Wilson: I want to say a word. I rise to express my personal satisfaction with this most interesting meeting that we have had to-night. I feel that I have enjoyed a great privilege, but I also think that if we stay much longer there will be underexposed sleep and overexposed bedclothes. Therefore, I make the motion to adjourn, and also, that the thanks of the Convention be tendered to the gentlemen who have taken part in this discussion. Agreed to.

Adjourned.

Friday, July 17, 1885.

FOURTH DAY.—MORNING SESSION.

The President called the session to order at 10 o'clock, A. M.

The President; The first business this morning will be the report of committees. The committee on the matter referred to in the *Photographic Eye* will now make their report.

Mr. Inglis: Mr. President, ladies, and gentlemen, I have to report this: Your Committee, upon looking into the causes bringing forth the item to which the atten-

tion of this Convention was drawn in its morning session yesterday, report as follows: (Item was then read.) That they find good grounds for the same by the admission of two of the members of the Executive Committee of this Association.

E. A. ATWATER,
JAMES INGLIS,
C. GENTILE.

Here are the books that have been handed over by our present Secretary. Our present Secretary or the Treasurer cannot make either head or tail out of them, and, if any one can do it, I wish they would come forward and do it, or show how it can be done. I cannot make anything out of them either.

Mr. Armstrong: Gentlemen, the former Chairman of the Executive Committee is not present, and I am, I suppose, the only member on that Committee who could say anything about it. Now, I dislike to say anything in reference to anything of this kind that casts any censure upon anybody, because, whenever there were any bills, they were paid, after they were audited by the Committee. There was never any expenditure of any money but what was authorized. Now, the Chairman of the Executive Committee, Mr. Ryder, has done more for the Association than any other man that ever belonged to it. He is not here to say anything about it. He understands this thing, and anticipated it, but he went away yesterday, not knowing that such a thing was to be brought before the Convention. Now, I made the only report that has ever been made. There never has been any formal report made; nothing but a meagre report. I did this as a precedent, and I gave all the report that I could give. I got all the information I could get from this book. Nobody can tell anything about it. The Secretary collected part of the funds, although that was outside, and he was assuming a little more than he ought to have done, but he did it. The entire Convention in Cincinnati depended upon him, and he collected the money. He paid out a good portion of it, and the Executive Committee looked over the matter as well as they could, audited all the bills, ordered them paid, and the money was paid. and

that is all there was about it. Now, whether this party, the members of it, had any jurisdiction over any former board of officers, is a question. I submitted the report of the Treasurer, meagre as it was, to the Executive Committee in Buffalo last winter. It was accepted, and I was discharged. So that is all there is about it. I could go further back and cite what instituted this thing, probably, if it was necessary; but I don't believe it is necessary to do that.

The President: I think it would be well to give a clear understanding, and whatever you know about it. If you know anything that instigated it, let us have it.

Mr. Armstrong: I will tell you. I suppose that you have read *The Eye*. It was a weakly thing, and it wanted pap—

Mr. Gentile: I deny it, and I call the gentleman to order; I do not like any such statements made.

The President: This is out of order; I will have to call the gentleman to order.¹

The President: The next business in order will be the election of officers for the next year.

Mr. Wilson: I have a short motion to make before we proceed to the election of officers. It is this: I understand that a great many of the members came here with the hope of seeing a demonstration on the new film negative. Since it is a matter of interest to all, I move that at three o'clock this afternoon we invite Mr. Cooper, of the Eastman Dry Plate and Film Co., to bring his camera and spool here and demonstrate before the Association. It will take, perhaps, twenty minutes time, and it will be a great satisfaction to those who are here.

This motion was agreed to.

The election of officers now followed, with the result below:

President.—W. H. Potter, Indianapolis.

¹ The discussion which followed on this subject was an excited and lengthy one; but, as there was a committee appointed to investigate the charges made, we decline taking up the space of our readers any further with the scandal now. For the fair fame of our Association, we wish the matter had not been brought up. If there has been a breach of trust, we can only suffer and bear it. There is no resource.—ED. P. P.

Recording Secretary.—H. McMichael, Buffalo.

Treasurer.—G. M. Carlisle, Providence.

Executive Committee.—G. Cramer, St. Louis; D. A. Clark, Indianapolis.

Addresses were made by the several officers elect, and congratulations passed all around.

St. Louis was decided upon for the next Convention, and the time left to the decision of the Executive Committee.

Mr. Cramer: You have decided to meet next year at St. Louis. I shall deem it my duty to make the members of the Association happy at the next Convention. I shall try all in my power to have a successful meeting; but, for the information of the Committee, I should like to know what has been the decision about the medal business. I understand my motion was that ten medals should be awards, and that the motion has been carried. How was it decided?

The President: It has been left to the Executive Committee.

Mr. Cramer: I hope that this award of medals will draw out the finest exhibits that we have ever had, and that that exhibition will surpass all others. I believe, as we have passed the resolution to award medals for the best exhibits, it would be very proper to make an award for the best paper read in the Association. It would draw out some very valuable lectures which we have been seeking for all the time. I therefore make the motion now that we make an award for the best paper of practical value, in addition to those already voted for, and that the Association donate something for that purpose.

The President: It is moved and seconded that an award be made for the best paper of a practical value presented to the next Convention in addition, and that the Association donate the sum of \$100.

The question then being called for, it was agreed to.

The President then announced the investigating committee to be Messrs. Bellsmith, McMichael, Poole, Potter, and Joshua Smith.

Mr. Gentile: I wish to call your attention to remarks made in my report on photography, that we should pass certain reso-

lutions to the memory of a gentleman who had done more for the advancement of photography in this country than anybody else—that is, to the memory of the late H. T. Anthony.

Mr. Ranger: I make a motion to that effect.

This motion was seconded.

The President: It is moved and seconded that proper resolutions be passed in honor of Mr. H. T. Anthony, who has done so much for photography, and that a committee of three be appointed.

The President: I will appoint Mr. Gentile and Mr. J. Traill Taylor on that committee.

On motion of Mr. Ryder the Convention then adjourned to two o'clock this afternoon.

FOURTH DAY.—AFTERNOON SESSION.

President Landy in the Chair.

The President: The first thing in order will be the reading of a paper entitled, "The Background, and its Use and Abuse," written by G. M. Carlisle, Providence, R. I.

Mr. E. L. Wilson, of Philadelphia, then read the paper, which is as follows:

The Background, its Use and Abuse.

That the background should be subordinate to the figure, I have no need to announce.

This truism has been so oft repeated that the veriest tyro must be aware of its importance; yet we see every day the effects of miserable carelessness in the use of both interior and exterior backgrounds.

If one has not the time or inclination to exercise proper care in adapting effective grounds to his model, it were better he have none. A plain ground, shaded gradually from dark upon the one edge to light upon the opposite edge, and so placed behind the model as to bring the face in proper relief by placing the dark portion of the ground opposite the lighted side of the face, never fails to fulfil its mission, and is easy of management; while the elaborately painted ground, unless carefully managed, destroys all harmony, and exposes ignorance of rules of composition or carelessness of treatment.

How often we see prints from negatives beautifully lighted, skilfully finished, and properly printed, yet the outline of the face so identified with the ground as to be entirely lost! This is so common an error that there are few photog-

raphers in the profession who do not, every month in the year, send forth to the public this glaring evidence—not of their ignorance, but of their carelessness in the use of backgrounds.

Should we have frequently, by discerning patrons, finished pictures turned back upon our hands for this inexcusable fault, we would, by thus having our attention called to the matter in a way to touch our purses, be benefited by the loss. I am aware that photographers of experience, possessing a practical knowledge, would scarcely need to be told that a contrast between the outline of face or figure and the background is absolutely necessary; yet a reminder of this important fact cannot be out of place when we see so frequently evidence of a neglect on the part of even veterans who fail to put in practice what their experience must surely have taught them, but frequently allow glaring errors to creep into work that would be condemned very readily by themselves if seen in the establishment of another.

There was recently brought to me a photograph to be copied which was fully up to the average in all particulars, save one. A landscape ground had been employed, while the subject, a child, was posed upon a carpeted floor, reclining against an upholstered chair. By converting the chair into a rock, and the tapestry carpet into a grassy bank, we were enabled to stop a lake from flowing into the foreground, of which there seemed great danger in the original, to the destruction of both life and property. That a man capable of making any kind of photograph should use a landscape ground in connection with a carpet, seems strange, indeed.

Another glaring error, too, often seen in otherwise good photography, is a contradiction of lighting. The model lighted from the left, while the design of ground is lighted from the right, and *vice versa*.

During the first years of my experience with the camera—1857—it was impossible to obtain painted, by order or in the market as merchandise, a practical or useful background; but to day we are favored with a variety that leaves nothing to be desired, and no excuse can be made for not possessing any property using as an auxiliary the backgrounds best adapted to your light and requirements.

In selecting a ground, one too pronounced should not be chosen. Many have an impression that a ground, however sharply painted, will be all right if removed far enough back to be out of focus. Such is not the fact. Experience has shown that a ground properly painted should have no hard or decided lines, but should be

merely suggestive with a penumbra to all lines and figures, which should always be in proportion to what the model must necessarily be on a given size mount.

Careful attention to line of horizon should be exercised in selecting backgrounds, a large per cent. of which have their line of horizon too high, which should not be more than one-fourth the distance from the floor to top of painting. Figures are frequently photographed larger than they should be when placed in front of landscape grounds or interior designs.

A lady taller than a church spire or tree is never seen, except in a lying photograph.

Imagine a gentleman photographed standing near an open door or arch, and his figure represented several feet higher than the door. We have all seen this error in photography. Should it not be avoided? I once saw a photograph of a lady, representing her as walking by the seaside; a full-rigged ship so painted in the background as to be in danger of tearing away the lady's hair. And this in that "Athens of America," cultured Boston. Thus the most ridiculous things do we sometimes witness in photography.

Injustice is frequently done the photograph or negative in printing. A portrait printed from a negative with a ground so dark as to show a marked halo in a vignette with a defined edge is, to say the least, in bad taste. The gradation of a vignette, whatever the shade of ground, should never indicate the means adopted to produce the result. So far should the mask be raised from the negative that no imprint of its shape or design is visible in the print. Therefore a ground too dark should not be chosen for negatives that are to be vignettised by any process of photographic printing yet invented. Tropical plants, Italian sunsets, or gorgeous flowers are all very well, but a portrait of a lady dressed in furs, surrounded by such accessories, can hardly be declared apropos. The photographer who is guilty of such an application of backgrounds can possess but little art feeling, and a less knowledge of the eternal fitness of things in general. To those never guilty of such oversight this charge cannot apply; but, should there be any present who have not hitherto given the background proper and careful consideration, I would urge upon them the importance of so doing at once.

There are not so many who have written their names in letters of gold upon the scroll of fame but that there is yet room for your name beside them. Photography in all its branches requires great care and watchfulness, but in no department is better judgment required than in the adaptation of surroundings to the model or subject to be

photographed. The general public are becoming educated up to this important feature of photography fully as rapidly as photographers are.

Bear in mind that the portrait of an humble hod-carrier may fall into the hands of those whose good opinion of your work it is desirable you should obtain. Eternal vigilance is therefore the price of success in this as well as any other business; and, so long as you make good use of your eyes, hands, and the mental faculties God has given you, they will minister unto your necessities, provided, however, you have the courage to charge a fair and adequate fee for your time and skill, as do men of other professions.

No business man, with an eye single to his own interests, will fail to note the signs of the period. If the public become accustomed to pictorial effect in photography, they must be indulged; therefore, possess yourself of a variety of grounds, but exercise the most judicious care in their use.

Sir Joshua Reynolds has been charged with laying down in his writings various rules which he never employed in his own practice. If the greatest master of the English school of painting did not always practise what he preached, I conclude I may be excused for referring to defects that may be found in my own productions.

An enterprising photographer of Providence has this season opened an equine photograph establishment. Here the painted background plays an important part. In an open and spacious yard, under a canvas canopy, backgrounds are arranged thirty feet long. Here horses harnessed to all manner of vehicle await their turn to be photographed, and their owners appear to be as much interested in securing their portraits as does the anxious mother for her darling child. Here, then, is a painter. Any large city will support its equine photograph establishment, properly conducted, and equipped with appropriate backgrounds.

That something handsome can be realized from this scheme by attending State Fairs, I have no doubt.

At very small expense, posts may be put up for canopy and backgrounds which will at once attract attention and profitable orders.

That some one may profit by this suggestion is the sincere desire of,

Yours, fraternally,

G. M. CARLISLE.

PROVIDENCE, R. I.

A vote of thanks was tendered to Mr. Carlisle for his paper.

The President: There will be a meeting of the Investigating Committee, at the Genesee

House, at 7 o'clock. The Committee are as follows: Mr. H. S. Bellsmith, Mr. H. McMichael, Mr. Poole, Mr. W. W. Potter, and Mr. Joshua Smith.

The next subject will be the appointing of Vice-Presidents.

Mr. Collins: I move you that the names to be put upon that list be referred to the Executive Committee. Agreed to.

Mr. Inglis: There was to be some discussion on prices, I move that it be postponed to an informal meeting amongst ourselves. Agreed to.

One of the members asked what had become of the question box. The President replied that it had been disposed of yesterday, and the questions unanswered would appear in the journals, and there would be an opportunity to answer them. Mr. G. A. Douglass, of Chicago, not being present, and his paper not being on hand it was not read. The paper of W. A. Armstrong, entitled "Our Mistakes," was not read on account of the absence of Mr. Armstrong.

The President: I don't see anything else for us to do, but to hear the description promised us by the gentleman from the Eastman Dry Plate and Film Company. Unless some gentleman has something to offer we are ready for that business now.

Mr. Inglis: If there is nothing more to be said, I will make a suggestion; it may be out of order like a great many other things I have said, but in the awarding of these prizes I think it would be well if there should be some subjects given out, and what they should be awarded for; to make up a certain kind of composition; and the lighting of subjects. I have always taken a very great interest in the lighting of the head. That is the principal work that a photographer makes his living by—the lighting of the head. I have very seldom seen a head lighted in an artistic way. It may seem a little arrogant on my part to say so, but I say I don't think I would be contradicted directly in saying so. I might say that my attention has been drawn to this matter, and if you will direct your attention to it you will observe that those pictures in the German collection, you will notice the lighting upon those heads, and you will see that it is accomplished in a very different manner

from what we have it in the American collection. I think it would be well worthy of a prize by this Association. I think that such a prize might be given to some one who would bring forth a higher state of perfection in the lighting of the head. I do not go into the subject of the lighting of the drapery or things of that kind, but I would confine myself entirely to the head from an artistic standpoint.

Mr. Cooper: There is a suggestion I would like to make with regard to this very matter of the exhibition of pictures coming from all over the country. I have found quite a number of men who made the remark that they should be very much pleased indeed, to send a collection of their pictures to be exhibited at the Convention, if it were possible for them to make any such display as the men who were very generally known could do. In the first place, even though they place an exhibit here, or want to, they were deficient in the subjects in a great many cases, and in the means for putting the thing before their brethren in the condition in which they would like to have them appear. Now, I think a too elaborate display—that is, too great a display of pictures on the part of any one man is rather overdoing the thing. I think, at least or at most, twenty real first-class pictures which are or ought to be the gems of any man's collection could be placed before the members of the Association, and it might be limited to that number, and if it was thus there would be a very much larger number of men who would send their work here, and who would feel that they were not cramping themselves in doing so, or placing themselves in an unequal light before the fraternity. No doubt about it, Gentlemen, but what the question might arise—well, while we are not overstocked with pictures even now with a large display made by some, again perfectly true—why? Because a few make a large display, there are many who cannot, because they cannot afford to send pictures hundreds of miles in great quantities here—they cannot afford to place them in elegant gilt frames before their friends, and those who might give them advice and criticism which would be of just as much value, if given in a friendly

way. I don't know that the suggestion is worth anything; if it is, I hope you will act upon it, and do some good in that way by bringing other members to the Association. I believe this would be a step in the right direction.

Mr. Ranger: I notice the pictures which have been sent here from Europe, mostly Germany and also England, are remarkable specimens, and I presume to say that it has been quite a large expense. I think it is quite befitting for us as a body to take official recognition of that fact, and to extend a vote of thanks for their display. It has been great gratification and a source of profit to us all.

The President: That has already been attended to. The Executive Committee was authorized to prepare an engrossed vote of thanks of this Association, and directed to send a copy to each one of the gentlemen included in the number of foreign exhibitors.

Mr. Bellsmith: Why cannot this be done through some association in Germany or through Mr. Gennert?

The President: I think that the photographer deserves the credit for his picture.

Mr. McMichael: No association has anything to do with it. It has been done through Mr. Gennert, who invited the foreign exhibitors.

The President: A vote of thanks might be given to Mr. Gennert in addition.

Mr. Inglis: The exhibition that we are to receive from the Eastman Dry Plate Company is ready to be given; I think that we should proceed with that.

Mr. Cooper: We are ready just as soon as you are.

The President: We are ready, we were only waiting for 3 o'clock to arrive.

Mr. Cooper: Ladies and Gentlemen, and Mr. President, with the aid of my friend, Mr. Jones, who has become extremely skillful in the manipulation of the roller holder which we are about to present to you, I will try to explain some of the few advantages which are to be derived from the use of this new process, which has been secured with an extreme degree of hard work, and expenditure of a large amount of money with the hope that the photographers of this

country as well as others will show that they can appreciate something that bears the mark of public spirit, and that they are determined to work for the craft on the part of the men who have done so. This is a camera. I don't know if any of you have seen one before, but I guess you have. (Laughter.) This is a roller holder, a great many people in the world have seen that in their mind's eye, but hardly before this Convention has it been presented to the world in the shape in which it comes to be considered of practical value.

The mechanism of this machine is simple, a great many of you may have had an opportunity of seeing it. If you have not, I will take great pleasure, with the assistance of my friend Mr. Jones, in showing it to you, and pointing out its various uses. I wish to say right here that we prepared an exhibition for this Convention with an immense amount of hard work. The process by which we exhibit the pictures was made and really came into being within six weeks. We had been working with the object in view of perfecting a film process, and with that object it was determined to make use of the support for the film. There were various reasons that suggested themselves, but that which seemed to be certainly the one that we could best adapt was paper. It had frequently been tried before, but usually failed. Paper was adopted. The coating of gelatine was placed upon the paper, after which it was coated with a soluble emulsion. It was then subjected, after exposure and development, to the usual treatment of the exposed plate, squeezed upon glass that had previously been coated with a rubber solution, to admit of its stripping. Then we treated it to warm water, which dissolved the gelatine solution, and allowed the negative to float off. The negative was then in a reverse shape on the glass. That being reversed could not be used for portraits or scientific work without retransferring it, and it became necessary to coat a plate with a solution of gelatine; one side when dried was peeled off leaving a negative of about this form. I think I have one with me this afternoon which you can pass around. You will see the piece between the film and the negative—the paper negative. Just

about the time that that process had been perfected, and all the difficulties which had presented themselves had been swept away, it suggested itself to the management of our concern to make an attempt to render the paper transparent by means of a medium of some kind. Various things were tried, but castor oil at last was adopted as the most satisfactory so far as we know at the present time. An opportunity is open for any gentlemen, who possess the talent for investigation, to experiment in this line, and if they find out something that is better than castor oil, and will give it to us, we will feel deeply indebted to them. At present all we can say is, that we consider that we have found the best thing for the purpose—that is, castor oil. That is the best that can possibly be obtained, better than any other article that I know of, or that we know of. This process was presented, and the necessity arose for some method by which the exposures could be correctly taken. Many attempts had been made to make paper negatives and things of that kind, but the difficulty was how to place the paper in such a position that the photograph could be made easily and securely, or made easily and have it securely fastened to the glass. This roller holder was one of the first things that suggested itself, and it has been worked out with a great deal of care.¹

My friend, Mr. Jones, who knows more about this thing really, in its manipulation, than I do, will now show how it is operated.

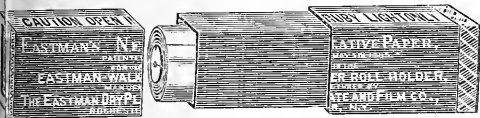
Mr. Jones: We have here two rollers; the paper is on one and is extended to the other. This is a dummy spool on which there are twenty-four paper negatives prepared for twenty-four exposures. There is a frog on here to take up any lost motion that may be made on the paper.

Mr. Cooper: You will notice, gentlemen, that the paper passes over a table which is absolutely flat, and there can be no warpage. There cannot be any possibility of any inaccuracy in focussing on a surface like that. It is flatter than the glass that you ordinarily get. The receiving spool here which takes up the paper that has been exposed, is provided with a clamp to which this end of

¹ See cut in advertisement.—Ed. P. P.

the paper is first adjusted, and admits of its being rolled from one spool to the other. About four clicks give the circumference of this spool. This is a 6½ x 8½. One click is one-quarter of the spool. At every click we have a perforation in the paper which can be felt, and you can feel them and count them. The impression is very distinct, so by running a finger on the surface you are able to measure off the distance accordingly.

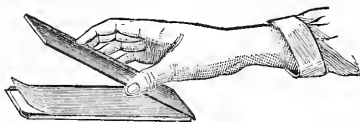
Mr. Jones: I will put this paper on, and turn the roller so you will see how it is done. (This demonstration was made.)



Mr. Cooper: So much for the roller holder exhibit. Let me relate a little incident connected with it showing the manifest advantage which it places in the hands of a man who is likely to meet a brother photographer who is somewhat of a crank. My friend Jones here, went out on a little amateur excursion when the Wild West show was in Rochester, and he received permission from Buffalo Bill, Mr. Cody, to photograph the Indians in an enclosure. It happened to be raining very hard, and my friend was going to take a group, and while he was in the act of making the photograph, this photographer happened to see him, and he ran up in front of the camera and said to Mr. Jones that he possessed the exclusive right to photograph the show. Mr. Jones said to him "I don't want to be mad with you, but I will show you one of the most surprising things you ever saw in your life. I have something peculiar on this box. You just turn this little crank here, one, two, three, four, and then you take off the cap here, and you count one, two, three, and the picture is made." The photographer was very much astonished. He was very much interested in watching the operation, and he did not understand it, but Mr. Jones had taken his group, and he surprised him very much by showing him afterwards an elegant print from the negative. That is one of the advantages. I was asked about retouching, and whether it was possible to retouch upon

one of these negatives. Upon one of the negatives greased with castor oil. Now, I want to say that it is a very singular fact that this gelatine film produced in this way with the oil on the film does not take the pencil very easily before it is oiled, but almost immediately after you have oiled it, you can find there is a regular tooth to it. You can hear the sound of the pencil almost. You see how easily you can write on it, and you can do your retouching as easily as you could desire. You can also remove any marks or spots on the negatives. You can spot out anything. It takes a very strong mark. The consequence is, you can readily dispose of any little defect that there might be in the negative. I would say further that there is something that has never been done before. I am confident I can say the knife can be used on that surface. Any gentleman can take a look at that, and you will say that it is not only susceptible of being very strongly marked with the pencil but you can take your knife or piece of stump and with a little emery paper on it, work your name right on it—you can write on it, and that too without scratching the film at all. Just see that and hold that up to the light, and you will notice that it is possible to do that—it is possible to make your shadows light. You will see the name of Sarony written upon the surface of the negative, without scratching or abrading the surface in the least. I don't think any gentleman ever did that or tried to do it with a plate, unless it was a plate that was not good for anything. So far as retouching is concerned, I think that any objection on this score can be laid at rest. Another great value is the large work which can be done. This morning we developed over in our developing room on the other side of the street, three 20 x 40 negatives all at once, one on top of the other, pulling them right over each other in the developing dish. I don't know but what we will have one or two of these negatives up here. Now the whole operation was concluded in from eight to ten minutes. Three 20 x 24 were developed all at once, and very fine negatives too. I mentioned last night, that I used the day before the diluted solution of the one-sixth dilution—

that is, two ounces to thirty-six ounces of water. To-day when I made that development I used two ounces to sixty-four ounces of water, and got elegant negatives, brilliant high lights and color, and beautiful shadows. Now, when the new process was devised it was supposed that the film was susceptible of being used only in the roller holder. That is not so. We have provided a very neat little mechanical device for exposing the film, which you will see here. There is a square of wood, which



is composed of woods the grain of which is cut in different ways. This is done so that there will be no warping. It lays perfectly flat. It is extremely light. Going into the dark room and taking out the film you get an absolutely accurate and true image as the camera can make. You lay it down, and you take this little point, which has been stamped out, and you will see that it will fit very accurately around that. You place it down here like that, and there is your plate. You put that into your ordinary wet or dry plate holder. One of these will go in very easily, so that you see it is not absolutely necessary that a man should go away from here supposing that he is bound to buy a very expensive outfit to try it. It is within the reach of anybody and everybody. I think there is very little use in taking up your time any further. You heard last night what I said on the subject of development. You heard also what I had to say about developing solutions of a very strong character. There is the developing solution that will keep for ten months. I put in two ounces to sixty-four ounces of water, and develop full of brilliancy, detail, and softness.

Mr. Cooper: All is in one solution. It is concentrated and combined afterward. You can make a concentrated solution, one of the sulphite and one of the soda, and you add your quantum of pyro and put them together in equal proportions; they will keep indefinitely.

A Member: I would like to ask how films will compare in price with other dry plates?

Mr. Cooper: In the case of very large work, about one-half the price; in the case of small work, 11 x 14, probably about two-thirds. I don't think any less than that—about two-thirds of the price. You see, the difference in the price of the large glass is quite an item. If there are any questions which the gentlemen would like to ask relative to this matter, I would be very glad to answer them to the best of my ability.

A Member: Will you say how you treated negatives preparatory to printing?

Mr. Cooper: You say you want to know how it is oiled before it is printed. We found, upon endeavoring to oil it, that it can be done quite readily by simply rubbing the oil on the negative, or by subjecting it to any ordinary degree of heat. The consequence was, we laid the paper down upon a bit of soft paper, and, putting castor oil over the back and rubbing it around and treating it with an ordinary clothes iron, such as is used in laundries; when quite hot, and rubbed all over, the consequence was, that the air in the cells of the paper would be expelled directly, by the heat allowing the oil to take its place. If in the operation you do this, the transferring of the oil takes place readily. Then you can wash your plate properly. In the case of the iron not being hot enough, you know the remedy for that; you simply heat your iron again and go on. In the case of a negative not being properly washed, all that you have to do is to continue the operation until you have evaporated all the water of crystallization from the crystals of hypo that remain in the film, and when all the water is out, you will let the oil go in; so that, if you find any trouble of that kind, you will know what the cause is—the negative is not properly washed from the hypo, or that your iron is too cold. You can remedy both of these things very easily: one by heating the iron, and the other by a little perseverance.

Mr. Clifford: What defects have occurred that you know of?

Mr. Cooper: I know of none.

Mr. Clifford: Does this paper require more, or less, washing than glass?

Mr. Cooper: It requires less.

Mr. Clifford: How long do you keep it in the running water?

Mr. Cooper: Not more than fifteen minutes. For large negatives, we put in quite a number of them together, and in this way they are washed quite thoroughly. So far as the sensitiveness is concerned, they are washed in a little less than half an hour; it would be safe to give half an hour's washing.

A Member: This process is patented, is it not?

Mr. Cooper: So I believe.

A Member: What is the difference between this and the Warnerke film?

Mr. Cooper: I do not happen to know how the Warnerke film is made, or I should be able to state the difference. If you will tell me what you know of it, I can perhaps make a comparison.

Mr. Taylor: The Warnerke system consisted of two rollers, in every way very much the same, only the paper was coated with a collodion emulsion, instead of gelatine. In other respects I think it worked the same. I have seen it work many times, but I don't know whether it was patented or not; it was manufactured to be used extensively.

Mr. Cooper: Did Mr. Warnerke ever put his film on the spool himself—that is, did he ever sell his spools with the film?

Mr. Taylor: All I got were put on by him.

Mr. Cooper: I don't know anything about that, but I doubt it very much.

A Member: Will you state how you keep the negatives after they are ready to print?

Mr. Cooper: We have the best means of keeping the negatives, which is to place them face to face and back to back in an ordinary printing frame, and put a little pressure on them. They will keep perfectly flat. It is not necessary to use your printing frame for that purpose. It would be a very simple thing to arrange a portfolio or envelopes in which they could be kept. They could be placed one on top of the other, and the pressure of their weight would prevent the necessity of having anything like pressure from any other source.

A Member: How many negatives can be developed in the dish at once?

Mr. Cooper: Sixteen of the small sizes, and as many as four of the size of 18 x 20 can be developed at the same time.

Mr. Beidle: Are they liable to become opaque?

Mr. Cooper: Decidedly. The time will come when the oil will dry out, as it will out of any other substance. Just the same way that it went out it will come in again. As you put it in before, you can put it in again. If it becomes necessary to make use of your negative, re-oil it. The re-oiling is done in a short time; it needs no drying after oiling. The alcohol will entirely remove the presence of any oil on the surface, and you can print from it immediately.

Mr. Gentile: Can it be printed from both sides?

Mr. Cooper: I have no doubt it can be done, but I don't think the print will present quite as perfect an appearance printed through the paper as it would printed from the substance of the films. I hardly think it possible to expect it would. At any rate, it would present so little difference as to be hardly discerned by any good expert. It can be retouched. There is no difficulty about the focus.

Mr. Poole: Immediately after washing, how do you dry these paper negatives?

Mr. Cooper: There are two ways in which it may be done, but neither is an absolute necessity. You can lay your plate upon the same spot or on ordinary blotting-paper, or squeeze them down upon a plate of glass, cover them with a rubber solution to prevent adhering to the glass, the ordinary black rubber, and as soon as the negative dries it peels off, falls off from its own weight.

Some discussion followed as to the Eastman patent, after which Mr. Cooper said:

I don't know that I came here with the object of entering into any argument; but, if it is necessary, I shall be very glad to enter into any discussion with any gentleman when I have made preparation to do so. I have no objection to doing it then, but at present my object in coming up here was, to show, just so far as I could, what I need to show (applause); and, if I have said anything by which I have trod upon anybody's toes, I apologize. I came up here to give my experience, and to show you

this roller; if it is not worth anything, let it go where it belongs.

Mr. Carbutt: Mr. President, my remarks are not intended to show that there is anything contradictory in what has been said, not in the least degree. I have been quite familiar with photographic patents and with the manufacture of gelatine paper; and, if I had not been so familiar, I should have been under the impression that what Mr. Croughton has been showing us was an entirely new thing. There is quite a difference between what he had in use, and what has been shown us, and that which was announced last December, and all credit is due to them for it, and for the most ingenious means of exposing the paper. They have a right to it, and they are entitled to full and due credit for it. It is a great step in the right direction, and it will open up a new field of labor, and will be a great benefit to the profession.

Mr. Wilson: Now that Mr. Cooper has finished his remarks and his demonstration, I move that a vote of thanks be tendered to the Eastman Dry Plate and Film Company and to Messrs. Cooper and Jones for what has been exhibited to us here this afternoon.

Agreed to.

Mr. Potter: There is one thing about this paper that has raised an inquiry in my mind, and that is as to the use of the castor oil upon these negatives. I have found in handling albumen paper that, if you get the least grease from your hands upon it, it affects the sheet in washing. I should think there would be some danger in printing the negative in the sun in very warm weather, and the inquiry would arise whether the oil would affect the chemical salt in the paper.

Mr. Cooper: It might probably seem like a bold statement that I make, but it has been proved that, by this method of working the paper, there is no difficulty of that kind. The matter has been tested thoroughly. This difficulty is only imaginary.

Mr. Wilson: A motion to adjourn *sine die* is now in order, but before that motion is made, I move that the usual vote of thanks be tendered our officers, our exhibitors, and the gentlemen who have paid us so much attention, and that the usual quantity of thanks on such occasions be given to all

the parties interested, and especially to the Secretary, who has so diligently attended to the business laid out on the programme.

This motion was seconded by several, and agreed to.

The President: It is with much regret that I now bring this Convention to a close. In doing so, I congratulate you upon the harmony and good feeling which have characterized its sessions from beginning to end. I also express a hope that what you have seen, and what you have heard, and what you have done, will prove of great service to you, and in the future become so generally known among the fraternity at large as to secure for photography and photographers a better position in the eyes of the world, better work, and better prices. With warm thanks for your patience with me, as your presiding officer, I wish you a safe return to your studios, and, bidding you a kind farewell, I now declare this Convention adjourned *sine die*.

OUR PICTURE.

THE quality of any art depends altogether upon the quality of the artist's mind and not upon the subject. The finest poetical theme, in itself full of pathos and beauty, becomes, in the hands of a prosaic person, prosaic; but the simplest subject in the mind of a poet becomes a new creation. "The Mouse" of Burns, or the Daffodils of Shakespeare, or the Daisy of Wordsworth, though the humblest things of earth, are transformed by genius into embodiments of beauty and deep-hidden truth. A Hay Barn, by Rembrandt, has more beauty and more attraction to one who has a true feeling for art than the sublimest subject by a soulless painter. But excellency does not consist in the choice of prosaic subjects. A mouse will remain a mouse, a hay barn still retain its hay-barn peculiarities, unless both be ennobled by the treatment. Mere technical skill in the rendering is not enough; the one will be a mere zoölogical analysis, the other a topographical survey—neither poetical nor artistic. Something more is demanded than skill in the reproduction of the actual to make it presentable in art.

We do not mean to say that detail should

be disregarded. There can be nothing good without attention to its demands. There can be no good generalship without accurate knowledge of roads and forage, and drills, manœuvres, and marches. Imagination will not supply the lack of knowledge, but there is something more demanded. There can be no good generalship without the power to generalize, discriminate, and organize, and so there can be no effective art without respect for technical and mechanical process; but, emphatically, there can be no art without imagination.

The demands upon the photographer, we are willing to admit, are great, but that they can be met we have abundant proof in the excellent work with which we present our readers this month.

Mr. Gutekunst, of Philadelphia, is too well known to the profession to need introduction. He is not only a conscientious photographer, solicitous of securing the highest technical excellence in his work, but he stands upon a loftier level. He is one of those who exercises the power of invention in photography, and hence merits the name of artist. He does not find it necessary to have beautiful subjects to create beautiful work. He possesses the ability to call forth, even in the plainest face, the beauty of expression; to mirror the passion and emotion of the soul within.

It seems to us that photography as much as art, to be successful, demands a certain knowledge of human nature, and this knowledge must be brought into exercise to print the mind's discernment on the face. The greater a student of human nature the photographer is, the greater will be his work. The portraits before us convey the thoughts and sentiments animating the sitters as truly as painted portraits of high order; the subjects are all interesting. The eye of the artist has, with fine perception, seized upon the moment when the soul within has looked out. These faces are fine character studies; the individual peculiarities of each are forcibly lined forth. We can read distinctly in the face of P. T. Barnum vigor and untiring energy, which never subcumb to any obstacle. In the face of Hermann Linde, the distinguished German actor and rhapsodist, the intellec-

tual element predominates; the fine head is thrown beautifully in profile, and the eyes betoken intensity of thought and poetic feeling. The vigorous face of the great preacher, Dr. T. De Witt Talmage, challenges our attention by its bold lines of character and earnestness. The thoughtful and energetic face of Thos. N. Walker, the architect, is very graphically portrayed. The serene and benevolent expression of Bishop Wm. M. Green is full of kindness, indicating a mildness of disposition, blended with vigor of intellect and definiteness of purpose.

With what skill has the language of expression been translated in these characteristic studies of the human face! Add to this the technical excellency, the beautiful manner in which they are lighted, the rich and soft modulations in tints, and the harmony in the blending of the lights and shades, and we will not wonder how it is that Mr. Gutekunst has resisted the inundation of low prices and poor work. Whilst the timid and mediocre photographer has made his efforts for prosperity useless by choking the stream with his fleets of petty sails, low prices, and club-rates, the gallant craft of men like Mr. Gutekunst has kept right on to prosperity, and seen thousands of these little barques foundered in the wide sea where their's sail in safety. With such men excellency of workmanship and artistic rendering of the subject have been paramount to everything else; good work has been their aim, and they have not been afraid to charge good prices for it, and we are rejoiced to say that the public has supported and will continue to support them, which argues well for the taste of our people.

The negatives from which the prints were made are part upon dry and some on wet plates; the prints upon the excellent quality of albumen paper (the N. P. A. brilliant) furnished by E. & H. T. Anthony & Co., 591 Broadway, N. Y.

MR. CHAUNCEY L. MOORE, of Springfield, Mass., we are informed, has taken possession of his new and elegantly fitted up quarters, where he is prepared to maintain the standard of excellency with which he has hitherto repaid his numerous patrons.

Editor's Table.

ALL.—In one issue, by adding 20 pages to our usual quota, we give our subscribers *first, before all other magazines, the entire proceedings* of the Buffalo Convention, *with every paper read there.* No other magazine does this, and buyers who understand the convenience of having the whole thing in one volume will appreciate our efforts in their behalf by ordering the extra copies they want soon.

We have printed an extra edition, and will mail copies at 50 cents each. Order early. Our comments on the Exposition, events of the week, opinions of the craft, and other matters, will appear next month. THE PHILADELPHIA PHOTOGRAPHER *is always ahead.*

THE SUTER LENSES AT THE CONVENTION attracted more attention than anything else offered for the inspection of the craft. The lovely examples of work secured by them at home and abroad created a regular stir. And no wonder, for, wherever the Suter lenses are used, they not only produce elegant work, but they win the people who use them. Here is an *e pluribus unum* from Mexico, which proves what we say :

MATAMOROS, ESTADO DE TAMAULIPAS, MEXICO,
May 22 de 1885.

SRS. ALLEN BROTHERS,
Detroit, Michigan, E. U. de America.

Muy Srs. míos: A su tiempo recibí fror el "Express" el lente Aplanático B, No. 5, manufacturado por et Sr. E. Suter de Basle Suiza. Debo decir á Uds. que este lente salió a toda mi satisfaccion, fires es, de una exelencia perfectir; dando un campo applanático, con definicion de detalles hasta los extremos de la negativa, gran difucion de foco y suividad en las imagenes; por lo qué, creo de justicia recomendarlo á todos los fotógrafos de Mexico y la America del Sur; donde aun no es Conocido, y el serlo será apreciado fror su exelencia y su relativamente bajo precio.

Yo siempre he usado lentes Ingleses de la fabrica de ———, y encuentro los de Suter tan buenos, y valiendo menos dela vorito: de los primeros. Hoy con el usa de las plas secas estos lentes sou inmejorables. Ya me hago el placer

de dar á Uds. las gracias por haberme enviado dioho dicho lente haciendome conocerlo y apreciarlo.

Sin mas quedo de Uds respetuosamente su a. s.

JOSE M. MENDEZ.

[TRANSLATION.]

MATAMORAS, STATE OF TAMAULIPAS,
MEXICO, May 22, 1885.

MESSRS. ALLEN BROTHERS, Detroit, Mich.,
U. S. of America.

Gentlemen: I received in good time by express the aplanatic B. No. 5 lens, made by Mr. E. Suter, of Basle, Switzerland. I must say to you, gentlemen, that this lens is to my entire satisfaction, on account of its perfect excellence; it gives an aplanatic field, with definition of details to the margins of the negative, great diffusion of focus, and softness in the image. I consequently feel justified in recommending it to all the photographers of Mexico and South America. Wherever known, it will surely be appreciated for its excellence and its relative cheapness.

I have always heretofore used English lenses, made by ———, and I find those made by Suter fully as good, and costing but half the price of the former.

In working with the dry plates now in use, these lenses cannot be improved upon.

I take pleasure in thanking you for having sent me this lens, and thus enabling me to know and appreciate it. Very respectfully yours,

JOSE M. MENDEZ.

THE excellent work accomplished by the New Orleans Centennial Photographic Company is due, no doubt, to the staff of skilled operators engaged by the experienced Superintendent of the Department; but the success of the operators depended upon the excellent apparatus supplied. At the close of the Exposition the greater portion of apparatus was secured at the low price at which it offered. We refer our readers who are desirous of purchasing what is still left to the last in the Specialty advertisement in the pages of this journal. Mr. A. H. Plecker, of Lynchburg, Va., writes, "The camera box to hand, and I am very proud of it."

Specialties.

MAKE OUT YOUR OWN BILL, and remit cash with your advertisements, or they will not be inserted.

ADVERTISING RATES FOR SPECIALTIES.—Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to *secure* insertion. Advertisers will please not ask us for recommendations. ~~We~~ We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement. **Postage-stamps taken.**

NOVEL, ARTISTIC, INTERESTING.
SEAVEY'S 1885 EXHIBIT.

P. A. of A. Convention, Buffalo, N. Y.

"Just suited to the times," our new and popular 6 ft. x 8 ft. full and three-quarter length Backgrounds, for light and dark draperies, adults and children at from \$9.60 to \$12.00. Hard times and low prices no excuse for not having one or more of these valuable aids.

Moreno Patent Glass Foregrounds.—Clouds, grasses, balustrades, etc. Taking and wonderful illusions at from \$8.00 to \$10.00.

Four Change Garden Wall.—Fully triumphed with vines. For adults and children, \$15.00.

Circular Garden-Seat.—Recently improved. Light, graceful, artistic. No objectionable straight lines. Reduced to \$18.00.

Rocks, Cottages, Trees, Bkgd. Pastels, Balustrades, Fireplaces, Artificial Vines and Rosebushes.

This advertisement is intended particularly for those who did not attend the Convention.

We are proud to mention that in the prize exhibit of Mr. J. F. Ryder, our backgrounds were used.

LAFAYETTE W. SEAVEY,
216 E. Ninth St., N. Y.

ROCKWOOD SOLAR PRINTING CO.

17 Union Square, New York.

TIME.—It is our intention that every order received in the morning's mail (when not to be put on stretchers) shall leave this establishment the same day or the following morning. If too late for the morning work, it is sent on the second day. Having our own engine and electric light, *we are not at all dependent on the weather.*

GEORGE H. ROCKWOOD,
Business Manager.

W. F. ASHE ARTISTIC BACKGROUNDS AND ACCESSORIES,

REMOVED TO 68 WEST FOURTH ST.,
4 BLOCKS WEST OF BROADWAY, N. Y.

My new studio is fitted up with all the modern improvements, and the most refined demands from a critical public can be satisfied. A visit to my establishment, which has the largest showroom, containing the greatest amount of stock of any place in the world, will be gratefully appreciated.

I have again added numerous new designs to my great variety of patterns for *backgrounds* and *accessories*, and keep also in stock a large quantity of goods for parties to select from, saving time and delay on orders.

ADDRESS T. W. POWER, N. Y., Secretary of Association of Operative Photographers of New York City, for operators, printers, and retouchers, 392 Bowery, or 487 Eighth Avenue.

WAYMOUTH'S

No. 18. VIGNETTE PAPERS, No. 18.

The old form of No. 18, Waymouth's Vignette Papers, oval, has been discarded, and a *new pear-shaped* style is now ready in its place. It is a beautiful piece of gradation and prints perfectly. Price \$1.25 per dozen. For sale by all dealers. See advertisement for all sizes.

No. 18. NOW READY. No. 18.

PORTRAITS IN CRAYON.

The new book by E. Long, on the art of making portraits in crayon on solar enlargements, covers the entire ground, and is sold for the low price of fifty cents. For sale by

EDWARD L. WILSON,
Philadelphia.

METAL GUIDES

FOR

A. M. COLLINS, SON & CO.'S

No. 26 GILT BEVELLED-EDGE CARDS.

The fancy-shaped mounts now so fashionable among photographers, require metal guides with which to cut the photographs. They are now kept on hand, and can be supplied in the following shapes, and at the prices mentioned :

	Each.
Cross.....	\$1 05
Star.....	1 00
Palette.....	90
Leaf.....	90
Bell.....	90
Crescent.....	80
Egg.....	39
Triangle.....	90

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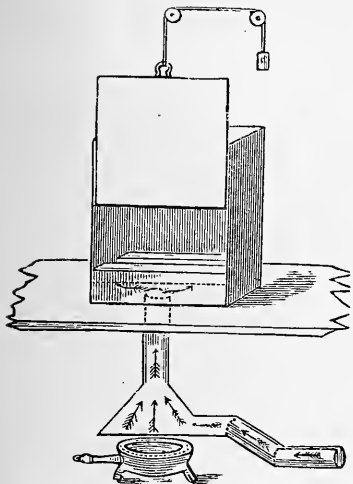
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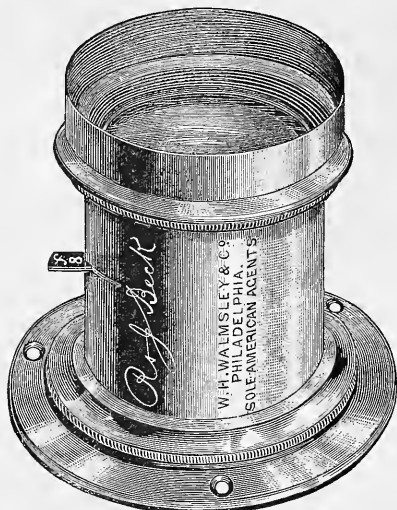
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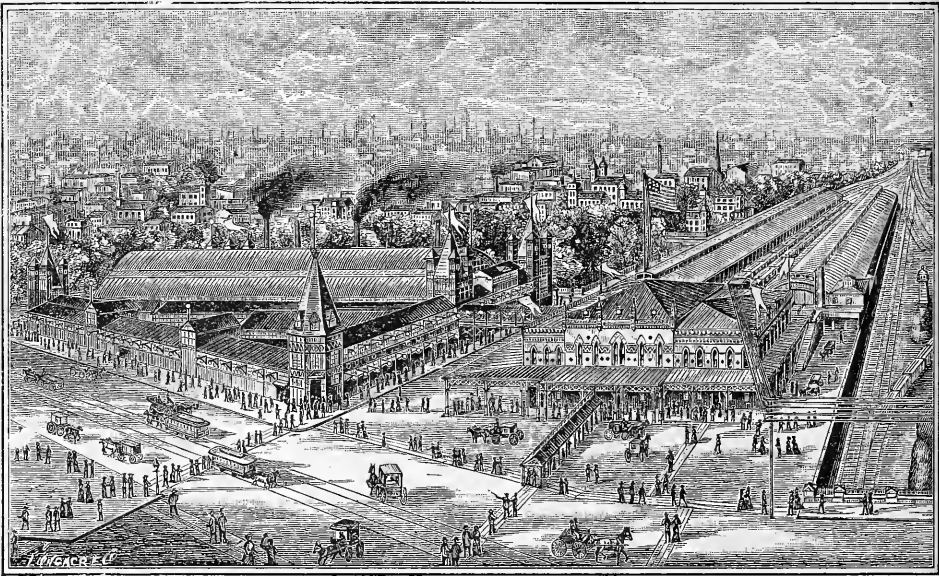
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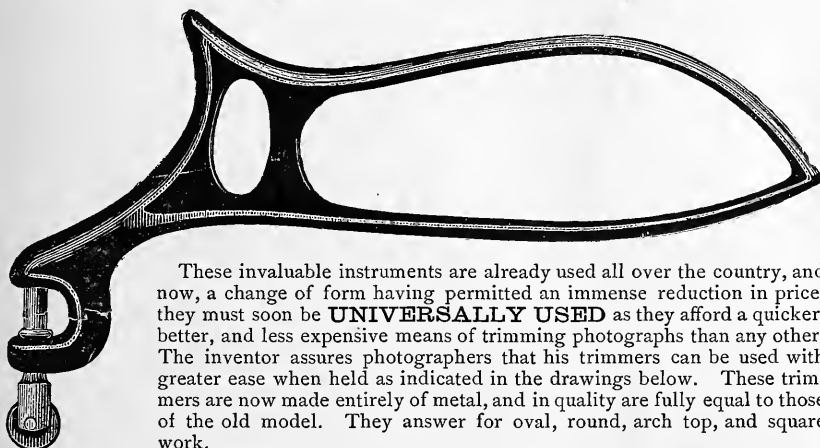
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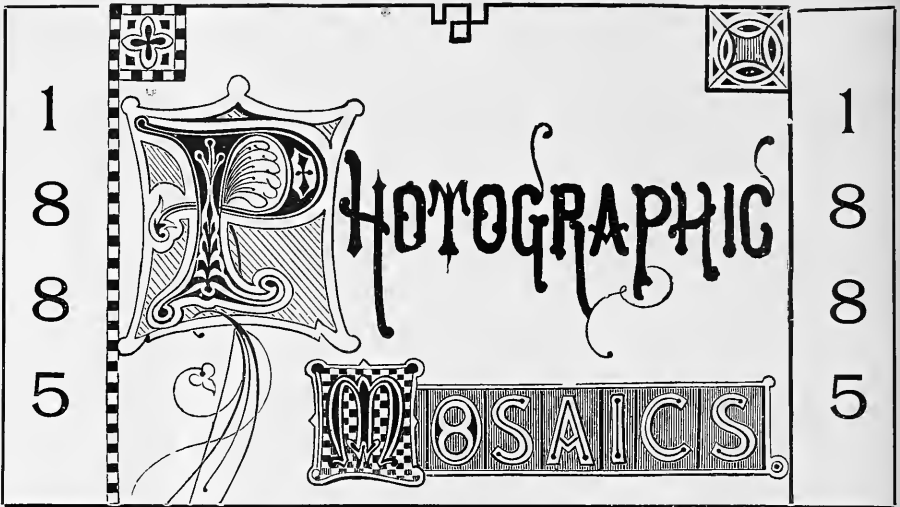
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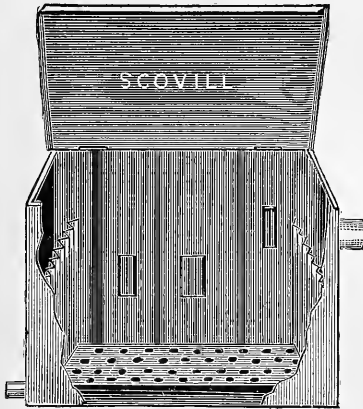
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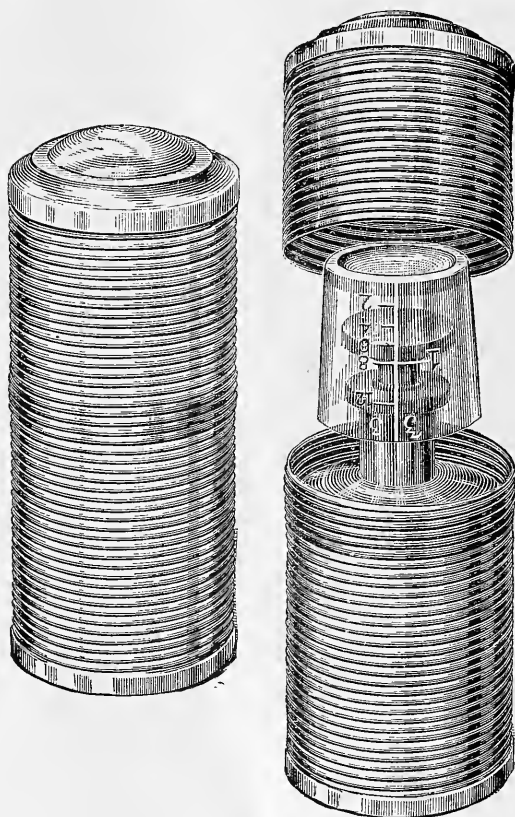
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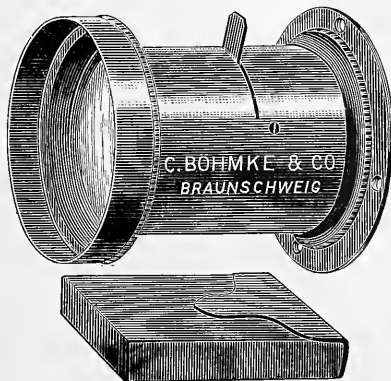
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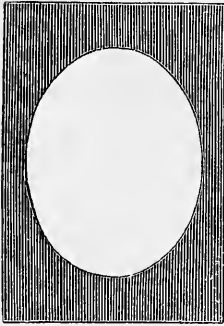
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For 1885 we have some useful schemes and novelties under way, which will be presented from time to time.

Contributions from both *Actives* and *Amateurs* are invited. Proceedings of Societies are very useful and should be sent promptly.

EDWARD L. WILSON, Editor, Publisher, and Proprietor, 1125 Chestnut St., Phila.

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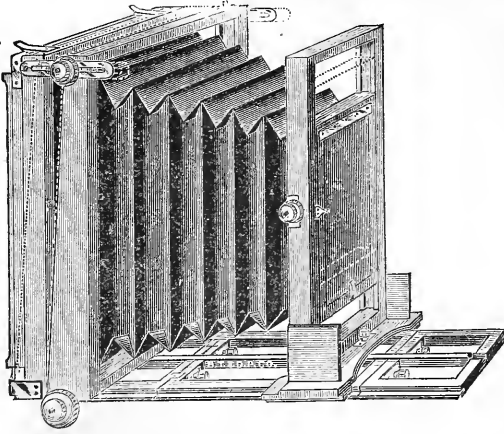
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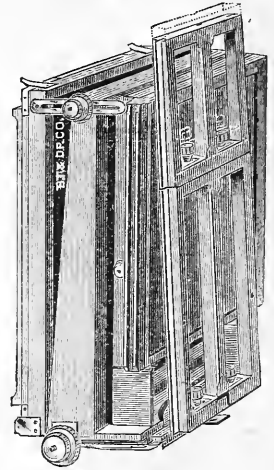
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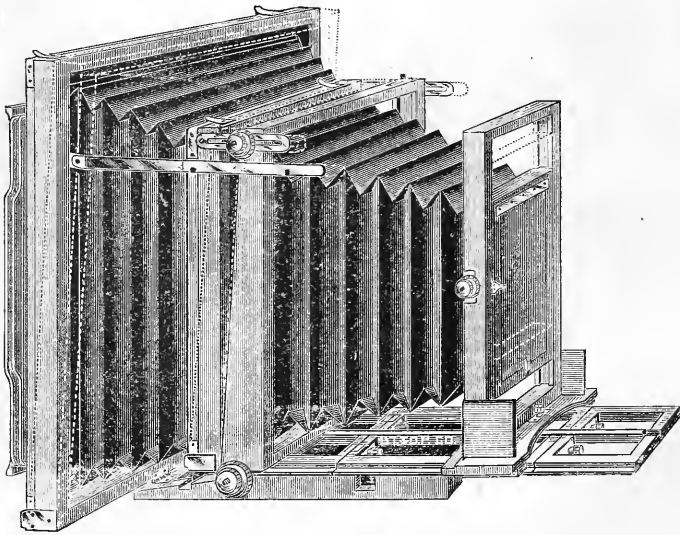
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22d YEAR.

SEPTEMBER, 1885.

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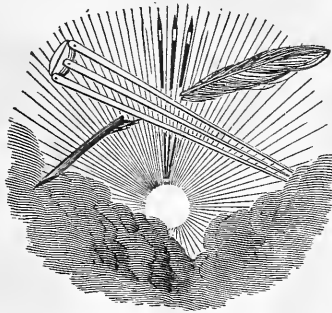
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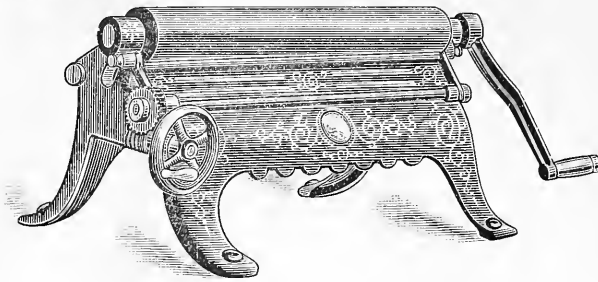
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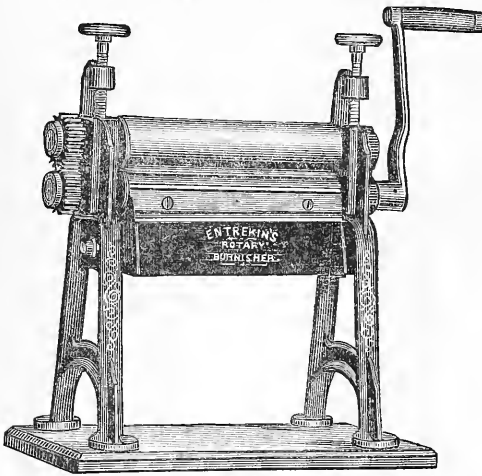
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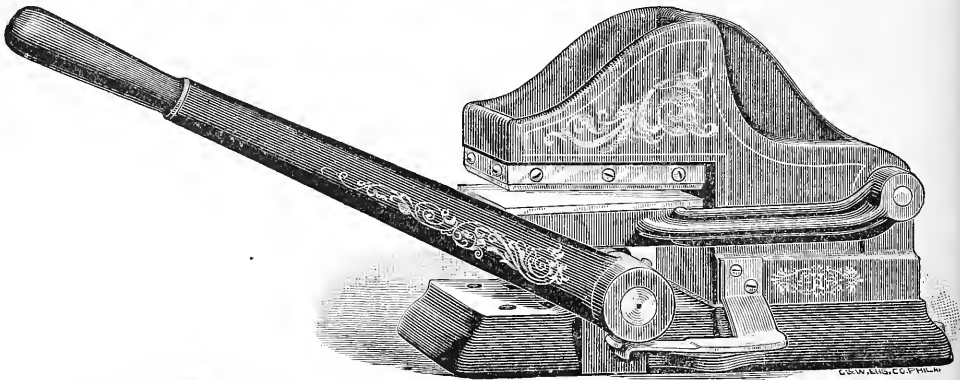
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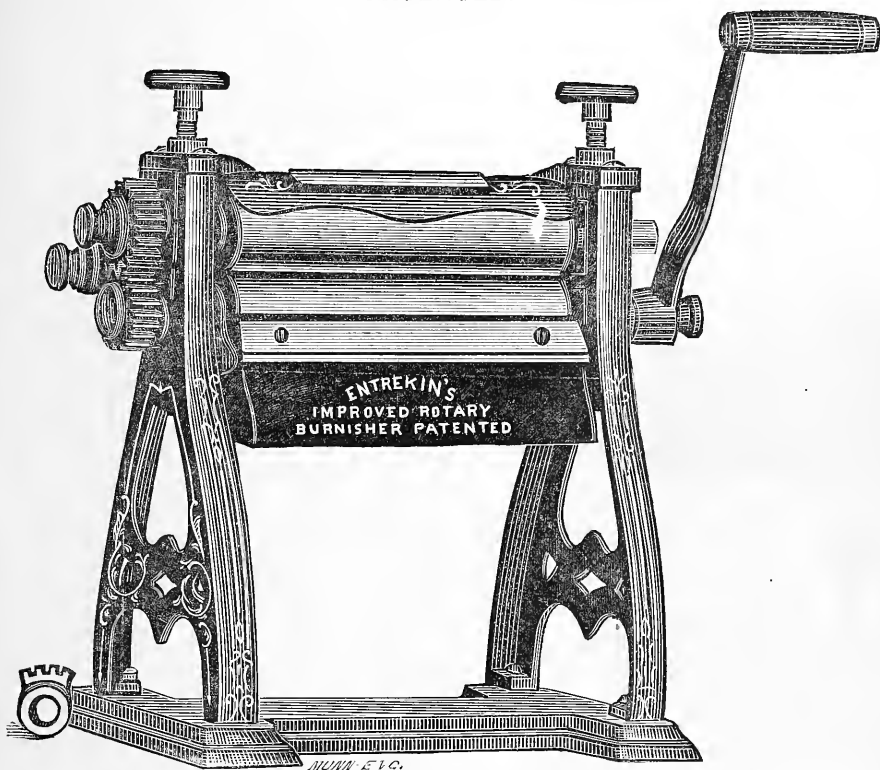
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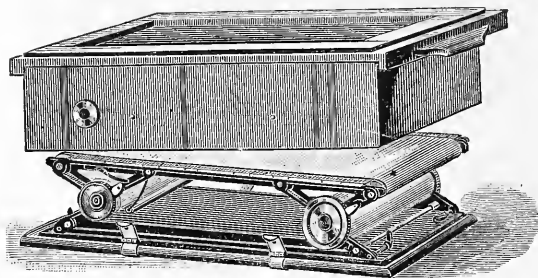
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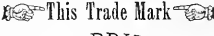

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We desire to call attention to our **NEW PENSÉ N. P. A.** Extra Brilliant Dresden Albumen Paper.

The manufacturers at Rives have recently many marked improvement in their celebrated paper, and all the sheets of this brand are **manufactured specially** for it, and are readily distinguished from all other papers by the **water-mark N. P. A.**

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Its excellence has induced some unscrupulous persons to **place the STAMP on the Paper of other makers**, in order to work it off, trusting that photographers will not look through to see if the **water-mark** is there. To prevent this we have registered  This Trade Mark  in Washington, which will subject to heavy damages all those who stamp this brand on paper which does not bear **EXTRA-BRILLIANT N.P.A. DRESDEN.** This Paper can be had also in **PINK, PEARL or WHITE.**

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N. B.—When any paper is offered to you at a low price, **Measure it.**

Also note whether it runs **Uniform**, for some albumenizers mix the first and second qualities, not discarding that which has defects, and thus get their paper cheaper.

Important Reduction

IN THE PRICE OF THE POPULAR

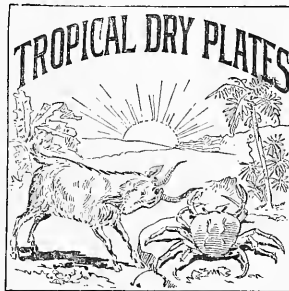
Stanley Dry Plates.

FOLLOWING IS THE REDUCED PRICE LIST:

3 1/4 x 4 1/4, per dozen,	\$0 45	10 x 12, per dozen,	\$3 80
4 x 5, "	65	11 x 14, "	5 00
4 1/4 x 5 1/2, "	75	14 x 17, "	9 00
4 1/4 x 6 3/4, "	90	16 x 20, "	12 50
5 x 7, "	1 10	17 x 20, "	13 00
5 x 8, "	1 25	18 x 22, "	15 50
6 1/2 x 8 1/2, "	1 65	20 x 24, "	18 50
8 x 10, "	2 40		

These Plates have met with remarkable favor among both amateur and professional photographers, and the demand is much greater than could have been expected within the short time that has elapsed since their introduction. Their rapid rise to popularity is a sufficient evidence of their superior qualities, for with so many plates in the market, nothing but **INTRINSIC EXCELLENCE** could have brought them so suddenly into their conceded position of **THE BEST PLATES MADE.** **FOR SALE BY ALL DEALERS.**

IMPORTANT



DISCOVERY.

Tropical Dry Plates.

The only Dry Plates made that will **NOT FRILL** in water of any temperature, and can be *dried by artificial heat.* By their use the negative can be developed, fixed, and dried in a few minutes, enabling proofs to be taken from them at once. They are Rapid and Uniform, unsurpassed for softness and delicacy, and can be used in the *hottest climates.*

PRICES AS FOLLOWS:

3 1/4 x 4 1/4, per dozen,	\$0 50	10 x 12, per dozen,	\$4 00
4 x 5, "	75	11 x 14, "	5 85
4 1/4 x 5 1/2, "	85	14 x 17, "	10 50
4 1/4 x 6 1/2, "	1 05	16 x 20, "	14 50
5 x 7, "	1 30	17 x 20, "	15 25
5 x 8, "	1 45	18 x 22, "	18 00
6 1/2 x 8 1/2, "	1 90	20 x 24, "	21 50
8 x 10, "	2 80		

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CAN BE HAD OF ANY DEALER IN PHOTO. MATERIALS.

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FROM AND AFTER MAY 10, 1885, THE PRICES OF

Eastman's Special Dry Plates

WILL BE AS FOLLOWS:

3½ x 4¼	.	\$0 45	10 x 12	.	\$3 80
4 x 5	.	65	11 x 14	.	5 00
4¼ x 5½	.	75	14 x 17	.	9 00
4¼ x 6½	.	90	16 x 20	.	12 50
5 x 7	.	1 10	17 x 20	.	13 00
5 x 8	.	1 25	18 x 22	.	15 50
6½ x 8½	.	1 65	20 x 24	.	18 50
8 x 10	.	2 40			

Eastman Special Dry Plates give the best chemical effects, and photographers are invited to compare them with any other plate in the market for **Brilliancy**, **Roundness**, and **Quick Printing**.

Owing to improvements made from time to time, and the extreme care exercised in every detail of their manufacture, these plates are **quick**, **clean**, and **uniform**.

Only the best English glass is used. No cheap French glass, such as is employed in inferior plates. Try them and you will use them.

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Which is unrivalled for groups, full-length figures, and other demands in the gallery, and every species of out-door work, including instantaneous photography.

 **THE EURYSCOPE** is made *exclusively* by Voigtländer & Son, and their name is engraved on the tube.

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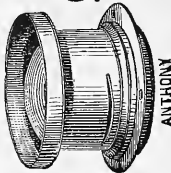
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No other will give you half so much satisfaction.

FOR DRY PLATES
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ARE SUPERIOR TO ALL.

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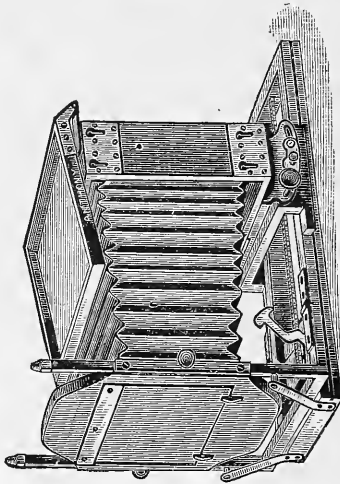
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SINGLE COMBINATION, RAPID,
WIDE ANGLE, PLATYSCOPE,
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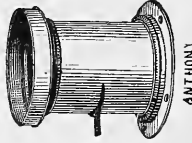
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THE NOVEL CAMERAS,
SCHMID'S DETECTIVE CAMERA

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Camera Stands
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The Lightest and Best for Out-door Work.
FOR WET PLATES
NOTHING EQUALS
THE BENSTER PLATE HOLDER.
O. I. C.
PORTRAIT, COPYING, CLIMAX
PORTRAIT, GEM, AND
COMPACT VIEW CAMERAS.

E. & H. T. ANTHONY & CO. BROADWAY, NEW YORK.

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The amateur and his old friend, the daily worker, are well taken care of in the literature line, and we ask their attention to the following list, which includes about everything there is need for. There is, in fact, a treatise on every branch of photography.

The Philadelphia Photographer. A monthly magazine, illustrated by photographs of superior merit. \$5 a year; \$2.50 for six months.—Stands ahead of all its kindred. Twenty-one years of success is a sufficient guarantee of its value and use to the practical, working, growing photographer. Do not go without its valuable help.

The Ferrotyper's Guide. Price, 75 cents.—Cheap and complete. For the ferrotyper this is the only standard work. Seventh thousand.

Pictorial Effect in Photography. By H. P. Robinson. Cloth, \$1.50; paper cover, \$1.—For the art photographer.

Wilson's Photographics. The newest and most complete photographic lesson-book. Covers every department. 352 pages. Finely illustrated. Only \$4. By Edward L. Wilson.

Wilson's Lantern Journeys. By Edward L. Wilson. In three volumes. Price, \$2 per volume.—For the lantern exhibitor. Gives incidents and facts in entertaining style of about 2,000 places and things, including 200 of the Centennial Exhibition.

Studies in Artistic Printing. By C. W. Hearn. Price, \$3.50.—Embellished with six fine cabinet and promenade portrait studies.

The Photographic Colorists' Guide. By John L. Gihon. Cloth, \$1.50.—The newest and best work on painting photographs.

Photographic Mosaics, 1885. A year-book. Cloth bound, \$1; paper cover 50 cents. Better than any of its predecessors.—Back volumes, same price.

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The Art and Practice of Silver-Printing. By H. P. Robinson and Capt. Abney, R.E., F.R.S. Price, 50 cents. Illuminated cover. Cloth bound, 75 cents.

Photography with Emulsion. By Capt. W. De W. Abney, R.E., F.R.S. Price, \$1 per copy.

Twelve Elementary Lessons in Dry-plate Photography. Price, 25 cents per copy.

The Modern Practice of Retouching. Price, 50 cents per copy.

The Progress of Photography. By Dr. H. W. Vogel. A splendid helper to all workers. Price, \$3.

Picture Making. By H. P. Robinson. Cloth, \$1. Paper, 50 cents.

All orders for above will be filled, free by post, on receipt of price at the office of this magazine.

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MANUFACTURER OF THE
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INGLIS' NEW DRY PLATE.

E. L. WILSON says they are too quick for him in New Orleans, but adds, the QUALITY IS ALL RIGHT. Send us slower ones.

Negatives made in one or ten seconds, both equally good. We saw this done, and so exactly alike were the two negatives they could not be told apart. Both taken on one plate then cut in two.

FRED. ROBINSON, Trumansburg.
HALE, Seneca Falls.

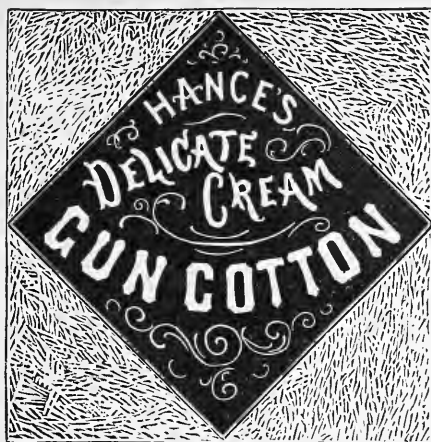
For Transparencies they are not excelled. How to develop for positives. For *quick* or *slow* exposures. For *hard* or *soft* negatives, find in our directions, which will enable the youngest amateur to work successfully. Will send them by mail on request.

THERE IS NO FEAR OF FRILLING.

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GROUND GLASS
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Manufactured only by
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THE BEST EFFORT OF THIS VETERAN TEACHER.

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PHOTOGRAPHIC CHEMISTRY.

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PHOTOGRAPHIC OPTICS.

CHAPTER V.

PHOTOGRAPHIC APPARATUS.

CHAPTER VI.

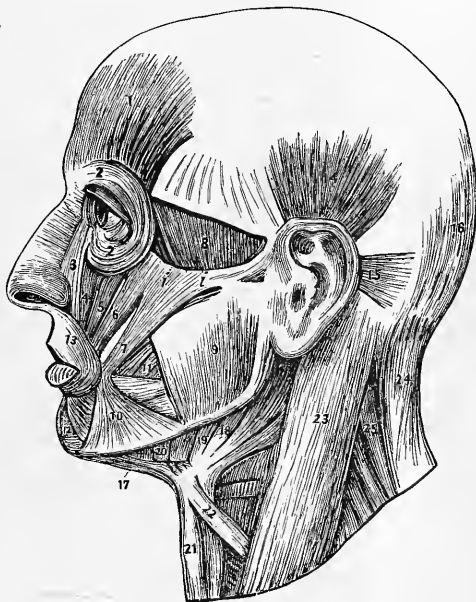
THE NEW PHOTOGRAPHIC
PROCESSES.

CHAPTER VII.

PHOTOGRAPHIC ÆSTHETICS AND
PORTRAIT TECHNIQUE.

CHAPTER VIII.

PHOTOGRAPHY FOR AMATEURS.



As the Artist should Study all about the Face, so should the
Photographer Study all about his Art.

NO BETTER OPPORTUNITY TO DO THIS IS AFFORDED THAN THAT FOUND

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Progress of Photography.

347 PAGES.

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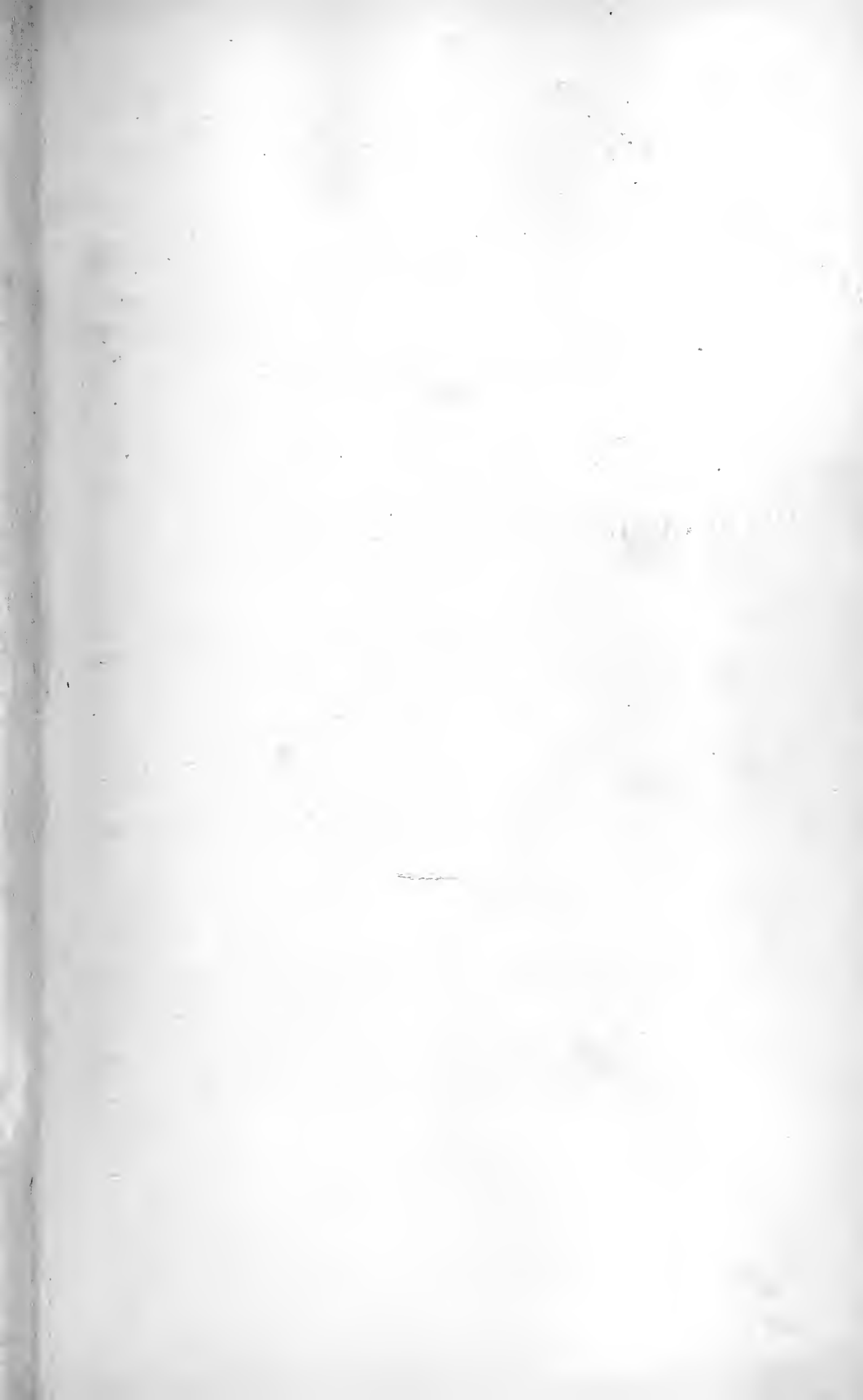
*With Seventy-two Illustrations, and an admirable portrait taken with
Electric Light, by W. Kurtz, New York.*

EDWARD L. WILSON, Publisher, 1125 Chestnut St., Phila.

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The following houses are to be recommended as the best for photographers in their localities.

<p>S. T. BLESSING, New Orleans, La.</p>	<p>THE BEST BOOK IS</p>	<p>SMITH & PATTISON, NEW LOCATION, 145 & 147 Wabash Avenue, Chicago.</p>
<p>H. A. HYATT, Mound City Photo. Stock House, 8th and Locust Sts., St. Louis, Mo.</p>	<p>WILSON'S PHOTOGRAPHICS, \$4.00.</p>	<p>D. J. RYAN, Savannah, Ga.</p>
<p>SCOVILL MANF'G CO., 423 Broome St., New York.</p>	<p>D. TUCKER & CO., Buffalo, N. Y.</p>	<p>BLESSING & BRO., Galveston, Texas.</p>
<p>C. H. CODMAN & CO. Boston, Mass.</p>	<p>WILSON, HOOD & CO., 825 Arch Street, Philadelphia, Pa.</p>	<p>B. FRENCH & CO. Boston, Mass.</p>
<p>BUCHANAN, SMEDLEY & BROMLEY, 25 N. Seventh St., Philadelphia.</p>	<p>EDWARD L. WILSON, Photo. Publisher, LANTERN SLIDES, 1125 Chestnut St., Philadelphia.</p>	<p>MULLETT BROS., Kansas City, Mo.</p>
<p>OSCAR FOSS, San Francisco, Cal.</p>	<p>E. & H. T. ANTHONY & CO. 591 Broadway, New York.</p>	<p>SHEEN & SIMPKINSON, Cincinnati, Ohio.</p>





C. F. CONLEY.

BOSTON.

A STANLEY DRY-PLATE GEM.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XXII.

SEPTEMBER, 1885.

No. 261.

BOOK BARGAINS.

ATTENTION is directed to our advertisement of "overflow" stock of books and magazines.

About a dozen years ago, the bindery where our magazine has been folded and bound for twenty years, *took fire*. It was over our office, and, as a consequence, we got a terrible wetting, and consequent damage to our stock. Much of it was saved from more than a sprinkling, however, and many of the craft were quick to avail themselves of the chance we gave them to buy in a stock of reading matter for the coming winter that cost them very little money. We are now in the market with a similar offer.

Here is an opportunity you will perhaps not have again:

1. To secure cheap photo-literature.
2. To make up sets of photographic *Mo-saics*, the *Year Book*, and the PHILADELPHIA PHOTOGRAPHER for very little money.
3. To get a collection of fine studies, unequalled in the world, at a very low price.

We need not say more, except that the stock is limited, and the early order secures the prizes. They are all about as good as new.

Read the advertisement understandingly. The parcels are sent by post or per express, on receipt of cash with order. Wherever we can we will supply special numbers and dates, on request, to fill sets.

THE BUFFALO CONVENTION.

OUR desire to supply our readers with a full and complete report of the Buffalo meeting under one cover of our magazine, caused our August issue to swell to unusual, in fact, nearly double, proportions, and to crowd out some of our "standard" articles, as well as some of the reports from local societies.

The former are in place this month, and the latter are on record in some of the other magazines, so nothing is really lost, but much gained.

And now, why need we comment, to any great extent, upon the Convention at Buffalo? To us, personally, it was one of the most satisfactory conventions we have ever attended, and, we think, the best there has been since the former Buffalo one of the N. P. A., in 1873. To this last-named one we often look back for help. Its influence was excellent, its work was great, and the good it started continues to go on. The late Convention was like it in the good feeling which prevailed; in the apparent determination on the part of members to get instruction, and in the willingness on the part of those able to do so to give of what they knew.

The papers that were read were of an unusually practical and useful order—something to send out among those who could not come that will give the Association a good name for being useful.

The debates were wonderful, too, because

of their fulness of practical thought and the entire absence of frivolity and nonsense. The President made it our duty to sit where we could face the audience, and we derived a great deal more quiet pleasure and comfort from our position on the platform than we looked, we are sure.

Harmony, peace, and good feeling ruled, and a determination to learn seemed to be depicted upon the faces of the attendants universally. All this was good, and we can only look back upon it with pleasure.

It has always been our desire as to these conventions, first, that those who attended them should be given some wholesome food to chew upon during the year. They got it this year.

Another desire we had, not always fulfilled, was, that our Association should be the means of scattering useful knowledge a great deal further than the space allotted for the meetings.

We feel that this has been started well this year also, and we are encouraged to believe that our meetings were not in vain. The officership this year excelled all precedent. The Secretary, Mr. McMichael, seemed to have an admirable comprehension of the things to be done, and he admirably did them all, just at the right time and in the right place. He made no noise about it. He went in and out among us quietly, and all we knew was that nothing seemed to be forgotten.

The editors of the magazines were made to feel good by the provision of desks and enclosures for them all.

The treasurer was in good position, and with great promptness, and system, and resignation, met his dues.

The planning of space and the installation of the exhibits in the Exhibition Hall could not be improved.

Our old stenographer, Dr. C. H. Morgan, was the reporter of the proceedings, and promptly each morning supplied the Secretary with enough copies to give each editorial gourmand a copy, all at one and the same time.

The Executive Committee were in continual attendance to settle any slight ruffle that might arise, and to see the work of

their hands going on smoothly and successfully.

The President, James Landy, Esq., with great suavity and dignity filled his position, and became deservedly more popular as the meetings proceeded.

In another place we give a running account of the exhibits. Those of the photographers were fewer than usual, but their average grade was admirable and higher than usual. The foreign pictures were a great treat. The dealers and manufacturers far excelled any exhibit held heretofore as a whole, and all did well, we believe.

The prizes and awards were given and received with good spirit, and most generous offers were made for another year.

We have crept upward and onward once more, and we feel good. Prices are low, and the public are depreciative. But we can escape from all that if we are diligent and cheerful.

So let us be, and with a hearty zeal prepare for St. Louis.

DOTTED DOWN DURING DEBATE.

WAS it not a remarkable treat to see such men as Mess. Cramer and Cooper in debate? The instruction obtained from them was immense. Mr. James Inglis is a practical man, and let out a great deal of usefulness.

Words of wisdom came from the lips of Messrs. Croughton, Carbutt, Mawdsley, and other debaters, who always held the house.

"Now throw up all your hats," said Mr. J. Inglis to the group of photographers, as he exposed his third plate. The first one was with Mr. Dixon turning somersaults across the foreground, the second with Mr. Inglis, Jr., darting across sitting on his bicycle.

Have you seen your hats since? Some of them are higher than any "stove-pipe."

Read *our* report sure.

Art is getting a chance among us. Let it come in and influence you.

It rained the first day, and a leaky roof put the exhibitors to a great deal of trouble. The elements seemed to oppose us, but we overcame fire and water and had a good time.

The useful little people, Clarence R. McMichael and Beatrice McMichael, children of the Secretary, will never be forgotten by the attendants at the Convention, for their attention to the mail department, and for many other courtesies. Personally we thank them much.

The public should see our exhibitions more than they have in the past; we want *the people* to know how we grow, and to think more highly of our work.

At least calculation our Convention diverted \$25,000 from regular courses. In other words, it cost that much. Could not a great deal more of good be had for such a stupendous sum? Let us agree to stay at home, year after next, put the money aside, and give it to an endowment fund. With the interest we could support our meetings, and supply some of the best talent for our improvement.

Better, we could use the capital to procure a permanent site for our conventions.

Then we could establish a school of photography under our wing.

Degrees could be conferred.

Then we could build up a museum.

Then we could grow more rapidly, and do more good with our money.

It should be at some resort where many thousands of the public would annually go and see and hear of our work.

It would place us up ever so high.

It would be a place for all photographers to make a pilgrimage to, at all times of the year.

Then we could talk about the dignity of the photoic art.

We would see our art in better repute.

We should get curiosity excited about us and get a name.

We should grow and never stop.

What is said by the *Press*.

"For our own part, we had a week of unalloyed enjoyment. The meeting of so many prominent men in the photographic world was a very great pleasure, and we shall never forget the faces of those we met in Buffalo."—*Anthony's Bulletin*.

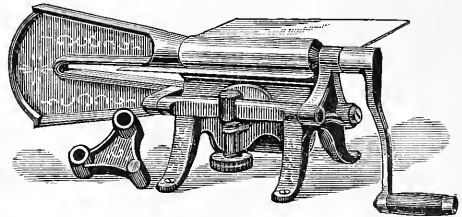
That it has proved interesting and suc-

cessful in an extraordinary degree, and beyond the expectations even of the officers, is a fact altogether beyond dispute, and at the close of the meetings we did not hear or learn of a single expression of dissatisfaction.—*Photographic Times and American Photographer*.

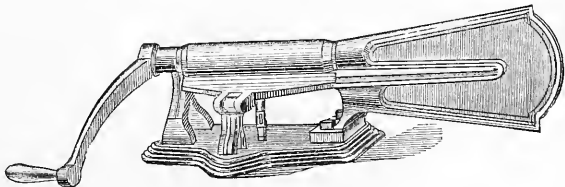
The like of it was never seen before, and it is a safe prediction that it will be no easy matter to produce another equal to it. The Convention was a grand success, and too much praise cannot be given to those whose untiring efforts called it into being and conducted it to such a successful termination.—*The St. Louis Photographer*.

A NEW AND USEFUL ATTACHMENT FOR THE PHOTOGRAPH BURNISHER.

It consists in a very simple and inexpensive arrangement, that is easily attached to any burnisher now in use, allowing the same to burnish any size card up to one that is almost twice the width of the burnisher.



The card is placed in the burnisher in the usual way, burnished as far as the burnisher will reach, then turned and finished. The slight taper at the end of the roller allows the burnish to taper out to nothing each time



as the card is passed through, with a slight lap. There can be no line or mark, for it blends the burnish in so nicely, that it is impossible for any one to tell where the burnish meets; in this way photographers

can add, at a trifling cost, any extension to their burnishers that they may want, from three to twelve inches, twelve being the largest required. As it is very easily attached or detached, it can be removed at any time and the burnisher used in the ordinary way, or may be used on the burnisher all the time, just as parties may see fit. It allows of better burnishing, as there is less surface to burnish at one time; it saves in heating, as a small burnisher will do the work of a large one, and with its use there will be no need for two or three burnishers to do the work of one gallery.

Parties wishing to engage in the manufacture and sale of these extensively, can secure a bargain by addressing the inventor,

CHARLES DORSEY,
LOCK HAVEN, PA.

PHOTOGRAPHY AT THE NEW ORLEANS EXHIBITION.

(Continued from page 221.)

THE *Museum* of the Photographic Department is certainly found in the section which is under the control of the Department of State. In this department the manufactured goods of every country is represented, and from many of them photographs have been sent. They are neither classified nor arranged in any particular order, and, therefore, we shall mention them just as they came to us in a hasty walk through the department. First, we see the cattle industry of the world represented by photographs of blooded stock. We have no possible way of getting at the names of the photographers in this class, but, judging from the physique of the attendants, we are sure some of them are from Holland, some from Switzerland, and some from Scotland. A series of views of Amsterdam comes next; these are followed by a fine but small collection of views in Ireland, street scenes, round towers, castles, abbeys, and churches, but, so far as our eyes are able to reach, we cannot observe the name of the photographer. A very pretty view of Stockholm, in Sweden, is found as we pass on toward the collection which is labelled "Diplomatic Relations," in which the principal pictures are from Italy.

Among them we find a portrait of Garibaldi, Victor Emmanuel and his wife, views of Florence, Genoa, Naples, Rome, statuary of the Vatican, some double examples of sculpture by modern artists, principally of the tombs. On the other side of this upright we have some very pretty artistic pictures, bathing scenes, marine views, bits of gardens, fishermen, bathers, gleaners, and water girls, which are very pretty. They are by E. Intergugliumi & Co. These pictures are mounted a little different from what we generally see; the print is 6 x 10, mounted on a gilt card with a black and gilt line next to the picture, then a broad gilt line three-quarters of an inch in width, then another series of gilt and black lines at the outside, finishing with a bevelled gilt edge, round corners, the card being 9 x 13. Quite a large number of photographs are standing in this department unhung, from various quarters. One frame is by A. Camarchof, at Madeira. The child pictures are very pretty, and some attempts at genre work are also quite creditable. Julius Brattz, of Stetten, is also represented here by several frames of enlargements, of a quality which we think he would have withheld had he visited one or two of our conventions. However, we admire his enterprise in sending his work to the Exposition, though poor. We are surprised and delighted with a splendid series of views by Mr. J. W. Lindt, Melbourne, Australia. The pictures of Australian aboriginals are particularly fine, and the best we have ever seen of their kind. The views of Melbourne are magnificent, while some of the views of the upper falls, Erskine River, give us not only splendid views of scenery, but examples of superb photography, rarely, if ever, found excelled. Mr. Lindt is certainly a splendid photographer; his pictures are all glacé, mounted on black cards with gilt, bevelled borders. On the other side of this upright are some fine views of lighthouses in Australia, and some of the public buildings. They are fine examples of architectural work, caught just at the right moment of architectural light for such structures, and very well handled in every way. It gives us pleasure to announce that they were made by Mr.

Nettleton, Melbourne, Aus. Messrs. Fraser & Sons, Toronto, Canada, display in this department, four frames of cabinet portraits, which are excellent, of course, and show that our old friend has still within him the feeling that stamps his individuality upon his work as plainly as it did years ago, as well as upon his talented sons. Among the South American industries are some fine photographs of sheep. Photography holds the place of honor in this department, for in the very centre of the front are several frames of photographs surrounding a central painting of President Cleveland. They include a series of portraits of the Presidents of the United States, and of some of the great statesmen thereof. A fine portrait of Senator Bayard hangs over the whole.

Mr. S. H. Parsons, St. Johns, Newfoundland, is represented by a series of views of dry docks, river scenery, and views of shipping, and Mr. C. Nettleton, of Carlton, exhibits a similar collection of ships in the dry docks, and of machinery pertaining to the docking of ships, which collection we find in the Naval Department of the State. In the same department we find a very large series illustrating the work of the Inter-Oceanic Panama Canal Company, of which de Lesseps is president. The views of Colon, Panama, and map of proposed canal route, dredging machines, engines, and other machines useful in canal building, are here shown very elaborately, but the name of the photographer is hidden from our vision. Why any man should allow one hundred of the splendid examples of his work to be exhibited in such a place as this without his name thereon we cannot see. It may be, however, that he is afraid he would have fault found with him for using the same cloud negative in so many of his pictures. The collection is centred by a very fine portrait of Count de Lesseps, which bears the name of Bradley & Rulphson, San Francisco, Cal.

The Department of Justice makes a very novel use of photography. In this department there are very large diagrams showing the different quarters of the Union divided into judicial districts, and at the top of each chart are found diagrams of the court buildings of the United States. Without pho-

tography these charts would look very plain, but as they are here elaborated, they look very beautiful. This same department exhibits a large series of reform school buildings in various parts of the country, and of the inmates thereof at their work, both in the field and in the factory, and also interior views of reform schools. The jail of the District of Columbia is represented by a very fine series of views, exterior and interior. Some views of the Supreme Court buildings of the United States, interior and exterior, also do credit to the photographer, whoever he may be. We are glad to announce that the Utah Penitentiary was photographed by Mr. Newcomb, of Salt Lake, and he need not be ashamed of placing his name upon his work, for it is excellent.

There are in the United States Army Medical Department, we should judge, quite a thousand photographs illustrating the various works of its department. First, a collection of the surgeons of the department; over these hangs a series of photo-micrographs, by Dr. J. S. Woodward, of blood corpuscles, muscles, lungs of animals, and hundreds of other things enlarged from 275 to 7200 diameters or more. These splendid examples of the lamented Woodward's work are well known to scientists. Another collection, by Dr. Geo. M. Sternberg, of various surgical subjects is illustrated by means of transparencies varying in diameter from 6 to 12 inches, over one hundred in number. A few transparencies on glass of similar subjects, by Prof. Hess, are colored very beautifully. Dr. Woodward is again represented by his photo-micrographs of animal subjects, for which he was so famed among scientists during his life. A large collection of photographs illustrating amputations and other surgical operations are disgusting, but interesting to science, and, of course, has its many uses. The curiosity of this department is a frame containing nine daguerrotypes, by Prof. Draper, of New York, of objects as seen with the microscope. They were made in New York in 1850 and 1852. A series of photographs of skeletons of persons of various nationalities helps to make this collection lively, and is enhanced by a collection of skulls made by

Dr. John S. Billings, Curator of the Army Medical Museum, made by the composite photograph method suggested by Mr. Francis Galton, F.R.S., with which our readers have been made familiar by former allusions and descriptions.

We omitted to mention that in the Smithsonian Institution Department we find several microphotographs printed in platinum, the work of our friend, Thomas Pray, Jr., of New York. There are seven in all, including two spectro-photo-micrographs, which are probably the largest in the world, and have been so stated by men abroad. We are glad to announce, too, that Mr. Pray's labors in this direction have been practically recognized in England by scientific men, and at the April meeting Mr. Pray was elected a Fellow of the Micrographic Society. He has been most industrious in this direction, and we are glad to know that his talent has been recognized. Certainly no greater reach has been made in photo-micrography than that attained by Mr. Pray.

So much for the United States; and well has it done for photography. We now leave the main floor and ascend to the gallery, which was devoted to woman's work, temperance, and education.

We enter the Iowa Department first, where we find photography well represented in the Women's Department by Mr. J. E. Bilbrough, of Dubuque, Iowa. Around a splendid portrait of Mr. Bilbrough himself is a collection of cabinet, boudoir, and other photographs, which do him full credit. One, of a Swiss flower girl, is the gem of the collection, and is exceedingly well done.

In the Kansas Department Mr. and Mrs. A. B. Sipple and Mr. J. F. Standiford, all of Parsons, Kansas, make a small exhibit of photographs. Mr. and Mrs. Sipple display some very beautiful cabinet pictures, those of children being more particularly worthy of mention. Some views of residences by this gentleman are also quite good. Mr. Standifer gives some views of public buildings at Parsons, interior and exterior, which show some considerable merit.

Some architectural views of Yankton,

Dakota, and public school buildings are without name. Mr. F. Jay Haynes is again represented very well by some views of the Fargo public schools.

Mr. I. W. Taber, San Francisco, Cal., exhibits in the Women's Department of that State about three hundred pictures of babies, undoubtedly the finest collection of juveniles ever gathered together. Mr. Taber must have had lots of fun in his quiet way when these pictures were made; more undoubtedly than did some of the babies, judging from the expression of their faces. Some of these studies we recognize as being in our own collection. Mr. E. D. Ormsby, Oakland, Cal., is represented by a similar series of children, and his collection is balanced, on the other side, by some views of the "Stanford Free Kindergarten at San Francisco." The grouping of the children is particularly fine. The Lick Observatory at San Francisco is largely illustrated by the photographs of H. E. Matthews, of San Francisco. The portrait of Mr. James Lick, the donor, centres the group. Some views of the Indian school at Albuquerque, New Mexico, illustrate the workings of that splendid establishment, by means of views and portraits of the pupils.

The photograph of the African Union Church of Wilmington, Delaware, together with a number of views of Freedman's schools, hangs in the colored people's department, without name. Schofield Bros., Westerly, R. I., exhibit in the same department a series of architectural views. In the South Carolina department of colored people Mr. Harvey Husbands, of Louisville, Ky., exhibits a frame of cabinet and boudoir pictures which may be termed excellent. A little card beneath tells us that he made them throughout, and he may well be proud of them, for in position, touch, light, etc., they are excellent. A group of the State Commissioners of the Colored Department is hanging close by. The photographs were made by various photographers with whose names we are all familiar. A series of views of the Freeman's Mission Churches of various cities of the country are in the Kentucky department. Another series of portraits by Mr. Husbands is in the same department. The portraits are of

ministers, missionaries, State Senators, and public men engaged in the cause of the freedmen.

J. C. Farley, photographer, Richmond, Va., exhibits a fine collection of cabinet portraits of colored people, which in every photographic element is really successful. The Freedmen's Aid Society makes use of photography in illustrating its college and school work, its medical department, its charitable institutions, etc. A collection of the buildings of Straight University at New Orleans, together with some groups of the pupils, show how important this work is, and opens the eyes of some people to its work. The Hampton Normal and Agricultural Institute, at Hampton, Va., makes a splendid display illustrating the library, wigwam, gymnasium, and various other departments. Some of a group of newly arrived Indians are represented as homesick, but on the other side of the collection we find a group of pupils who have been at the Institute but a year of a very different mood, and, altogether, as cheerful, bright, and happy looking as can be.

Alaska. The Sheldon Jackson Institute at Juneau, Alaska, sends a series of photographs of mission buildings and Indian curiosities from that far off region, made by Mrs. R. Maynard, Victoria, V. I.

In the Virginia educational section is a large collection of photographs of the universities, public schools, memorial churches, court houses, and other public buildings of the States, the larger portion of which were made by Foster, Campbell & Co., Richmond, Va. This collection illustrates very particularly the improvement in school houses that has been made since the old picturesque structure of Pulaski County was erected. Some of these woodside structures were photographed by Noel, at Newburn, Va.

Tennessee. The educational department of Tennessee makes photography of great service in illustrating its school houses, normal schools, and various educational departments for the colored and white people. A group of the Board of Education at Jackson, Tenn., and several groups of teachers, help to make this collection interesting. The topographical map of the Vanderbilt

University campus, Nashville, Tenn., is graced by a series of pretty little views of residences of the professors, from which we may gather that the professors are well treated at the Vanderbilt University. The largest photograph of the collection is a composition picture of the University of Tennessee at Knoxville, by Lindsey & Hodges. Mr. C. S. Judd, Columbia, Tenn., is represented by a 14 x 17 view of the Columbia Female Institute.

Ohio. In the Ohio section we find the public school buildings splendidly photographed by Mr. W. S. Goodough; the interiors are particularly fine, and the whole collection is tastefully gotten up. In the reception room of the Ohio section is a large series of architectural views of the public school buildings of the various cities of the State, and among the photographs we notice that Powelson, of Cleveland, is not ashamed to acknowledge his work.

Indiana. The district schools of Indiana make a splendid showing by means of photography. Some of the village schools are very quaint in architecture, but still may be just as able to teach the young idea how to shoot. Some of these days we may see photography taught in all these wayside places of learning. Why not? Probably three hundred photographs are used by Indiana for this purpose. The collection has been carefully and systematically made. There is some mighty bad photography among them, and we trust that the children who frequent these schools will not be made cross-eyed or dizzy by the study of some of these photographs. If they do, we shall be able to recognize them in the future when we meet them, by one shoulder being higher than the other, and their noses higher in the air, or, in plain English, turned up, which is more interesting in art than it is beautiful in nature.

Nebraska. History is repeated by the State of Nebraska, for we see the public schools of that mighty section of our country likewise shown us by photography, though not so extensively; but, perhaps, there are not so many schools yet in Nebraska as there are in Indiana. Nearly every one of these are straight. A distinc-

tive exhibit is made by the Roman Catholic church school.

Minnesota. Minnesota makes a fine exhibition of its State Normal School, for here are exterior and interior views of school and chapel, practising department, physical department, geographical quarters, class room, zoölogical section, etc. A large series. The State Normal School at Winona, more ambitious than the rest, has had views of its Kindergarten and other departments colored. The yellow element is introduced almost too much to make the effects pleasing; some of the pictures look as if they were faded. The collection is a very excellent one, and well arranged. Other groups of photographs are of the school houses of the State, illustrated according to their standing and to the care devoted upon them by their professors. Some of the High School buildings in Minnesota are arranged very beautifully likewise, but by whom we are willing to be informed. Our friend, Mr. A. F. Burnham, Fairbault, Minn., exhibits a collection of views of the Seabury Mission Church, which is very pretty. One of the Woodside School House, half covered with leaves and trees, is a particularly pretty bit.

Iowa Iowa is not behind its sister States in the use of photography, and we find all through its educational department views of schools, school-houses, normal schools, with their different departments made by anonymous photographers, and others, including Lancaster Bros., Waterloo, Iowa. Our old friend, Mr. J. De Baines, of Dubuque, Iowa, gives us evidence of the fact that the fire still flames within him, by a frame of splendid portraits which hang over the door of the Iowa department, centred by a picture of himself. This is a real surprise to us, and we congratulate our old friend on his continued success. He is every inch an artist.

New Hampshire. The public schools of Concord, N. H., are displayed in all their beauty by means of the art work of our friend Kimball, of that city. His views show the neat, clean, tasteful photographer throughout, and are well worthy of their place in the educational exhibit of this important State.

In Ward's Zoölogical Museum we find photography made great use of for the display of specimens prepared and sent to various institutions by Prof. Ward.

The Christian Brothers' College, of Memphis, Tenn., has a department of its own in the educational section, and has not failed to use photography. Some groups of the classes are particularly well taken, and other photographs of preparations, drawings, portraits, works of art, and the mission schools of the Brotherhood are displayed here.

St. Michael's College, Santa Fe, New Mexico, and St. Mary's Parochial School, Yonkers, N. Y., also use photography for the illustration of the various fields of their work, in and out of doors. The views, we presume, were done by some of the pupils of the various schools.

The same use is made of photography by the New York Catholic Protectory, where we see the young misses employed at their various avocations, such as glovemaking, dressmaking, machine sewing, embroidery, etc.

New Jersey. In the New Jersey Educational Department we find some two hundred photographs of the public schools of New Jersey, arranged in a novel manner. They are framed in solid walnut frames, very plain. In one edge of the frame two small screw eyes are placed, which serve as eyes to hang upon iron hooks placed in two strips which are nailed to an upright. Thus the frames can be turned over and over like the leaves of a book. Among the names of the photographers represented here are Rockwood, N. Y.; Stacy, Rahway, N. J.; Pach Bros., N. Y.; Pine Bros., Trenton, N. J.; W. H. Hill, Elizabeth, N. J.; T. F. Crane & Co., Newark, N. J.; and Chestnut & West, Vineland, N. J. Mr. W. W. Silver, N. Y., exhibits a series of 14 x 17 views of several of the collegiate institutions of New Jersey.

The Workingman's School and Free Kindergarten, New York, has employed Pach Bros, photographers, and fortunate were they, because here is a fine series of views of the geographical class, model room, reception room, school workshop, drawing

class, cast room, etc., all most excellently done.

The Indian Industrial School at Carlisle, Pa., we find again photographed in the Pennsylvania Educational Section, a duplicate almost of the series that has been before mentioned, and the work of the veteran photographer, Choate, of Carlisle.

Mr. F. Green, Meriden, Conn, contributes of his talent in a series of views of the State Reform School of that city. Mr. D. A. Cobb is the photographer for the Wisconsin Industrial School for Girls. Both of these gentlemen have done their work well.

We now reach the United States Educational Department. Here are the institutions for the deaf and dumb, for the blind, for the imbecile, and for the education of the inmates of reform schools, all given a fine showing by means of our art. The Toner collection of portraits of professors in medical colleges, of course includes the work of a good many photographers. The gem of all these is by Mr. F. Gutekunst, of Philadelphia, a series of portraits of the Faculty of the University of Pennsylvania.

The Charity Hospital of New York makes a splendid display of photographs of the nurses of the male and female departments, and of the various workings of this splendid institution. The New York Hospital Training School for Nurses makes a similar display of photographs of its nurses, its grading schools, and the work in its various departments. A little dark-room in this department is devoted to the exhibition of transparencies of micro-photo work.

The University of Tennessee has employed some photographer whose name has been spirited away, to make a series of views of the College and its various buildings, including views of the laboratory, the museum, the various class rooms, chapel, observatory, and the assembly room, which are real good examples of photography, and the author of the pictures ought to have credit.

The Agricultural and Mechanical College of Mississippi has been alike generous, and gives us the pleasure of a series of splendid views of the students at work, of the various departments, of the stock, and of the professors. In this last list we find

the names of everybody, from the gray-bearded president, down through the list of professors, to the hospital steward, but the photographer is entirely forgotten.

The Amherst College, Massachusetts, displays a series of portraits of its faculty, splendid views of the college church, the various departments of learning, some of which are named in Greek, and some inscriptions, together with the class exercises in the main hall of the gymnasium, the library, reading room, and views from the chapel tower of the town of Amherst, the work of some of the students, undoubtedly, as they belong to the no-name series.

Mr. F. E. Ives, of Philadelphia, will be glad to know that the Cornell University exhibits a large number of his pictures, from negatives made to illustrate the University in its various departments, its buildings, and its work.

The High School at Washington, D. C., with all its varied workings, is illustrated by means of a fine collection of photographs. Students at the table and chemical laboratory, at their easels in the drawing room, drilling on the campus, in the lecture room, etc., are all seen here.

The Baltimore School of Cookery has employed Messrs. Blessing & Kuhn to photograph its building. The interior view of the kitchen is particularly interesting. The grammar schools of Washington, D. C., are photographed in and out. Some of the groups of classes are excellent.

The Boston public schools are evidently good patrons of photography, judging from the fine collection that we see representing them in their various workings, reaching from the nurseries to the printing rooms.

The Fitch Creche School, Buffalo, N. Y., displays some very pretty Kindergarten groups, together with some fine views, inside and out.

The Chautauqua Assembly is well represented by photographs of the various Chautauquas, north, south, east and west. A fine collection, showing the founders of these schools to be well up in natural scenery and in photography.

In the French Educational Department we find some very excellent photographs of groups made inside the school-house. These

are real pictures, and give evidence of the fact that the photographers have given much more attention to the pictorial effect in these illustrations than we see in our American pictures. For example, in a singing room of one of these schools the professor is at the piano, the professor of singing stands with hands and baton high in air; the scholars with mouths open, music in hand, stand, with a single exception of one poor little bird who won't sing, and who has been placed in the dunce's place at the master's desk. Another view of the artistic department shows the young pupils at work, carefully cutting, designing, sewing, and what-not, groupings most artistic, the whole balanced by a young fellow in long gown, who is sweeping up shavings in the foreground. A similar group is found in the drawing school, and others upon the campus, all of excellent quality. Mr. Pierre Petit, of Paris, makes an exhibit here of his illustrated window blinds for schools, which are simply photographs upon linen, representing various scenes in history. A splendid idea, and a good outlet for photography. Fiorillo, photographer of Paris, has a fine collection of photographs of the military schools and Kindergartens of Paris. A very fine collection of photographs representing the infant schools and art schools of Paris, together with those of the schools of design and modelling, are also shown in the French Educational Department. The series is a large one and beyond all description. Groups of the machine department of one of the scientific schools are particularly interesting and fine. Indeed, the whole French Educational Department is ahead of anything else that has ever been shown in America.

The City of Bath, England, has, in the northeast gallery of the building, models of the ancient baths found in that city, and here are hundreds of photographs illustrating the scenery about the town, its churches, cathedrals, its ruined baths, and other objects of interest, old and new.

The *Century* magazine collection contains a number of photographs of some beautiful things that have appeared in the *Century* from time to time by various photographers.

In the Pennsylvania Woman's Depart-

ment we find a series of photographs taken by an amateur club of Philadelphia, composed only of ladies. They are really very pretty little bits. We hope the time will come when the ladies will not hide from us their names. A group of little freedmen is quite interesting and excellent.

The National Temperance Society makes use of photography to show us the faces of some of its best orators and advocates, including one of the recent Presidential nominees Governor St. John.

And now, as we depart from the Government Building, at the head of the descending stairway, we come to a splendid 20 x 24 photograph of the He-No Tea Hong, made by the Centennial Photographic Company, made with a Suter lens, No. 8 B. American Optical Company's camera box, and on an Inglis plate. A very excellent photograph of a picturesque structure made familiar to many of our readers by the recent photograph of the same subject in the St. Louis *Practical Photographer*.

Next month we hope to give some comments on the exhibit of photography at the late great World's Fair.

THE BUFFALO EXHIBITION.

REVIEW OF THE PICTURES AND
APPARATUS SHOWN.

BY EDWARD L. WILSON.

THE making of a correct list of the photographic exhibits was attended with extreme difficulty. No preconceived arrangement was followed, inasmuch as portraits and views were exhibited both by photographers and by manufacturers of plates, and interspersed without any regularity or system. We therefore begin our report with the department which was devoted to the photographic exhibits from abroad.

In the corner of the hall we find a beautiful series of life-sized heads, panels, and cabinets, from Friederich Müller, of Munich, Bavaria. The work is simply exquisite. The subjects range from the line of actors, acrobats, street musicians, and the clergy, to pretty infantile groups, all equal in character, and certainly showing a wide range of conception and artistic to a degree.

Mr. Müller is an artist of the first German water, and we all know what that means. His character portraits certainly show him to be able to bring out the most picturesque elements of character in his subjects, and there is something about the German subject, too, that seems to be in such sympathy with the artist that it must be a delight to make their pictures.

Next is a similar series by W. H. Hoffert, who seems to have studios in Dresden, Leipzig, Hanover, and Berlin. We might look for a larger exhibit from such a number of houses, but we are much gratified and edified with what there is.

The gem of the collection is a trio of soldiers seated at their tent, around which are arranged spear, sword, and cannon ball as accessories, a capital example of triangular composition. The soldiers seem to be thinking of some matter, as in their laps is a map, although the faces do not show that they are studying the campaign; their heads do not convey such an idea, because they are not composed in harmony with such a conception. The picture of a little girl on a swing is very superior.

Close to this hang a number of pictures by that king of composition, H. P. Robinson, Esq., of Tunbridge Wells, England. Among them is Mr. Robinson's last production called "Hope Deferred." The description of this is found in the Editor's Table, and we will not repeat it now. We look upon Mr. Robinson as our most enthusiastic artist in this direction.

We come next to a collection of German photographs by various photographers. First a series of carbon prints by Grutzmer, of Frankfort-on-the-Main. They give evidence of an artist mind in composition. One group might be termed "Buying a Fish;" it represents a twain of portly priests discussing the subject of a purchase from the fish market. The scene is a most characteristic one, and natural in every respect as a work of art. The other is that of a trio of priests touching their beer mugs together with an animated expression of anticipation of the pleasure which is sure to come upon one quaffing the contents of the contemplated festive bowl. The humble repast of garlic and bloater paste with a piece of cheese and

rye bread lying upon the table help to catch the light with other beautiful parts of the picture, as well as to promise future matter for the digestion of the jolly trio. Schmidt, of Frankfort, exhibits a small variety of cabinets and other pictures which are very meritorious. A child group of a young artist painting a picture of his little sister who is posed very sweetly is exquisite and full of humor and feeling.

High above all hung six life-sized heads of gentlemen and ladies that came from Fritz Eilender, of Cologne, Germany. They are simple and natural, in treatment, and yet every one is a conception, a gem, a likeness, a work of art.

The group of Tyroler Bauerkiermis is a magnificent production. The peasantry are assembled on one of those picnics for which the Tyrolese Alps are so celebrated, ranged in groups which follow the most exact ruling of composition, full of life, spirit, joy, and animation. Some of the parties are dancing; some are looking on; some are seated in conversation; and a group at the window of the Chalet in the background is no doubt discussing something more serious.

Benque & Kinderman, of Hamburg, Germany, exhibit five pictures from 14 x 17 plates, which are not remarkable for their excellence, though fairly good. The gem of the collection is a little Alpine Climber, staff in hand, which is very spiritedly posed, with rocky accessories.

Ten very fine portraits on 11 x 14 plates of noted characters come next, but unfortunately they are without name. If we can supply this deficiency hereafter, we will do so. They are very fine examples of ordinary portraiture, splendidly lighted artistic pieces, and in every way well managed, and are lovely prints.

Some beautiful examples of landscape work come next, made by Theodore Cricfelds, of Cologne, Germany; a twain of pictures of Cologne Cathedral, exterior and interior, are magnificent, and exceed anything of the kind in the Exposition. Included in this space we must not fail to mention a view of Cologne, probably from the other side of the Rhine. There we see the majesty of the Cathedral and of scenes

of a past age also in the fine pictures of ruins. Bridges and railway scenery make up the rest of the series, and are magnificent in every respect. Edy Brothers, London, Ontario, complete the line of foreign pictures by their exhibit of twenty examples of their work, mostly from negatives 13 x 16. They are very fine examples of portraiture, well managed, and up to the times. The most pretentious picture of the lot is a little miss in her baby carriage, taking her baby to ride. Both in the management of the subject and in the accessories this photograph is well worthy of being called a picture which would help any photographer to understand art better. It will be good exercise occasionally to make a bit like this.

Opposite the foreign collection hung the remarkable display of Mr. J. H. Kent, of Rochester, N. Y. This collection might be classed as the greatest novelty of the Exposition, since all the negatives, instead of being upon glass dry plates, as they are generally understood, are made upon the new Eastman paper, and are the first of their kind that have been exhibited. The collection includes about sixty pictures, ranging in size from 17 x 40 to 8 x 10. A number of them are life-size heads; they are full of vigor; are fully equal to Kent's best work, with which our readers are so familiar. The lighting is in Mr. Kent's most approved style, and the prints which result from these paper negatives seem to leave nothing whatever to be desired. They have not been made either for the purpose by any peculiar style, but to show off the advantages of the negative paper. Here are pictures with accessories, pictures with plain backgrounds, pictures with clouds, pictures with worked-in backgrounds, pictures with shaded backgrounds, and in every way fair opportunity is given to the observer and the studious photographer to understand the merit of this new candidate for photographic favor. Magnificent as a class they are, and yet some other word seems to be needed to present them as they should be. The greatest advantages are found in the use of the negative paper, which we understand is ready for the market.

On the other side of the screen we find the exhibit of Passmussun, of Rock Island,

Ill., taking a prominent place. The collection is all of portraits, and embodies a variety of groups of child pictures, character compositions, and plain portraiture.

McCrary and Fransom, of Knoxville, Tenn., are here, with a fine display of beautiful pictures, and a fine "baby show" it is. Three frames are not able to contain all the children which the loving photographers wish to show, and therefore they have surrounded their frames with an outside collection. They are excellent, so far as baby pictures can be excellent.

David Scannell, of Philadelphia, exhibits a dozen enlargements on opal glass, painted in oil. They are colored in Mr. Scannell's best style.

On the opposite screen is the very modest collection of Mr. James Landy, the President of the P. A. of A., and it is by no means a meagre or mean exhibit, because here we have many evidences of Mr. Landy's true nobility and greatness as an artist. His plain portraiture, as we understand it, is unexcelled by any. And, what is very appropriate, in the centre of the lower line of a frame is a splendid view of the interior of his skylight, showing the tools which produce these splendid pictures and the space wherein they were produced. Mr. Landy's child pictures and family groups are particularly fascinating. The more ambitious pictures of his collection are three composition groups, two representing scenes in the history of the Christian martyrs.

Walter C. North, of Utica, N. Y., a well-known veteran in our art, follows with his display of "baby pictures." The only exception we see to the rule is an amiable pug dog and a basket of full-grown kittens, whose ages we are not quite able to judge. But we are able to see Mr. North still holding his spirit, and not declining to exhibit, as many of our veterans did.

Mudge & Mudge, of Elkhardt, Indiana, exhibit a small collection of portraits and some pictures which are more ambitious. One of their best compositions is probably one called "Bachelors' Hall." The poor fellow is endeavoring to thread a needle with one eye open and the other on the needle. We are very glad to see a growing disposition to try character pictures, for the

exercise is good, and the results generally pay.

F. W. Guerin, of St. Louis, Mo., exhibits not what we were all made familiar with last year, as so many predicted, but has given us an entire new collection of pictures, hung here without frames, giving us evidence of his continued growth as an artist.

The gem of the collection we consider a little Italian music girl, reposing on her arm, with a tender pathetic feeling expressed in her face. A grand conception.

A life-size portrait of Mrs. Fitzgibbon Clark graces this collection, and we notice also another one of Mr. H. A. Hyatt; also a group of the Chicago Base Ball Club; rather mechanical in composition, but still worthy of mention.

Mr. J. C. Patrick, of Batavia, N. Y., who was one of the operators at the World's Exposition, exhibits two frames of views of New Orleans and vicinity, made after his engagement there, which are printed in very creditable style. They include the usual street scenes, levees, views of buildings and cemeteries, made on plates 5 x 8 and 8 x 10. Following these is a large white background, which reads "Genelli, the original inventor of stamp photos, St. Louis." This is a large exhibit of stamp portraits of the usual small size, and of the new size introduced by this gentleman, which measures one and a quarter by two and three-quarters inches. This style of picture has its attraction to many and its uses. Everybody has an opportunity of making "a deal" for this picture if they wish.

On the opposite screen on the right-hand side is a fine collection of portraits by W. H. Potter, of Indianapolis. Mr. Potter has made rapid strides in photography since we last saw his work exhibited. Here we find about two hundred pictures, varying in size from cabinet to full size heads, which are well worthy being placed with our first-class work. There is quality and individuality about the pictures which is Mr. Potter's own, and shows that he is not only ambitious, but fully able to do artistic work. The technical qualities of this work are fully up to the times, and with due frankness we say that it is largely because they

are all made from negatives on the St. Louis dry plates.

Next to this is a collection mostly of large-sized heads, by D. R. Clark, of Indianapolis, Ind., made upon the same plates. A very excellent plan adopted by the St. Louis Dry Plate Company is that of exhibiting the negatives from which these prints were made. They are very carefully placed in frames, and bear the closest expert examination. It seems that nothing could be better in photographs than these negatives are.

In the St. Louis Dry Plate Company's collection is a life-sized head of Mrs. Fitzgibbon Clark, by Strauss Brothers.

On the other side of this screen is another series of stamp portraits of Kuhn Brothers, of St. Louis, who claim to be the original producers of stamp portrait work. Their collection is a very pretty one of its kind.

F. M. Mackey, of Cambridge, Ohio, displays a collection of cabinets and 8 x 10 pictures and portraits. A very fine solar enlargement of Mrs. Fitzgibbon Clark, on Gilbert's rapid albumen paper, is also a great attraction here.

Three frames of examples of the work of the Photogravure Company, New York, including photo-caustic prints, photogravures and gelatine prints in various colors, form a very interesting and pretty series, showing great progress in their various directions.

Winter, of Syracuse, N. Y., makes a pretentious display of work done with the Suter lens, sold by Allen Brothers. The gem of the collection represents a young lady in Turkish costume, with her smoke pipe and rich rugs as accessories. The lens work is simply exquisite, rivalled only by the next door picture, which may be termed fishy—a group of children on the seashore, prettily posed and admirably photographed as fishing. Some of the life-size heads also show capital lens work.

Theodore P. Schurr, of Lockport, N. Y., exhibits a sample frame of pictures that were shown at the New Orleans Exposition, together with some others of larger size. The child pictures are remarkably fine. In addition to those are some other portraits by the same gentleman of a pair represent-

ing smoking and its effects, which are very well done.

Palethorpe, of Greenville, Mich., displays a collection on the same screen. His work is carefully done, and represents quite a variety of subjects.

F. Jay Haynes, of Fargo, Dakota Territory, displays a fine collection of magnificent pictures on 20 x 24 plates, made on Carbutt special plates, of cascades, spouting springs, river views, and scenery of the Yellowstone, all beautiful and quite admirably rendered. Mr. Carbutt's plates are also represented by the collection of Mr. J. Mitchell Elliot, a young amateur photographer of considerable talent who resides in Philadelphia. A view of one of Mr. Carbutt's factories is a fine bit of outdoor work; nothing could scarcely be better. The same may be said of all Mr. Elliot's work, which is technically "first class."

Frank Robbins, of Oil City and Bradford, Pa., exhibits a collection of portraits of various kinds made on his own plates. The work is the best we have seen by Mr. Robbins. Messrs. Winsor and Whipple, Olean, N. Y.; J. O. Jackson, Franklin, Pa.; J. W. Sives, Oil City, Pa., also show work on the same plate, all of which speak well for the quality of them. Johnson & Brothers, Watertown, N. Y., make a small and very beautiful display of portraits, many of them of ladies and children, and the rendering of the white dresses and draperies is particularly fine.

Jules Hoffmeister, of St. Louis, Mo., exhibits examples of his negative retouching.

Frank Robbins, of Oil City, Pa., makes a negative and transparency display produced on his own plates, which is always surrounded by a crowd of examiners.

Mr. W. J. Baker, of Buffalo, N. Y., comes to the front with an admirable collection of portraits of any size, from the life-size pictures to the smaller size, and in a variety of subjects, from the President of the United States to a pretty waiting-maid. There is an individuality about Mr. Baker's work which has pervaded it ever since we were acquainted with it, and which is more than ever apparent here. He is an artist in lighting and posing. In his picture of the "Old Priest and Schoolmaster," if there is

not "conception," after the strictest interpretation of Monsignor Capel, then we give up all idea of art and begin the study again.

Mr. Davis, of Rochester, N. Y., exhibits a frame of character portraits of Edmund J. Burke, the comedian, which are of excellent quality.

A. C. Taylor, of Clinton, Wis., makes a novel exhibit of one frame of portraits mounted in various forms supplied with such work as only comes from his establishment. All these pictures are made on the Munroe dry plates. Mr. Baker's pictures are on the Cramer dry plate.

Mr. Irving Saunders, of Alfred Centre, N. Y., one of our thoroughgoing photographers, makes a very pretty exhibit, indeed, of his portraiture, showing good progress since we last saw his work. The gem of the collection we think has been rightly placed in the centre of the lower line—a child asleep. It is an admirable work. It has been beautifully managed in every way. All through the collection Mr. Saunders' patience with children is evidenced, and his results are fine. We are glad to see another novelty in our line represented by the permanent carbon enlargements of Mr. W. W. Sherman, of Milwaukee, Wis. There is a quality about these pictures that we very much like, as we expressed ourselves when we first saw them at Milwaukee. Mr. Sherman has very much simplified and improved his method of production since then, and has patented his process in order that those who adopt it may be protected in its use. By his method he guarantees perfect keeping qualities, and he secures at the same time a certain snap in his results not obtainable by the other processes. He will have a big success.

Messrs. Moreno and Lopez, of New York, exhibit a fine collection of life-size pictures upon the Inglis plate, which are simply all that one could wish in such pictures; they are marvellous. The charm of the collection is one or the other of two pictures of W. Irving Adams, Esq., the well-known and popular agent of the Scovill Manufacturing Company, but the most beautiful examples of the collection are of some ladies' heads. Nothing can be wanted in the pose, lighting, and general management, all un-

equalled by anything of their class. They are all on Inglis plates.

Mr. Inglis himself exhibits a collection of bicycle riders and other instantaneous pictures, which are simply marvellous; the marvel being that such excellence can be secured in such a short time, which is not always the case with "drop" views. He also exhibits some enlargements from the same negatives, made by Thomas H. McCollin, of Philadelphia, platinum prints.

Wardlaw & Learned, of 16 State St., Rochester, N. Y., exhibit a double collection of pictures; one consisting of two frames of portraits, mainly and largely of children. If these pictures do not display any peculiar individuality, certainly they display a great talent in the catching of the shadows of the little ones. They are simply life-like and admirable. The other collection consists of twenty-two pictures, 18 x 20, which are printed on Hovey's special paper. The photography is good, and the prints are good.

The picture of the Old Mill and Stream, with a broken-down wheel on the left, exquisite lights and foliage surrounding it, is a very pretty thing, and looks like a view of Old England.

Nier & Weplin, of Rochester, N. Y., exhibit a life-size head worked in crayon.

D. J. Smith, of Detroit, Mich. (Mr. L. G. Bigelow, operator), exhibits some very excellent pictures made upon the Stanley plate. Some of these pictures are quite pretentious in style and composition, and are well worthy of considerable study. One of these, "The Old Carpenter," compass in hand, is fine, but it is eclipsed by another one of a pretty girl with Oriental eyes, called "Dolce Far Niente" (Sweet Idleness).

Mr. G. Cramer, of St. Louis, exhibits a large series of views of the New Orleans Exposition, made upon his plates by the Centennial Photographic Company, Edward L. Wilson, proprietor. One of these of the Brazilian exhibit of coffee contains about four hundred jars of green coffee, and so exquisite is the rendering of the image upon this creamy Cramer film that we believe every grain of coffee can be counted, and the rugosities of each particular grain exterior can plainly be seen. The collection

embodies every size, from a 5 x 8 to a 20 x 24. The lenses used were both Suter and Morrison, wide angle, with various results, according to the subject. Mr. Cramer has secured another collection from negatives made on his own plates, the work of the studio of Gerbig, of Chicago, Ill. The sizes vary from cabinet to full-size. The results are simply exquisite. We do not see how anything could be much softer or more delicate or more beautifully created in light and shade than the picture of an old gentleman. We have here, also, other pictures, which are superb examples of photography. Such work is very rarely excelled.

Mr. Cramer's individual display is not surpassed by anything else that we see here on his plates. Twenty-four magnificent pictures hang here on one side of the screen with the name of the good-hearted dry-plate manufacturer in gold letters overhead, various in style, wonderful in conception. We miss the title of a good many of his composition pictures, which are subjects well secured and rendered according to the Capel interpretation. "Home Secrets," "The Tease," "The Baby School," and "Home Duties," are such pictures as will appeal to the pathetic in everybody's nature who is interested in anything about home; they tell of the nursery, of the playground, of the kitchen, and of the grandmother's quarters, most vividly and naturally. We all know that Mr. Cramer's work as a rule is magnificent. And even now we have only mentioned half of it, for on the opposite screen we find twenty-four more pictures, all of which are worthy of all the praise we can give them. The groups entitled "The Beggar" and "Two Little Negro Boys," bootblacks by trade, early learning the evils of the wicked city of St. Louis, are fine. All that is needed to give full animus and force to the last picture is a companion one, which would represent an approaching policeman and the scattering of the aforesaid boys with their pack of cards. The picture "At the Spring" is a pretty little composition, and "Majority Rules" is another pretentious picture, which attracts a great deal of attention—three boys on one end of a see-saw, and only one boy

on the other end. Another beautiful looking group we must not forget to mention is that of Mr. Cramer himself, seated in his own parlor with his wife, and three boys, a group of his family—a domestic scene. Mr. Cramer is reading some favorable criticisms of his plates in the last issue of the PHILADELPHIA PHOTOGRAPHER, and seems well pleased. Due regard and attention is being given by the other members of the family, and that is right. Between these two sections of Mr. Cramer's exhibit are five 20 x 24 negatives displayed, made upon his plates. These should be seen to be appreciated. We know of nothing superior, for they are the perfection of photography so far as it goes to-day.

Certainly the most *startling* exhibit in the whole exhibition is that of Mr. George Barker, of Niagara Falls, N. Y. Mr. Barker covers one whole side of a screen with his lovely pictures, mainly of Niagara, with a few views of picturesque Buffalo and other localities. It seems as though during the days of his life Niagara, with all its changing qualities, could have assumed no aspect or position that has not been caught by the industrious camera of Mr. Barker. The rapids, the cascades, the whirlpool, the trees, the ice bridges, the nervous, fathomless river, the ragged rocks, all have been caught in various lights, and are here spread before us in most astonishing array. The novelty of this exhibit is the collection of pictures of all the varieties that have been described from 17 x 20 plates. They absolutely take our breath away, the more so because we have but recently visited Niagara, and once more have been privileged to see it in all its glorious beauty and magnificence; so these pictures can make us sigh as we look at them, and feel as we always do when we make our departure from there. They are the most beautiful of all the natural pictures in the world. We observe "Cramer's Plates" on a card underneath; also that Eastman's Special Plates were very often used to get these grand effects.

One of the pictures of the Whirlpool Rapids in this collection is simply *water* itself, and, if taken upon a dry plate, it certainly is a very wet looking print. Mr.

Barker's ingenious method of inserting clouds is quite original, sometimes quite well worthy of notice. On the opposite screen hangs the smaller but similar collection of H. F. Neilson & Co., of Niagara Falls. These gentlemen are new candidates for public favor, we believe, and certainly show themselves to be most enterprising photographers. We do not purpose in the least to act as a critic in our review of this collection, but merely to give, as near as we can, a complete list of the exhibits for the information of those who could not come, and, if possible, to attract them to come another year. But in a country where clouds are so plenty as they are at Niagara, it does seem that it would be possible to secure more indications of them, and not exhibit at least twelve pictures whose clouds are all the same, though the subjects are entirely different. While we deplore such a course as this, we cannot but congratulate the genius of the photographer who could secure such indications, and who could with appropriate taste refrain sometimes from printing his favorite cloud negatives in the wonderful views where clouds would have destroyed the harmony of the whole grand picture.

Mr. E. L. Fowler, of Chicago, exhibits from several frames, examples of his negative retouching, and solicits patronage.

Mr. Kenney, of Hackettstown, N. J., exhibits two frames of very excellent outdoor grouping made with the E. A. lens.

C. G. Geleng, of Toronto, Ont., exhibits specimens of his enamelled photographs, which are very smoothly done. The most of them are cameoed.

From Mr. J. F. Ryder, the veteran photographer, artist, and conceptionist, of Cleveland, Ohio, we always expect a fine exhibit at our annual exhibition, but this year Mr. Ryder has overdone Ryder. When we say this, we are not influenced at all by the glitter of the magnificent frames, such as have never before been seen in the Exposition, but we are impressed with the difficult work which he displays, which includes a variety of portraits, mainly of the larger sizes, ranging, say from 8 x 12 to a life-size. They are simply exquisite. No attempt here is made at genre or composition pic-

tures, but usual subjects are treated according to the rules of photographic art, and in each case the artist seems to have endeavored to express some conception. The young girl is not made to look like a staid old spinster; the bride is posed in a happy attitude, with harmonizing accessories; the matron is given an attitude of dignity, with home-like accessories; the rector and the priest are treated with consummate skill; the children are jolly and life-like; the gentleman of business is given a knowing "bear" kind of pose; the dude is given all that he is entitled to, and allowed the full sway of his natural tendencies—also the dudine.

Three life-size heads of young ladies we consider to equal anything that photography has ever mastered. This is, indeed, a wonderful collection; we would not neglect any branch of it, and especially this, which we must not forget to mention. Hanging below the portraits are fifteen landscape gems, 10 x 16, which are worthy of more than honorable mention. They are in *subject* not extraordinary; they are just such pictures as any one would see in a day's journey, either in Ohio, Northern New York, or Western Pennsylvania, or in a hundred other sections of our country. But they are all secured according to the rules of "How to See"—after Ryder. They are simply magnificent, soft and lovely, quiet in feeling; most of them lonely spots, with not a figure to bless them; but *lovely* is the only word that can be applied to them. Here and there we see a tiny couple, along the roadside, or a solitary child seated upon a bridge fishing or trying to fish; now a cold winter view, with some shivering children; but with all there is that same feeling of lovely, dreamy quiet which takes away the senses and makes the observer become one with the picture. The most poetical exhibit, perhaps, is one of a locality which we do not know. It is a yacht at anchor, with an interested group of people surrounding it at the boat landing, looking very much as if something was the matter. Can it be that a wheel has run off? or that there is a hot journal? No. Neither has a storm occurred, for the mast stands stiff and upright, and the sail is hoisted and ready for work. It

may, after all, be only "a discussion on prices."

We look now on the opposite screen. We there come to another series of exquisite landscapes, by Mr. W. A. Armstrong, of Milwaukee, Wis. Mr. Armstrong astonished us all by his collection of pictures "In and Around Milwaukee" at the Exposition two years ago, but since then he has added a number of pretty things to his collection, which more than ever proves him to be a thorough student of nature and a worthy disciple of photography. We wish he had given us the titles of his pictures. It is difficult to decide which is the best, or to describe it. The whole collection is simply elegant.

R. G. Gardner, of Kansas City, Mo., makes a variety display of views and portraits, and among them we find one of an engine-room interior, marked "four hours' exposure."

N. Sarony, N. Y., exhibits two frames of his examples of work, the individuality of which can be easily guessed at, for we are all familiar with his works. The grandest picture of his whole collection is "King Lear," a magnificent study in light and shade, and a superb conception.

A splendid life-size head of Col. V. M. Wilcox, of E. & H. T. Anthony & Co., is hung next, and emanates from the studio of Parkinson, of New York. It is an admirable picture in every respect, and was made on a Stanley dry plate. It is very rarely that we see anything more life-like and better rendered as a direct life-size than this.

A. G. Marshall, of Canandaigua, N. Y., exhibits two life-size "solid crayon portraits."

H. McMichael, of Buffalo, N. Y., has also an exhibit in the hall; but how he occupied his time as he did for the last six months, and then was able to make the display of artistic work shown by his magnificent collection, we are not able to say, for he has brought himself up to the requirements made upon him, both as an artist and as Secretary. He exhibits eight frames of magnificent works of art, many of which are admirable conceptions, fully up to the Capel standard, and they are produced on the Stanley dry plate. Not only are these

pictures of Mr. McMichael artistic, but as prints they are scarcely excelled by anything else in the Exposition, for they seem to have been produced with the greatest care in every respect. The other examples of Mr. McMichael's work are made on the St. Louis dry plate. It is not for us to determine which is the best, and we doubt very much if anybody could determine that question if they tried. One of the brightest gems of the collection of Mr. McMichael's is the life-size portrait of our artistic friend Mr. J. F. Ryder, of Cleveland, Ohio, which was done in five seconds.

On the opposite screen we find an exhibit made by Mr. J. M. Brainard, of Rome, N. Y. Mr. Brainard was one of the competitors for the Anthony prizes for examples on the Stanley dry plate, and he and Mr. McMichael are the triumphant ones. The pictures are certainly very fine.

Drezel, of Buffalo, N. Y., seems to be the landscape photographer of the lake city, and exhibits some very fine examples of his work—exterior and interior architectural, and so forth. There is one, a magnificent picture of an iron bridge, on a 17 x 21 plate. No fault can be found with such results as these. The group of nurses in the Creche school is a splendid example of photography also.

G. M. Carlisle, of Providence, R. I., limits his display to one frame largely of portraits of very excellent quality, and one composition group called "Yussouf," illustrating James Russell Lowell's last poem by that name. A very fine exhibit, indeed.

Mr. A. N. Hardy, of Boston, Mass., makes a display of nine very fine examples of his work on 10 x 12 negatives. One of a bride is exquisitely rendered—as much so as anything in the exhibition. It is simply lovely, and shows the capabilities of the Stanley dry plate. A series of views of the eclipse of the sun, of June 18, 1885, is exhibited by Mr. H. C. Maine, of Rochester, N. Y., made on Munroe's dry plates. The rendering of the sun spots is considered wonderful by those who are posted in this direction.

A very pretty collection of modern views upon 5 x 8 plates is exhibited by H. S. Wyer, of Yonkers, N. Y. A similar collection is by Theo. Gubleman, of Jersey City, N. J.

A collection of portraits follows by Mr. Taylor, of Rochester, N. Y.; and another collection of portraits by Furman, of Rochester, N. Y. And then we come to the collection of Messrs. A. E. Dumble & Co., of Buffalo, N. Y., which are all made on the Munroe dry plates. They all show very admirable qualities, and speak well for the Munroe plates.

This ends the collection of photographs. We now come to the magnificent exhibit of photographic requisites, fine both in arrangement and quality. We think that it excels anything that was ever exhibited in photography before. Surely every photographer who is privileged to be at this Convention must feel the advantage of seeing all at once, and so splendidly displayed, such a grand collection as there is here. Of course, we cannot be expected to do more than mention a list of the parties who exhibit and a few of their specialties. As will be seen by the plan of the exhibition, already given by the journals, one whole end of the hall is devoted to the quarters of the various periodicals. Starting at the front door, we pass down the main avenue, and find the display on the right-hand is that of Messrs. E. & H. T. Anthony & Co., of New York.

Novelties and apparatus of all kinds are exhibited. Dalmeyer lenses, Smith's detective camera, Barker's patent revolving back camera, the Fairy Camera, and grand extension camera for lantern slide makers and copyists; Entekin's new duplex roller, and the A. W. L. Bicycle Camera, the Fairy Tripod "that you can put in your valise," a full line of Novel cameras, enlarging lanterns, a fine pyramid of Stanley dry plates and banners, a full line of "Climax" cameras, fitted with Benster's holders, and the inside shutter; also an enormous collection of useful inventions.

The Scovil Manufacturing Co.'s exhibit, on the opposite side of the hall, contains a full line of the American Optical Co.'s apparatus; Morrison's lenses, appliances for the use of photographers, chemicals, and camera stands. The Waterbury "K. D." lantern is one of the novelties of this exhibit. Also among its attractions is the new "Detective Camera." But what seems to attract

the most astonishment of all is the American Optical Co.'s Bicycle Camera. It is certainly a camera on wheels, and it don't seem to be afraid to go. Another new thing in this exhibit is the "Ne Plus Ultra" outfit, which is becoming more and more popular every day.

Goebel's new "Vignette Chair," an embodiment of common sense, as it is labelled, attracted a good deal of attention, and secured many sales. It is certainly a useful accessory under the skylight.

Following the exhibit of the Scovill Manufacturing Company is a display of Messrs. David Tucker & Co., whose collection is rather more novel than some of the others, because of the fine accessories and apparatus—Eastman's negative paper, Suter lenses, and Entrekin's burnishers, which are among the useful and necessary articles exhibited. The Pistol Camera attracted great attention. One of the most important appliances is the Novelty Retouching Desk, for sale by these gentlemen; also their drying and fuming box attracted a good deal of attention, and rightly so, because it is a useful article in the printing line.

Mr. W. G. Entrekin makes his own individual display of his burnishers, and shows their advantages. These articles are so well known to all our readers we need only mention them.

The next exhibit to him presents us with a display of the Rochester Optical Company, whose apparatus is becoming more and more popular every year. The business of the Company continually grows.

Mr. George R. Angel, of Detroit, Mich., makes a specialty of maps hand-painted and hand-made. The instantaneous shutter displayed by Mr. Angel attracted a great deal of attention from a great many observers, and seemed to be very popular.

Next to him comes the Voigtlander and Darlot lenses, displayed by Benjamin French & Co., of Boston, Mass., which we always expect to see at our exhibitions, attended by Mr. Wilfred A. French in person, who always interests his listeners.

Mr. Garland's new Skeleton Shutter, and the new Thread Mat, for use in the studio, are also specially exhibited by Messrs. B. French & Co.

Messrs. A. M. Collins, Son & Co. make a magnificent display of photographic cardboards, together with a few lithographic designs for backs. These need only to be mentioned to bring them to the attention of the consumer. Nothing in the world now equals them; they are without a peer.

H. A. Hyatt, of St. Louis, Mo., attends in person. We find here Kuhn's Sensitive Paper and Stretcher. The most important is Kuhn's Lightning Intensifier for dry plates. Both give new power to the craft. Scovill's unique apparatus and other novelties, which Mr. Hyatt takes care are well advertised in the PHILADELPHIA PHOTOGRAPHER.

Buchanan, Smedley & Bromley, of Philadelphia, exhibit a collection of draperies and accessories and novelties in apparatus, together with some splendid specimens of platinotype prints, made by Willis & Clements. Both Messrs. Smedley and Bromley were in personal attendance at their exhibit, and made many new friends. Osborne's new Accessories were the most prominent of all the novelties at the exhibit of these gentlemen. None of them has been before exhibited, and therefore deservedly attracted great attention.

Smith & Pattison, of Chicago, display the following novelties: Baldwin's Duplex Rotary Polishers; Baldwin's Baby Holder, "from which the child never escapes;" Hawkes's Patent Revolving Rapid Shutter; Perry's Instantaneous and Magic Shutter, for regular outdoor and indoor work. These gentlemen are the Chicago agents for the Suter lens, and show themselves worthy of the compliment by the magnificent stand of specimens which they exhibit of portrait work by the Suter lenses. The new Magic Camera Stand, manufactured by these gentlemen, is noted for its easy working and general solidity.

Wm. Gerhardt, of Baltimore, Md., makes a display of picture frames, and next to him is the Ennis perfect background holder.

Next to this is the beautiful collection of gold and beautiful fancy mats of Perigo & Faupel, of Baltimore, Md.

The Toledo Moulding Company, of Toledo, Ohio, make a gorgeous display of mouldings.

The Eastman Dry Plate and Film Company, of Rochester, N. Y., exhibit a splendid collection of their paper negatives, the prints of many of which are seen in the Kent collection, and have been noticed previously. It is a great triumph for these parties to make such a glorious display of their accomplishments at this exhibition.

Something entirely different from what was ever seen in any former display is the exhibit of the necessary apparatus to be used for the production of paper negatives by this new method. A large glass case is devoted to the display of the tiny bits of metal work, such as screws, nuts, springs, etc., necessary for their apparatus. These little parts shown here make one think of the parts of a watch. They are very tastefully arranged by Mr. Cooper, the demonstrator of the Eastman Dry Plate and Film Co., who has distinctly contrived to arrange the various bits of variously colored metal into monograms. The word "Convention" is made up of brass springs; the "P. A. of A." is made up of tiny screws and spirals and metal heads; the "E. D. P. & F. Co." is made up of various bits of brass and iron and nickel, the whole being a very beautiful exhibit; "1885" is made up of rings of brass. All the parts are necessary in the work of making new paper negatives, film carriers, and negative holders. They are exhibited in great variety and astonish the public.

P. F. Shindler, of Hoboken, N. J., exhibits his accessories and relief backgrounds. Mr. D. H. Anderson's splendid picture of the Seventh Regiment of National Guards State of New York, exhibited in Mr. Shindler's frame is an attraction.

M. A. Seed Dry Plate Company occupy their quarters with examples of their work, made upon plates made by several New York artists, and by Parker, of Newark; Gutekunst, of Philadelphia; and Murth, of Cohoes, New York.

Wilson, Hood & Co., of Philadelphia, are represented by Mr. John G. Hood, of that firm. His particular specialty is the new inventions of Mr. Entekin, of Philadelphia, consisting of a new Print Cutter and a Rotary Burnisher. Both inventions are useful and are well known, and we need

not say anything about them, except always to praise them.

W. H. Walmsley & Co., of Philadelphia, exhibit Beck's autograph rectilinear lenses; Beck's autograph wide-angle lenses, for life-size heads; 10 x 16 landscapes, made with four 8 x 10-13 inches focus; Beck's portable folding cameras, also Walmsley's instantograph shutters, phantom shutters, Excelsior dark-room lantern, folding pocket lantern, concentrated developer in single solutions, and adjustable view finder, by Mr. Walmsley in person.

Beck's Autograph Rectangular Lens must not be forgotten as one of the novelties of this section.

The headquarters of the St. Louis Dry Plate Company attracted a good deal of attention, and, indeed, the whole time of the attendance Mr. Wuestner was occupied in answering questions.

Mr. John Carbutt, of Philadelphia, manufacturer of the Keystone dry plates and photographic specialties, made a very fine display of his manufacture. It was attended in person by him. Among the novelties recently introduced by Mr. Carbutt are his Keystone varnish and pyro varnish and concentrated developer.

Malinckrodt's Chemical Works, of St. Louis, made a very pretty display of chemicals.

George Murphy, of New York, made a grand display of photographic instruments. He attended in person. Mr. Murphy's new photographic apparatus attracted a great deal of attention; and rightly so, because of the quality and their appropriateness. Mr. Murphy also exhibited his peculiar drop shutter, for which he claims that nothing comes up to it.

The New Acme Water Color manufacturers made a display of photographs and materials.

No exhibit in the whole building attracted more interested observers than did that of Messrs. W. H. Allen & Brother, of Detroit, Mich., whose specialty is the celebrated Suter lens. Not only do these gentlemen make a fine display of American results from the negatives with these instruments, but they have been so enterprising as to secure a number of foreign productions.

Among these are some of the views of the celebrated St. Gothard Pass of Switzerland, which attracted continual attention here, as also did the views of Luzerne, Geneva, and Lake Luzerne, and portraits made by foreign photographers, all of which verify the claims made for the lenses now so extensively sold by these enterprising gentlemen. A number of portraits are also displayed made by Mr. E. Suter, the optician, himself, at his home in Basle, Switzerland. We think that he also made the landscapes for this display. It is certainly a very fine collective display.

Beneath them is the display of Mr. L. G. Bigelow, of Detroit. There is also a various collection of portraits made by Wykes, of Grand Rapids, Mich.; T. B. Perkins & Co., of Grand Rapids, Mich.; McKecknie & Oswald, Arthur & Philbrick, Detroit, Mich., and others in numbers so great that we cannot mention all of them, except to say that in every instance we find the most exquisite qualities of the lenses proven by the results before us. In addition, a large series of 20 x 24 and 8 x 10 pictures of the New Orleans Exposition—of the old moss-covered live-oak trees and the old Liberty Bell, all made by the Centennial Photographic Company, is near.

Mr. F. Hendricks, of Syracuse, made his department one of the "headquarters" of the Exposition, and sold everything.

The Cramer Dry Plate Works Section was often attended by Mr. Cramer in person and by his assistant, and was also one of the attractive parts of the Exhibition.

The Blair Tourograph and Dry Plate Company, of Boston, Mass., made a very splendid display of their apparatus and accessories, similar to the one made at New Orleans. Mr. T. H. Blair and his brother attended in person, and found sufficient to do during the whole of their presence there. The "Lucidograph" exhibited by these gentlemen attracted a great deal of attention, and was one of their best exhibits. Their place was the entertaining headquarters of a great many.

The outer line of the Exposition Hall was occupied principally by novelties, the most of which are familiar to our readers, but must be mentioned, as follows:

Gilbert's lubricator and automatic retouching pencils headed the line.

H. A. W. Brown, of Phillipsburg, Ind., exhibited the model of his solar camera, with a self-acting vignetter and reflector.

L. W. Seavey, of New York, photographic backgrounds and accessories, with a fine collection of photographs illustrating their use.

G. B. Bryant, of Laporte, Ind., backgrounds and accessories, with photographs illustrating their use.

W. F. Ashe, scenic artist, of New York, some decided novelties in backgrounds, accessories, rocks, stumps, rustic seats, gates, and what not, for the use of the photographer, together with a fine series of photographs illustrating their application. Another proof of his inventive genius is Mr. Ashe's latest window accessory, which needs only a handsome subject to make it superb, indeed.

Knapp & Caldwell, Jersey City, N. J., display photographic accessories quite novel in design, and in some measure new.

All these gentlemen are entitled to a great deal of credit for the study which they have applied in providing photographers with acceptable and harmonious accessories, and the wherewithal to make good pictures.

Schaffer, Lubrick & Schaffer attracted a great many observers and purchasers.

Lehman & Brown, importers, of New York, made their usual exhibit.

The Acme flue heating burnisher ended the list, and tried to shine over all.

The show was a fine one, and admirably installed by the very efficient Secretary, Mr. H. McMichael.

AN INTERESTING VISIT TO THE ESTABLISHMENT OF THE EASTMAN DRY PLATE AND FILM CO.

"About the middle of life's onward way.

I found myself within a darksome dell,
Because from the true path I went astray.
Alas! how hard a thing it is to tell—"

Dante's Inferno.

And that is just what what we did. On our way to the Buffalo Convention we halted at Rochester in order to make a call at the

establishment of the Eastman Dry Plate and Film Co. We were shown "all the ins and outs" under the leadership of the Captain of the place, Mr. George Eastman, and, now, in the language of the immortal bard, we find

"Alas! how hard a thing it is to tell"

about it. Our object was to learn all about the new film or "Negative Paper" just ready to be introduced, in order that we might intelligently inform our readers about it. As much as ten months ago we announced in these pages that a new method of making negatives upon an emulsionized film on paper was in the experimental stage, and that in due course of time the fraternity would be asked to consider the introduction of important changes in their methods of securing their results. We, of course, had in mind the now perfected product of the Company whose works we shall now enter hand in hand.

After inspecting the engine—"the gentleman who does the work"—we were hoisted by the elevator to the upper floor. There, in the various apartments we found machinery for cleaning the glass and for giving it its final touch before being carried into the emulsionizing room (for this is a dry plate factory also, remember); machinery for rolling, cutting, and dampening the paper, and store-rooms for stock; cases of gelatine, chemicals, etc., all in the open light. And now for the inside. But before we enter that let us learn a little of the state of affairs up to the present time as regards the flexible negative process. We cannot do better than quote from the statement of the Company as to this:

A survey of the field when it was first realized that glass would eventually have to give way to a more suitable negative support, developed the fact that very little had been done in a practical way in the direction indicated, and that the completion of any process to supplant glass dry plates would necessitate not only the invention of the material itself, but *means for exposing the material when made.*

With full knowledge of the difficulties to be encountered, the Company determined to undertake a series of experiments, having

for their object the perfecting of a process that would relieve photography from some of the evils inseparably connected with the use of glass in negative making.

Paper was, naturally, the first material selected, and as it had proved a failure in other hands, as a permanent support, it was determined to employ it only as a temporary support, and transfer the image after development. A process was devised in which this transfer could be accomplished with great certainty and ease, when it was discovered that the image, when the paper was coated in the ordinary way, retained all the grain heretofore supposed to be in the paper.

After further experiment a method was devised for preparing the paper so that the image, when transferred, would be free from grain. When this point of perfection was arrived at, it was discovered that the image would print as free from grain and quite as quickly *through* the paper, if rendered properly transparent, as it would if transferred to a sheet of gelatine. In other words, that the grain in paper negatives heretofore supposed to be in the paper, has really been in the image, and when freed from the image the grain of the paper can be rendered imperceptible, provided a proper paper has been used. The result is a negative process that is freed from all objectionable features of glass, and unaccompanied by any mechanical difficulties.

This was demonstrated to us at the time of our visit, and afterwards most fully to the attendants upon the Convention. Now let us see how it is done. See? We are kindly taken by the Eastman hand and by some means which we entirely forget, found us in an immense apartment, hanging upon the walls of which here and there, were tall cylinders red as blood, looking like red-hot sections of stovepipe. A *rickety-rump* sort of a noise and a seething sound revealed to us that something was going on, and presently, by slow development, human images became more and more defined until we could clearly recognize that this was the "coating and drying room." We began to discover, too, what caused the noises which had alarmed us, for now we came up against a great vessel which gave forth the seething

sound. It was warm. It was black. It was dark. It was a mystery. It seemed that

“ Thus not by fire, but by the art Divine,
A lake of pitch aye seethed in the abyss,
And with thick glue bemired the bank malign;
I saw it, yet perceived I not in this
Aught but the bubbles its fierce boiling raised,
Upheaving now, and now compressed, I wis.”

From this “abyss” ran a wide stream over whose less uneasy surface we saw tripping an endless slip of paper which, taking up a portion of the sticky mass below, went forward upon its journey and was hung up in space, far beyond, to dry. With eager editorial curiosity, led by means of the *rickety-rump* noise we endeavored to “see the end of this thing,” when

“ My Leader said to me ‘Beware’ and drew
Me towards him from the spot where I was
[placed.]”

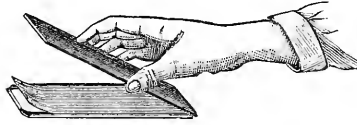
Into a second cell we then followed, where the ready coated paper was slit and cut into proper size and then placed in a machine for winding it upon the spools. After these operations it was packed for the market—all in the dark.

Sauntering through the rest of the factory, we saw that no pains had been spared to make a most completely accoutred establishment. Here are rooms for the chemicals; for the mixing of the emulsion: for the manufacture of distilled water in bulk; for the purification of alcohol; for the storage of silver and chemicals; for the machine shop and tool room; and for the full sway of a monstrous calendering machine whose rolls are sixteen inches in diameter. Not only did the industrious and thoughtful gentlemen here engaged find themselves often to serve as novices in their work, but after the negative paper was produced in perfection, it would not be available unless some means could be devised for working it in the hands of the photographer. They were not idle in this direction either, for while the experiments with the material were being carried on, apparatus was being devised for its exposure in the single sheet and in the roll.

“The Film Carrier,” is the name given to the first and is made so light and strong, that with the film attached it may be placed

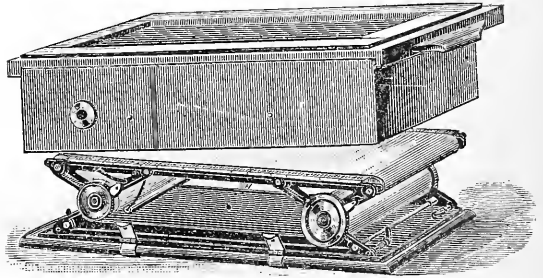
in any holder as though it were a sheet of glass. Its use is obvious. The method of exposing the film paper in a continuous roll is more intricate, but none too much so for

FIG. 1.



the inventive genius of the earnest gentlemen who have provided us with the Eastman-Walker roll holder.

FIG. 2.

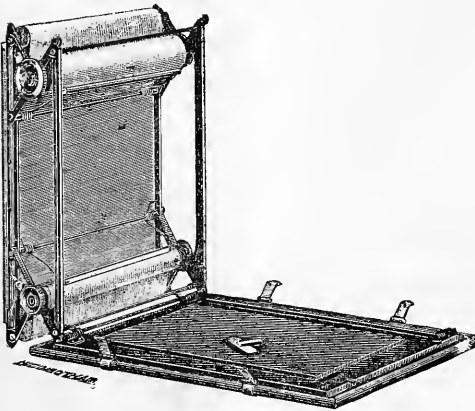


It consists essentially of a metal frame carrying the spool wound with the supply of paper, and a reel for winding up the exposed paper, suitable devices for maintaining a tension upon the paper, and measuring and registering mechanism. The frame is hinged at both ends to the paneled board which forms the back of the enclosing case. The second cut shows the holder with the case partly raised. The movement raised for changing the spool is shown in the third drawing, and in Fig. 4 the spool of paper, ready to be inserted in the holder is seen.

To fill the holder, the movement is raised as in Fig. 3, the spool inserted in its place *under* the brake and fastened with the thumb-screw on the side of the frame; the pawl on the tension barrel is thrown off, the bank on the spool broken, and sufficient paper drawn out to reach over the bed to the reel; the movement is shut down and fastened and raised at the reel end, the paper is then drawn over the guide roll and slipped under the clamp on the reel, and the reel turned sufficiently to give the clamp a hold

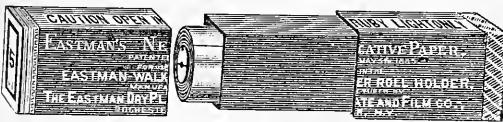
on the paper. Now, throw in the pawl on the tension drum and put on the tension by turning the tension barrel over to the left until the paper is taut; shut down the movement and put on the case, insert the key and turn it over until the alarm strikes once, draw the slide and mark the limits of the first exposure with a lead pencil. The holder is then ready to attach to the camera. After the first exposure turn the key until

FIG. 3.



the alarm strikes four times, (three in the 4 x 5 holder). This brings a fresh sheet onto the bed for exposure, after which turn the key and make as many exposures as required. When the required number of exposures have been made take the holder into the dark-room, take off the case and insert the point of a penknife in the slot in the guide roll and separate the exposed from the unexposed by drawing it along the slot. Throw off the pawl from the reel and draw

FIG. 4.



out the exposed paper and cut it off at every fourth mark (third mark in the 4 x 5 holder), with a pair of shears. If any unexposed paper remains on the spool draw over the end and attach it to the reel as before and the holder is ready for work again.

A spool of unsensitized paper is sent out with each holder that the operator may accustom himself to working the holder in the light before manipulating it in the dark-room.

These holders are made in such a manner that they can be fitted to the camera by any good workman, who has only to dress down the outside frame of the holder (which in making is left larger than necessary), until it fits the camera.

To our surprise we found a great stock of these goods all ready for the market. To experiment, one can purchase say a 5 x 8 outfit for working one's own camera consisting of: 2 doz. 5 x 8 negative paper; 1 8-oz. bottle developer; 1 8-oz. bottle castor oil; 1 6-in. vel. rubber squeegee; 2 5 x 8 carriers, complete, for \$3.50. Two gross of 5 x 8 negative papers weigh only 2½ lbs. Each "spool" contains enough paper for 24 5 x 8 exposures. Twenty-one boxes of the cut sheets represent a ton of dry plates.

Ponder these things in your leisure moments. The development of the paper negative we have seen and it is most simple and easy.

To Develop:

TAKE

Solution	1 ounce.
Water	4 ounces.

For quick exposures use only one-half the above quantity of water. In case of over-exposure, add to each ounce of developer one drop of the following

Restrainer:

Bromide of Potassium	1 ounce.
Water	6 ounces.

This developer never gets muddled with age, and sufficient old developer should always be kept with which to commence development. The contents of this bottle are sufficient to develop one hundred 5 x 8 paper negatives.

There is nothing to fear. It is but for the craft to try intelligently and they will have a new power in their hands, which, when understood, will not be readily given up. And as they make discoveries, we shall hope to have our magazine used as a medium of communication, as it was when the

new emulsion process came into use. After our visit to the Inferno whence all these lessons come, we made haste

“To turn again to the clear world of light.”

where we found the Buffalo Convention.

There, Mr. J. H. Kent, of Rochester, N. Y., held another surprise for us in his magnificent exhibit of paper negatives, and prints therefrom, of which we make mention in another place.

And since then a gold medal has been awarded for what we have seen, by our foreign compeers.

OUR PICTURE.

THE beautiful examples of portraiture which embellish our current number were printed from negatives made by Mr. C. F. Conley, Boston, Mass., on the already famous “Stanley” dry plates.

This latter piece of information we give our readers because the “Stanley” may be new to them, although they have made a good name already in Europe, Canada, and throughout our own land.

It would seem superfluous to do more than make this statement, for the exquisite results place Mr. Conley among the masters of lighting, posing, and development, and make the plates the desire of all who understand their real good qualities.

No effort has been made to secure showy subjects, whose personal appearance would divert the mind from the real object in view—the understanding of the photographic work. Neither are “accessories thrown in” to catch the light and delude the brain.

These are simply examples of excellent plain photography, pure and unadulterated, and in Mr. Conley's usual artistic style. For what they are—admirable studies—we heartily commend them. We undertook to print them in a hurry for this special issue, and so we have used nine double negatives, all different in subject, and as uniform in quality and in printing ability as any set we ever saw.

We are not informed as to the rapidity of the exposures, but as the dry plates of the day are so quick there is many a nice effect lost by overexposure. It will be apropos,

therefore, to give the method adopted by Mr. F. C. Beach (found in the circular issued by the trade agents for the Stanley plates, Messrs. E. & H. T. Anthony & Co.), for the treatment of overexposed plates. It is as follows:

Into 2 $\frac{3}{4}$ ounces of Mr. Newton's sulphite soda solution (water, 32 ounces; sulphite soda, 3 ounces), I put 5 grains of dry pyro, $\frac{1}{2}$ grain of bromide of potassium, and 3 drops only of his yellow prussiate of potash solution, made as follows, using 480 grains of the salts to the ounce:

Water,	32 ounces.
Yellow Prussiate of Potash	3 “
Carbonate of Soda (granulated),	3 “
Carbonate of Potash,	3 “

After wetting the plate and pouring on the stated developer, the image came out very gradually and beautifully, and continued to develop right along until all details in the darkest portions were brought out. The edges and shadows, which should be black, kept wonderfully clear. After fixing, which, perhaps, took eight minutes, I found I had two elegant, soft, clear negatives, resembling very closely the appearance of a wet plate, and possessing the desirable quality of being rapid printers. I have not yet tried the plates as to rapidity, but some results which I have seen surprise me. I was delighted to notice the ease with which they develop, and the extreme latitude of exposure they will bear, a quality specially valuable to the amateur.

The latitude allowed with these plates must make them very popular, and their admirable quality will win them friends in all quarters.

Col. V. M. Wilcox writes us: “They give good satisfaction, and our customers seem to be wonderfully pleased, and cannot say too much in their praise.”*

For further testimonials, see the advertisement.

The prints were made at our own print-

¹ Since above was in type, Mr. Conley writes among other data as follows: “The plates were developed with Mr. Cooper's sal soda developer. The light being changeable, I timed all the way from two to seven seconds. They were made with a No. 6 Voigtlander lens, smallest stop.

ing rooms, on the popular brand of paper known as N. P. A., also supplied by the trade everywhere, and to us by Messrs. E. & H. T. Anthony & Co., New York.

GERMAN CORRESPONDENCE.

New Heliographic Process in Half-tones—Improved Sensitiveness of Dry Plates—Ducos du Hauron's Heliochromic Principle and Modification of it.

THE process of heliograveur in half-tones, which formerly was confined exclusively to the firm of Goupel, is becoming more general in its application. Obernetter's copper-light engravings are exciting much attention in this respect. These are not mere results of experimentation, but examples of a practical process in active operation, among others, an art sheet, choir chairs from Memmingen, prepared and published in the celebrated *Zeitschrift für Bildende Kunst* by Lützow, which speaks well for the new process. Furthermore, a series of plates form a great medal work, whose pictures are taken directly from nature; besides large sheets of festival and society diplomas from drawings, which illustrate in a striking manner the capabilities of the process, and which are exciting great interest. A like attention is being directed to a number of instantaneous views in lichtdruck from negatives from various sources.

Recently, endeavors have been made to increase the sensitiveness of dry plates in respect to instantaneous exposures. Mr. Himley, of the renowned firm of Siemens & Halkse, has made many experiments in that direction. He found, first, that softening the plate before development in a bath of 1 drop of a saturated solution of bichloride of mercury and 1 drop of saturated solution of hyposulphite of soda, in 200 c.cm. of water, is of great advantage. Experiment has shown that stronger amounts of mercury gave hard negatives and delayed the development; increased amount of hypo occasioned slight fog. Then he tried acetate of potassa, ammonia, fuming and bathing in citrate of silver solution—all of which did not give him the wished-for results. Finally, he tried dry plates of 18° W., bathed in a solution of

$\frac{1}{2}$ c.cm. of citrate of silver solution and 100 c.cm. of alcohol (absolute). The silver citrate solution was made up according to Eder:

Nitrate of Silver . . .	10 grains.
Citric Acid	10 grains.
Distilled Water	100 grains.

With this he got the following results:

1. 1 minute, bathed, dried; 2 minutes, fumed, exposed, immediately developed. Result: clear; thin shadows.
2. 1 minute, bathed, dried; 2 minutes, fumed, exposed; 2 minutes in the softening bath, then developed. Result: clear, and well-worked-up detail in shadows.
3. 2 minutes, bathed, dried; 4 minutes, fumed, exposed, and developed. Result: quicker than 1; clear, thin shadows, and hard.
4. 2 minutes, bathed, dried; 4 minutes, fumed, exposed; 2 minutes in softening bath, developed. Result: quicker than 1, 2, 3; better detail in shadows.
5. 3 minutes, bathed, dried; 6 minutes, fumed, exposed, and developed. Result: just as rapid as 1 and 3; clear, hard, thin shadows.
6. 3 minutes, bathed, dried; 6 minutes, fumed, exposed; 2 minutes in softening bath, developed. Result: just as rapid as 4; gave harmonious image; rich shadows. Best of all.

Ducos du Hauron has, as is well known, endeavored to take pictures in their natural colors; that he made negatives through red, violet, and green disks, and copied the resulting negatives upon lichtdruck plates and in the complimentary colors to the disks, blue, yellow, red, for all three negatives, whether taken behind the green, red, or yellow glass, making use of eosin colloid.

Now, the silver in the first line is sensitive for blue and green, less so for violet, and least of all for red. It is, therefore, manifestly the least suitable material for exposures through red glass. But, even for exposures through blue glass or violet glass, it will not be esteemed the best material, inasmuch as here the green sensitiveness is of no value, and the eosin represses the blue sensitiveness. For exposures through

blue glass pure bromide of silver will recommend itself as the best agent; for exposures through red glass the cyanin-gelatine plate; but for yellow-green sensitiveness the eosin plate stands foremost.

Another fault of Ducos's process is the arbitrary choice of the printing color. The doctrine that the plate photographed through colored glass should be printed with the complementary color of the glass is impracticable, as well as the idea doubtful that one color should complement the other. They say the complementary color to red is green, but what green is left undecided; in fact, the complementary color to many reds is rather blue than green.

I propose the following modification of the process, which is free of the mentioned deficiency:

1. That, instead of a single sensibilitor (as with Ducos), several be employed, and each by itself in a special plate: a sensitizer for red, one for yellow, one for green, one for blue-green. One for blue is not necessary, inasmuch as bromide of silver is itself sensitive to blue.

2. That the optic sensitizers at the same time form the printing color for the plate obtained, or, if the sensitizer itself cannot be employed for the purpose, a color spectroscopically nearest possibly to it be substituted.

This last condition will be appreciated if we consider that the printing color must reflect the colored rays which are not absorbed by the color sensitive plate, or cannot be allowed to reflect the colors which are to be absorbed by the plate.

If we take a plate colored with eosine, which is affected only by the rays which eosin silver absorbs, which is effected by using a suitable medium in front of the objective (chrome glass would be suitable, or a film colored with methyl-roseazalinepicrate), it will be found that the green and green-yellow rays are most active, and accordingly afford a plate, which is to be copied on lichtdruck, with a color which does not reflect these rays—that is, eosine itself. The case is analogous with cyanine, which serves as an optical sensitizer for plates behind a red medium (ruby glass). This affords for the lichtdruck plates which

reflect all the rays except those absorbed by the cyanine. But this body is cyanine itself. Therefore, a plate taken with cyanobromide of silver behind a red glass, copied for lichtdruck, is to be printed with cyanine. Following this train of thought, we arrive at the conclusion that each plate which has been made sensitive by a given optical sensitizer is to be multiplied by the color which served as the optical sensitizer. Now, to be sure, we cannot employ very sensitive cyanine, and, still less, the sensitive bromide of silver (which, by reason of its absorption, is itself an optical sensitizer). Hence, other colored bodies may be employed which have an equal or similar absorptive power. Cyanine may be replaced very well by aniline blue, whose absorptive band occupies the same position as cyanine. Likewise bromide of silver by a spectroscopically selected yellow—for example, methyl-orange. With such color-combinations, however, there is an apparent wanting of the shades of green. This is, however, obtained by superposing of the two plates, upon which the green rays have no effect. But, if the gradations in the green are not sufficient, it is easy to introduce a malachite-green or analogous optical sensitizer. Yes, it is recommended, to introduce more optical sensitizers in the system, a greater number of gradations will thus be secured. If the sensitizers are not suitable for gelatine plates (for example, methyl-violet and chlorophyll), collodion-bromide of silver dry plates may be substituted. The arrangement of colors so obtained demands not only an artistic knowledge, but also a spectroscopic knowledge of colors. The modern color-stuffs offer many perplexities to the artist, but they cannot surprise the spectroscopic investigator. The old yellow dye-stuffs, mixed with blue, afforded green. Yellow aniline (chrysaniline), with aniline blue, on the contrary, in mixture, gives rise to red and not to green. Further, iodine-green and fuchsin, properly mixed, give a beautiful blue. You may be very easily convinced of this by making dilute solutions of these substances and mixing them in the proper proportions. But the eye is not always capable of appreciating the spectroscopic constitution of a color without optical aids.

For instance, red lead appears like the orange of the spectrum; in fact, it reflects not only orange, but also a considerable amount of yellow, some dark red, and even green—a fact which may be easily demonstrated by subjecting an illuminated arc of red lead to the spectroscope. Hence, the painter in reproducing vegetable green does not make use of any chlorophyll, but mostly green cinnabar mixed with a small amount of English red. But it is to be observed that although the so-constituted color-mixture, in reference to the absorption band, deviates from chlorophyll, the green and yellow-green rays reflected from the mixture approach nearer in quality to chlorophyll. Hitherto the discussion has been confined to a few optic sensitizers, but daily chemistry is giving new color-stuffs which promise much for the color sensitive process; and the hope is that the technical difficulties, as regards color, may in ten years be overcome. Then will the color sensitive process be a simultaneous blessing both to photography and the color printing process.

Very truly yours,

DR. H. W. VOGEL.

THE ISOCHROMATIC PROCESS.

Editor PHILADELPHIA PHOTOGRAPHER:

It appears that Dr. Vogel no longer disputes my claim to priority in practical isochromatic photography, but he makes an effort to produce a false impression in regard to the matter by "correcting" statements which he asserts that I made, but which I did not make, and by greatly exaggerating the importance of my failure to be absolutely exact in my reference to the absorption bands of chlorophyll. And he does this in a manner which would have been inexcusable even if I had actually made the mistakes which he asserts that I did.

Any one who reads my article to which Dr. Vogel refers will see that although I mentioned the fact that he was not the first to devote attention to the subject of color-sensitiveness in photographic processes, I have not disputed that he was the first to employ dyes for the purpose of increasing

the color-sensitiveness of silver bromide. In the *Year-Book of Photography*, for 1885, p. 112, I stated that "Dr. Vogel was undoubtedly the first to suggest the use of dyes for increasing color-sensitiveness of silver bromide," and inasmuch as Dr. Vogel has himself quoted this identical statement, he cannot plead ignorance of the fact that I distinctly acknowledged the claim which he now takes so much trouble to prove. It is well known that Dr. Draper, of New York, some thirty or forty years ago, called attention to the fact that certain sensitive films which absorb particular rays of the spectrum are proportionately more sensitive to those rays. The subject was frequently discussed, and many attempts were made to produce orthochromatic photographs before Dr. Vogel discovered that some Wortley bromide of silver collodion plates with which he was experimenting were remarkably sensitive to green, and that most of this color-sensitiveness disappeared when the plates were washed with alcohol and water.

I called attention to the fact that Dr. Vogel's wet eosine process was insensitive to scarlet and ruby red, but I did not, as he alleges, "assert that isochromatic gelatine plates are comparatively insensitive to red," nor did I, as he further alleges, say that "isochromatic gelatine plates must be developed in almost total darkness." I stated, in effect, that if isochromatic gelatine plates were many times more sensitive to red light than my chlorophyll plates, it would be necessary to develop them in almost total darkness. No such plates have been produced. I also called attention to the fact that almost any degree of yellow sensitiveness could be tolerated, and might be of practical advantage, provided that the red sensitiveness was not too great to prevent the safe preparation and development of the plates in red light. It will be seen that if Dr. Vogel had read my statements as they were made and printed, he would have found nothing to dispute.

I have made no reference to Dr. Vogel's so-called "azaline process," because I believe it was not published, but has been held as a trade secret, and therefore is not a subject for scientific discussion. I may add that inasmuch as it was the wet eosine pro-

cess which Dr. Vogel announced as the "solution of a problem," the azaline process would have no place in this discussion, even if published.

I am obliged to Dr. Vogel for his reference to Ducos du Hauron's book. The manner in which he makes this reference is calculated to produce the impression that he believes that Hauron anticipated me in the publication of a process of isochromatic photography with chlorophyll plates, and is all the more surprising when it is considered that if he (Dr. Vogel) really held such a belief, his acknowledgment of the fact would react with great force upon his own claims. But I can assure Dr. Vogel that I was well aware of Hauron's experiments, and know that although he made some use of chlorophyll, he neither used blue-myrtle chlorophyll nor emulsion plates, and he never tried to make an isochromatic photograph, or realized, any more than Dr. Vogel, that it would be possible to make such photographs by means of any kind of chlorophyll stained plates. In fact, he was so very far from realizing the capabilities of chlorophyll as a color sensitizer that he soon abandoned it altogether, and used eosine instead.

Dr. Vogel will readily see that if I had accepted either his own or Hauron's estimate of the capabilities of chlorophyll, the complete solution of the problem of practical isochromatic photography would have been put back more than four years.

I was aware that chlorophyll shows faint absorption-bands in the orange, yellow, and green of the spectrum, and that this orange, yellow, and green absorption is so insignificant in comparison with the red absorption as to appear hardly worthy of remark in this connection. My chief reference was to the fact that I had produced color-sensitiveness by purely chemical means, without coloring the silver bromide at all, and this important fact is not disputed.

I believe I have clearly stated my claims in the article to which Dr. Vogel refers, but I repeat here, that I produced in 1878 the first photographs in which all colors were reproduced in the true proportion of their brightness, and in 1879 I published the process in detail for the benefit of the

photographic fraternity. It was more than four years later that Dr. Vogel published an inferior process, announcing it as "the solution of a problem," and asserted that no other practically useful process had been published. I do not understand Dr. Vogel to dispute the facts as here stated.

FRED. E. IVES.

SOCIETY GOSSIP.

THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the stated meeting, held Wednesday evening July 1, 1885, the President, Mr. Joseph W. Bates, in the Chair.

There being no business brought before the meeting, Mr. Wood asked advice in regard to developing a plate which had been exposed on an oil painting, in which there was a large proportion of very non-actinic color, contrasted with a certain amount of strong high light. This sort of subject naturally presented great difficulties for its proper development. A long exposure was necessary to obtain the detail in the darker parts. The effect of the violent contrast was to be counteracted by keeping down the amount of pyro and bromide and increasing the ammonia or other alkali, and, also, by using the developer quite dilute. This treatment would tend to bring out the detail throughout the picture, and, as far as possible, keep down the strong contrasts between different portions of it.

Some interesting instantaneous pictures were sent by Mr. McCollin to show the work of a new exposor, the invention of Mr. Barker, which was soon to be put on the market. The exposure was made through a slit cut in a curtain which passed directly in front of the plate, and the pictures shown were most decided proofs of the efficiency of the shutter and of the rapidity of the Inglis plates upon which they were taken.

The subjects were those of figures in most rapid motion—running, leaping, bicycle riding, etc., and all were remarkable for their sharpness and full detail. The bicycle pictures represented wonderful feats in that line, such as riding down a flight of stone steps on a bicycle with the back wheel

removed, riding over a gutter without back wheel or saddle, and leaping from the ground while riding a single wheel provided only with the pedals.

A shutter was also shown constructed on the plan devised by Dr. Morris J. Lewis. A disk of cardboard was arranged to rotate behind the lens, with a hole through which the exposure was made. At the centre of this disk was a small pinion into which fitted the teeth of a segment of a larger cog-wheel. Rubber bands attached to this segment imparted to it rapid motion, which, on being transmitted to the disk, was greatly multiplied. Great rapidity could be attained by the shutter with no perceptible jar.

Messrs. Wilson, Hood & Co. submitted for inspection samples of a new style of mount known as the "ragged edge," the edge having the appearance of being roughly torn to shape and size.

Mr. Carbutt showed a number of prints of Yellowstone scenery, from 20 x 24 negatives, made by Mr. F. Jay Haynes, of Fargo, Dakota, which were greatly admired. The negatives were made on Carbutt's special plates, and Mr. Haynes had stated that, using one plate from a lot of 36 for trial, 35 had been exposed with the loss of only 2, the remaining 33 all producing good negatives.

Interesting pictures were also shown by Messrs. Barrington, Corlies, Wood, and others.

Adjourned. ROBERT S. REDFIELD,
Secretary.

Minutes of the regular meeting, held Wednesday evening, August 5, 1885, the President, Mr. Joseph W. Bates, in the Chair.

The minutes of the last stated meeting having been approved, Mr. Wood showed a device for attaching a camera to a car window, to use in taking pictures from a train in motion. It consisted of a brass plate, which, by means of a flange turned down at one edge and a set screw underneath, could be firmly clamped to the window sill. Two small spikes on the inner side of the flange helped to hold the plate in position, and the camera was

screwed on to the plate in the same manner as to the head of a tripod.

Mr. Wood also showed a number of views taken in Camden, showing the devastation caused by the recent cyclone.

Messrs. Wilson, Hood & Co. showed some negatives made on the Eastman negative paper, and a number of prints from paper negatives. The prints were remarkable for their fine detail and the apparent entire absence of any trace of the grain in the negative paper, it being practically impossible to tell whether they were made from glass or paper negatives.

For use in ordinary plate-holders, thin pieces of wood, about the thickness of the glass plate, are provided, on which the paper is held in position by a tin frame, fitting tightly around the edges of the board, which is then placed in the holder, as though it was a glass plate.

An exposor of ingenious construction, the invention of Mr. Stiff, was also shown. It was intended to be used for either instantaneous work or time exposures up to about thirty seconds.

The slide of the shutter, instead of having the usual opening, was simply cut across, so as to form two rectangular pieces. The lower piece, covering the front of the lens, and the upper one, being supported just above, with its lower edge in contact with the top of the first piece.

A pneumatic release caused the lower piece to fall and uncover the lens, and after an interval, determined by the adjustment, the second piece fell, completing the exposure.

The length of the exposure was regulated by an ingenious contrivance, in which a lever or pointer operating over a graduated dial-plate, changed the size of an opening in an air chamber, so that the air under pressure of a rubber cap escaped more or less rapidly, the second shutter falling after a certain quantity of air had escaped.

Adjourned.

ROBERT S. REDFIELD,
Secretary.

THE PACIFIC COAST AMATEUR PHOTOGRAPHIC ASSOCIATION.—Monthly meeting held at the Association rooms, 318 Pine

Street, Thursday evening, August 6. Mr. Gibbs in the Chair.

Minutes of the last meeting read and approved.

The Committee on Membership having reported, Mr. Alexander Cheminant was elected a member of the Association.

Resolved, that the Chairman appoint a committee of three members, not present at the last field day, to pass upon the prints presented for competition, and report at the next meeting.

The Chairman thereupon appointed Messrs. Louden, Lange, and Gibbs to act as such committee.

A committee consisting of Messrs. Wandesford, Yale, and Babcock were appointed to pass upon the "expectations" prize print, and report at the next meeting.

Resolved, that all duplicate books and periodicals belonging to the Association be sold to the highest bidder.

An impromptu auction was thereupon had, and several dollars added to the funds in the treasury.

A large number of prints, by Messrs. Gibbs, London, Blackburn, Tashiera, Wagner, and Tyler were passed around for inspection.

Mr. Blackburn exhibited two mounted, but unburnished, 5 x 8 prints, which created considerable discussion. These prints were made under the same conditions on Anthony's ready sensitized paper. Print No. 1 was made in April, and No. 2 in August of this year. After printing (no acid or salt being used in the washing water) the prints were thoroughly washed and put into a fresh "hypo" solution without toning. After fixing they were washed in running water for several hours and mounted. Print No. 2 is a bright brick color, as was print No. 1 when first made; but a curious change has taken place in this print, and it is now of a rich chocolate-brown color. There has been no fading, and the whites are absolutely pure, the whole print having the appearance of a proper, though rather undertoned, picture.

No satisfactory explanation for this phenomenon could be suggested by any of the members, though Dr. Passavant thought that the paper probably contained a large

proportion of citric acid, which by the action of the "hypo" and exposure to light had changed the nitrate into citrate of silver.

The prints will be preserved and other experiments made, as the subject is certainly worthy of investigation.

Mr. Partridge exhibited an electric light for developing from the Scovill Manufacturing Company. The light worked well, and is very convenient, especially where the dark-room is small and easily heated.

It was decided to establish a new class of members, to be known as non-resident members," with annual dues fixed at \$3 per year.

On motion the meeting adjourned.

W. B. TYLER,
Cor. Sec. P. C. A. P. A.

SAN FRANCISCO, August 7, 1885.

GLEANINGS.

OUR foreign exchanges seem to think that emulsion paper (gelatino-bromide), which is more and more used, especially when the light is weak, may one day take the place of albuminized paper, on account of the rapidity of its work, even with bad light. According to Captain Abney, instead of *printing* under the action of the light, as is done on albuminized paper, it will become possible to *develop* the image, after a very short impression, on this positive emulsion paper.

M. SCAMONI has made known that by adding a little acetic acid to the bichromatized gelatine he was able to obtain on the image the regular grain seen on the *photoink* prints published from time to time in the *Photographic News*. Mr. George Brooks has just patented a process in which the grain evidently depends upon the temperature, without the use of acetic acid. He says that the plate of bichromatized gelatine treated with bichromate of potash (the finer the powder the finer the grain) is dried at a temperature of from 30° to 70° Centigrade, according to the nature of the grain to be obtained.

As much has been written about the platinum process, let us say a word about the

ore of Russia. The mines are situated in the Uralian mountains at Bogoslowsk, Minsk, and in a few other places. They were discovered in 1824; and, latterly, one hundred parts of the sand yielded about one and a half parts of metallic platinum. This last is sold, at Paris and London almost exclusively, at about 350 francs per pound. The crude metal contains many other substances. An analysis made by Le Play of a sample coming from Nischnei Tagilsk, gave him: Platinum, 75.1; palladium, 1.1; rhodium, 3.5; iridium, 2.6; osmiridium, 6; osmium, 2.3; gold, 4; copper, 1; and iron, 8.1 per cent. The other localities are Brazil, Columbia, San Domingo, Borneo, and, recently, North Carolina, and Point Oxford, California, have yielded small quantities. Formerly the Russian mines gave only from 1 to 3 parts of metal for 3700 of sand.

THE manufacture of bichromate of soda does not seem to be entirely free from difficulties, if we are to judge from a patent recently given to Messrs. Carlile & Park, the object of which is to obtain the salt in the form of non-deliquestent anhydrous crystals. The solution is concentrated until the hydrated salt melts in its own water; it is then heated by steam in a vessel with double bottom and sides, and furnished with a mechanical agitation. The steam is heated to a temperature which should not exceed 392° Fah.; the fluid is constantly agitated until

the water is eliminated, and the salt forms a mass of crystallized anhydrous grams.

A SIMPLE, practical, and, consequently, important discovery, has just been communicated to the Chemical Society of London, by Mr. E. H. Francis; it relates to the action of nitric acid on paper. The author found that by plunging filtering paper into nitric acid of a density of 1.42, then washing it in water, this paper becomes much stronger. It may even be washed and rubbed. By this operation it has not lost its porosity, and may still be used as filtering paper. A strip of ordinary filtering paper one inch wide, breaks if, when held by the two ends, a weight of from three to five ounces is placed in the middle; but when treated as above with nitric acid, this same paper will bear about three pounds and three-quarters before giving way. It is easy to understand that a paper thus treated may find many applications, but it is possible that this treatment may render it very inflammable, to which the author does not allude, and then there would be some danger in storing it. It remains to be seen also if, with time, paper thus treated is not liable to change. The parchment paper obtained by means of monohydrated sulphuric acid, diluted with one-half of its volume of water, is no longer sufficiently porous for filtration, although it is used as a membrane in dialyzers.

Editor's Table.

We have to run extra pages again this month and yet matter in type must be laid over.

AFTER MANY DAYS.—We have received from PROF. J. H. C. COFFIN, U. S. N., Superintendent of the *Nautical Almanac*, Washington, D. C., a copy of the "Reports of Observations of the Total Eclipse of the Sun," August 7, 1869. It covers 160 pages, accompanied by ten full page plates, and one enlarged photograph. As we stood at the telescopic camera on the eventful occasion named, we made notes of what we saw, and gave our readers a full record at the time, with four photographs. The Philadelphia Photographic Expedition reports cover forty pages

of the work. The party were all volunteers, and are all yet alive, we believe, but two, Messrs. WILLARD and KENDALL. Prof. HENRY MORTON was our chief. The coming of the report, though late, is none the less welcome, and verifies the injunction, "Cast thy bread upon the waters, for thou shalt find it after many days."

MR. A. E. DUMBLE, Rochester, N. Y., has favored us with copies of that *recherché* picture of a Negro Young Miss, that gave color to his exhibit at Buffalo. Photographically, it is beyond question the best *colored* picture we ever saw, and as full of snap, and vim, and life, and nature as it can well be.

A good offer is made and correspondence solicited by Mr. M. P. BROWN, Tecumseh, Mich. This might be seen by some one who would want just such a place. Gallery and residence are all on the ground floor, built of brick, warmed with a furnace; a pleasant and attractive home and business all together. If you are looking for a location, this one is worthy of attention.

THE P. A. of A. Constitution is a queer one. The newly elected officers cannot serve until January.

PICTURES RECEIVED.—From Mr. B. W. KILBURN, Littleton, N. H., we have received several views of the track of the great avalanche which took place near Jefferson, N. H., in July. From Mr. J. MITCHELL ELLIOTT, Germantown, Pa., an excellent view of the Exhibition Hall at Buffalo, and another of the Natural Bridge, Virginia. The former is very satisfactory, and the latter is, we think, the best we ever saw of the subject. Mr. MITCHELL is one of our youngest and most enthusiastic amateurs, and is entitled to great credit for his results. Mr. H. McMICHAEL, Buffalo, N. Y., has favored us with boudoir photographs of himself, his wife, and his two children (Master CLARENCE R. and Miss BEATRICE), who were so useful and such favorites at the late Convention. Mr. H. P. EGGERT, Bethlehem, Pa., has sent us the best *Kitten* pictures of the season. Miss Maltie, in the first picture, is looking out from her basket at some flowers; in the second, she has one of her paws upon the flowers, and there she pauses—and such cat's eyes we never saw, so full of diabolical cuteness, and so sharply caught. The pair are immense. From one of our East India subscribers, Mr. MERSOO DEWJEE POOPAL, Ahmednuggar, India, we have received a roll of exceedingly interesting pictures, consisting of native groups, portraits, views, elephants, and a likeness of himself turbaned for his work in the atelier. The quality of his pictures is admirable, and would put to shame some of the "Cheap Johns" of America.

MESSRS. A. M. COLLINS, SON & Co., 527 Arch Street, Philadelphia, have just issued a new and neat price list of their card stock.

A SPLENDID CATALOGUE.—The most unique and beautiful of all the catalogues has just been issued by the SCOVILL MANUFACTURING Co., Mr. W. IRVING ADAMS, Agent, New York. It contains 190 pages of tastefully printed matter,

elaborately illustrated with engravings of almost every piece of apparatus known in the art. How photography grows is more marvellously proven by this catalogue than in any other way. Few who consult it will ever understand the amount of labor and money it cost to produce, and yet every photographer will find it most useful.

THE Novelties Exhibition, to be opened in this city by the Franklin Institute, September 15th, will afford our craft an excellent opportunity of showing the world the new things in our art. Circulars and copies of the *Bulletin* may be had on application to the Secretary, south Seventh Street, Philadelphia.

MR. JOSEPH ZENTMAYER, the eminent optician, has removed to No. 201 South Eleventh Street, Philadelphia, and, besides his famed lenses and microscopes, has added spectacles and eye glasses to his manufactures.

THE BLAIR TOUROGRAPH AND DRY-PLATE Co., Boston, desire our readers all to notice and read the changes in their advertisement on our cover this month. Their reversible back camera improved is a model of beauty. It attracted a great deal of attention at the Buffalo Convention. The "feather-weight" holders will suit the most indolent, and please those ambitious to carry many plates.

A GOOD WORD FOR THE P. A. OF A. AND COMPANY.—Of the many trade associations that hold annual conventions there is none, probably, that is more practical and useful to its members than the Photographers' Association of America. The members generally hold their summer meetings in some city offering special attractions for a holiday jaunt, but they settle down to business promptly, and always manage to have an exhibition of pictures and papers of interest to the profession to be read and discussed. The meeting of this year was held at Buffalo last month, and papers were read on many subjects of technical interest. These, with the discussions, are fully reported in the August number of the PHILADELPHIA PHOTOGRAPHER, which has been enlarged in order to admit the large amount of matter furnished by the Association. The report occupies fifty closely printed pages, and there is scarcely a line in it that does not relate to the experiences of skilled photographers in the manifold operations of their art. THE PHOTOGRAPHER for this month contains as its illustration an admirable portrait study by Gutekunst.—*The Public Ledger*, Philadelphia.

VOIGTLANDER LENSES.—Our annual conventions and exhibitions would be incomplete if the attendants could not regale themselves with the examination of the world-famed lenses of VOIGTLANDER, and hear their qualities pronounced by Mr. W. A. FRENCH. We all miss the genial face of his father now, but he is attending to the wants of the craft at *headquarters*, all the same. The exhibit this year was fine, and we all know that no matter how many other lenses we have, we must have one or more Voigtlanders to keep steady. Some twenty-five eyescopes were ordered by one house lately.

SEE "Our Picture" this month.

MR. GEORGE H. RIPLEY has succeeded Mr. ROCKWOOD in the manufacture of the "Rockwood" Dry Plates, and asks a fair trial of them. He guarantees every plate. 261 West Forty-third Street, N. Y.

MR. L. C. OVERPECK, Hamilton, O., returned from the Convention with a splendid AMERICAN OPTICAL Co. camera, which he had on exhibition with the first camera he ever used. The contrast was wondrous—the comparison odious—for the old camera.

MR. G. GENNERT, 54 East Tenth Street, New York, has just returned from Dresden, where he has been arranging for the coming year's supply of the celebrated brand of "Eagle" paper. It has had a wonderful sale in this country, and the demand increases steadily. Somehow we do not get the tones secured by the German photographers who exhibited at the Buffalo Convention, and so astonished us all, but we believe it will be done on the "Eagle" by all who know how to try.

A FINE treat ahead for our subscribers, namely, examples of work as "Our Picture" by both of the German photographers who took the prizes at Buffalo. The first series will appear in our October issue. They will arouse a sensation.

MOsaics, 1886.—Hear ye! all good and would-be useful operators. Your pointed and practical articles for 1886 *Mosaics* are now due. Please send them early, lest you be crowded out. A free bound copy to all contributors.

N. P. A. PAPER.—More than the passing allusions given to it monthly in "Our Picture" are due to this admirable brand of albumen

paper. Our embellishments speak splendidly for it, and especially this month, with the Stanley plates to back it. All we can add is our testimony to the ease with which the paper is worked. We have had to print the immense quantity needed for our current issue, all through the hot August weather, and found the N. P. A. to "keep" most satisfactorily. All dealers have it for sale.

MR. W. G. ENTREKIN'S two pages of advertisements must all be read again this month.

The new burnisher is a jewel. See "Our Picture." The new *print-cutter* is a power we have all devoutly wished for, and it works exactly. Any dealer can show you these useful tools.

ALL.—In one issue, by adding 20 pages to our usual quota, we give, in August number, to our subscribers *first, before all other magazines, the entire proceedings* of the Buffalo Convention, with every paper read there. No other magazine does this, and buyers who understand the convenience of having the whole thing in one volume will appreciate our efforts in their behalf by ordering the extra copies they want soon. A few only left. We will mail copies at 50 cents each. Discussions and lectures by such men as MESSRS. CRAMER, INGLIS, COOPER, MAWDSLEY, CARBUTT, RYDER, HURD, ASHMAN, TAYLOR, CARLISLE, WILSON, and other red and orange and green lights in our art, make up a very valuable volume.

WHAT A PACIFICER THINKS OF OUR MAGAZINE.—I have this day ordered a continuance of your PHOTOGRAPHER through the SCOVILL MFG. Co., and hope it will reach you in due time. I see you club together the same as last year, so sent to them this time, which I hope is correct.

THE PHOTOGRAPHER is an ever welcome visitor, for it always brings us something new. No enterprising photographer can afford to be without it, for its pages are full of information, repaying the cost a hundred fold. I have tried the "New Friend," and am fully satisfied with it, and use it altogether.

My advice to the "Wet Foggy" is to come to the "dry" and be happy, for dry plates are, beyond a doubt, the photographers' friend.

Yours, respectfully,

THOMAS A. LEY.

WOODLAND, YOLO Co., CAL.

THE Photographic Society of Great Britain opens its 1885 Exhibition October 3d.

PICTURES RECEIVED.—MR. H. P. ROBINSON, of Tunbridge Wells, England, has sent us a beautiful composition picture, which, like all his work, is characterized by a chaste and artistic presentation of the subject. The question has often been asked, Why do we see so few composition photographs? Is it more difficult to tell a simple story by the aid of the camera and sensitive plate than with the palette and the brush? There are so many difficulties attending the conception and bodying forth of a story or incident that few are willing to undertake the task, for fear their attempts may be roughly criticised by the painter. To be candid, many of the attempts deserve no better fate. The failure springs from the too great ambition of the photographer, from the desire to do something which belongs solely to the province of the painter, and to which photography should not aspire, such as the portrayal of passion or emotion, which, from the intense realism, cannot help becoming sensational; but, for the representation of simple domestic scenes or incidents of every-day life, photography can, and has, produced charming results. Indeed, the artistic ability of either the painter or photographer is in the measure of his manner of treatment of simple subjects. The most familiar domestic scene becomes ennobled by the touch of true art. Mr. H. P. ROBINSON'S conceptions are always pervaded with that refinement of feeling which takes actual delight in what it portrays, and the feeling which it engenders is contagious. There is such an utter freedom from all affectation, a charming, natural simplicity in the arrangement of the parts which seems independent of rule, but never violates any established principle of art, because their principles are the ministers to effect, not its rulers. Mr. ROBINSON never astonishes us by any novelty in presentation. All that he gives seems to be actual transcripts from nature. It is only when we study the individual parts that we are convinced that nothing is introduced which does not add to the general effect, and that all the parts harmonize to produce a pleasant impression. The picture which he has had the kindness to send us is 20 x 24 inches in size, entitled, "Hope Deferred." It represents a scene in an old-fashioned kitchen. A roguish boy, full of life and spirits, is seated upon a stool in a way in which nobody but a boy would sit; in front of him stands a dog, eager to secure the piece of bacon which is held out to him in a tantalizing manner; expectancy is in the very attitude of the animal. The arrangement of the light and shade in this picture is superb. The principal light comes in from a

window, illuminating a number of flowers in pots upon the sill and table in front. Glinting off from the edge of the table, it strikes with a beautiful softness upon the face of the boy and the fur of the dog, lighting up the old stone mantelpiece and the fringe of the hangings on the shelf above, blending softly until the dark portions of the room are lost in the deep shadows. We do not remember having seen any photograph in which the contrasts of lights and shadows are more beautifully managed. The whole picture is upon a single plate, and not a combination photograph. We have received from E. B. LUCE HINCKLEY, Illinois, a number of cabinet and card pictures, well lighted and of excellent finish. Mr. A. W. MANNING, Medina, Mo., sends us a curious photograph of a flash of lightning. It is the best of the kind we have seen.

WE are always gratified to know that our labors to secure for the profession the most valuable photographic literature in the pages of our journal are appreciated and acknowledged. Our journal travels all over the world, and wherever it goes it is a welcome friend, which encourages us in our endeavors to keep it up to the high standard it has attained. We quote a portion of a business letter from Mr. J. R. Hanna, of Auckland, New Zealand:

MR. WILSON.

DEAR SIR: Many thanks for your promptness in replying to my queries. . . . I am pleased to be able to inform you that I get the PHOTOGRAPHER regularly. It is all you claim for it: in fact, it is the best publication out. There is only one drawback, and that is no fault of yours: the very fine specimens of photography it contains get much broken coming through the post.

Yours, truly,

J. R. HANNA.

Not only "shores afar, remote" appreciate the high character of our journal, but we are also honored in our own country and amongst our own people. The Philadelphia *Public Ledger* writes:

THE PHILADELPHIA PHOTOGRAPHER for July, published by Edward L. Wilson, has for its illustration a picture of Horticultural Hall, at the New Orleans Exhibition, taken by the electric light. It is a weird and beautiful scene, somewhat marred, however, by the sunlike electric lights blotting out portions of the picture. Each lamp has a halo of light around the glass globe, but the most curious feature is a black dot in

the centre, where one would look for the highest light. The intensity of the light there centred has produced a positive upon the glass, instead of a negative. The magazine is full of good and useful reading matter, including a further account of the photographic exhibits at New Orleans.

The Photography of Colored Objects in the right proportions of their colors or tone value, and Manual of the Color Sensitive (isochromatic or orthochromatic) Process.—Of late years there has been a revolution in photography, brought about by the stimulus which Dr. Vogel gave by the discovery, in the year 1873, of the fact that the addition of dyes to bromide of silver made it sensitive to green, yellow, and red rays of light. These experiments, and others which the Doctor has since made, have been confirmed by other experimentalists, so that productions from oil paintings and from highly illuminated prints, the work of Dr. Vogel, Eder, Ives, and others, which have been forwarded to us, present in a wonderful manner the gradation of tints of those colors which by the old process impressed themselves in one uniformly dark tint without shade or variety. It is therefore with pleasure that we can recommend the new work by Dr. Vogel upon this very important subject. Many celebrated photographic establishments in Germany and Austria have adopted the new process, and are making grand results. Dr. Vogel's work is written in his usual clear and practical style, and bears upon every page the evidence of careful and earnest study and investigation. The principles from which the process is evolved are first laid down, and the deficiency of the old method stated. A description of the various instruments is next given for the study of color sensitive films. Experiments with various dye-stuffs, together with recipes, follow: eosine, of necessity, receiving a special notice. The wet and dry method of the color sensitive process are explained, and methods for practical application. The whole work is especially valuable at this time, and will be read with interest by every one who is anxious to know the progress which has been made in this new departure. The book contains a chromo lithograph, and reproduction by the old process and by the new. A glance at the latter will convince any one of the importance of the step which isochromatic photography has made. The book is published in German by Robert Openheim, in Berlin.

A QUESTION SETTLED.—The Eastman Dry Plate and Film Company have been given a

gold medal, the highest award of the International Inventions Exhibition at London for their display of photographic negative paper and roll holders. The photographs were from the paper negatives, by Mr. J. H. Kent, shown at Buffalo. This disposes of the question as to these inventions being *new*.

BOOKS RECEIVED.—DR. H. W. VOGEL, whose great and important discoveries in isochromatic photography are at present exciting the attention of the artistic and scientific world, has favored us with the results of his labors in the shape of a book of 150 pages, entitled, *Die Photographie Farbigter Gegenstände in den richtigen Verhältnissen und Handbuch der farbenempfindlichen (isochromatischen oder orthochromatischen) Verfahren*. No. 3 of *The Camera, Field, and Book*, devoted to photography and studies of nature, published at Bristolville, Ohio, contains a number of well-written articles, and is altogether an excellently conducted magazine. It is the intention of the editors and publishers to enlarge its size. We predict its success.

A FAMILY OF LIGHTNING STREAKS.—MR. W. N. JENNINGS, of this city has caught not only one streak, but a fearful one, with a family of smaller ones emerging from it at an angle downwards like the tributaries of a river. This sky-serpent was caught at 10.30 P.M., August 1st, after many trials. It was Jersey lightning, strong enough to illuminate the housetops also well gathered in. Very marvellous.

SCOVILL MANUFACTURING Co., New York, are not forgotten by the members of the P. A. of A. for the beautiful emblematic gilt badge presented to each due-payer, are they? We turn to thank them for it and for the "Times" Match Box.

THE English photographic journals copy the Convention papers. The *British* gives them entire. The *News*—we don't know what you call it.

A GOOD EXAMPLE.—MR. J. F. RYDER, Cleveland, O., permits—may asks us to say, that much of the excellence of his Convention Exhibit was due to the skill and interest of his portrait operator, Mr. R. P. BELLSMITH, and his outdoor operator, Mr. W. J. WHITE, both of whom were at the Convention.

Specialties.

MAKE OUT YOUR OWN BILL, and remit cash with your advertisements, or they will not be inserted.

ADVERTISING RATES FOR SPECIALTIES.—Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to *secure* insertion. Advertisers will please not ask us for recommendations. ~~We~~ We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement. **Postage-stamps taken.**

SEAVEY'S NEW YORK NOVELTIES.

FALL SEASON.

OUR small size (6 ft. x 8 ft.) interior and exterior backgrounds for full and $\frac{3}{4}$ lengths, at from \$9.60 to \$14.40, have struck the popular taste.

They are new in design, quiet in tone, first class, and different from any before offered.

For further description, see last month's advertisement. Send for samples. For the fall season, orders should be given now.

LAFAYETTE W. SEAVEY,
216 E. Ninth St., N. Y.

FOR SALE.—Gallery in the town of Warrenton, Va., county seat of Fauquier County. Population, 1600. No opposition. Address

OTIS BARKER,
Warrenton, Va.

WANTED.—The address of Platt Bros., formerly at 1126 12th St., Washington, D. C.

C. H. SCHOFIELD,
Utica, N. Y.

WANTED.—A good, wide-awake photographer, to take half interest in a well paying gallery. Good references required and given. For particulars, address

A. H. NOYES,
Jefferson, Wis.

ADDRESS T. W. POWER, N. Y., Secretary of Association of Operative Photographers of New York City, for operators, printers, and retouchers 392 Bowery, or 437 Eighth Avenue.

ROCKWOOD SOLAR PRINTING CO.

17 Union Square, New York.

TIME.—It is our intention that every order received in the morning's mail (when not to be put on stretchers) shall leave this establishment the same day or the following morning. If too late for the morning work, it is sent on the second day. Having our own engine and electric light, *we are not at all dependent on the weather.*

GEORGE H. ROCKWOOD,
Business Manager.

W. F. ASHE ARTISTIC BACKGROUNDS AND ACCESSORIES,

REMOVED TO 68 WEST FOURTH ST.,
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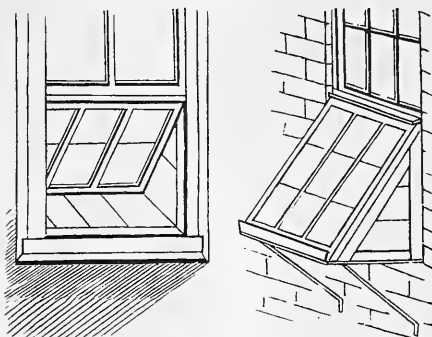
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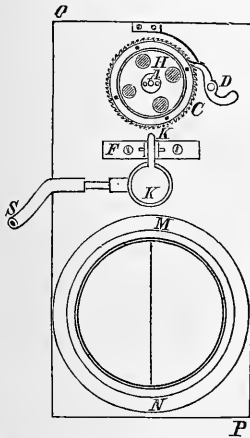
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
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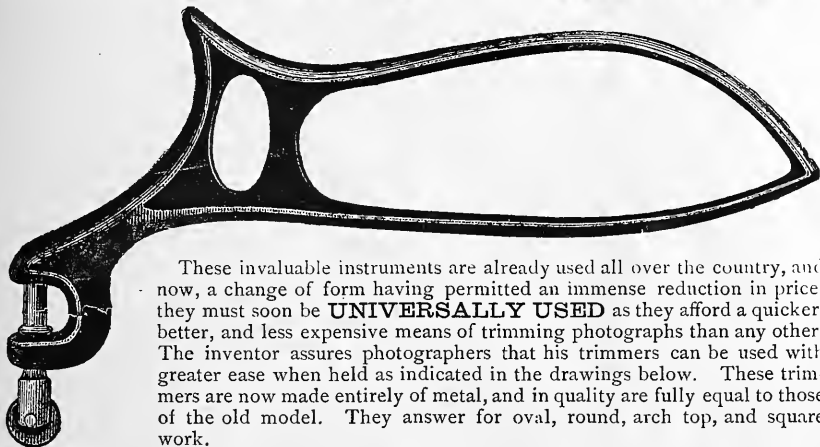
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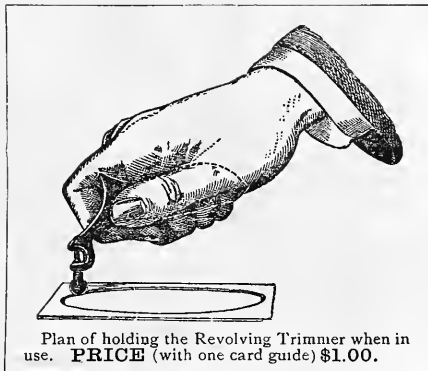
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2 $\frac{1}{2}$ x 3 $\frac{1}{2}$	2 $\frac{3}{4}$ x 4 $\frac{1}{4}$	3 $\frac{1}{8}$ x 5 $\frac{1}{4}$	3 $\frac{7}{8}$ x 6
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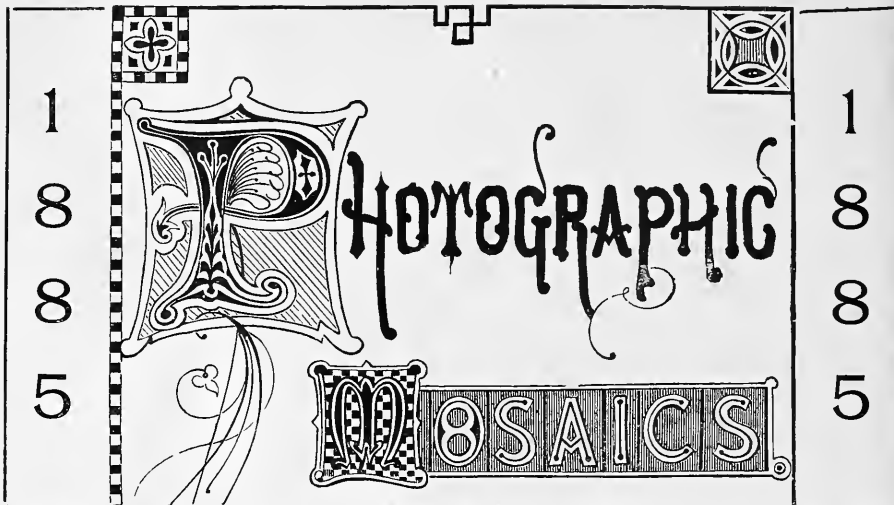
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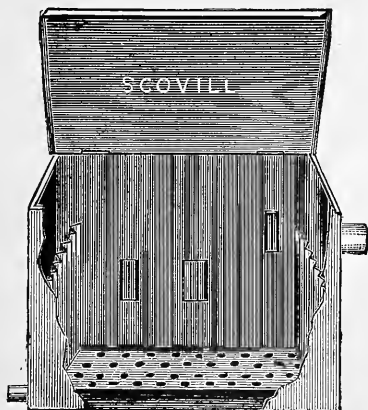
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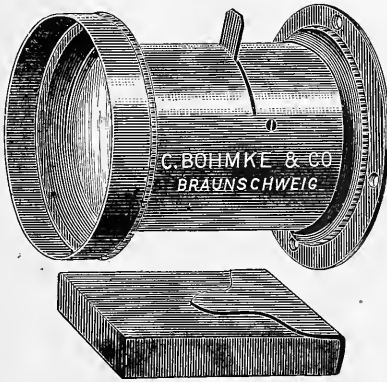
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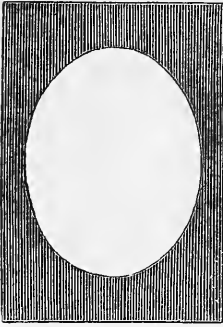
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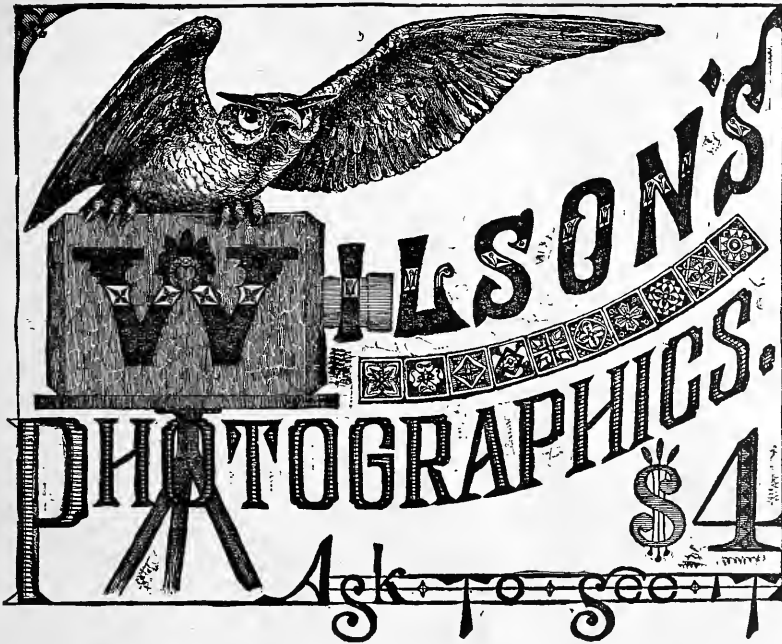
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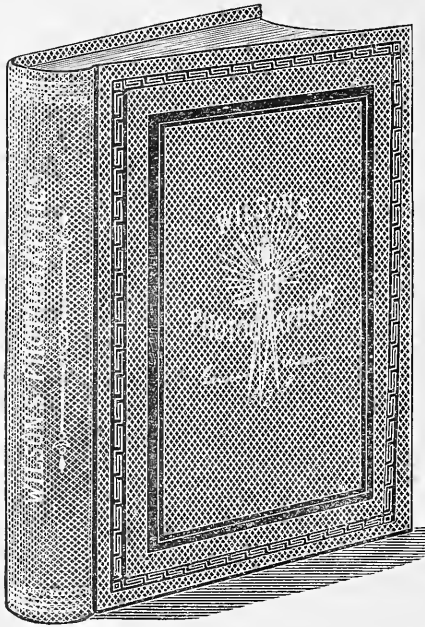
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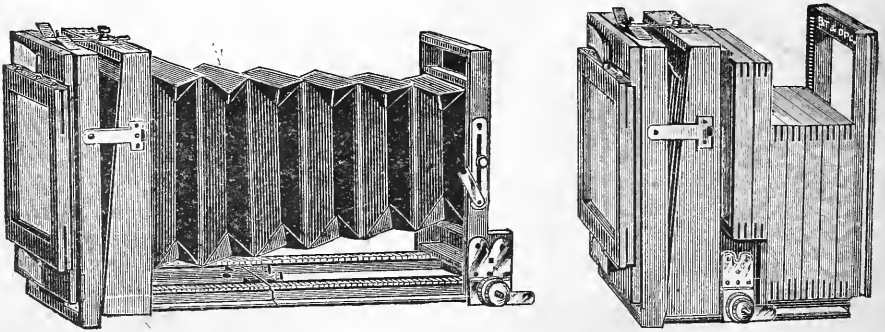
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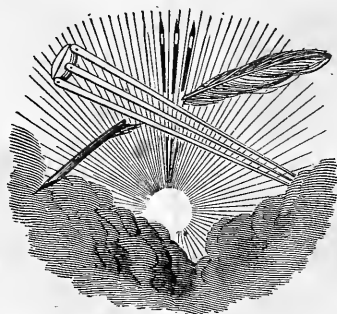
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* May be had in pairs of exactly equal focus, for Stereoscopic purposes, at \$60 per pair.

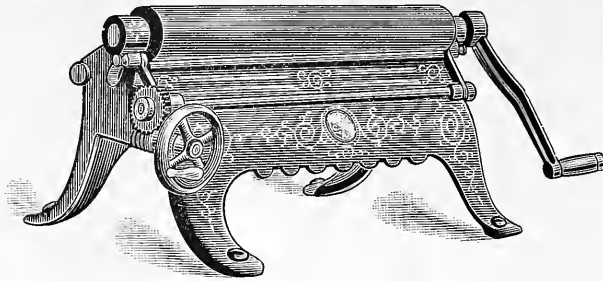
No. 1*	1 1/4	6 1/4	5 x 4	Small Stop.	\$30 00
" 2.	1 1/2	6	6 x 5	30 00	
" 3.	2	11 1/2	8 1/2 x 6 1/2	40 00	
" 4.	2 1/2	15	10 x 8	50 00	
" 5.	3 1/4	18	13 x 11	78 00	
" 6.	4	21 1/2	15 x 12,	120 00	
" 7.	4 1/4	24 1/2	18 x 16,		
" 8.	4 1/2	27 1/2	20 x 18,		

A—Aplanatic Lenses for Portraits, Groups, Architecture, and Copying.

FAMOUS BUTTER LENSES.

OF THE
PRICES

ENTREKIN'S PATENT EUREKA BURNISHER.



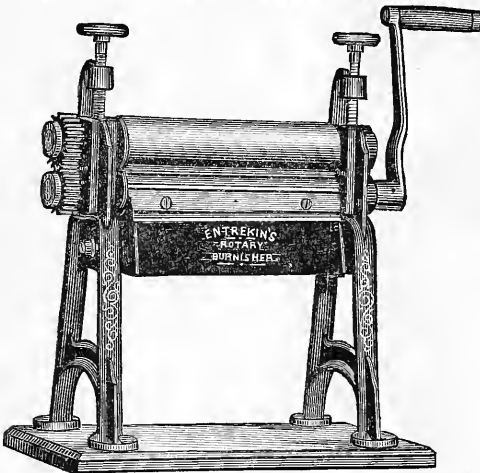
The above cut represents our 25 inch Eureka.

The unprecedented popularity of this Burnisher is wonderful. Over seventeen thousand (17,000) sold in less than five years. Agencies in London, Berlin, and Vienna, and sold by all stockdealers in the United States. The machines are built in first-class style, and warranted to do the work claimed.

Full directions accompany each machine.

PRICES:

6 inch Roll,	\$15 00	20 inch Roll,	\$60 00
10 " "	25 00	25 " "	70 00
14 " "	35 00		



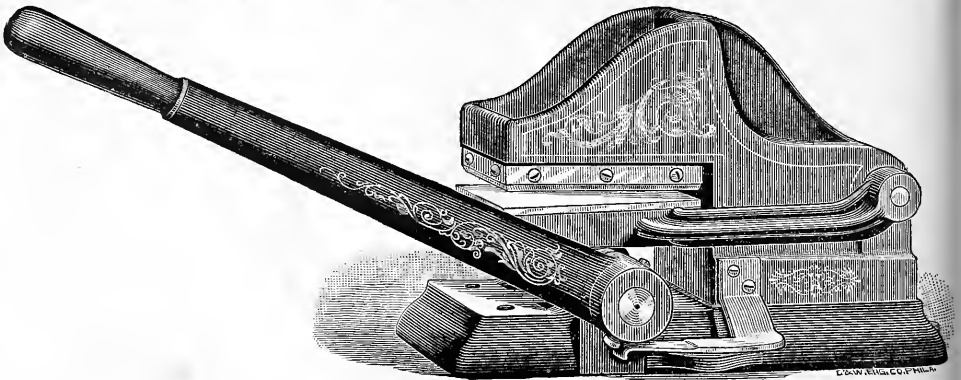
ENTREKIN'S Duplex Rotary Burnisher.

PATENTED JUNE 1, 1875.

PRICES:

10 inch,	\$15 00
15 "	25 00
20 "	35 00
25 "	45 00

ENTREKIN'S DUPLICATING PRINT CUTTER.



Cabinet and Stereo. Sizes, \$25.00

Small Panel Size, \$35.00.

Size 6½ x 8½, \$40 00.

MANUFACTURED AND FOR SALE BY

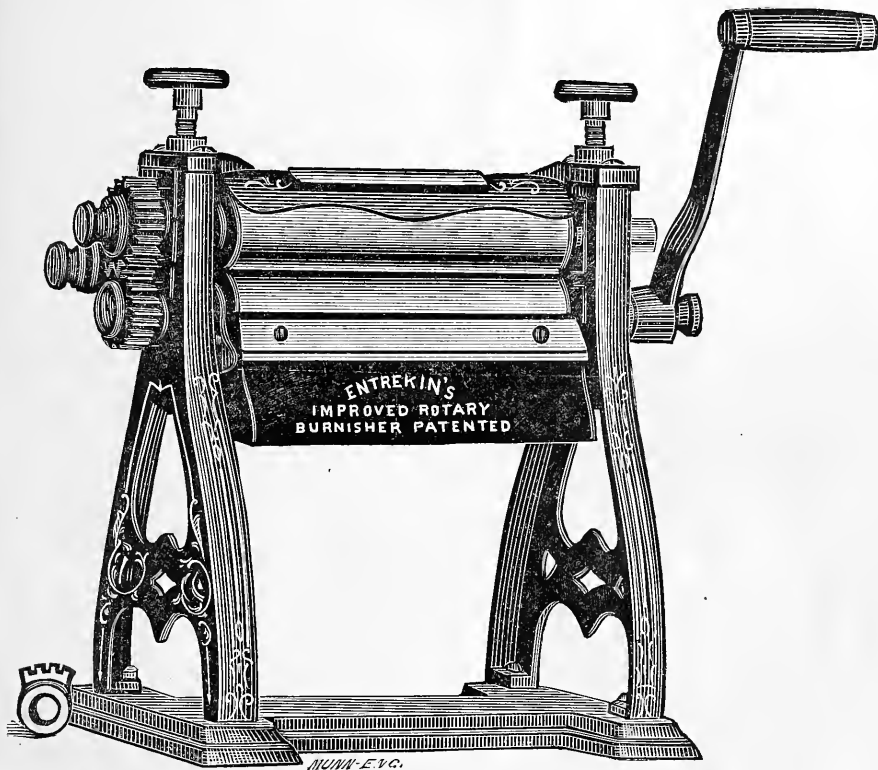
W. G. ENTREKIN, 4384 Main St., Manayunk, Philada., Pa.

ENTREKIN'S

IMPROVED

DUPLEX ROTARY BURNISHER.

PATENTED.



10 in., \$25.00. 15 in., \$35.00. 20 in., \$45.00. 25 in., \$60.00.

This Machine is an improvement on our old Duplex Rotary Burnisher, invented by us in 1874.

It is so constructed that by changing the Large Gear or Cog-wheel, from the stud to the end of the draw-file or upper roll, you reverse and change the speed of the lower or polishing roll, thus getting the same result as in the old Duplex Rotary; but to secure the best polishing surface, use the machine with the large cog-wheel on the Stud, by so doing you secure three times the polishing surface. All the machines will be sent out with gearing so arranged as to give this result. It is optional with the Photographer how he may use the machine. The Fire-Pan is so arranged that it is impossible for it to come in contact with the surface of the polished roll, and it can be turned away to cleanse the roll.

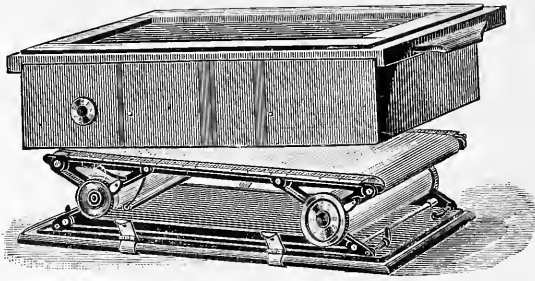
EVERY MACHINE WARRANTED PERFECT.

FOR SALE BY

W. G. ENTREKIN, Inventor and Sole Manufacturer,

4384 Main St., Manayunk, Philadelphia, Pa.

AND BY ALL PHOTOGRAPHIC STOCKDEALERS.



Send to the Eastman Dry Plate and Film Company
for full particulars of their New

PAPER NEGATIVE PROCESS.

NOW READY:

NEGATIVE PAPER, Cut Sheets.

NEGATIVE PAPER on Spools for Roll Holders.

ROLL HOLDERS, for Exposing Negative Paper
in the Continuous Web.

CARRIERS, for Exposing Negative Paper.

CUT SHEETS in Regular Sizes.

For Sale by all Dealers.

TRY THE COMING PROCESS.

THE EASTMAN DRY PLATE AND FILM CO.

ROCHESTER, N. Y.

THE

Eastman Dry Plate and Film Co.

NEGATIVE PAPER OUTFITS,

—FOR—

MAKING PAPER NEGATIVES IN ORDINARY HOLDERS.

CONTENTS:

2 Doz. Negative Paper.	1 8-oz. bottle Castor Oil.
1 8-oz. bottle Developer.	1 6-in. Vel. Rubber Squeegee.
2 Carriers, complete.	

5 x 8 Outfit, complete, with Carriers 1-8 inch
thick for Dry-plate Holders, put up
in neat box.

PRICE, \$3.50.

5 x 7 Outfit, complete, with Carriers 3-16 inch
thick for Wet-plate Holders, put up
in neat box.

PRICE, \$3.00.

FOR SALE BY ALL DEALERS.

The Following is of Interest to Every Photographer.



THE NEW N. P. A.

P E N S É.

We desire to call attention to our **NEW PENSÉ N. P. A.** Extra Brilliant Dresden Albumen Paper.

The manufacturers at Rives have recently many marked improvement in their celebrated paper, and all the sheets of this brand are **manufactured specially** for it, and are readily distinguished from all other papers by the **water-mark N. P. A.**

It is doubly albumenized by the **most experienced house** in Germany, with **new and improved** formulas, and we are confident that on trial it will be found **superior** to any other in market.

Its excellence has induced some unscrupulous persons to place the **STAMP on the Paper of other makers**, in order to work it off, trusting that photographers will not look through to see if the **water-mark** is there. To prevent this we have registered  This Trade Mark  in Washington, which will subject to heavy damages all those who stamp this brand on paper which does not bear the **water-mark N. P. A.** This Paper can be had also in **EXTRA-BRILLIANT N.P.A. DRESDEN. PINK, PEARL or WHITE.**

FOR SALE BY ALL DEALERS IN PHOTO. GOODS IN U. S. AND CANADA.

E. & H. T. ANTHONY & CO.,

591 Broadway,

NEW YORK.

N. B.—When any paper is offered to you at a low price, **Measure it.**

Also note whether it runs **Uniform**, for some albumenizers mix the first and second qualities, not discarding that which has defects, and thus get their paper cheaper.

Important Reduction

IN THE PRICE OF THE POPULAR

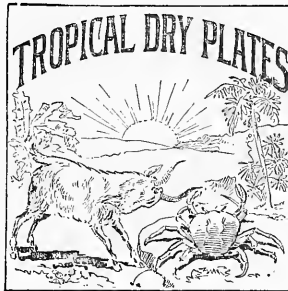
Stanley Dry Plates.

FOLLOWING IS THE REDUCED PRICE LIST:

3¼ x 4¼, per dozen,	\$0 45	10 x 12, per dozen,	\$3 80
4 x 5, "	65	11 x 14, "	5 00
4¼ x 5½, "	75	14 x 17, "	9 00
4¼ x 6¾, "	90	16 x 20, "	12 50
5 x 7, "	1 10	17 x 20, "	13 00
5 x 8, "	1 25	18 x 22, "	15 50
6½ x 8½, "	1 65	20 x 24, "	18 50
8 x 10, "	2 40		

These Plates have met with remarkable favor among both amateur and professional photographers, and the demand is much greater than could have been expected within the short time that has elapsed since their introduction. Their rapid rise to popularity is a sufficient evidence of their superior qualities, for with so many plates in the market, nothing but **INTRINSIC EXCELLENCE** could have brought them so suddenly into their conceded position of **THE BEST PLATES MADE.** **FOR SALE BY ALL DEALERS.**

IMPORTANT



DISCOVERY.

Tropical Dry Plates.

The only Dry Plates made that will **NOT FRILL** in water of any temperature, and can be *dried by artificial heat.* By their use the negative can be developed, fixed, and dried in a few minutes, enabling proofs to be taken from them at once. They are Rapid and Uniform, unsurpassed for softness and delicacy, and can be used in the *hottest climates.*

PRICES AS FOLLOWS:

3¼ x 4¼, per dozen,	\$0 50	10 x 12, per dozen,	\$4 00
4 x 5, "	75	11 x 14, "	5 85
4¼ x 5½, "	85	14 x 17, "	10 50
4¼ x 6¾, "	1 05	16 x 20, "	14 50
5 x 7, "	1 30	17 x 20, "	15 25
5 x 8, "	1 45	18 x 22, "	18 00
6½ x 8½, "	1 90	20 x 24, "	21 50
8 x 10, "	2 80		

E. & H. T. ANTHONY & CO.

Sole Agents.

NEW YORK.

CAN BE HAD OF ANY DEALER IN PHOTO. MATERIALS.

THE BEST AND THE CHEAPEST.

GREAT REDUCTION IN PRICES OF DRY PLATES.

FROM AND AFTER MAY 10, 1885, THE PRICES OF

Eastman's Special Dry Plates

WILL BE AS FOLLOWS:

$3\frac{1}{2}$ x $4\frac{1}{4}$	. \$0 45	10 x 12	. \$3 80
4 x 5	. 65	11 x 14	. 5 00
$4\frac{1}{4}$ x $5\frac{1}{2}$	. 75	14 x 17	. 9 00
$4\frac{1}{4}$ x $6\frac{1}{2}$	. 90	16 x 20	. 12 50
5 x 7	. 1 10	17 x 20	. 13 00
5 x 8	. 1 25	18 x 22	. 15 50
$6\frac{1}{2}$ x $8\frac{1}{2}$	. 1 65	20 x 24	. 18 50
8 x 10	. 2 40		

Eastman Special Dry Plates give the best chemical effects, and photographers are invited to compare them with any other plate in the market for **Brilliance**, **Roundness**, and **Quick Printing**.

Owing to improvements made from time to time, and the extreme care exercised in every detail of their manufacture, these plates are **quick**, **clean**, and **uniform**.

Only the best English glass is used. No cheap French glass, such as is employed in inferior plates. Try them and you will use them.

FOR SALE BY ALL DEALERS.

MANUFACTURED ONLY BY

THE EASTMAN DRY PLATE AND FILM CO.,
ROCHESTER, N. Y.

BENJ. FRENCH & Co.

No. 319 WASHINGTON STREET, BOSTON,

Sole Agents in the United States for the Celebrated Lenses
Manufactured by

VOIGTLÄNDER & SON.

ALSO, THEIR FAMOUS

EURYSCOPE,

Which is unrivalled for groups, full-length figures, and other demands in the gallery, and every species of out-door work, including instantaneous photography.

 **THE EURYSCOPE** is made *exclusively* by Voigtländer & Son, and their name is engraved on the tube.

FOR **DARLOT LENSES** FOR
PORTRAITS. VIEWS.

IMPORTERS, ALSO, OF THE CELEBRATED

TRAPP & MÜNCH

ALBUMEN PAPER,

AND DEALERS IN ALL KINDS OF

Photographic Materials and Magic Lantern Slides.

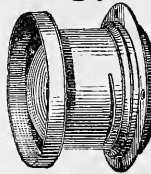
SEND FOR OUR NEW ILLUSTRATED PRICE LIST OF LENSES

BUY THE BEST!

No other will give you half so much satisfaction.

FOR DRY PLATES
ANTHONY'S Patent Perfect PLATE HOLDERS
ARE SUPERIOR TO ALL.

DALLMEYER



FOR WET

OR DRY

WIDE-ANGLE RECTILINEAR

E. A.
SINGLE COMBINATION, RAPID,
WIDE ANGLE, PLATYSCOPE,
PORTRAIT AND VIEW LENSES.

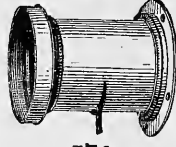
DALLMEYER LENSES,
SUCCESS CAMERAS,
THE FAIRY CAMERAS,
THE NOVEL CAMERAS,
SCHMID'S DETECTIVE CAMERA

APPARATUS OF ALL KINDS.

Chairs,
Neg Boxes,
Camera Stands
Printing Frames,
Etc., Etc.

SEND
FOR OUR
CATALOGUE,
AND GET
THE BEST
Of Everything.

DALLMEYER



NOTHING

COMPARES

RAPID RECTILINEAR



THE FAIRY CAMERA.
The Lightest and Best for Out-door Work.

FOR WET PLATES
NOTHING EQUALS
THE BENSTER PLATE HOLDER.

O. I. C.
PORTRAIT, COPYING, CLIMAX
PORTRAIT, GEM, AND
COMPACT VIEW CAMERAS.

E. & H. T. ANTHONY & CO. BROADWAY, NEW YORK.

BOOKS!

The amateur and his old friend, the daily worker, are well taken care of in the literature line, and we ask their attention to the following list, which includes about everything there is need for. There is, in fact, a treatise on every branch of photography.

The Philadelphia Photographer. A monthly magazine, illustrated by photographs of superior merit. \$5 a year; \$2.50 for six months.—Stands ahead of all its kindred. Twenty-one years of success is a sufficient guarantee of its value and use to the practical, working, growing photographer. Do not go without its valuable help.

The Ferrotyper's Guide. Price, 75 cents.—Cheap and complete. For the ferrotyper this is the only standard work. Seventh thousand.

Pictorial Effect in Photography. By H. P. Robinson. Cloth, \$1.50; paper cover, \$1.—For the art photographer.

Wilson's Photographics. The newest and most complete photographic lesson-book. Covers every department. 352 pages. Finely illustrated. Only \$4. By Edward L. Wilson.

Wilson's Lantern Journeys. By Edward L. Wilson. In three volumes. Price, \$2 per volume.—For the lantern exhibitor. Gives incidents and facts in entertaining style of about 2,000 places and things, including 200 of the Centennial Exhibition.

Studies in Artistic Printing. By C. W. Hearn. Price, \$3.50.—Embellished with six fine cabinet and promenade portrait studies.

The Photographic Colorists' Guide. By John L. Gihon. Cloth, \$1.50.—The newest and best work on painting photographs.

Photographic Mosaics, 1885. A year-book. Cloth bound, \$1; paper cover 50 cents. Better than any of its predecessors.—Back volumes, same price.

The Photographic Amateur. By J. Traill Taylor. A guide to the young photographer, either professional or amateur. Price, 50 cents.

The Art and Practice of Silver-Printing. By H. P. Robinson and Capt. Abney, R.E., F.R.S. Price, 50 cents. Illuminated cover. Cloth bound, 75 cents.

Photography with Emulsion. By Capt. W. De W. Abney, R.E., F.R.S. Price, \$1 per copy.

Twelve Elementary Lessons in Dry-plate Photography. Price, 25 cents per copy.

The Modern Practice of Retouching. Price, 50 cents per copy.

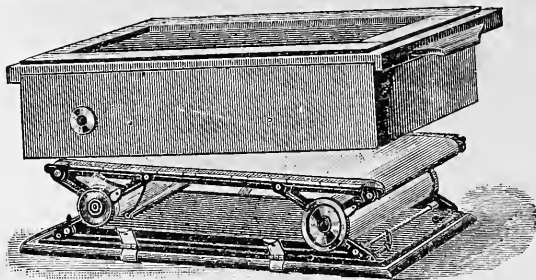
The Progress of Photography. By Dr. H. W. Vogel. A splendid helper to all workers. Price, \$3.

Picture Making. By H. P. Robinson. Cloth, \$1. Paper, 50 cents.

All orders for above will be filled, free by post, on receipt of price at the office of this magazine.

EDWARD L. WILSON, Photo. Publisher, 1125 Chestnut St., Phila.

Highest Award at the London International Inventions Exhibition.



THE SUCCESS OF PAPER NEGATIVES.

OPINIONS OF THOSE WHO HAVE USED THEM.

DEAR MR. EASTMAN:

NEW YORK, August 13, 1885.

The impossible is attained. It has been claimed that in the efforts to make full life-sized portraits, so many difficulties of both optics and chemistry presented themselves that practical successes were hardly to be hoped for. The results exhibited rather sustained the proposition, but your Improved Negative Paper solves the problem. I have just made a *life-sized negative—full time in fifteen seconds*, with 27 x 22 Dallmeyer Rapid Rectilinear, one and a half inch stop—the focus or rays of light being sixty inches long. This under a sky-light with no side light and one of friend Kent's head screens between the light and the sitter.

After exhausting my present stock of plates, I shall use the negative paper for all pictures larger than 8 x 10. Your invention is the beginning of a new era in photography.

Yours very truly, GEO. G. ROCKWOOD, 17 Union Square, N. Y.

As I was the first to use your plates in New York, so I am the first to use your *paper* commercially.

THE EASTMAN DRY PLATE AND FILM CO.

GENTLEMEN: Your letter of June 20th and the Roll Holders came here just after my departure for an extended trip East. I am now back, and upon the first opportunity, gave the holder and paper a trial. To say that I am pleased with the working of both holder and paper is expressing myself very mildly. The ease of manipulation is something wonderful; the adjustment of the spool of paper to the holder takes but a few moments; the registry of each successive length as it is brought into position, is perfect; the weight of the whole apparatus is an unconsidered trifle. When home again, the spool of exposed paper is removed in about "one time and two motions," as military parlance would have it, and a pair of shears clips off each length; a slight moistening lays the paper flat and smooth on the bottom of the holder and development proceeds in the easiest manner imaginable. To enable the out-door photographer to appreciate all the advantages of the paper process, let him bring to mind the trials and suffering incident to the use of glass plates. Say he has twelve 5 x 8 holders carrying twenty-four plates; these, with the necessary carrying cases, weigh about twenty pounds. The Roller Holder, with the same amount of material weighs three pounds. Each plate has to be handled with all the precautions necessary to guard against light. It is very, very seldom that one can fill twelve holders without coming across several refractory plates, too thick or too wide, or something to provoke profanity. Then, if he has to carry all these about the country during a hot day, let him think of the single holder of feather weight; then when he gets home some plate will stick, and he will either pull his finger-nails off or break a plate in getting them out. Glass plates require grooved boxes for washing, and it is often a problem in developing up a big day's work, to find places for all his plates. The paper films are all washed in one tray, and there is no danger of the accidental abrasion of the surface that happens so frequently to glass plates.

In fact, I might go on interminably in speaking of the advantages that paper enjoys over glass. They prove the advantage in every single count up to the final operations of printing. On this point we have not had enough experience to speak with assurance: but I see nothing, so far, that would lead me to prefer glass to paper. Most surely there will be no breakage to apprehend, and that one advantage alone is priceless. I have apprehended trouble with the grain of the paper, but if the negatives are only made vigorous, there is no trouble on that score—even in such small work as the "stero." the grain is not visible.

I send you a proof of both cabinet and stero. sizes to show you my success with the very first lot used. I shall look forward with much interest to your experiments with holders for larger sizes. I shall want one for 18 x 32 soon as practicable; and in the meantime send me a **couple of dozen five-inch spools** as soon as ready. When will you be ready to undertake a 7 x 11 holder for me? I am a thousand times obliged to you for the new power placed in our hands whereby our labors are made sport. *Truly our day of deliverance has come.*

Yours truly, W. H. JACKSON, Denver, Colorado.

USE



USE

Is liable to break his Ground Glass, and to have no ready means of supplying a new one. This article focused upon plain glass will make a capital substitute.

ANY PHOTOGRAPHER

HANCES
GROUND GLASS
Substitute.

Manufactured only by
ALFRED L. HANCE,
PHILADELPHIA.

AS A RETOUCHING VARNISH;

For making Ground Glass wherever needed; for Doors; for Skylight; for Camera Boxes, it has no equal. Good Ground Glass is hard to get; this Substitute never fails.

BATH.
Nitrate of Silver Cryst. 35 grs.
Water 1 OZ.
Iodide of Silver Near Saturation
Slightly acid with Nitric Acid. C.F.

ELBERT
ANDERSON'S
NORTON
COLLODION

DEVELOPER.
Protosulphate of Iron.
Acetic Acid "V.O.G."
Water.
Alcohol. Quantum Suf.
1 OZ.
1 OZ.
2 F. oz.

Scovill Manufacturing Company, Trade Agents.
FOR SALE BY ALL DEALERS.

New Book by Dr. H.W. Vogel,

—THE—

PROGRESS OF PHOTOGRAPHY.

THE BEST EFFORT OF THIS VETERAN TEACHER.

Every Photographer and Amateur should Read it Carefully.

CHAPTER I.

PHYSICAL EFFECTS OF LIGHT.

CHAPTER II.

CHEMICAL EFFECTS OF LIGHT.

CHAPTER III.

PHOTOGRAPHIC CHEMISTRY.

CHAPTER IV.

PHOTOGRAPHIC OPTICS.

CHAPTER V.

PHOTOGRAPHIC APPARATUS.

CHAPTER VI.

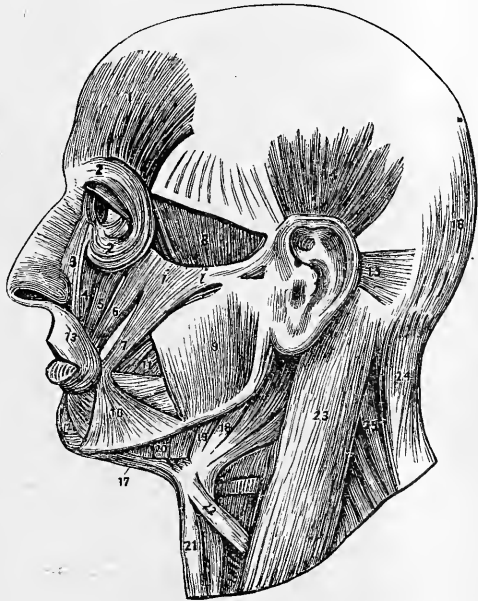
THE NEW PHOTOGRAPHIC
PROCESSES.

CHAPTER VII.

PHOTOGRAPHIC ÆSTHETICS AND
PORTRAIT TECHNIQUE.

CHAPTER VIII.

PHOTOGRAPHY FOR AMATEURS.



As the Artist should Study all about the Face, so should the
Photographer Study all about his Art.

NO BETTER OPPORTUNITY TO DO THIS IS AFFORDED THAN THAT FOUND
IN

Progress of Photography.

347 PAGES.

\$3.00 — PRICE — \$3.00

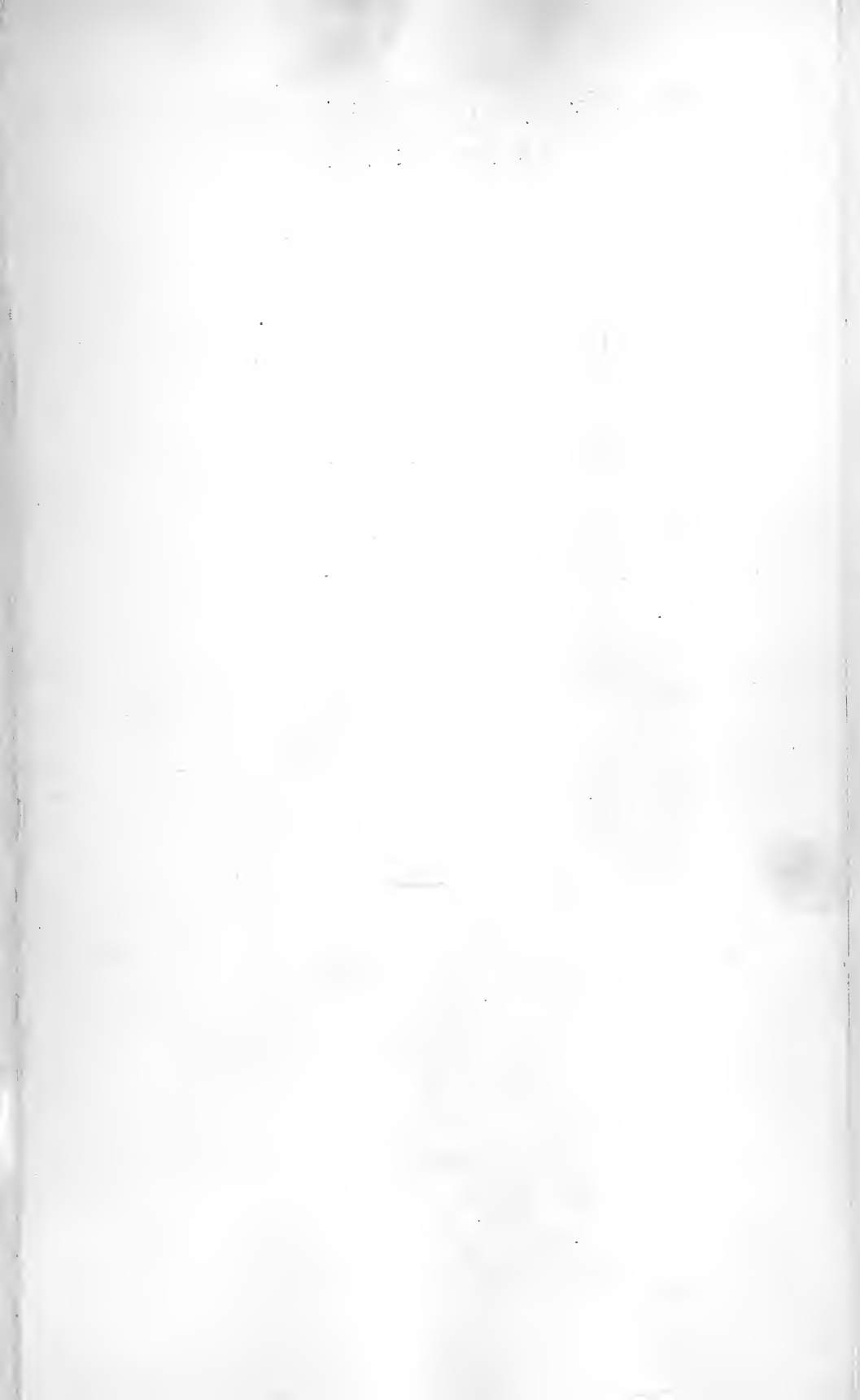
*With Seventy-two Illustrations, and an admirable portrait taken with
Electric Light, by W. Kurtz, New York.*

EDWARD L. WILSON, Publisher, 1125 Chestnut St., Phila.

DEALERS' DIRECTORY.

The following houses are to be recommended as the best for photographers in their localities.

<p>S. T. BLESSING, New Orleans, La.</p>	<p>THE BEST BOOK IS</p>	<p>SMITH & PATTISON, NEW LOCATION, 145 & 147 Wabash Avenue, Chicago.</p>
<p>H. A. HYATT, Mound City Photo. Stock House, 8th and Locust Sts., St. Louis, Mo.</p>	<p>WILSON'S PHOTOGRAPHICS, \$4.00.</p>	<p>D. J. RYAN, Savannah, Ga.</p>
<p>SCOVILL MANF'G CO., 423 Broome St., New York.</p>	<p>D. TUCKER & CO., Buffalo, N. Y.</p>	<p>S. T. BLESSING, Galveston, Texas.</p>
<p>C. H. CODMAN & CO. Boston, Mass.</p>	<p>WILSON, HOOD & CO., 825 Arch Street, Philadelphia, Pa.</p>	<p>B. FRENCH & CO. Boston, Mass.</p>
<p>BUCHANAN, SMEDLEY & BROMLEY, 25 N. Seventh St., Philadelphia.</p>	<p>EDWARD L. WILSON, Photo. Publisher, LANTERN SLIDES, 1125 Chestnut St., Philadelphia.</p>	<p>MULLETT BROS., Kansas City, Mo.</p>
<p>OSCAR FOSS, San Francisco, Cal.</p>	<p>E. & H. T. ANTHONY & CO. 591 Broadway, New York.</p>	<p>SHEEN & SIMPKINSON, Cincinnati, Ohio.</p>





FRITZ EILENDER,

COLOGNE.

SELECTIONS FROM
THE FIRST GENNERT FOREIGN PRIZE COLLECTION,
P. A. of A. Exhibition, Buffalo, N. Y., 1885.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XXII.

OCTOBER, 1885.

No. 262.

NO LAG.

ALTHOUGH there are lower-priced magazines, although there are magazines issued more frequently, although there are magazines more thoroughly devoted to the interests of the dealers, although there are younger magazines, although some magazines watch less diligently the interests of the craft, yet THE PHILADELPHIA PHOTOGRAPHER continues to grow, and there is no lag in the interest which is taken in it, and the enthusiasm with which it is supported. The reason is, because its editor puts his heart in his work, gives it his personal hand and head work, and *makes it* "the best."

Witness the report of the Buffalo Convention, which everybody agrees, so far as we have heard, "was the very best report published."

No matter how many other magazines you take, the PHILADELPHIA PHOTOGRAPHER is different from all the rest, and you want it if you want to keep up with your art.

Thus much we wrote as to our magazine for the third page of our cover last month, and there is nothing truer than that *you* want it if you want to keep up in our art. We have had many demonstrations of this fact, but will mention one which occurred since our last issue:

A photographer living in one of the larger cities between here and New York

became in need of an assistant. He came down here and spent two days among photographers and the stockdealers, making search, but without success. In his desperation he thought of our office, and came here to make known his wants; said he "had been two weeks without help, and was tired out, and fifty dollars out of pocket."

We said, "Did you look at the advertisements in our September number? There were twenty-four advertisers for situations there, any one of which you might have corresponded with ten days ago."

He answered, "Why, no, I never thought of that; besides, I do not take your journal. I do not find time to read it."

We suggested that he might save money and time both if he *would* read a journal.

But when he said he "wanted a man to attend to the dark-room, operate, retouch, and print at odd times, for \$12 a week," we let him go. Would it not be better for him to take and read a magazine for a long time?

A MODEL EXHIBIT.

BY EDWARD L. WILSON.

I MADE last month some general remarks upon the exhibits at Buffalo, and wish I had time and space to say as much about them as they all deserved. Even in a single instance I cannot do so, but will undertake to specify somewhat as to what I considered a "model" exhibit. It was that

of the Scovill Manufacturing Company, 423 Broome Street, New York.

When I entered it first I felt very much as I imagine an Italian donkey I saw once under peculiar circumstances felt. It was in picturesque old Naples on a market-day. I stood on the quay watching the peasantry as they came in hanging to the tails of their donkeys, and the poor little beasts so covered with lettuce, cauliflower, and radishes that only their ears and hoofs could be seen. This particular donkey was unloaded and made fast to a post near by, while his master "attended the shop." The donkey napped; his head went down and the halter slipped. Awakening he found himself free. He strolled into one of the side stalls, rather out of sight, and lingered amid pyramids of luxurious green stuff. He was too surfeited to partake, apparently, and immediately began to kick in all directions, and sent the product of the garden flying in every quarter. Then, with extreme content, he began to eat what seemed best to him with apparent enjoyment.

I felt very much in that sort of humor when I entered the exhibit I have mentioned, *i. e.*, that I could enjoy a great deal more if I could kick a few of the things out of my way. It was indeed a marvellous collection, and I falter when I try to describe it as representative of American photographic manufactures.

It was at the left of the main entrance of the hall, in an enclosure. Higher than anything else was an array of tall but graceful tripods, which could only be compared to a forest of slender trees.

Dazed, as I approached, I was at once drawn by a power, psychological or otherwise, to a splendid French walnut camera and stand, which stood near the entrance to the enclosure. I asked the price, but was informed by a polite gentleman that it was not brought to Buffalo for sale, but rather to show what the American Optical Company could do when specially fine or complicated apparatus was desired.

It was a bit of splendor, and yet it did not cause any diminution of interest in the fine array of sets of apparatus which were mounted upon the aforesaid tripods. There were about ninety-six of these. I will men-

tion them. "No," you say; "please don't!" Well, then, permit me to specify just a few. A shy, sly, smart-looking group of men stood over in one corner, nervously examining a tiny case of some sort. They were the Buffalo detective force, from the chief down, who, hearing of Scovill's detective camera, had come to "see it work."

Very often while standing there, and as often as one chanced to pass near the Scovill space, he could not fail to note the interest centered in this detective camera, which has been rapidly advanced to a state of perfection. To glance at the handsome case, not the slightest suspicion would be aroused as to its contents, for the camera proper, six double plate holders, the finder, lens, and the simple mechanism, are completely hidden from view, but an inspection of the album of photographs, the result of the sport enjoyed by a single possessor of a Scovill detective camera, revealed its infinite capabilities of catering to the fun-loving instinct of the genus Homo. It is very cute.

"Revolving-back" cameras of all sizes, from $4\frac{1}{4} \times 6\frac{1}{2}$ to 20×24 , inclusive, were displayed, and found ready purchasers. The so-called "forward focus" pattern seems to be gaining rapidly in favor. Several of the "revolving-back" cameras were fitted with the Eastman-Walker "roll-holder," and these also were eagerly sought after.

Much interest was shown in the "Manifold" camera, the invention of Mr. W. J. Stillman. It was often observed that it was rightly named. To judge of all its capabilities, one requires to study the admirable illustrations and description published in the advertising pages of the *Photographic Times*.

And now comes something that everybody can have, for when one reflects upon the superior workmanship and desirable features given to the "*Waterbury Outfits*," they must be considered such marvels of cheapness that anyone can run one. The "Petite" camera, made at the behest of Vassar's fair students, was fittingly placed on a "feather-weight" tripod; and I was shown a new pattern of this adjustable tripod, which can be readily unjointed and carried in a valise. In spite of their un-

equalled lightness, both styles of adjustable tripods possess the requisite rigidity for supporting small cameras.

So that now Hebe Vassar may with one fair hand and camera catch the glistening water as it pours forth from the fountain, while she receives it in her water jar with the other. Or Sappho Vassar may catch the departing Phaon McGriffin, her father's coachman, while he falls into the sea to escape her. Again, Diana Vassar may vary her life of celibacy by making groups of her little army of nymphs; or Juno Vassar, when Jupiter is asleep, can with safety "catch on" to her "golden chain" and make balloon views of the earth on one of those occasions when her jealous husband suspends her from the heavens, and not strain a tendon or shake a rosy cloud.

For these as well as other novelties in apparatus I was made aware that the demand was far in excess of the supply on exhibition. The "baby" of the collection was a 25 x 30 portrait camera. As I was not in need of a camera and a "cottage by the sea" combined, it fell to the lot of another to secure this camera, but it is only fair to add that it is a "Jumbo" only in size, for it weighed less than an ordinary 20 x 24 camera.

Of folding and extension tripods, the light and serviceable amateur outfits, there was a large array, with such noticeable improvements as the registering slides, or, as they have sometimes been styled, "record slides," and the side latch for instantaneously making the bed of a camera rigid.

Photographers in search of a good portrait camera found their only choice lay between the "Imperial," "Royal," or other American Optical Company styles, and of a "Gallery" or "Lever" stand to match.

Choice in cameras for the professional view taker rested between the "Revolving" and "Reversible-back" patterns. But I found that while I was courteously made welcome, my call would have to be curtailed, or I would lose sight of the Morrison's new "Leukoscope" lens, about which all of us have heard such favorable reports from well-known leading photographers. While looking at the lens and pondering on the significance of its name, and, as I

thought of the divine command, "Let there be light," our old friend, Mr. Richard Morrison, greeted me cordially, and in the interval of replying to queries about illumination, aperture, focus, etc., directed my attention to the marked reduction in the price of the Morrison group and wide-angle instantaneous lenses which had just been announced. The result of this reduction cannot but increase the ever-growing demand in a marked degree. I used the Morrison lenses very extensively at New Orleans.

The "Waterbury" Company Group and Landscape Lens, covering an 8 x 10 plate, (price, \$8.00), was another surprise to many.

The Russell Negative Clasp and Drying Support is also among the novelties quite recently introduced by the Scovill Manufacturing Company. Its merit is its simplicity. The idea so carried out is to keep the fingers off of the sensitive plate and out of the developing solution by means which enable the operator to inspect the plate and watch the progress of development, eventually forming a support for the plate while drying. As "dirt is matter in the wrong place," then fingers in the solution are "dirt," for it is the "wrong place" for them.

For illuminating the dark-room, choice could be made between the "Scovill Electric Lamp," the "Waterbury Knock-down or Folding Lantern," the "Scovill Non-actinic" Lantern (now provided with candle socket as well as coal-oil burner, and recently otherwise much improved), and the "W. I. A. Improved Dry-plate Lantern," for candle only.

Then, among the articles of smaller and different nature, were packages of carbonate of soda developer, albums with Slee's prepared cards for photographs, the "Mignon" and "Bicycle" Camera, the "Ne Plus Ultra" Outfits, adjustable washing boxes, corrugated protecting cases, the handy "View Finder," photo books, including *Wilson's Photographics*, and Scovill's enlarging, reducing, and copying cameras, and the Scovill Electric Dark-room Lamp, all of which were explained by expert attendants, who never grew tired of being amiable.

Among the other good things they did

was to give to each visitor a gilt match-safe, a copy of the *Photographic Times*, whose generous sheets go everywhere, and a homœopathic phial filled with pelletone tablets of Schering's pyro, many of which, I fear, have since been taken in mistake for compressed pills.

As I tried to cool my brain at the hotel, a mental kick after a personal inspection of all these bewildering beauties, I wondered what Mr. Benjamin Franklin, who stated his honest conviction that "some day a young man would be able to travel from New York to Philadelphia in three days," would think if he saw Scovill's Electric Dark-room Lamp used; I wondered what Daguerre would think of the Eastman-Walker Roll Holder; I wondered what old Mr. George Washington Irving Adams Vassar would think his bright girls were coming to if he saw them using a Hoodlum Camera—on legs? I know. History would be repeated.

"Well might the great, the mighty of the world,
They who were wont to fare deliciously
And war but for a kingdom more or less,
Shrink back, nor from their thrones endure to
look,
To think that way! Well might they in their
pomp
Humble themselves, and kneel and supplicate
To be delivered from a dream like this!"

COMPOSITE PHOTOGRAPHY.

A GOOD deal has been said and written lately on this subject, and even a book on "Shakespeare Portraiture," with composite photograph illustrations, has been published in our city by Mr. W. R. Furness. Only fifty copies have been printed, and they are sold at \$4 per copy.

An interesting paper on the subject, by Mr. W. Curtis Taylor, has been made familiar to our readers by its publication.

The Army Medical Museum at Washington exhibited a series of composite photographs of skulls at the New Orleans Exhibition, which we reviewed last month.

So far, except in the case of the skulls, the composites have been made up of various portraits of the same individual. Curious, and interesting results have been obtained,

though not, it is true, such as one would wish to distribute as his "best" phase.

But we think the thing is carried a little too far to be of any use, except as a curiosity, by Mr. Raphael Pumpelly, in his late paper in *Science*.

His communication is accompanied by four photo-engraved illustrations. These are made up, not each one portraits of the same person, but, Fig. 1, of twelve mathematicians, Fig. 2, of sixteen naturalists, Fig. 3, of thirty-one academicians, Fig. 4, of twenty-six field geologists, topographers, etc.

The author says: "What was wanted, however, was not an impression of one portrait on the plate, but of all the thirty-one; and to do this required that the aggregate exposure of all the thirty-one should be sixty-two seconds, or only two seconds for each. Now, an exposure of two seconds is, under the adopted conditions, too short to produce a perceptible effect. It results from this, that only those features or lines that are common to all are perfectly given, and that what is common to a small number is only faintly given, while individualities are imperceptible. The greater the physical resemblances among individuals, the better will be the composites. A composite of a family or of near relatives, where there is an underlying sameness of features, gives a very sharp and individual-looking picture.

It would be difficult to find thirty-one intelligent men more diverse among themselves as regards facial likeness than the academicians entering into this composite. They are a group selected as a type of the higher American intelligence in the field of abstract science, all but one or two being of American birth, and nearly all being of American ancestry for several generations. The faces give to me an idea of perfect equilibrium, of marked intelligence, and, what must be inseparable from the latter in a scientific investigator, of imaginativeness. The expression of absolute repose is doubtless due to complete neutrality of the portraits."

There is a good deal of fancy imagination in all this. Any bright photographer looking at Mr. Pumpelly's results will see at once—will see that in the first three one likeness or head rules the whole; so much

so that the composite of each group would readily be accepted as the likeness of one and the same person taken at various times. In other words, that by some strange freak in photography the mixing up—the compositizing of, 1, twelve mathematicians; 2, sixteen naturalists; 3, thirty-one academicians; all produce a likeness of one and the same individual! There is the same forehead, the same eyes, the same shadows under the eyes, the same nose with its exposed nostrils, the same lines at the sides of the nose, the same general lighting, the same ears, whiskers, hairs—man!

How strange that the admixture of twelve such homely phizzes as mathematicians generally have (ye gods! *don't* we remember our old New Hampshire schoolmaster?) should be no more handsome than a similar trituration of sixteen homelier, rougher naturalists or the mortar and pestle of thirty-one academicians. It is true the mathematicians look a little the most confident; the naturalists have a few locks more of hair slightly banded, and the academicians look a little more waggish than the others; but they all look much alike, and the look pervades the fourth composite a little, too.

Now, it may be that Mr. Pumpelly will say, "of course," "the one grand similarity is *intellect*—the pictures prove it, and *knowledge will tell*," etc.

But we have a feeling, not proven by actual experiment, however, that the first picture exposed to the plate in each instance was one and the same individual (1, as a mathematician; 2, as a naturalist; 3, as an academician), and therefore became *master* of the whole—*i. e.*, all exposed after him were overruled by him. Where there were certain parts like a lock of hair falling lower or reaching out further, would slightly make a change upon the plate—like, as in a common blunder, that made by amateurs of double-exposure on the same plate.

The *first* image *rules*, and any subsequent exposures of the plate will not make material changes.

And yet, in the fore of all these faces, Mr. Pumpelly says in closing his remarks: "I may mention, as perhaps only a remarkable coincidence, that the positives of the mathematicians, and also of the thirty-

one academicians, suggested to me at once forcibly resemble the face of a member of the Academy who belongs to a family of mathematicians, but who happened not to be among the sitters for the composite. In the prints this resemblance is less strong, but in these it was observed quite independently by many members of the Academy. So, also, in the positive of the naturalists, the face suggested, also quite independently to myself and many others, was that of a very eminent naturalist, deceased several years before the sitting for this composite."

The whole thing is a mix-tery, surely, and we are willing to hear of more developments, and to be convinced.

THE OLD CASE ARGUED AGAIN.

ONE may sometimes start up a big bird with a small cry. Not long ago, in a letter to the editor of the *Amateur Photographer* of London, I made a casual remark which he printed. What came of it appears in a letter in the last number, beginning thus: "In the issue of this journal for November 14, 1884, Mr. Charles G. Leland raises a question of great interest. He saw paper photographs in Rome in 1846-47, and he says, 'Are not such photographs supposed to have been made for the first time a year or two later? On this hint the correspondent went to work and found from old numbers of *Chambers' Journal* and other sources that in November, 1862, a Mr. Smith, curator of the Museum of Patents, had occasion to go to Birmingham. Here a Mr. Price showed him some curious pictures which had been found twenty years before in a room which had been Matthew Boulton's library. They were among lumber which had not been looked at or touched since 1790. The pictures were on paper, and had been produced by some process which puzzled both artists and daguerrotypers. They were monochrome, and all left-handed, as if they had been produced by a camera. They were on a kind of albumenized paper, and the image wiped away clearly with a little rubbing."

Then other strange discoveries were made, which apparently proved that Matthew Boulton was acquainted with some sort of

photographic process analogous to that which was practised by Daguerre forty or fifty years afterwards. When Mr. Price found the paper pictures in Boulton's library, he also found two plates like daguerrotypes packed between two pieces of board. They are silvered copper, such as the best kind of silver-plated goods are made of. One has on it the picture of a house, and is labelled, "Sun picture of Mr. Boulton's house before the alteration in 1791." This had been written by an old lady, a relative of Mr. Price, who remembered Soho House before it had been altered. The other plate had recently been found to bear a faint image of the house in its latter or altered state. The old lady was wont to tell that the pictures were taken by means of a camera obscura placed on the lawn. Mr. Price actually found this camera at the same time he found the pictures. He lent it to a schoolmaster at Trentham, who, of course, lost sight of it forthwith, as generally happens to four-fifths of such loans to "curious" and "deeply interested" people.

Urged by Mr. Smith, Mr. Price has made numerous inquiries during the last twelve months in towns of Staffordshire. He believes, or has heard, that it is extant, doing duty as a salt-box in some village. Mr. Price knew an old man named Townshend, who died in 1854, at the age of ninety. He had in early life been general aid and assistant to Matthew Boulton. Old Townshend used to say that there was a so-called Lunar Society, which met at Soho House, and that the members were accustomed to take "sun-pictures" in a dark room, with an image thrown on a table, and fixed by chemicals. While these matters were under discussion (in 1863) a singular support for Price's statement sprung up in a wholly unexpected quarter. Miss Meteyard is known to have been engaged on a life of Josiah Wedgwood, the potter. While looking over family documents at Etruria, the famous Wedgwood establishment in Staffordshire, she found two pictures enclosed among some papers. One was exactly like a photograph on silver, and the other nearly like it. She found, also, entries relating to a lens, and camera, and chemicals, used in or about 1791, by Thomas Wedgwood, son of Josiah,

and at that time quite a young man. One of the pictures represents a breakfast service set out. There is a letter extant from James Watt to Thomas Wedgwood, dated 1729, in which Watt says he would try the method of producing "silveres" which Wedgwood had mentioned to him. In 1802 Wedgwood and Davy communicated to the Royal Institute a method of producing "silver pictures," from which it appears that, if produced with a camera obscura, the image impressed on silvered paper within a moderate time was too faint to produce a good effect; while, if taken with the solar camera, there was no method known for fixing the image or making it permanent.

Miss Meteyard, in a letter to Mr. Smith, speaks of the Etruria photographs as looking like "faded silver prints on paper." So far as all the evidence goes, then, it seems to show that, somewhere between 1780 and 1800, two processes were known to and practised by the shrewd manufacturing philosophers of Warwickshire and Staffordshire—one for copying paintings by a rapid and cheap mechanical operation, and one producing pictures on silvered paper by a photographic process.

I am, of course, very much gratified at having been the means of calling forth, or recalling, so much valuable information as to the origin of sun pictures. But it does not in the least affect my question, which is to know whether the photographs exhibited in Rome in 1846-47, and which I saw, were the first good, practical, permanent ones ever made? They were fairly good, distinct pictures, of a brown or sepia-like color, and were exposed for sale in the cars as a novel invention. Can any one inform me? If it be true, as I have always heard, that whatever will interest one hundred readers is worth publishing in any journal, these remarks on photography will merit their type. This winter amateur photography is the rage in London, the recent improvements in the art being such that it is almost as easy to make a good photograph as to copy a letter with a press. Yesterday I saw in Regent Street an exquisite photograph of a house and landscape, labelled, "An Amateur's First Photograph." As "there is no church so holy but what the devil hath

therein hys chapell," so I hear with sorrow that there is in London a club of gentlemen and ladies who, with a shocking disregard of all the proprieties, devote themselves to producing mutual photographs of a character which would grieve every moralist and Christian.—MR. CHARLES G. LELAND, in the *Chicago Tribune*.

WILL PHOTOGRAPHY BECOME A LOST ART?

[Note from the author.]

Editor PHILADELPHIA PHOTOGRAPHER:

As the scope of the article read to the Convention at Buffalo, by Mr. Hurd, of Providence, and published in THE PHOTOGRAPHER, was contained in an article written by me that appeared in the *Yonkers Gazette* many months ago, and as ideas are copied, in some cases word for word, I send you my article, and think it should be published unmutilated. It is entitled, "Will Photography Become a Lost Art?"

Deeply interested in photography—the art—I have written to give my evidence to the public that there is in photography a true and a false; that one who has the creative faculty is an artist,

"Whether the instrument of words he use,
Or pencil pregnant with ethereal hues,"

or camera, and that machine-made pictures are not artistic nor true in any sense

Wishing you success in your endeavors to preserve the only art that ever came freely to the doors of the poor, I remain

Yours, very respectfully,

JOHN A. LORENZ.

MATTEAWAN, N. Y., Aug. 13, 1885

People who think that photography is advancing should know some of the causes that are operating to degrade it, and then, having learned those causes, they may well ask themselves if there are not reasons to fear that it may share the fate of chromo lithography, and a photograph become a byword. The chemistry of photography is advancing wonderfully, which is making it a science; but can we say of it, as we may now say of wood engraving, that is a fine art? No one who is not an artist can suc-

ceed in wood engraving now, for art has driven out the mere mechanical workers; but in photography the frauds have nearly succeeded in destroying the artists engaged in the business.

Not merely are the cheap Johns who work for the prices of unskilled labor, because their circumstances and the quality of their work compel it, bringing photography into contempt, but in the great cities, where it is in the hands of moneyed men, who can fit up large rooms regardless of expense, it undergoes the same degradation.

Sarony, the greatest artist living, who is a photographer, said recently, "I don't think much of photography." His work done with the camera is art. His lovely women and children, his radiant faces, faces of pensive purity, faces of intense thought, and faces of action; his choice of the view of the face, the way the light falls on it, all show the divine faculty. Let one see Sarony's drawings and it is then plain why his photographs are different from others. To make a photograph requires a knowledge of certain chemicals. To make a work of art requires a knowledge of drawing.

Will Sarony's contempt for photographs become the feeling of people of taste? We believe that it will, unless those who make the true photographic portrait, the likeness (the good old word is now disused, it would be a misnomer), continue both by example and in word to show the difference between such portraits and the vile stuff that goes by the same name.

No agency employed in photography has so changed the character of the work as retouching the negative. Why it is called retouching we do not know, as it is the first touching a negative gets. It enables the artist to give to a picture what it lacked in the early days of photography—something of the elevation and depression of the features—the fine detail of a drawing instead of white paper and outlines. That is what retouching may and should do; but is usually employed for quite a different purpose—to make people's pictures look less like them. Old ladies of both sexes have no wrinkles, and there are no thin faces in this age of progress. What the dentist has not been able to accomplish the photographer

has. Such pictures of our departed friends will not disturb us with their look of life,

"Like a picture that magic has charmed from its frame—

Lifeless, but lifelike, and ever the same."

Nothing so degrades photography as retouching in the way that it is usually practised.

Another reason of the decline of photography as an art, in proportion as it advances as a science, is the tendency of the public to patronize cheapness rather than quality. Men like Sarony and Kurtz will always have appreciators, who know their worth and will pay for their work; but unless a stand is made against the demoralizing influence of cheapness, their customers will not be numerous enough to enable them to retain their high standard of excellence, and they will be compelled to lower their prices, when, of course, the quality must come down, too. An artist cannot continue the thankless labor of giving art to people who think only of cheapness.

Notice the difference of the methods of men of business in photography and the real artists; the clap-trap employed by the former; the fantastic styles of mounting; the name of a noted artist applied to a shape of picture, etc.

We were much surprised at the quality of work done in the city of Washington. Walking along Pennsylvania Avenue, on a pleasant day, one meets children with sweet faces and graceful forms, ladies of every type of beauty, with dresses most tastefully designed, and rich in color and texture, and happy combination of colors. What a rare chance for full figures, for half lengths, for heads, for small groups, for children of ten and twelve years and adults grouped together. Something of this one would expect to find in the galleries of Washington; but he will be disappointed. Now and then he will come across a portrait made by Mr. Fasset (who had a gallery there some years ago), which shows the true taste of the artist. Fine samples of his work we saw are pictures of Mrs. Senator Dorsey and Senator Anthony. Mr. Fasset believed in art; his pictures have the nameless grace which only the few can give to their pro-

ductions the world over. Mrs. Fasset painted the picture of the electoral tribunal, which John Sherman is endeavoring to have the Government purchase for \$15,000.

We will expect to see some fine work from Mr. John D. Merritt, who has lately opened a gallery in Washington. We know of his good taste. Let him elevate the standard of photography in the capital. He can do it. That will be a kind of civil service reform much needed there.

J. A. L.

ERRORS IN THE REPORT OF OUR PHOTO CONVENTION.

THE short-hand reporting of discussions of a large or technical character in large assemblies is difficult, owing to the many phrases and peculiar terms used, and the distance the speakers are from the reporter. That there are many errors in the report of the proceedings of our last Convention at Buffalo, is evident to those who took part in the discussions, and to all who read it carefully.

In many instances the sense of the remarks is entirely destroyed, and a far different meaning conveyed to what was intended. I do not blame Dr. Morgan for the mistakes which appear in the report, although believing that I got the worst of it. On the contrary, it is my opinion that no man could have done better under the circumstances; but I earnestly protest against having said such nonsense.

What good can such reports be to persons who were not present, when, as an example, the leaving out or adding of the simple word "not" changes the meaning of the speaker very materially, and renders his advice or remarks very misleading or ridiculous?

I now fully share the opinion of our friend Dr. Vogel, who told me during his last visit that he had the same sad experience, and that he would rather not speak in a meeting when a stenographer was present.

Yours truly,

G. CRAMER.

PHOTOGRAPHS of dogs come good when the beasts are lost, strayed, or stolen.

MY DEVELOPER BOTTLE.

I ENCLOSE sketch and description of a bottle for holding developing or other solutions in use in the dark-room or laboratory, which, from an experience of over three months, I can assert to be very convenient and effective. It thoroughly protects the solutions from contact with the air. The contents come in contact with nothing but glass, so that there is no danger of contamination and deterioration from organic substances, sulphur, etc., as might happen with apparatus requiring rubber tubing, etc. Anybody can make it, requiring about five cents' worth of glass tubing and a bottle with a somewhat wide mouth (I use empty pickle bottles) and a good cork. The glass tubes can be bent in the flame of a spirit lamp or Bunsen burner, or over an ordinary gas jet. These bottles are always ready for action, and the cork need never be removed until the bottle is empty, thus saving time and trouble, as you only use *one hand* to pick the bottle up.

To protect pyro solution use a layer of oil (I use good headlight) about an inch thick. Same for ferrous sulphate or ferrous oxalate solution. The potassic oxalate solution has a disagreeable habit of crawling up the inside of the bottle and around the neck. A thin layer of oil is a sufficient preventive of this. The pyro solution seems to exert a slight action on a fresh layer of oil, which causes some discoloration of the pyro solution, but this ceases after a short time, so I think it best to keep the same oil on top when fresh developer is made up, as the action will be less than if fresh oil is used. I have pyro solution on hand which has been made up for about six weeks. It changed in a few days to a sherry-wine color, but has got no deeper in color for several weeks, and is perfectly free from any muddiness or granular deposit. This, I think, is a good test. I attribute most of the discoloration to fresh oil, but perhaps it was impure sulphide or pyro. It cannot be caused by contact with oxygen.

The method of operating is plain. Simply blow in the tube A, and the pressure on the liquid will force it out of tube B as desired. Don't tip up the bottle towards the lower

end of B, or it will be apt to act as a siphon. For the same reason the bent portion of B should not have the end lower than the level of the liquid in the bottle. If this bottle, in its simple form is not elaborate enough to suit, just attach a piece of rubber



tubing to A with a rubber bulb (such as are fitted to the ordinary atomizers) at the end, and squeeze this in the hand. This will enable you to allow the bottle to stand on a shelf, which may be a gain when using large bottles.

I would be greatly pleased to hear from anybody who may give this a trial, in regard to any troublesome or other experience they may have. Yours, etc.,

H. SCHOONMAKER,
347 Race Street, Cincinnati, O.

I have ascertained that the developer bottle which I described a few days ago is *not* a new thing at all. No use to publish it unless to emphasize its great utility for the purpose. I find it *ne plus ultra* for any solution much used—developer mixed, pyro, potassic oxalate, ferrous sulphate, soda or ammonia, hypo, mercuric chloride for intensification, etc. H. SCHOONMAKER.

AN ATTEMPT TO PHOTOGRAPH THE SOLAR CORONA WITHOUT AN ECLIPSE.

SINCE writing my last communication on this subject, I have made a series of investigations with the object of improving my apparatus, if possible, and of obtaining some quantitative measurements of the light reflected by the atmosphere near the sun. To avoid the reflection of the light from the surfaces of the glass, I removed my achromatic lens, and substituted for it a simple spectacle-glass of one and three-eighths inches in diameter, and forty-nine inches focus. As the diameter was relatively so small, the inclination of the surfaces to one another at any point was necessarily very slight, and this fact, combined with the extreme thinness of the glass, rendered the multiple internal reflections almost entirely harmless. Five diaphragms were used between the lens and plate, cutting off totally all internal reflection from the tube. The same drop-shutter was used as before, working just in front of the lens.

Several observers have attempted to compare the brilliancy of the corona as seen during a total eclipse with that of the full moon. Thus Belli, in 1842, and Wilson, in 1860, find the corona brighter than the moon, while Halley, in 1715, Billebeck, in 1851, and Curtis, in 1869, find the moon brighter than the corona. Other observations by W. O. Ross, in 1870, and by J. C. Smith, in 1878, would indicate that the corona was somewhat brighter than the full moon.

A photograph of the solar corona, in order to be of any use whatever, should show something more than a thin uniform ring of light around the sun. It should show some structure, some details of the rays and rifts visible at the time of an eclipse. The only observations which I have been able to find of the intrinsic brightness of different portions of the corona, were those by Prof. John W. Langley, in 1878. He found that the corona at 1' distance from the sun had a brilliancy equal to six full moons, while at 4' distance it was only equal to 0.1 of a full moon. Unfortunately for our present purpose these

observations were visual and not photographic, but they will give us an idea of the size of the figures with which we are dealing. In order, then, for a photographic plate to show any of the irregularities of detail in the corona, such as the contrast between a ray and one of the neighboring rifts, it must be capable of showing contrasts of light which do not vary from one another by more than about one-tenth the intrinsic brilliancy of the full moon.

A series of investigations was next instituted to determine what excess of brilliancy it was necessary for one surface to have over another, in order that the contrast between them might be rendered perceptible in a photograph. The difference of brilliancy required by an acute eye amounts to between one and two per cent. One sees it sometimes stated that the camera is capable of distinguishing contrasts which are quite invisible to the eye. This, I think, is a serious error. If both sources of light are of great brilliancy, though differing considerably, the eye may not perceive a very great difference between them, while a negative with a very short exposure may show a very considerable difference. If, however, the eye be protected by colored glasses, the contrast will be as great as that presented by the negative.

But the question which occurs at present is not where great differences of light exist, but where the differences are very small, of only a few per cent. The inferiority of the best gelatine plates to the human eye in this respect is very readily shown by an attempt to photograph distant mountains. It will be found that it is perfectly impossible, even in the clearest weather, to photograph at a much greater distance than fifty or sixty miles. I recently, on a very clear morning, made a mountain ascent with a camera. Mountains over ninety miles distant were readily recognized and distinguished, but on pointing the camera in their direction, nothing over forty miles distant could be photographed. There was no question but that mountains at a much greater distance than ninety miles could have been seen had there been any high enough to be visible. Every photographer who has visited mountain regions is per-

fectly well aware of the disabilities under which he labors in this respect.

Another illustration of the same thing is the impossibility of photographing the moon in the daytime, when the sun is high above the horizon. Although the moon may be perfectly distinct to the eye, the negative shows no trace of it. This fact of itself, I think, has a direct bearing on the question in point.

But in addition to these general facts it was thought that some quantitative results would be desirable. Besides the chloride plates which I had been using, several well-known kinds of bromide plates were tested at the same time. These were selected with especial regard to the strong contrast qualities which they were supposed to possess. The plates tested were the Anthony chloride, the Carbutt B, the Allen and Rowell, and the Stanley. Different portions of the plate were exposed to a uniform illumination for various times, and it was found that all the plates gave the same result, and that if the division lines between the areas were very sharp, and over an inch in length, as small a contrast as five per cent. could be detected, but if the division lines were not over one-eighth of an inch in length, even if one knew just where to look for them, it was impossible to recognize a difference of less than ten per cent. upon the negative. As the coronal rays on the photograph would be less than one-eighth of an inch in length in order to reach out beyond 3', ten per cent. was selected as the limit of contrast necessary to obtain a satisfactory result.

Since the light reflected by the corona at 3' distance from the sun is only 0.1 that of full moon, in order to distinguish between a coronal ray and a neighboring rift at that distance, it is necessary that the light reflected from the earth's atmosphere in that region should not exceed in intrinsic brilliancy that reflected by the moon itself.

A series of observations was next made to determine the relative light of the sun and of the sky in its immediate vicinity. The method employed was as follows: Half of the photographic plate was covered with thick yellow paper, a diaphragm of 0.016 centimetre was placed in front of the lens, and

four exposures of different parts of the plate, lasting respectively for two, four, eight, and sixteen seconds, were made. The plate was then taken into the dark-room, and the exposed portion protected by yellow paper, which was removed from the other half of the plate. The telescope was now so placed that the sun should be hidden behind a paper disk, fixed at about twenty feet distant. A diaphragm of one centimetre aperture was placed in front of the lens, and an exposure of four seconds given to the sky. On development, half of the plate, except where cut by the image of the disk, was found uniformly darkened. On the other half were four images of the sun, two of which were lighter and one darker than the sky. The third image of eight seconds exposure was of exactly the same darkness as the sky, and it was accordingly shown that since the diaphragm used with the sky was about four thousand times larger, the sun was about two thousand times as bright photographically as the sky in its immediate vicinity. A number of plates were taken on different days, when the sky seemed perfectly clear, and the results indicated that the number varied in general between a thousand and four thousand. Owing to the diffraction produced by the small diaphragm used in photographing the sun, which rendered the image 1.6 times larger than it really should be, all these figures must be multiplied by 1.6.

Comparisons were then made in a similar manner between the sky near the sun, and the full moon, the latter taken with the full aperture of the lens, 3.65 centimetres, and the former with an aperture of 0.204 centimetre. Under these circumstances, with exposures of fifteen seconds, the moon and sky darkened the plate to about an equal amount. The result of a number of experiments indicated that the sky in the immediate vicinity of the sun was about four hundred times the intrinsic brilliancy of the full moon. The ratio of the sky to the sun on this same day was fifteen hundred, so that the light of the moon was to that of the sun as one to six hundred thousand. In some experiments which I made in 1879, I found the visual ratio was one to three hundred and fifty thousand. On account of the

extreme blueness of the sun, it was to be expected that the photographic ratio should be somewhat higher than the visual one.

I next tried comparing directly the light of the sun and moon on the same plate, in order, if possible, to get a check on my results. The results, however, were unsatisfactory, the ratio coming out as 1 to 300,000, or only one-half the former amount. Owing to the difficulties of the experiments, this discrepancy may very well be referred to inaccuracies of the photographic plate, and changes in the sun's and moon's light during the course of the experiments. In all the results with regard to the sun, it must be remembered that the figures must be multiplied by 1.6, on account of diffraction. The two ratios, then, of the light of the moon to that of the sun, stand as 1 to 960,000, and 1 to 480,000, and of these, I think, in connection with my visual result, the former is the more correct figure. The moon at the time of these observations, June 26, 12 M., had an altitude of 29°, when the atmospheric absorption would amount to about twenty per cent. Making this correction, we have the photographic ratio of the moon to the sun, as 1 to 760,000, or about twice as great as that to the eye. This is, of course, only an approximate result, as only very few observations were made, and as it was entirely outside the course of our inquiry.

Returning, then, to our original subject, we found the sky near the sun four hundred times as bright as the full moon. Correcting for atmospheric absorption, this figure becomes three hundred and twenty times. But we found before, that in order to detect the contrast between a coronal ray and a neighboring rift, the light of the sky must not exceed that of the full moon. It therefore seems that even in the clearest weather the reflected light of the atmosphere is three hundred times too strong to obtain the faintest visible image of the true coronal rays.

In connection with these experiments, I took a few photographs of the sun with my improved apparatus. In order to diminish still further the reflection of the light from the surfaces of the lens, I so placed the telescope that the sun was almost com-

pletely hidden behind the high steeple of a neighboring church. A vast improvement in the results was at once obtained. The sun stood out sharply defined on a perfectly uniform background of blue sky. There was not the slightest trace of a fringe either where the steeple crossed the disk, or where the sky came in contact with the solar limb. The day was beautifully clear, and at six in the afternoon some more photographs were taken; but now, although the steeple was as clear as ever, all around the limb of the sun appeared the atmospheric halo, extending out in all directions, and gradually growing fainter as it receded from the sun. We may, therefore, in general, say that with properly constructed apparatus in perfectly clear weather, no halo whatever appears around the sun. It is only in slightly hazy weather, or as the sun approaches the horizon, that the appearances are produced which have been elsewhere described.

In brief, the result of my researches would seem to indicate: 1st, that without a total eclipse it ought to be impossible to photograph the solar corona; 2d, having tried, I have failed to photograph the corona, but have obtained the result which theory indicated.—WM. H. PICKERING, *in Science*.

THE AROUSEMENT AT BUFFALO.*

CLEVELAND, OHIO, August 21, 1885.

Editor PHILADELPHIA PHOTOGRAPHER:

I HAD thought to make a statement in the matter of charges made against the Executive Committee at the next Convention, when the Investigating Committee should report, but don't feel like waiting so long a time, and ask you to give publicity to my showing.

The charge, as I understand, is the serious one of misappropriating money.

It is made against the Executive Committee.

The misappropriated (?) money was used in the payment of railroad fares, hotel bills, and in a small way for time lost from business and home duties while in the service of the Association.

* Received one day too late for our last issue.—ED.

The Constitution says: "The Executive Committee, of which the President, Secretary, and the Treasurer shall be members, shall have charge of the general business of the Association."

It does not say it shall be paid for its services, beyond the Secretary and Treasurer. It does not say it shall not be paid.

In the course of their duties each member is required, when a meeting is called, to leave his own personal business, travel in some instances hundreds of miles, give several days' time and his best ability in arranging the business for a coming convention. During the year he is called upon to do much correspondence with other members of the committee, with stockdealers and manufacturers, and with members wanting information. In his own locality he must effect contracts with railways for special rates in carrying members to and from convention, and he must advise by circular all photographers within a radius of one to two hundred miles of such secured rates while urging their attendance.

He must write communications for the journals urging and encouraging a large attendance.

When convention time comes he must be on hand in advance of the opening, and must remain until after the close, during which time he must be in harness and at work.

The Executive Committee is empowered to make contracts, to employ help, and to pay all expenses incident to holding conventions. It is competent to determine what are proper expenses.

It was the opinion of the Committee, when settling up the expenses and paying the bills for conventions at Milwaukee and at Cincinnati, that "the laborer was worthy of his hire"—a queer old notion indulged in by many.

It believed the success brought about through its efforts, which showed by a good balance in the treasury, justified the payment of that labor as a legitimate expense. So it did, like men who had done good work and were entitled to pay, vote to each member, not full compensation, but what would decently pay his expenses.

There was no reason why the Committee

should not do this, but good reason why it should.

In the past, when each convention held left the Association some hundreds or thousands in debt, it was more a work of patriotism, and the officers had naturally to be content with the distinction conferred.

In later years, when more enthusiasm has been manifest, and the Association abundantly able to pay, it is very proper it should be done.

The Convention just closed has been a fine success in a pecuniary, as well as an educational sense. The announcement is made that over \$1400 is in the treasury. The men who have been instrumental in making this fine success are entitled to compensation, at least in a sum sufficient to cover their expenses while in attendance at convention and performing the work of the Association.

The Association should not expect to secure competent and reliable service gratis. It is time this fact was recognized and acted upon.

Men may serve one year for glory, but are not willing to continue year after year on the same terms.

At present, the Association is fortunate in being splendidly officered, and could hardly be in a more prosperous condition. That it continue so is my hearty wish. There is a way to keep it so, but it does not lie in the direction of piling up money and giving votes of thanks only for services.

Yours truly,

J. F. RYDER.

GELATIN FILM NEGATIVES.

BY ROBERT DE CHENEVIERE.

Preparation of the Negative Film.—Ordinary white writing paper is allowed to lie for a short time in water, then placed upon a clean glass plate, which has been previously rubbed with a little wax, and bordered around with strips of albumen or gum paper. When the paper is dry, it is stretched tightly over the plate, and sprinkled over with talc powder, the excess of powder, brushed off with a camel's hair pencil. The paper is now coated with a mixture of,

Ether	50 grammes.
Alcohol	50 "
Pyroxylin	1 "
Oil of ricinus	8 drops.

As soon as the collodion is perfectly set, the bromide of silver gelatine emulsion is spread over smoothly by means of a glass rod. As soon as the emulsion is set, the edges are cut round by a penknife, and the film easily lifted up and cut to any desired size.

Another method consists in coating over the same kind of paper or albumen paper laid upon a warm plate with

Wax	2 parts.
Benzine	100 "

The paper so prepared is dampened, and, as in the former recipe, stretched over a clean glass plate, and coated with the gelatine emulsion. This plan affords more brilliant results than the former; besides, the sensitive film seems to adhere firmer to the paper, a circumstance desirable for the subsequent manipulations to which it is to be subjected.

A third method: A sheet of double transportation paper is stretched over a glass plate, and coated with collodion as before; and, after setting, separated from the glass. A second glass plate is sprinkled with talc powder, coated with emulsion, and laid after the setting of the gelatine (about a quarter of an hour) in a dish of distilled water. The collodionized paper is also laid in another dish of water, and when wet through, laid upon the gelatine plate, the collodion surface against the gelatine film. The plate and paper are now taken from the water, and contact thoroughly secured by means of gentle pressure. The paper is now cut around the edges of the glass, and, if properly performed, the gelatine film will detach itself from the glass, and be found adhering to the paper, in which condition it is ready for exposure in the camera. In separating the film from the glass, care must be taken to do it quickly and without any pause, otherwise there is danger of tearing the film.

Fourth method: Ordinary white paper or albumen paper is waxed as before, and the glass plate strewn with talc powder,

coated with gelatine, and after the setting, together with the paper, put in the water bath. If both are carefully taken out, it will be found that the two surfaces are in contact, and all that is necessary is to separate them. This process avoids the coating of the paper with collodion, as in the first method. These leaves or films may be preserved in a book, so as to keep them flat.

Development.—The films are laid in distilled water, and suffered to lie there until they become perfectly flat. The water is then poured off and the developer applied. When the shadows of the negative begin to appear gray, the developer is poured off, the negative well washed, and put in a bath of hypo and alum, where it is allowed to remain until all the unreduced bromide of silver is eliminated, which is indicated by the paper becoming pure white. The negative is then washed for hours. If it is desirable to have a firm, inflexible negative, take a glass plate sprinkled with talc, and coat it with collodion; then, after the setting, with a mixture of,

Water	100 parts.
White gelatine	40 "

As soon as this sets, treat the plate to a bath of water. In the same bath place the negative film; let it remain therein about five minutes, and press it in contact with the gelatinized glass. The attached film is allowed to dry thoroughly, and the paper cut about 6 mm. from the edge with a penknife. The paper is loosened from the glass plate. If a thin film is needed, the glass plate is sprinkled with the talc and coated with collodion. The negative is dipped in a thin gelatine solution, laid upon the collodionized plate, and the excess of gelatine pressed out. The whole is allowed to dry and the paper detached, and the negative film from the paper, in the same manner as before described. An evil attached to the method is that the negative film curls up too easily.

The paper negative may be dried between blotting paper, but must be first treated to an alum bath. It is then well washed and flooded in a mixture of

Water	1000 parts.
Glycerine	50 "
Alcohol	50 "

by which means the films become soft and flexible.

Of the above methods for preparation of negative films, I especially recommend the third and fourth as giving very brilliant negatives, without spots or pinholes. Although the methods may occasion some little trouble, I think that the photographer and the amateur will be richly repaid for the labor expended.

CITRO-CHLORO-GELATINE PAPER.

THAT the interest of photographers has been recently directed to such printing processes as afford more constant results than those given by albumen paper is an event to be hailed with joy. The foundation for this heightened interest is to be ascribed to the circumstance that since Simpson published his chloride of silver collodion process—that is, just twenty years ago—not a single case is known of any print fading or turning yellow, prepared according to his directions. On turning over the pages of an old volume of photographic pictures there will be found many albumen prints, not later than 1876, which show either the well-known yellow tone, or the incipient bleaching or fading, which ere long will totally obliterate the entire picture. Yet these pictures certainly were well washed and properly mounted. Moreover, they were well protected from light and air, being preserved in an album. From the year 1872 and backwards, scarcely a single fresh-looking print can be found, all look as if they had been smeared over with some sort of yellow sauce. One thing is sure, albumen paper is a broken reed to depend upon if permanency is desired. Sooner or later it will “go back on you,” and even with the best albumen prints, a short time is sufficient to cause fading or the ominous yellow. This is all owing to the fact that we do not possess any means of fully eliminating the silver from the paper. Now I will mention a case to show the tenacity with which albumen holds on to silver once within its grasp, until with time it repents of its possession. I have before me a glass positive fifteen years old, which still looks young

and fresh in its positive beauty, while the border of it is totally faded. The plate had been edged around with albumen to hold the chloride of silver collodion.

From this we may learn that even with the collodion process it is best not to use albumen as a substratum for the collodion.

The bromide of silver gelatine has been employed for paper printing, and with the best results with enlargements. The great sensitiveness of this substance to the influence of light enables one to effect the desired printing by gas or petroleum light. For direct printing, however, the bromide of silver is less used, at least we are not acquainted with any general application.

A more hopeful future is promised for the chloride of silver gelatine paper, whether it be used in the copy frame, or by daylight, or for development by exposure to artificial light.

For enlargements without the aid of sunlight the paper is not sensitive enough. Mr. Geldmacher estimates the sensitiveness of the bromide of silver paper at forty times that of chloride paper, which estimation corresponds with that of our experience. The *Photographischer Archiv* has frequently given formulæ for the preparation of this paper. The following recipes have in our practice proved excellent. The same recipe will serve for printing by daylight as well as with artificial light, but for this latter the emulsion must be washed.

Printing paper for full illumination:

Three solutions are to be made

	1.	
Water,		100 c.cm.
Nitrate of silver,		25 grammes.
	2.	
Water,		300 c.cm.
Hard gelatine,		30 grammes.
	3.	
Water,		100 c.cm.
Citrate of potassa,		10 grammes.
Chloride of sodium,		10 “

Which are to be brought to a uniform temperature by placing the respective solutions in beaker glasses, and surrounding them with water in a larger vessel at 80° C. After the solid portions are dissolved, the silver solution is to be poured into the gela-

tine solution, well stirred, then No. 3 is poured into it gradually with constant agitation. This operation is to be done under orange-yellow light. The emulsion is then taken out of the water bath, filtered through clean canvas into a glass, and mixed with 50 c.cm. of alcohol.

Upon this warm mixture Steinbach's paper is floated for a minute, and hung up to dry.

The printing is effected by using a printing frame, exactly as with albumen paper. After this it is treated to the alum bath, two per cent., washed, and toned in the usual gold bath, then fixed. Soft pictures of an agreeable tone are the result.

Printing Paper for Development.—The above-mentioned solutions, Nos. 1, 2, and 3, are to be mixed as directed for the ordinary copying paper.

The emulsion is taken and after setting is squeezed out in cold water, and washed until every trace of silver is removed—that is, till the wash water ceases to give a precipitate with hydrochloric acid. The gelatine shreds are put into a beaker glass, and the glass placed in a vessel containing warm water until the gelatine is melted. Next one gramme of chrome alum is dissolved in fifty c.cm. of warm water, and added by small increments to the emulsion, which is to be violently agitated. The emulsion is now filtered through canvas, and fifty c.cm. of alcohol added, and if it is not intended for immediate use a few drops of carbolic acid are added. The paper is flowed upon this as before, dried and kept excluded from the light.

The exposure in a copy-frame by gaslight is a half minute. It is better to illuminate thoroughly, and use a very weak developer to get warm tones.

The following developer is recommended

<i>a.</i>	
Water,	300 c.cm.
Oxalate of potassa,	100 grammes.
<i>b.</i>	
Water,	300 c.cm.
Sulphate of iron,	100 grammes.
Citric acid,	10 “
<i>c.</i>	
Water,	50 c.cm.
Bromide of potassium,	10 grammes.

<i>d.</i>	
Water,	200 c.cm.
Hyposulphite,	50 grammes.

In the developing tray the following mixture is put:

Water,	60 to 80 c.cm.
Solution <i>a</i> ,	25 c.cm.
Solution <i>b</i> ,	8 to 10 drops.
Solution <i>c</i> ,	2 to 4 drops.
Solution <i>d</i> ,	5 c.cm.

and well mixed. The exposed paper is submerged in this liquid, and the development effected in from three to ten minutes.

The picture is well washed, and allowed to lie five minutes in the alum solution, again washed because the alum interferes with the toning in gold bath.

Tone with gold and acetate of soda or borax, fix in hypo, and wash.

If the exposure has been too short, or too long, the toning cannot be effected, the prints acquiring an ugly green color.

Manipulated enlargements by means of the sciopticon, with citro-chloro-gelatine paper, may be had in twenty-five minutes, nearly one-half the time required for chloride of silver collodion prints.—DR. LIESEGANG in *Photo. Archiv.*

HONOR TO WHOM HONOR IS DUE.

YOUR September number at hand, and there is much food in it for the thinking photographer.

The picture by Conley, on the Stanley plate, is worthy of the rank it takes. The pose is well chosen.

There is one thing in your Journal that I am highly pleased with, and it shows how a great master can divide up the honors due his co-workers. It is not enough that a workman is paid for his time, but he should be given the honor of what his talent has produced for his employer. I am very much pleased with friend Ryder's sense of justice in giving credit to those whom he recognizes as being the ones entitled to it, although probably if he were to operate, he might produce as meritorious work himself, as he has done so in the past. His example is one that should be copied, for there is honor in admitting the truth.

You speak about so little interest in com-

position being manifested by the photographers of the country. I doubt not there are many who have a feeling for art when they see it, but cannot express it; and there are others who have the same emotions, and can't convey them. Others, whose condition is favorable to its development, are spurred on by the impulse; that is, are spurred on by the impulse that is within them, and their condition being such they improve and become lights in the art world.

If you want to see art spring into existence in photography that will not be laughed at, you have got to make it so there will be time to devote to such things, and not be occupied in fighting for a crust of bread. Such a condition is only fit for slaves, who are not susceptible of feeling, having been in that condition so long that all the individual faculties are at rest, and they know no bidding but that of others.

Whither are we drifting? Is it not in that direction? If not, we soon shall be if we go on depreciating the recompense of our calling, and no protest is offered but a sickly one.

What inducement is there for a young man in needy circumstances, who has the fire of art burning in his bosom, to enter photography? I cannot see any. It is all the veterans in the science can do (and do conscientious work) to live. They may have the wish, but are without the needful of this world's goods to assist them in their calling. I hope those who have the interests of this elevating science at heart will redouble their exertions to put it where it belongs, for there can be art displayed even by the camera, when the mind that controls it is that of an artist.

I speak plainly, and it applies to myself as much as to others, for I too am a photographer; one who is as devoid of originality as any in the profession.

Yours fraternally,

M. H. ALBEE.

TWO YEARS' EXPERIENCE WITH ONE DEVELOPER.

THE following is reliable, besides being the best form of developer I have as yet

used, and in the hands of any ordinary operator will produce surprising results by alteration hereunder mentioned. You can at will make either a first-class solar, ordinary view, or copy a negative in short from the most transparent image to the most intense, without aid of after-intensifying (which I consider to be needless, besides being detrimental). Scale for 5 x 8 plate:

Solar negative: 6 grains of pyro, 1 grain of bromide of potassium, 4 ounces of water—first, 4 drops of ammonia solution; second, 8 drops of ammonia solution.

Ordinary negative: 10 grains of pyro, 2 grains of bromide of potassium, 4 ounces of water—first, 6 drops of ammonia solution; second, 12 drops of ammonia solution.

View, negative: 12 grains of pyro, 2 grains of bromide of potassium, 4 ounces of water—first, 8 drops of ammonia solution; second, 16 drops of ammonia solution.

Copy negative: 14 grains of pyro, 2 grains of bromide of potassium, 4 ounces of water—9 drops of ammonia solution, 18 drops of ammonia solution.

Pyro solution for intensifying, 1 drachm to 2 ounces of water.

(880) Ammonia solution for accelerating: Ammonia, 1 ounce; water, 1 ounce.

Soak plate one minute in either of the forenamed solutions, according to which negative you require to produce; then, say for ordinary negative, add 5 drops of ammonia solution. If properly exposed, the high lights will appear well out in one minute; then add 12 drops more of ammonia solution, which, as a rule, will finish development. If appearing too intense, add a little more ammonia solution; if too weak, add several drops of pyro solution. No definite amounts can be specified, but is a matter of judgment on the part of the operator. Very little experience will teach you the amount required. Think well; have plenty of light, that you may see well, and success will attend your efforts. To make matters more explicit, I have detailed the quantity of ammonia solution for first and second application.

EDWIN DURYEA.

MOONTA, SOUTH AUSTRALIA.

THE AMERICAN PAPER NEGATIVE IN EUROPE.

THE *London Times*, August 11th, devotes a column to the Eastman paper negative and its application, under the head of "Another Advance in Photography." Among other things, it describes the whole working of the new invention, and says:

"Among the American contributions to the Inventions Exhibition is one which promises to effect a revolution in out-of-door photography by the complete attainment of the long-sought-for desideratum in a flexible substance for the glass plate, which, so far, has been indispensable to the best results in landscape photography. The weight and the risk of fracture when the route of the photographer lies through countries difficult in communications, make the use of even dry plates in all out-of-the-way places an impediment with which no enterprising amateur is unfamiliar. This restricts the use of the camera to the smaller sizes, and even when all difficulties are overcome, often robs the photographer of the fruits of his labor by the carelessness of a porter or an accident on the road. In the search for a flexible material paper naturally has always drawn the attention of the experimenter, and even preceded glass in measurable success, the talbotype being the earliest negative process, and one which for certain kinds of work has had its triumphs.

"The incurable defect of paper negatives has, however, always been the inequality of texture in the paper itself, giving the prints obtained therefrom a mottled appearance, corresponding to the water-mark in the paper. Various experiments have shown that this granularity—for such it may be called—is not due to the greater or less opacity of the paper, but to the fact that its unequal surface induces a correspondingly unequal thickness of the sensitive coating, the pits in the paper receiving more of the haloid than the intervening ridges, so that when the development takes place every depression in the paper becomes a granule of greater density in the negative. To overcome this difficulty thousands of experiments have been made fruitlessly,

so far as a general result obtains. Some experimenters of great skill and experience, notably Warnerke here, and Balagany in France, have produced paper negatives of admirable quality, though none which rival the negatives on glass, and the careful and laborious preparation of the material which has always been necessary has made the result costly and of little commercial importance, and unworkable by the average photographic amateur.

"In the American contribution to the Inventions to which we allude, that of the Eastman Dry Plate and Film Company, the difficulties are all met by a near approach to complete triumph. The sensitive film is absolutely free from any inequality due to the paper, and the resulting prints which we have seen are in no wise to be distinguished from those made from glass negatives, while the production of the film is carried on such a colossal scale and with such complete mechanical appliances, that the equality of the material and its freedom from accidental defects are greater than has been possible to obtain with glass, and the cost is reduced far below that of the usual dry plates of an equal excellence."

THE NORTH, CENTRAL, AND SOUTH AMERICAN EXPOSITION.

HARDLY had the World's Industrial and Cotton Centennial Exposition closed its doors at New Orleans on the 31st of May last, when a new corporation was formed under the above title, for the purpose of opening a *new exposition* during the ensuing fall and winter, to be conducted on purely business principles, and, if possible, excel in extent and completeness even the famous exhibition of last winter. That this hope will be realized is already assured by letters and applications for space from all sections of the country.

The North, Central, and South American Exposition has purchased at a low figure the entire buildings and plant of the World's Exposition, and is now fully organized for business.

The leading object of this new exposition will be to develop more intimate trade relations between the 55,000,000 producers and

consumers of the United States and the 48,000,000 producers and consumers of Mexico, Central America, South America, and the West Indies; in other words, to stimulate an exchange of our surplus manufactures for their surplus raw materials.

While especial attention will be paid to the commercial interests of the three Americas, it is assured that large and interesting foreign exhibits will be forthcoming.

The Exposition buildings cover nearly sixty acres, the main building alone having thirty-three acres under one roof. The collective exhibits of States and Territories will cover some ten acres more.

The Exposition will open November 10, 1885, and remain open until March 31, 1886. To the opening will be invited the Presidents of the United States, of Mexico, and of all the Spanish American Republics; the Emperor of Brazil, and the Governor-General of Canadas.

It promises to be a grand success. Intending exhibitors may obtain the necessary papers on application.

PAPER SUPPORT FOR NEGATIVES.

BY G. HANMER CROUGHTON.

WHEN at Cincinnati I showed the members of the Chicago Photographic Association some examples of paper negatives which I had brought from England, and gave it as my opinion that it was the next step in advance. I had no idea that by the next Convention there would be such a fine exhibit of what would be done by paper negatives as was shown at Buffalo. The exhibits by Mr. Eastman, the demonstrations made by Mr. Cooper, and the fine exhibit of very large pictures by Mr. Kent, all showed that paper negatives had long passed the experimental stage. Since then I have had an opportunity of seeing more of the capabilities of Eastman's negative paper and holders, and am still more confirmed in my belief that it is the process of the future.

There are so many advantages in the use of a paper support instead of glass, that if the results can be proved to be equal, the balance is so much in favor of the paper that it should lead to its universal adoption.

I will pass over the very obvious advantage of lightness and portability in carriage, although this is not by any means the least of its advantages. During my stay in Buffalo I carried around a 4 x 4 camera with twelve double holders, and can appreciate the difference in weight between that and a roller-holder carrying an equal number of paper films. In developing the advantage is with the paper films; the ease and simplicity of the development must be seen to be believed. The members of the Photographic Society of Philadelphia, who at their last meeting had this demonstrated before them by Mr. Cassidy, were unanimous in their expressions of surprise at the perfection of the results, and the ease with which they were produced. At the same time, the great objection which has been urged against the paper negatives was proved to be quite groundless; this objection has been that of texture of the paper, which it was urged must show in the printing.

Any one who has had anything to do with magic lantern slides will know that if texture exists at all it will be brought out in a transparency, even if it does not show in printing. To test this matter in a satisfactory manner I made magic lantern slides from the paper negatives, and the results were shown at the meeting; and when enlarged upon the screen there was no appearance of texture, or anything whatever to show that the slide was made from a paper negative, both the lights and shadows being as clear as if made from the best glass negative. With the settlement of this objection, there does not remain one which has not been fully and satisfactorily refuted.

This experiment with the magic lantern slides has suggested to me an application which will make this negative paper of great value to the profession, outside of its ordinary use for portraits and views.

For instance, I have a 4 x 5 negative of a group taken under very unfavorable conditions, it is therefore not so good as I could wish; but the people want larger copies of it, about 10 x 12. I put my small negative into the enlarging camera and enlarge the same in the usual way till it fills the 10 x 12 plate; then I take a piece of Eastman's negative paper and make a transparent posi-

tive full size. In making the positive it is important to give full exposure, and be careful not to overdevelop.

When dry this positive can be improved in a most wonderful manner with a lead-pencil, or rather, I should say, with several leadpencils of various degrees of hardness; shadows of drapery can be deepened; sharp touches put in where there is a want of definition. In fact, anything can be done with it, even to taking out objectionable portions with a sharp scraper, as demonstrated by Mr. Cooper at Buffalo.

When all this has been done upon the shadows of the transparent positive it must be oiled, and a negative made either by contact or in the camera. I prefer the latter. Upon this negative you have also the same power of improvement, working this time upon the lights with the pencil, and deepening the shadows, if wanted, by scraping. In this way you have a double power for improvement, and by adding to the shadows in the transparency and the lights in the negative, a large addition is made to the scale of tones on the enlarged negative and an enlarged print obtained, which is a great improvement upon the original.

There are other applications of this negative paper, which I hope to refer to hereafter.

OUR PICTURE.

As promised in our last, we give in this number a copy of the six pictures which were awarded the first prize presented by Mr. G. Gennert for exhibits from Europe at the late Convention.

These pictures (which were life-sized heads upon 20 x 24 plates) attracted well-deserved attention from all who saw them. We have already referred to the European photographs in our critical notice of the exhibits in our last number. The six pictures which we have now the pleasure of presenting to our readers were undoubtedly the finest in that exhibit, and deserve the first prize for photographic and artistic qualities.

The characteristics of these pictures were breadth and feeling in the treatment of the light and shade, softness and delicacy in the flesh shadows, an admirable rendering of texture, and, what is very important, sim-

licity and ease in pose and expression. The absence of over-retouching was not the least charm of these pictures; the pencil of the retoucher had not destroyed the natural flesh texture, or altered the lines and contours of the face. Just enough and no more has been done to remedy photographic defects, and it can be safely said that none of their excellence was due to the retoucher.

For the last few years photographers, as a rule, have appeared to aim to produce striking effects by violent contrasts of light and shade, combined with impossible action in position. These pictures, on the contrary, are striking examples of effect obtained by quietness and repose both in treatment and position.

The scale of tones is not near so extended as we have been in the habit of seeing in the majority of the photographic portraits produced on this side of the Atlantic. Take, for example, any exhibits of the best-known men in the same exhibition, and it would be seen that the number of tones or tints, from the deepest shadows to the highest lights, were far greater than in these pictures, and yet there is no lack of brilliancy, which is obtained by the harmony of the gradations, not by an extended scale of tones, or by the violent contrast of very deep shadow against the highest light. The massing of the lights upon the hair of the pictures of the lady and gentleman is simply exquisite. Notice how the silvery sheen upon the highest lights is enhanced by the delicate demi-tint next them. Notice, also, that the deepest shadows of the flesh are full of transparency and life-like texture. There is none of that hardening of the flesh into stone by the pencil of the retoucher which has of late called forth the condemnation of artists upon the average photographic portrait for its unreality and want of life. Here all is quiet, life-like, harmonious; the photographic manipulation perfect; artistically, they are striking examples of what can be done in artistic hands with our art-science, which some would have us believe is nothing but mechanical.

The prints were made upon the famed N. P. A. paper, supplied us by E. & H. T. Anthony & Co., New York.

THE NEW "DETECTIVE" CAMERA AND PHOTOGRAPHIC MATERIALS GENERALLY.

THE progress which has been made of late years in the science of photography has been something remarkable—the modes of posing are as different as can possibly be, while the apparatus employed have been changed and improved in a high degree. The photographer of the old school fixed the person to be taken in front of a sort of "bull's-eye," and requested him or her to "look natural." Then, after a half hour of fixing and twisting, the cap was taken off the bull's-eye, and a minute or more of torture followed, in which the sitter gazed fixedly at nothing. The result is well known to all.

But things are altered now, as a visit to the establishment of Messrs. E. & H. T. Anthony & Co., No. 561 Broadway, will convince the most sceptical. Here everything in the way of a photographic outfit can be obtained. Among their many specialties the most novel is certainly Schmid's patent "Detective" camera, by means of which pictures may be literally taken "on the wing." It is the lightest, neatest, and most compact camera ever made, and only weighs a fraction of three pounds, being so small and light that it can be easily carried under the arm. When needed for use it is only necessary to insert a "plate," a little catch is raised, a "click" is heard, and quick as the twinkling of an eye the view is secured. There is no trouble, and scarcely any mechanical skill is exercised.

Practically the operation is instantaneous, since a passing train, a galloping horse, or a flying bird can be pictorially fixed. These "detectives" are becoming almost as indispensable a portion of the tourist's "kit" as his guidebook, and the demand is such that the Messrs. Anthony, who control the patent, are totally unable to supply the demand, notwithstanding a large force is kept busy upon them in the factory.

Then there is the "Fairy" camera and tripod, a neat little affair, the whole of which can be readily carried in a hand valise. This is by far the most attractive and elegant piece of apparatus of its kind

ever offered. It is put together as rigidly as wood and metal can be, occupies less space than any other view camera of the same capacity, while the plate-holders are made of hard wood, with metal carrier for the plates, and fitted with all the later improvements. In direct contrast to those mentioned are the monster "Climax" and "Novel" cameras, some of which take a plate 25 x 30 inches, and are filled with the "Benster" plate-holder, which for "dry" studio work is the best ever invented. Then there are the famous "Stanley" dry plates, for which Messrs. Anthony are the sole agents. These plates have met with remarkable favor among both amateur and professional photographers, and their rapid rise to popularity is a sufficient evidence of their superior qualities; they need no demonstrator.

It would be difficult indeed to enumerate one tithe of the many novel and standard items of interest to photographers generally dealt in by this firm, which stands now, as it has since 1843, when it was first established, ahead of any other similar concern. Messrs. Anthony, it may be mentioned, publish a fortnightly magazine, entitled the *Photographic Bulletin*. It is handsomely gotten up from a typographical point of view, and is most ably edited by Prof. Charles F. Chandler, Ph.D., LL.D., Professor of Applied Chemistry in the School of Mines, Columbia College, New York City.—*New York Times*.

GERMAN CORRESPONDENCE.

Isochromatic Plates for Landscape and Portrait Work—Increasing Sensitiveness of Dry Plates—New Official Galleries—Black Bristol and its Influence—Sensitometer Researches of Eder—Siegfried's Experience in Balloon Photography.

COLOR-sensitive plates (or, as they are called, isochromatic) are exciting increased attention. Obernetter, in Munich, has employed them with repeated success in landscape work, and has had the best results in evening landscapes with brilliant yellow clouds and deep green foliage, and still greater advantage in architecture, composed

of brick and even with sandstone of a yellow color. I recently took such a building, of a yellow spotted sandstone, with ordinary plates, and obtained an impression which was covered with black spots. I then tried an azaline plate and obtained a faultless picture, which conveys the impression that the negative had been in the hands of a good retoucher, but the negative had not an iota of retouching. Naturally such results excite the attention of the portrait photographer. Scoliak, of Vienna, had shown a year ago the advantage of the employment of azaline plates in portraiture with variegated costumes—for example, military, and the costumes of ladies, also the rendering of dark complexions. To be sure, the time of exposure is somewhat lengthened, inasmuch as the addition of the color-sensitive body lowers the general sensitiveness of the plate, and in like manner the inevitable yellow glass operates to slow the action. Fortunately, in portraiture the intense color of the plate is not demanded. It is sufficient to coat a plate glass over with a colloid of about one and three-quarters per cent of cotton, with fifteen grains of aurantine, to one hundred cc.m. Such a plate increases the time of exposure to a small degree, so that the time is about three times that of an ordinary plate; the results are excellent.

In my last letter I made known the experiments of Hanley to make gelatine plates sensitive. He has made known recently the following: Plates of 19° W. were dipped in a solution of half a cc.m. ammonia citrate of silver in one hundred cc.m of absolute alcohol. The ammonia citrate of silver was composed of

10 grains of Nitrate of Silver,
10 grains of Citric Acid,
100 cc.m. Distilled Water.

Liquor ammonia was then added, which formed a white curdy precipitate. This addition was continued until the precipitate redissolved. It was then filtered; the solution is not clear, but milky. The plate was then dried and exposed, dipped for two minutes in bath of hypo 1 to 5000, then developed. Result: The plate showed softer gradation during the development than in

the case of the former experiment, and the high lights were beautiful. No trace of spots was visible, as occurred in the previous experiment with the fuming of the plates on ammonia. Sensitive plates gave in fifteen seconds the same results as with thirty seconds with the sensibilator. The negatives resemble wet plates. The method is worthy of recommendation, but the plates cannot be made in any quantity for storing, as the sensitiveness is lost in twenty-four hours. It, however, only requires a couple of minutes to prepare such plates.

The daily increasing importance of photography to science and art becomes more manifest by the increase in the commissions for the erection of photographic establishments by the Government. There is to be erected a reproduction gallery in the Hydrographic Office of the Admiralty. Another is being planned for the Royal Museum. Moreover, the photographic experimental atelier, in the Technical Academy in which your humble servant was actively engaged for twenty years, will soon be completed. We may remark that photographers who are officially appointed are not rarities, and that the number increases with the increased number of the official ateliers. I lately received cards of a black color, the pictures upon which were covered with bright yellow spots. I could readily determine the cause: The photograph, pasted with sour paste containing five per cent. of acetic acid, showed upon the black card spots in twelve hours; the same paste, used in pasting a photograph upon white board, did not exhibit the phenomenon. I recommend this simple test to any one who is desirous of using black cards.

Professor Pickering, in Boston, has made a number of interesting reports concerning the sensitiveness of bromide of silver gelatine plates of commerce when subjected to the influence of light from different sources. He has shown that the relative sensitiveness varies with the source of light. Professor Eder has continued these experiments. He took a Warnerke sensitometer and exposed plates of different make. He employed, not merely ordinary bromide of silver plates, but extended his investigations t

iodide of silver, chloride of silver, gelatine emulsions, wet iodide collodion plates, and (eosine) bromide of silver gelatine emulsions, employing daylight, gaslight, Hefner Alterkes amyl light, Warnerke phosphorescent blue normal light, and magnesium light. The following results were obtained:

which did not result favorably owing to defects in apparatus, shutters, etc., the following arrangements were found to give best results: The camera consisted of a box arranged for photogrametric purposes, with horizontal and vertical axes, so that the various operations—the fixing of the shutter,

The light-sensitiveness of	Light sensitiveness of	Source of light.	
Bromide of silver gelatine is to	Wet iodo-bromide collodion as	1- $\frac{1}{2}$	Daylight.
	" " "	1-1-10	Blue phosphorescent light.
	" " "	1- $\frac{1}{3}$	Acetate of amyl light.
	Chloride of silver gelatine as	1 $\frac{3}{4}$ to 1-7 ?	Daylight.
	" " "	1 1-10 to 1-50	Acetate of amyl light.
	" " "	1 $\frac{2}{3}$ to 1	Magnesium.
	Bromine of silver gelatine containing eosine as	1 $\frac{1}{3}$ to 9-20	Daylight.
	Bromine of silver gelatine containing eosine as	1-1 to 3	Amyl light.
	Bromide of silver gelatine containing eosine as	1-1-5 to 1-3	Blue phosphorescent light.
Iodo-bromide of silver (bromide of silver gelatine), with 10-20 per cent. of iodide of silver gelatine	1 $\frac{1}{2}$ to 1-3	Daylight.	
Iodo-bromide of silver (bromide of silver gelatine), with 10-20 per cent. of iodide of silver gelatine	1-1 $\frac{1}{2}$ to 4	Blue phosphorescent light.	

From this it will be seen how great is the variation of sensitiveness in relation to the source of light. Hence the light to be employed in the sensitometer will be better suited in proportion as it contains the greater number of colored rays in the spectrum—that is, the nearer it approaches ordinary daylight. I therefore regard the Warnerke sensitometer in this respect as the least suited, because its rays are chiefly blue, corresponding to the middle between G and F of the spectrum. The unfavorable results with wet plates may be thus explained, since they are more sensitive to indigo and violet rays.

Recently my pupil, Mr. Von Siegsfeedt, has given a thorough study to balloon photography. The great obstacle to success was the circumstance that the balloons were usually sent up for the pleasure of the public, and hence late in the afternoon. In spite of this hindrance, he has succeeded in taking, at seven o'clock sharp, strong instantaneous views, the clearness of the air which followed a rain-storm contributing to the success. After several attempts,

changing of the plates, and setting the apparatus in the seat in the basket—could be quickly and easily effected without causing any vibration in the car. Upon the base board of the camera were marks for registering indefinitely and for special distance, from which, after the ascension, the first shot could be made; a line fastened to the bottom of the desired length of the distance indicated during the ascension the proper moment for the unfastening of the shutter. The apparatus was connected with a table which was fastened from the outside of the edge of the basket by two hooks, and pressed by the weight of the apparatus against the sides by means of a three-curved support, which offered sufficient resistance to the strong concussion of the guillotine shutter. A quick but surely continued movement of the balloon does less harm to the sharpness of the picture than the swinging of the gondola, and especially the double swing, because an angle of only five degrees in one second, or fifteen minutes in one-twentieth of a second, made in 2000 metres, amounts to 8.8 metres. It is easily seen

whether an object has been taken indistinctly through the straight forward movement, or from the oscillation of the car, for in the first case the distance, in comparison with the near objects, appears sharper, and the reverse in the second case. From a free balloon the probabilities of the success of the undertaking are greater than from a captive balloon, because the motion of the former is much more uniform and not subject to violent vibration. By reason of the exaggeration occasioned by the aerial perspective, the same trouble as regards distant defects is encountered as is met in experimenting upon mountain tops.

Yours truly, H. W. VOGEL.

DOTS OF THE DAY.

THE Suter lens won a silver medal for its talented inventor and producer at the recent *International Inventions Exhibition* at London. It won *golden* opinions at the Buffalo Exhibition of Photography.

LUKE SHARP has had, to explain to our English neighbors, that when he said he could not tell the right side of the Eastman film from the other, that he was go-aking. What a pity some people don't read the *Detroit Free Press*, and learn the habits of that sharp focusser man.

AND now Mr. J. Peters claims to have been sharp enough to have taken some "battle photographs under fire," at the late unwholesomeness in the Northwest. Our recollections of "under fire" are, that twenty years or more ago the *smoke* considerably interfered with good photography. But then there wasn't *much* smoke, Riel-ly, at this last-named battle. Mr. Peters, though, took a picture "during a volley from the rebels' pits about one hundred and fifty yards distant"—ahem! say four hundred and fifty feet. Were the feet all on one side—a flank foto?

ON the 9th of September the emulsion process was twenty-one years of age. Its parents were Messrs. Sayce & Bolton, and its swaddling clothes were collodion. Its birthday was celebrated by the London Photographic Club.

ALL the English photo publications speak well of the Eastman film, and devote several pages to drawings and descriptions of the roller-holder and film carrier.

THE *Amateur Photographer* is a sprightly weekly published in London, 22 Buckingham Street, Strand, W. C. Its neat cover and general appearance make it the "prettiest" of all its compeers in the big city. Its older contemporaries snub it some, but it seems to get along.

IT is remarked by one of our British contemporaries that the larger number of the papers read at Buffalo were from England. Very true. Let us exchange again. We were busy on this side working up a film process.

MR. JAMES INGLIS has associated Mr. Wm. R. Dryer with him in the manufacture of dry plates, under the firm-name of Inglis & Co. Three brands are now made, "Extra Quick," "Tourists," and "Medium." Send for a price-list.

THE Novelties Exhibition of the Franklin Institute opened September 15th, and continues until October 31st. It is a grand exhibition, well worthy of a visit.

THE Photographic Society of Philadelphia is now making active preparations for its fall and winter exhibition. If you have not its circular-list of awards offered, you should get it now, and prepare to compete for some of them.

THE Photographic Society of Great Britain will open its annual exhibition October 3d, with the usual conversatione.

ANOTHER THEATRICAL TRIUMPH.

THE following will cause all our readers to congratulate the writer on his results:

SAN FRANCISCO, September 5, 1885.

Last week I was asked by the managers of the Grand Opera House whether it would be possible to obtain a photograph of the transformation scene during the performance of the spectacular play of "Undine" at their theatre!

My answer was, that I did not know, but that I would make the experiment. Ac-

cordingly, on Wednesday evening last, I set up my inoffensive-looking detective camera in a stage box of the Opera House, and waited for "further developments."

I had given no instructions as to lights or the number of seconds I desired the curtain held, and so had to take things as I found them.

Two exposures were made, one of a ballet tableau, and the other of the transformation scene. The former received eleven, and the latter nine seconds exposure.

The stage was lighted by four calcium lights, two being placed in the first gallery of the theatre, and two in the front wings of the stage; besides this the gas was turned on full force.

Both exposures were successful, though a trifle undertimed.

During the transformation scene redlights were burned at the wings, which, strange to say, did not seem to decrease perceptibly the actinic power of the light.

The audience did not notice the camera, and were unaware that anything out of the common was taking place.

Next week the experiment will be repeated on a large scale from the mezzanine boxes. Three or four large cameras and powerful lenses will be provided, longer exposures given, and the lights differently arranged if possible; and a special and exceedingly rapid emulsion prepared for the occasion by Dr. Passavant.

On Wednesday night I used quarter plates (Passavant's C. I. P.), and a five and a half inch focus Darlot rapid hemispherical lens, with full aperture, developing with "pyro" and potash.

I will send you full particulars of future experiments, and details of working, in my next letter. W. B. TYLER.

[Mr. Tyler is the able Secretary of the San Francisco Amateur Club.]

ONE of the most curious applications of photography that we have yet seen is a slide for the microscope containing fifty kinds of foraminifers, with the name of each kind clearly photographed on the plate itself. These specimens are sold at five dollars each by Messrs. W. Watson & Son, of London, who furnish a great many to microscopists.

CAMERA AMATEURS.*

SPREAD OF THE MANIA FOR PHOTOGRAPHY
—TAKING VIEWS ON THE WING—
SCENES IN THE AMATEURS'
ASSOCIATION ROOMS—
ODD AND ARTISTIC
WORK.

"A pleasant and natural expression—not too serious," has for years been the awful sentence imposed upon sitters before the cameras of photographers. Then, with a feeling of crime rising rapidly in his heart, the muscles of his face becoming like iron and cold perspiration starting from every pore, the anguish-stricken sitter has dumbly glared while the operator held the time-piece of fate in his hand and counted the slow seconds of the victim's doom. All that has been changed—or might be, rather, by the invention of the dry plate, or instantaneous process of photography. It is said that it might be, instead of that it has been, for the peculiar reason that the dry-plate process has not been adopted by many professional photographers, although there are over two hundred amateurs who are successfully using it. Many of the professionals are wedded to the old wet-plate process and are slow to realize the advantages of the new, if in fact the new has any advantages for the professional, for it is not claimed here that it has. But to the scores of enthusiastic amateurs who have become infected with the mania for photography, the instantaneous process has very many advantages. They go about always seeking something new to picture with their faithful cameras, and what they seek is generally of a nature not to observe any injunction to remain perfectly still and to assume a pleasant and natural expression—not too serious. In fact, the favorite subjects of the amateurs are anything but still life or portraits, as a visit to the rooms of the Pacific Coast Amateur Photographic Association, 318 Pine Street, will show.

TAKEN ON THE MOVE.

The amateurs prefer something on the go—a race-horse, a yacht, the clouds, a tangle

* San Francisco Daily Chronicle.

of shrubbery swayed by the wind, a herd of cows—anything with the element of picturesqueness or oddity. The amateurs are insatiable and ubiquitous. The one who was out for a walk with his camera under his arm and saw a balloon just ascending from a public garden was considered particularly lucky. The balloon was "taken," of course, and a finished picture of it hangs as a trophy on the walls of the Society's rooms. Those who are only familiar with the cumbersome apparatus laboriously wheeled about in photographers' studios will be puzzled to imagine how such a subject as an ascending balloon could be photographed without previous preparation. A polite and entertaining amateur who showed a *Chronicle* reporter through the Society's rooms explained this interesting point. The amateur, with his snug little apparatus under his arm, is always ready for work. Attached to the camera is a convenient little arrangement called a "finder," which is a camera in miniature. When a yacht, a friend, a pig, a couple of fighting roosters, or anything else, is seen and wanted, the amateur takes a look through his finder, waits until the subject is sighted, touches a spring, walks unconcernedly on, and the deed is done. The spring which he touches works a mechanism which exposes the dry plate for less than one-hundredth part of a second, yet a perfect negative of the subject has been taken. The clumsy tripod is no longer carried—only the camera and some plates—and the camera is held in the hands or under the arm, or rested on any convenient object. Many amateurs are displaying a very pretty taste in the subjects of their work, and a new interest is created by the fact that they take so many objects in motion.

YACHTING SCENES.

Yachts and yachting offer an endless variety of subjects. Some of the yachting scenes exhibited in the amateurs' rooms were taken on board yachts. When sail is being made or shortened or reefed, when the yachtsmen are dining, washing up, or in the unsettled condition a rough sea sometimes brings about, then the camera is at work. The reporter noticed one picture

which represented a small rowboat, with a single occupant, which was plunging furiously through an otherwise unoccupied waste of water. The picture compelled a second glance, for while the little boat was racing at a rate which dashed the water in foam from its bows, the occupant sat motionless and with leisurely folded hands. It had a more than Flying-Dutchman effect, and the reporter was at a loss to account for it until told that it was the small boat of a yacht. It was, of course, attached to the sailing yacht by a rope, but the operator had so skilfully buried the rope in finishing the picture that it could not be distinguished from the water. One picture on the wall represented a man who was a vivid personification of all that has ever been written about "the next morning." The man sat at a supper-table with the wreck of what must have been a very merry feast on all sides. A noble array of bottles, glasses half filled, upset and otherwise characteristically disposed, remnants of cigars and cigarettes, some withered fruit, and a tired-looking corkscrew, were the table's accessories. The victim had drawn his chair near the table, from which he turned his face in weariness, and his countenance expressed his belief that all is vanity, and that the brandy and soda would never arrive. The rest of the story is as follows: A party of bachelors passed a night in the quarters of one of them, disposing of their time as bachelors have had a way of doing before and since the days of Charles O'Malley. The next morning there was a weak but plaintive cry for brandy and soda. The subject in the picture was told that he could not have his drink unless he left his bed and took a seat at the table. Not suspecting the trick he did so, and the camera of an amateur, lying on a chair, finished the work.

(To be continued.)

SOCIETY GOSSIP.

THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the regular meeting held Wednesday evening, September 2, 1885. Mr. John Carbutt in the Chair.

The questions in the box were as follows:
1st. "When using a long focus lens, is

not the length of draw of the camera more nearly the same in focussing near or distant objects than when a short focus lens is used?"

With either lens the difference in draw is slight, unless the object is very near, and the image of the object large in proportion to its actual size. The nearer the object and the larger its image, the further from the lens will the plate have to be drawn, whether a long or a short focus lens is used.

Supposing in each case the image of the same object is to be reduced to a certain fixed size with each lens. If, to do this, one lens requires a draw of, say one-fourth more than its focus for distant views, the other will also require one-fourth more draw, and this, with a long focus lens, would, of course, be more in actual measurement than with a short one.

2d. "How can you get a warm red or brownish tone on a wet collodion slide?"

As a rule, the color of a slide depends greatly on the relative length of exposure, a long exposure tending to give the reddish tones. Much depends upon the condition of the silver bath, which must be in perfect order.

It was recommended to use a thick collodion, also to tone with a weak lemon-colored solution of sulphuret of potassium.

Mr. Carbutt presented the Society with a window transparency representing General Grant's Cabin in Fairmount Park. The transparency was made on one of his gelatino-albumen opal plates.

M. A. J. Casseday, representing the Eastman Dry Plate and Film Company, who was present, showed a number of paper negatives and prints from the same; also the apparatus made by his Company for exposing the camera in the paper by means of a holder containing sufficient paper to take twenty-four successive pictures.

The holders can be adapted to any camera. The paper is stretched between two rollers at either end of the holder, and passes over a board, which holds it perfectly flat and in proper position when the slide is drawn.

After making an exposure, by means of a key attached to one of the rollers, a fresh portion of the paper is brought into position, and so on until the supply is exhausted.

The holder occupies the same space as three ordinary double holders, while it contains paper for four times as many negatives. The advantage in regard to weight and bulk is, of course, obvious.

Mr. Casseday demonstrated before the Society the ease with which a paper negative could be developed. By first wetting it thoroughly with water, there is no difficulty in handling the paper. As the film naturally adheres more firmly to paper than to glass, the danger of frilling is obviated.

In regard to fixing, owing to the paper backing to the film, perhaps it is not quite so easy to tell when the hypo has done its work, but close observation shows plainly a decided increase in the translucence of the negative when entirely fixed.

After thorough washing, the negative is laid face downward on a piece of glass, and a squeegee passed over its back to remove all the moisture possible. It is then turned face upward and laid on the glass or any other smooth surface to dry. If done in this way, it is said that it will dry perfectly flat.

When dry, the negative is passed through a bath of hot castor oil, the surplus oil being wiped off with a cloth, and, when dry, it is ready to print from.

A valuable advantage possessed by paper negatives is the ease and rapidity with which they can be retouched. Cloud effects can be readily produced—the light portions by the brush or stump, and the dark effects by partly rubbing away the paper backing of the film.

As showing how completely any effect of grain in the paper is overcome, a lantern slide made from a paper negative was shown. When thrown on the screen the result was as perfect in this respect as if a glass negative had been used. The slide was made by reduction in the usual way, by means of a north light, acting directly through the negative.

Some lantern slides by Mr. Croughton, representing Louisiana scenery, were shown also some by Mr. W. D. H. Wilson.

Adjourned.

ROBT. S. REDFIELD,
Secretary.

SOCIETY OF AMATEUR PHOTOGRAPHERS OF NEW YORK.¹—An informal meeting, termed an "Experience meeting," of this Society, was held at the rooms 1260 Broadway, on Wednesday evening, August 12th. The Vice-President, Dr. John H. Janeway, occupied the Chair, and about twenty members were present.

The secretary read a letter from President Beach, whose engagements did not permit him to be present, and who gave an account of his experiences at the Buffalo Convention, at Niagara, etc.

Mr. Partridge followed with some "experience" in developing at hotels, and the expedients he resorted to. (Many years ago we established a dark-room in the hotel where we hid each summer for a few weeks—Dixville Notch, N. H.—and it appears Dr. Williams, one of the speakers at this meeting, found it and used it the past summer.)

Mr. H. J. Newton told how to manage with short rations of water.

Mr. Ripley made some excellent remarks on developers. He said: "Each separate part of the developer has its own special function. We are very apt to regard the combination as the thing. It is the thing, but we must learn to suit the combination to the particular circumstances that may be presented to us. If we do that, and bear in mind what the special function of each part is, we shall come nearer than if we mix the developer, as we often do, by a hard and fast rule of so much of No. 1 and so much of No. 2 and so much water, for any and all subjects. For instance, take the pyro developer; what does each part do? I take it that the pyro is the developer, the alkali is the motive power. Bromide of potassium or ammonium we use to restrain the action of the developer and, in combination with pyro, to gain density and contrast.

"So, if we bear in mind the conditions of exposure, and regulate the separate parts of

our developer to suit the conditions, we can, without much difficulty, get something that approaches a good negative. I have also found pyro itself, without any bromide to be a powerful restrainer. I have used as an experiment twenty or thirty grains to the ounce of developer, and obtained a fine negative. In developing negatives of subjects with strong contrasts, such as some interiors or landscapes, commence development with half the amount of pyro that is intended to be used, which will bring out the details in great softness, then add the balance of the pyro in combination with some bromide to finish to proper density.

"It is a great mistake to use the developer too strong or to carry development too far. We want to get out the detail without fog. Sometimes in case of very short exposures we are tempted to force our plates. We do not gain anything after all, for there will be fog over the whole surface, which ruins all, while a thin negative, if clear, can be intensified, and from it we will obtain good prints, which is the result we wish for."

Messrs. Newton and Ripley and Dr. Williams followed with remarks on "crooked" dry plates, and then the poor stenographer came in for a share of fault-finding.

Mr. Granger recounted his experience in the far west, and exhibited a number of his pictures, and finally Dr. Williams related his experience at Dixville Notch. Mr. Ripley was declared a true amateur though he manufactures plates, and then a meeting, the report of which would require nine or ten of our pages to print, came to a termination.

OBITUARY.

WALTER BENTLEY WOODBURY is dead. The sad news comes to us through our English exchanges, just as we go to press. The warm-hearted friend, the able scientist, the ingenious inventor is dead.

To us it is a personal bereavement, for we had been intimate friends for nearly twenty years. In our next issue we shall endeavor to place upon record as fitting a tribute as in our weak words we can.

¹ The report was not sent us until it had been set for another journal, and so was received too late for our last issue. As it has been twice published it is hardly worth repeating it in our current number; moreover, as we are overcrowded, we give a synopsis only.

His untimely death could have been prevented had an unappreciative and ungrateful world done its duty to him.

He was found dead in his bed on the morning of Saturday September 5th, away from home—at Margate. He had made an excursion to the country with two of his little children. Being weary he retired

early, and, as he frequently did, took laudanum to induce sleep. It proved an overdose, and our honored friend is dead. We do not hesitate to place him *at the head* of all the inventors in our art, who ever lived.

He was only fifty-one years old, and it will be fifty more before our loss can be repaired.

Editor's Table.

PICTURES RECEIVED.—From Mr. CLAYTON H. DAVIS, 12 North Seventh Street, Philadelphia, a very creditable 5 x 8 photograph of a teamster at rest. The diagonal lighting is the great charm of the picture, and the posing of the group is well managed. It is a fine bit of light and shade. Mr. DAVIS is a colored man, and wants to find a good business opportunity. He understands dry-plate manipulation thoroughly, and can give excellent references. Mr. E. M. VAN AKEN, Elmira, has created a great commotion in our study by his picture of "a great natural curiosity." A friend of his has an apple tree which bears fruit so curiously shaped as to resemble the bodies of chickens, ducks, etc. Artificial legs, bills, and wings are added to a group of them and photographed, and this quack-apple photograph surreptitiously mailed to us. It is awfully funny, but please send on the feathers. Mr. W. H. KIBBE, Johnstown, N. Y., has favored us with three rather ambitious composition pictures, which are very pretty in conception and very well managed. One is "Maud Muller," one "I am Going a Milking, Sir, she said," and the other "The Puritan Maiden." The last we consider the gem of the lot, and the milkmaid next to it. All show the good, careful photographer, and do him credit. The making of such pictures is excellent exercise. Mr. C. P. HIBBERD, Burlington, Vermont, has added a very refreshing series of White Mountain photographs to our collection, 8 x 10 size. The Old Mill and the Flume, Franconia Notch, are gems of the first water, and no pun. They were made on ALLEN & ROWELL's plates. Some portraits, some architectural subjects, inside and exterior, are also fine, but are eclipsed by one of the Episcopal Institute, which, with its surroundings, is reflected in the clear water of the river. It reminds us of scenes in Scotland. All are fine. Mr. HIBBERD's results are equally good in these last, which are on CRAMER's plates. All were developed with ALLEN & ROWELL's pyro and ammonia developer.

From Mr. J. INGLIS, Rochester, N. Y., a copy of the wonderful picture he made at Buffalo of the Convention attendants with "all hats up." Certainly a photographic cyclone, this, for hats are flying upward and in all directions, waggishly, regardless. Every man who parted with his hat there at the bidding of Mr. INGLIS gave evidence of his faith in the quickness of modern photography. Those who did not were unbelieving Thomases, and the man who said, "Faith, and before I will throw up me hat I'll see first if he can take it so quick," was an itinerant. Mr. JOHN BARTLETT, of this office is making some very good genre studies after Mr. H. P. HOBINSON. Mr. GERHARD, Keokuk, Iowa, favors us with some cabinets of admirable quality, which in every respect do him credit. Posing, lighting, careful retouching—all show the good photographer. HEIMBERGER & SON, New Albany, Ind., have been making steady progress for several years, and some examples of their work before us now excel anything we have seen from them. Mr. JOHN T. STUBBERT, North Sydney, Cape Breton, was one of our helpers at New Orleans, and since his return home has sent us some comical and excellent baby pictures. Mr. A. A. BALDWIN, Ludlow, Vermont, another one of our helpers at New Orleans, has been in charge of WYATT's gallery, Brattleboro, Vermont., for some weeks, and sends examples of his fine work. Thanks to both of these gentlemen for their kind expressions to their old employer. Mr. BALDWIN is to settle at the Partridge gallery, Boston, as lessee, we learn. Mr. A. H. PLECKER, Lynchburg, Va., favors us with a photograph of the house at Appomattox where General Lee surrendered to General Grant, taken on the day of General Grant's burial. From Mr. DURYEA, Moonta, South Australia, a very interesting series of photographs. Among the portraits are several of Mrs. ELLEN VIVIAN, in the character of "Leah, the Forsaken," which are fine in

pose. Also some admirable views of the Wallarow Copper Mines, and a lot of portraits of Australian blacks, who are far more repulsive and pitiable looking than the Nubians and Arabs whom we have met. Mr. DURYEA shows his interest in his far-away coworkers by sending for publication his formula for developer, which we give on another page. We hope to keep up communication with him. From Mr. C. W. DERSTINE, Lewistown, Pa., we have some interesting specimens of good work, including one of a young lad mounting a bicycle, which is very natural and gracefully posed. The work is excellent. From A. W. MANNING, Edina, Mo., a wonderful photograph of a streak of lightning. A duplicate of this came to us before the one noticed last month, but was streaked away, so this is first.

VIEWS OF ENGLISH CATHEDRALS.—For twenty years we have enjoyed correspondence with Prof. C. PIAZZI SMYTH, Astronomer Royal of Scotland, and the great pyramid scholar and photographer. Recently he has favored us with some splendid "scraps" of the English cathedrals, which he has been visiting during his vacation. We have no such studies in our own country, and neither have we any such royal astronomer, photographer, and genial friend combined.

THE Duplicating Print Cutter is the last invention of that useful man, Mr. W. G. ENTREKIN. This is an entirely new machine for cutting out the paper before or after printing. By folding a whole sheet of silvered paper to cabinet size, it will cut, with one stroke of the machine, fifteen pieces with perfect accuracy. In cutting after printing, you have full view of the print, so that each can be cut with exactness. Its simplicity and effectiveness of the machine are truly wonderful. Saves time and paper, and is just what the photographer needs. Any size made, with square or round corners, oval or arch top. The Improved Duplex Rotary Burnisher, lately introduced by Mr. ENTREKIN, is also worthy of a place in every studio. See advertisement.

WILSON, HOOD & Co., S25 Arch Street, Philadelphia, have just issued a very elaborate pictorial catalogue of dry-plate outfits, with net prices, which will prove a great convenience. It is splendidly printed, and up to date.

THE *Practical Photographer* is edited and published quarterly by Dr. H. D. GARRISON 76 Thirty-first Street, Chicago, at 50 cents a year, and everybody should have it. It is full of practical spice and good sense.

THE *St. Louis Photographer* for September is embellished with 1800 of Mrs. R. MAYNARD'S British Columbia babies. Ye gods! what commotion there must have been in our cotemporary's printing room during the production of the pictures. But then our St. Louis friends are amiable, and have given us a great picture.

A SAMPLE LETTER.—Enclosed please find \$5 for THE PHOTOGRAPHER for next year. Though only an amateur, the P. P. is fully appreciated by

FRANK H. BUTLER.

459 LAFAYETTE AVENUE,
NEW YORK. Sept. 18, 1885.

Mr. J. F. RYDER, Cleveland, O., created a convulsion in our office about three weeks ago, so serious that all hats have to be hung outside and frames tied fast to the wall (we always keep our bookcase locked), by springing upon us his new picture, "The Drummer's Latest Yarn." Take not our word for it, but send 25 cents, right away, and get it. Insist on the circular without extra charge.

A NEW DOCTRINE is it that "the Executive Committee never drew on the treasury for their travelling expenses." We think the old N. P. A. set the example, and we think all the members hold a lot of unpaid drafts, too, of the Executive Committee.

THORS, the progressive San Francisco photographer, causes us a pleasant surprise two or three times a year by a batch of his work. He is an artist who truly impresses his individuality upon his work. Original treatment of the subject and varied style are his forte, and his pictures always cause one to look them over again and again with interest.

Mr. CASSIDY, one of the demonstrators of the EASTMAN DRY PLATE AND FILM Co., has been posting Philadelphia photographers for three weeks. The societies met him with great enthusiasm. We have made some admirable lantern slides from EASTMAN film negatives, perfectly free from any granular appearance—as fine as from glass.

Mr. B. W. KILBURN, Littleton, N. H., rested four hours with us early in September. For over twenty years we have chummed together with the camera in the woods, on the mountains, at sea, and where not, and it grows newer to us every day, we have decided. We presume no man living has made so many negatives as Mr. KILBURN.

MR. S. P. TRESSLER, late of Fort Scott, Kan., has purchased the studio of C. E. WALLIN, at Montgomery, Ala., and has met a cordial welcome there. He has added a number of improvements, and will succeed, doubtless.

MESSRS. ALLEN BROS., Detroit, Mich., have favored us with a very pretty souvenir of their city, containing a dozen views.

MR. W. H. JACKSON, Denver, Col., gives the EASTMAN paper negatives the highest kind of a recommendation.

"OVERFLOW BOOKS" (see adver.) brought us an overflow of orders last month. A few more left. A good way is for the photographers in one place to club their orders and save expressage. Read all about it and order early. Here is a sample:

BANK, BLOUNT CO., TENN.,
Aug 31, 1885.

MR. E. L. WILSON,

SIR: Please send me Wilson's *Photographics, Pictorial Effect in Photography*, and Gihon's *Colorists' Guide*. The latter two are advertised in the PHILADELPHIA PHOTOGRAPHER for September. I enclose five dollars for the above books. I am much pleased with the PHOTOGRAPHER, and hope to be able to continue it through the year. Am just commencing work in the photographic line, with the expectation of making it my "calling and support," and need all the help I can get. Your picture for September is truly a gem.

Respectfully,

ANNA M. LORD,

Care REV. C. B. LORD.

In giving the names of the parties whose pictures were included in the set used in our August issue, we made a misspell of the name of the great architect of the Capitol Building at Washington, D. C., THOMAS N. WALTER, Esq. (and not WALKER, as we printed it).

We have sold our retail lantern and slide business to Mr. T. H. McALLISTER, 49 Nassau Street, New York, and in that line confine us to the manufacture of special slides to order, and from our own personal negatives. We commend Mr. McALLISTER heartily to all intending buyers. See his 136 page catalogue.

MR. LEON VAN LOO, the genial Cincinnati, only VAN LOO, remained at our office a few weeks ago and gave us his annual lecture on the folly of low prices. You will find it all in our little leaflet, "A Quiet Chat on Prices," copies of which are free. Send for one.

THE following postal card is to be considered as sent to you, and responded to accordingly. Please write down and send now, without waiting for the limit of time:

PHILADELPHIA, Sept. 15, 1885.

MY DEAR SIR: I come to you again with the request that you help me make *Mosaics* (for 1886) useful for the fraternity at large. I make the usual offer for your article, a bound copy of the book, which will go to you, postpaid, as soon as issued. Please let it be as practical as possible, pointed and clear, and not necessarily "dry." If you can, let me have your copy by the 15th of October, or as much earlier as possible, and oblige,

Fraternally Yours,

EDWARD L. WILSON,
1125 Chestnut Street.

IS SUCH NEGLECT?—A subscriber, in remitting a little late, says: "Pardon us for not responding before. It is so small a matter that it had entirely slipped our minds." Please, friends, do not so (in) consider us.

MR. G. W. CHANDLER, for several years operator with MESSRS. CHUTE & BROOK, Buenos Ayres, S. A., called upon us in good health a few days ago. He goes back to New England to live. He showed us some excellent work.

PACKING DRY PLATES has become so serious a consideration all around that manufacturers are looking into it most seriously. What follows then will be a welcome bit of news: "I have applied for a patent on a box to pack dry plates. The ends are of corrugated spring steel, adjustable. The box is made of tin. This box completely does away with all doubt as to the plates changing on account of separators or soda in the paper. We shall have the Stanley plate put up in these boxes for amateurs, $\frac{1}{4}$ 4 x 5, 5 x 7, 5 x 8, and larger sizes, as soon as possible. It also serves as a negative box. The steel ends being hard and smooth, no particles of matter scrape from the contact of glass.

V. M. WILCOX,

of E. & H. T. Anthony & Co.,
New York.

THE EASTMAN FILM abroad is winning friends. An active discussion concerning it has been going on in the *London Times*, but only to confirm the fact that our American friends are away ahead of all else in quality.

DO NOT forget to read about the New Eury-scope of VOIGTLANDER in MESSRS. B. FRENCH & Co.'s advertisement. See specialties.

In the *British Journal* for August 14, our friend Prof. Stebbing claims for Monsieur Audra the process of developing in two solutions, given by Mr. D. Bachrach, Jr., first in this magazine for June, 1884, and then modified and more fully in *Mosaics*, 1885, page 120, which wrong we desire to correct. Had the process become more general, as it deserves to be, it could not have been thus claimed for another. If you have not *Mosaics*, you should get it and try it. In recent correspondence with Mr. Bachrach on the subject, he says:

"It is best to use *no* bromide in the pyro bath, and only one-half the quantity of *sulphate* of soda recommended (no alteration in the *sulphite*). Instead, we put the restrainer necessary for *plates that require it* in the alkaline solution. Another desirable improvement would be some *astringent* in the pyro solution in *place* of the *sulphate* of soda. In warm weather it cannot well be worked without it."

GOOD NEWS AHEAD, THIS IS.—"I enclose a paper for *Mosaics*, 1886, the result of a little experiment just concluded, which I trust will prove both interesting and profitable to the fraternity. I am feeling splendidly, because I have got my plates to working quick as lightning, and clear as a crystal, and now orders are not lacking.

Yours truly,

"H. D. GARRISON."

PRIZES AT THE ST. LOUIS CONVENTION.—"The regulations in regard to exhibits, prizes, etc., being left to the executive officers for the St. Louis Convention, they (having all been consulted) substantially agree on the following propositions, the details of which will be more fully elaborated and formally promulgated at its first executive meeting:

1st. The maximum limit of space allowed to any one exhibit will be placed at about 300 square feet.

2d. Pictures entered for prizes must be from negatives made since the Buffalo Convention, the competitor certifying on honor to this fact.

This information is given as early as possible, so that all interested may know the gist of the Committee's probable action in the matter. May the best win.

W. H. POTTER.

INDIANAPOLIS, Sept 17, 1885.

WONDERFULLY curious pictures of Barnum's troupe of elephants on street parade in St. Johnsbury, Vt., July 25, 1885, have been sent us by Mr. D. A. CLIFFORD, the veteran photographer

of that city. One of them is taken at the head of the procession, with the now lamented Jumbo leading. The other is from the rear. They were made in one-twenty-fifth of a second, and are remarkably good. They prove that when he walks the elephant can carry his trunk and lift two of his great feet at one time.

A SPLENDID collection of photo-mechanical work has been sent us by the PHOTOGRAVURE Co., 853 Broadway, N. Y. It consists of about fifty specimens from their new works of prints by the various processes which they work, known as photo-gravure; gelatine printing (helio-type); photo-lithography (Osborne's process); photo-lithography in half tone; photo-engraving, and photo-engraving in half tone. The prints are on enamelled and plain paper; upon linen, silk, and satin; in tint, stipple, and half tone; portraits and landscapes from nature; representations of all kinds, and most beautifully done in a great variety of colors. Fifteen years ago, if a crayon artist could make a life-size head look as well as one of these portrait prints of same dimensions, he would have more than he could do. The prints in colors have never been equalled. Mr. ERNEST EDWARDS is the practical president of the new company, and it is bound to have success under him, for few, if any, are such entire masters in this line as he is. Photographers realizing that the PHOTOGRAVURE Co. produce cheaply prints of all grades, from the quality of "Our Picture" to that of the engravings in our advertisements, ought not to be slow to see that they can make the PHOTOGRAVURE Co. of great use to them in their business, for every one of them can work up orders for these productions and make money on them. (See advertisement.)

FRENCH'S ORNAMENTAL RELIEF BORDER FLEXIBLE NEGATIVES.—Mr. C. M. FRENCH has removed his studio to Oneonta, N. Y., where he now manufactures his famed negatives for borders. The New EASTMAN Film now enables him to produce flexible negatives instead of glass, the advantages of which will be seen at once. (See advertisement.)

GOOD.—Mr. C. W. MOTES, one of our veteran photographers, is applauded by the Atlanta newspapers for maintaining his prices and making the "best" photographs possible.

THE Minneapolis Amateur Photo Club has been formed with a membership of twenty.

WRITE for *Mosaics* for 1886 now.

Specialties.

MAKE OUT YOUR OWN BILL, and remit cash with your advertisements, or they will not be inserted.

ADVERTISING RATES FOR SPECIALTIES.—Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to *secure* insertion. Advertisers will please not ask us for recommendations. ~~85~~ We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement. **Postage-stamps taken.**

SEAVEY'S NEW YORK NOVELTIES.

FALL SEASON.

Our small size (6 ft. x 8 ft.) interior and exterior backgrounds for full and $\frac{3}{4}$ lengths, at from \$9.60 to \$14.40, have struck the popular taste.

They are new in design, quiet in tone, first class, and different from any before offered.

For further description, see last month's advertisement. Send for samples. For the fall season, orders should be given now.

LAFAYETTE W. SEAVEY,
216 E. Ninth St., N. Y.

FOR SALE.—First-class gallery, located in one of the smartest of New England towns. Doing a good business; elegantly fitted. Must be sold at once. Will sell at a sacrifice. Address

A., Care Benj. French & Co.,
319 Washington St.,
Boston, Mass.

FOR SALE.—A gallery established ten years, averaging a business of \$800 per month. Well supplied with instruments, backgrounds, etc. Prices good. No club work. Will sell whole or half interest to right party. Don't write unless you have some ready cash. Address

OPERATOR, Care of Geo. Murphy,
250 Mercer St., New York.

BACKGROUNDS! BACKGROUNDS! BACKGROUNDS!
—I undertake to paint them for photographers. Send for particulars.

M. H. ALBEE,
Marlboro, Mass.

ROCKWOOD SOLAR PRINTING CO.

17 Union Square, New York.

TIME.—It is our intention that every order received in the morning's mail (when not to be put on stretchers) shall leave this establishment the same day or the following morning. If too late for the morning work, it is sent on the second day. Having our own engine and electric light, *we are not at all dependent on the weather.*

GEORGE H. ROCKWOOD,
Business Manager.

W. F. ASHE ARTISTIC BACKGROUNDS AND ACCESSORIES,

REMOVED TO 68 WEST FOURTH ST.,
4 BLOCKS WEST OF BROADWAY, N. Y.

My new studio is fitted up with all the modern improvements, and the most refined demands from a critical public can be satisfied. A visit to my establishment, which has the largest showroom, containing the greatest amount of stock of any place in the world, will be gratefully appreciated.

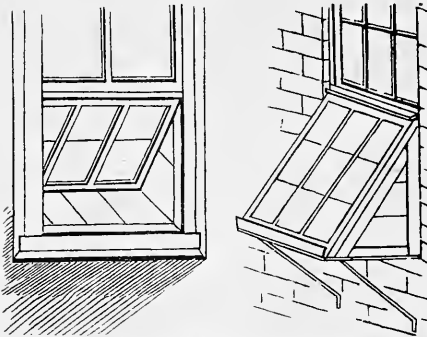
I have again added numerous new designs to my great variety of patterns for *backgrounds* and *accessories*, and keep also in stock a large quantity of goods for parties to select from, saving time and delay on orders.

WILSON'S PHOTOGRAPHICS.

\$4.00

\$4.00

The Best.



Look into it for anything you want; you are pretty sure to find it. **The Photographers' Encyclopedia.**

FOR SALE.—One of the best and most favorably known photograph galleries in St. Paul.

Address C-54, PIONEER PRESS,
St. Paul, Minn.

PORTRAITS IN CRAYON.

The new book by E. Long, on the art of making portraits in crayon on solar enlargements, covers the entire ground, and is sold for the low price of fifty cents. For sale by

EDWARD L. WILSON,
Philadelphia.

METAL GUIDES

FOR

A. M. COLLINS, SON & CO.'S

No. 26 GILT BEVELLED-EDGE CARDS.

The fancy-shaped mounts now so fashionable among photographers, require metal guides with which to cut the photographs. They are now kept on hand, and can be supplied in the following shapes, and at the prices mentioned :

	Each.
Cross.....	\$1 05
Star.....	1 00
Palette.....	90
Leaf.....	90
Bell.....	90
Crescent.....	80
Egg.....	59
Triangle.....	90

For sale by EDWARD L. WILSON,
1125 Chestnut Street,
Philadelphia, Pa.

KUHN'S

SENSITIZED PAPER, STRETCHER, AND DRYER.

THIS simple arrangement cannot but commend itself to every practical photographer. Paper dried in this manner lies perfectly flat, and therefore better prints can be made, and you can also cut your paper either lengthwise or crosswise of the sheet, as it neither stretches nor shrinks afterwards. In addition to all the above advantages, the paper is much more easily handled than in any other way; in fact, it is no trouble at all. The Stretchers are made in two sizes, for whole or half sheets. See circular.

Price, either size, each \$1.50. For sale by all dealers.

H. A. HYATT, Trade Agent, Dealer in
Photographic Goods of every Description.
8th and Locust Sts., St. Louis, Mo.



WILSON'S PHOTOGRAPHICS

Teaches how to get rid of every monster and trouble in the practice of the art.

\$4.00

\$4.00

M. WERNER,

PORTRAIT ARTIST,

No. 102 N. TENTH STREET, PHILADELPHIA.

Photographs finished in crayon, India ink, water colors, and pastel, in all sizes, in the very best styles, and at moderate prices.

Solar Prints and Enlargements Furnished.

EVERY photographer in want of excellent lenses, for any purpose, will best serve his interest by consulting the new illustrated price-list of Messrs. BENJAMIN FRENCH & Co. before purchasing.

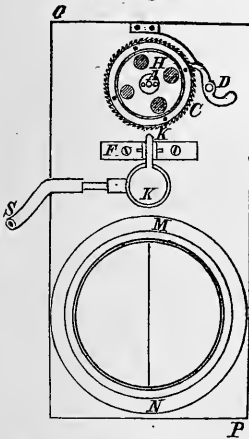
VOGEL'S

Photographic Progress.

\$3.00

347 Pages.

\$3.00



A word for all, and you never shut-ter without learning something useful.

KUHN'S

LIGHTNING INTENSIFIER FOR DRY PLATES.

Owing to the great rapidity of Dry Plates, it often happens that the negatives made are either over- or underexposed, and it becomes necessary, as with the wet process, to strengthen them, in order to get good results. It is usually done with bichloride of mercury and iodide of potassium. But this has serious drawbacks, as plates intensified by this method require a great deal of washing, and, after printing a quantity of pictures from such a negative, it will not retain its original color, but turns yellow, and then a good print cannot be obtained. This Lightning Intensifier, when applied, gives a beautiful blue or cherry color to the negative, and has the following advantages: It stands the light, and keeps its original color; admits the light through and prints beautifully. Besides this, it can be applied on any part of the Plate to lighten the deep shadows, etc., by applying with a soft camel's hair brush. In fact, the finest results from under- or overexposed negatives are obtained if these solutions are used as directed. The solutions are very concentrated, and are put up in two bottles containing two ounces each, and, when diluted to proper strength, each bottle makes sixteen ounces of solution, or it can be used in the more concentrated form if required.

For sale by all dealers.

H. A. HYATT, Trade Agent, Dealer in Photographic Goods of every Description. 8th and Locust Sts., St. Louis, Mo.

THE STANLEY PLATES.

CHICAGO, May 30, 1885.

MESSRS. E. & H. T. ANTHONY & Co.

GENTLEMEN: I have tried the Stanley Plate you sent me lately, and I am quite satisfied that it is as good a plate as I could wish for, working quick, clear, with fine details and beautiful roundness of image. I tried different developers on them, but find the pyro and potash to give the most satisfactory results.

Yours truly,

H. ROCHER.

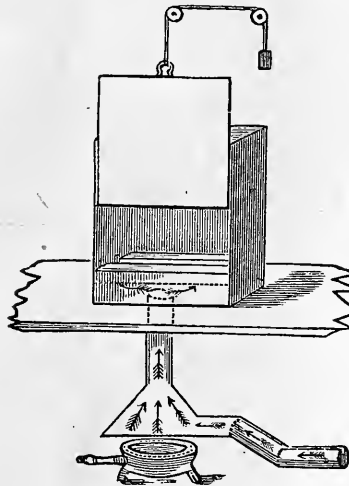
NEW YORK, June 8, 1885.

MESSRS. E. & H. T. ANTHONY & Co.

MY DEAR SIR: The four dozen Stanley Plates I had from you last week were all that could be desired—rapid, intense, and with not the slightest disposition to fog. For instantaneous exposures of steamers under full headway, I gave 1-50 of a second; for reproductions by gaslight, 5 seconds; for ordinary negatives, 15 feet distant from a common gas-burner, and the contrast of the pure white and black is remarkable. I am, very truly yours,

J. J. HIGGINS, M.D.,

23 Beekman Place.



WILSON'S PHOTOGRAPHICS.

All about emulsion work and plate making—a whole big chapter. See index.

\$4.00

Buy it.

\$4.00

ADDRESS T. W. POWER, N. Y., Secretary of Association of Operative Photographers of New York City, for operators, printers, and retouchers 392 Bowery, or 487 Eighth Avenue.

LIST OF ARTICLES FOR SALE AND PRICES FOR SAME.—All cameras in list are American Optical Company's best quality. Used by Edward L. Wilson at the New Orleans Exhibition:

	Each.
1 10 x 12 D. S. B. Revolving Camera	
Box, back focus	42 00
1 Hinged Tripod	3 50
4 14 x 17 New Style Plate Holder, extra	9 00
20 15 x 8 " " " " " " " " " "	1 35
2 14 x 17 Flat Printing Frames	2 00
4 10 x 12 " " " " " " " " " "	70
10 8 x 10 " " " " " " " " " "	60
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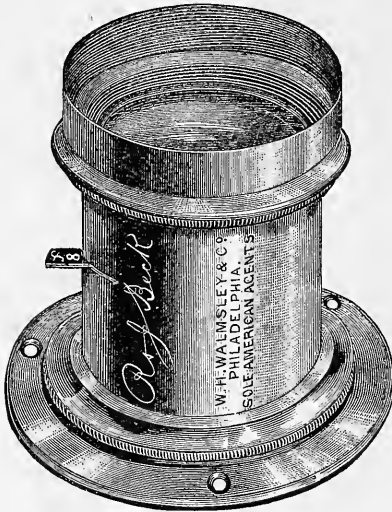
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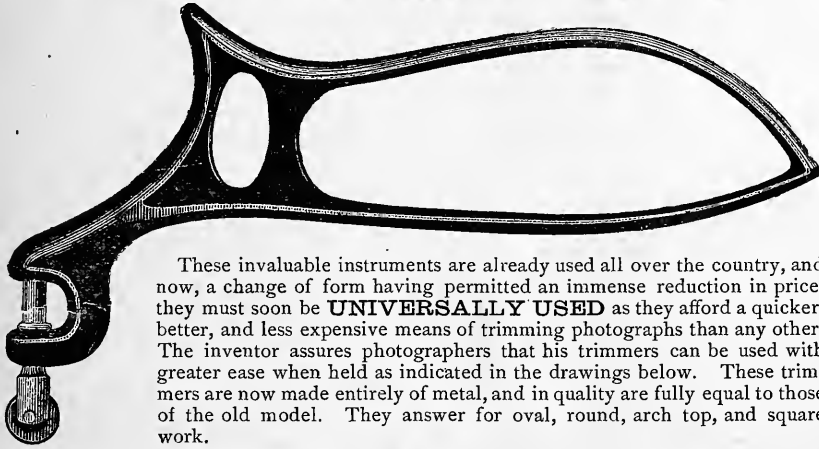
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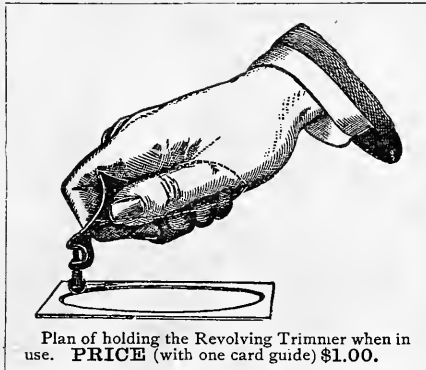
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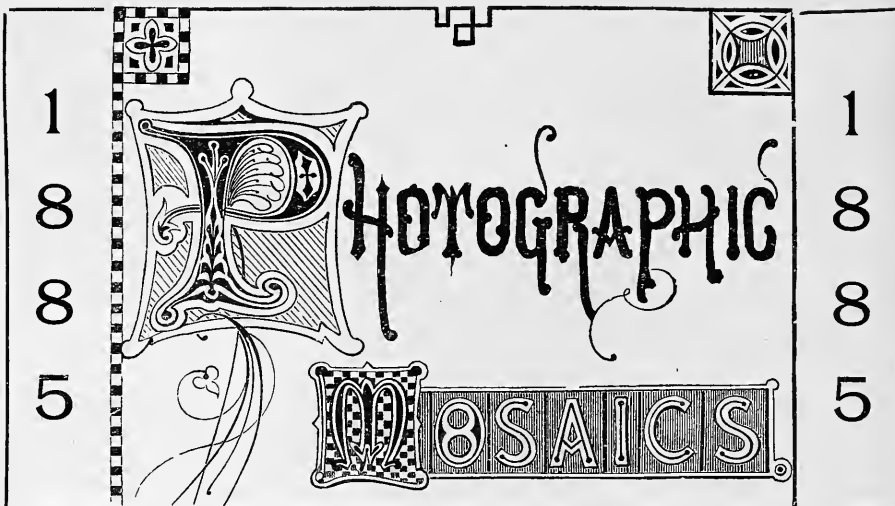
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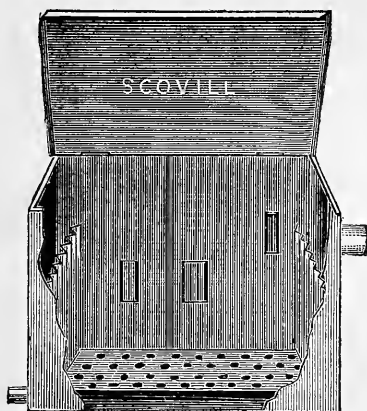
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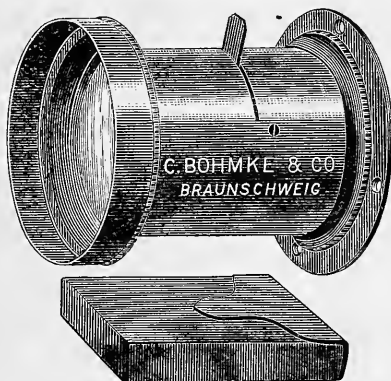
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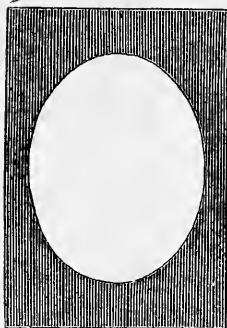
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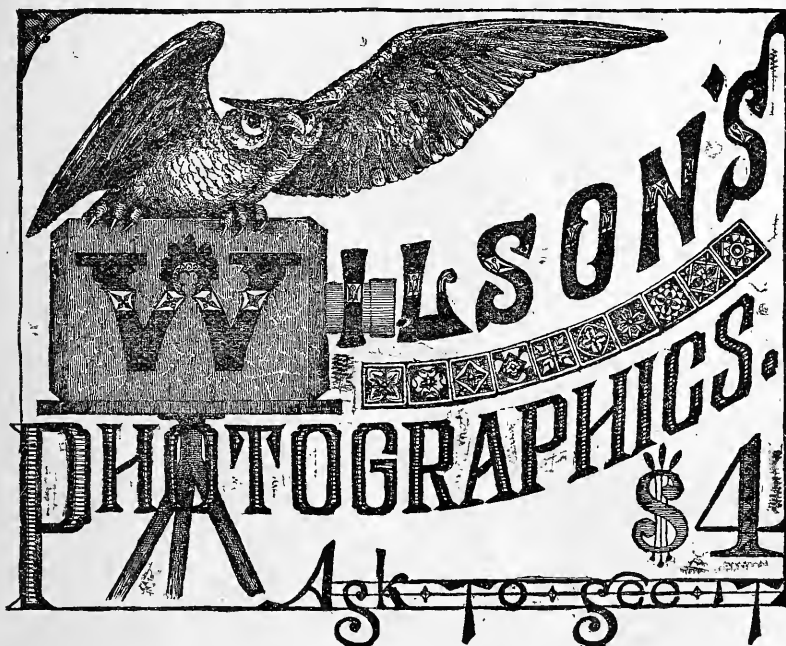
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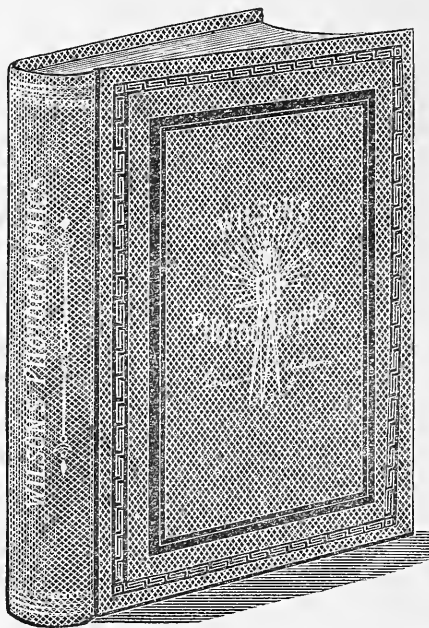
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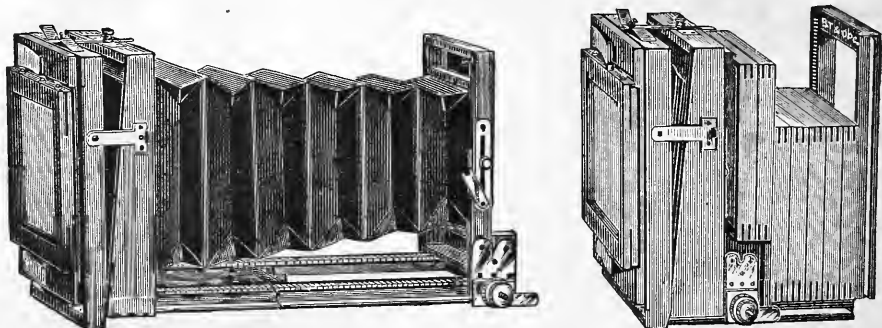
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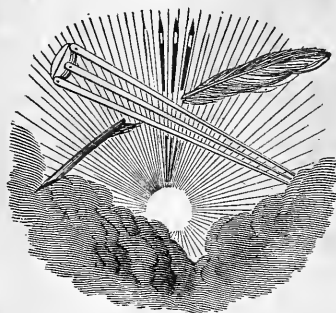
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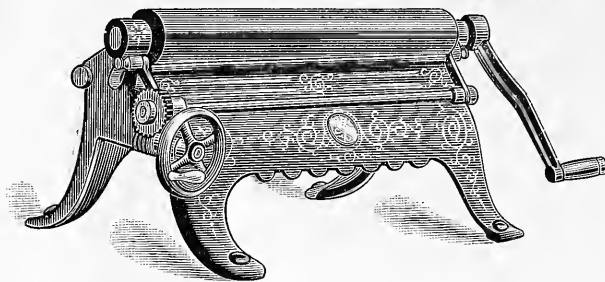
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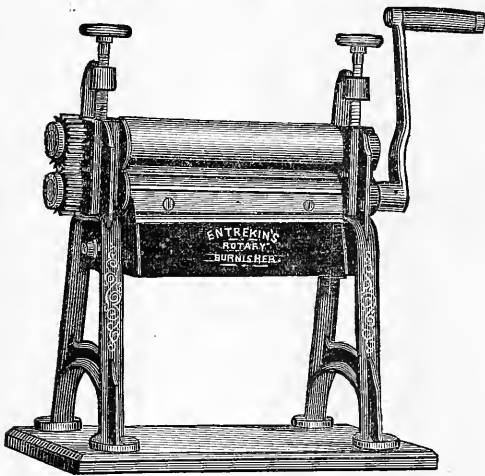
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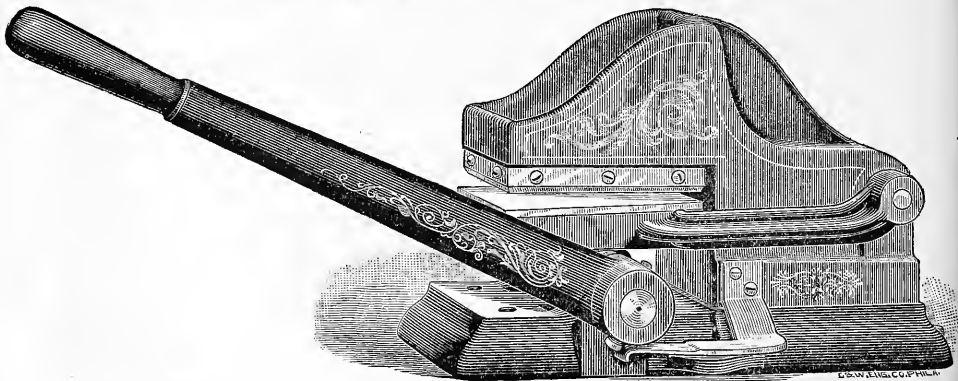
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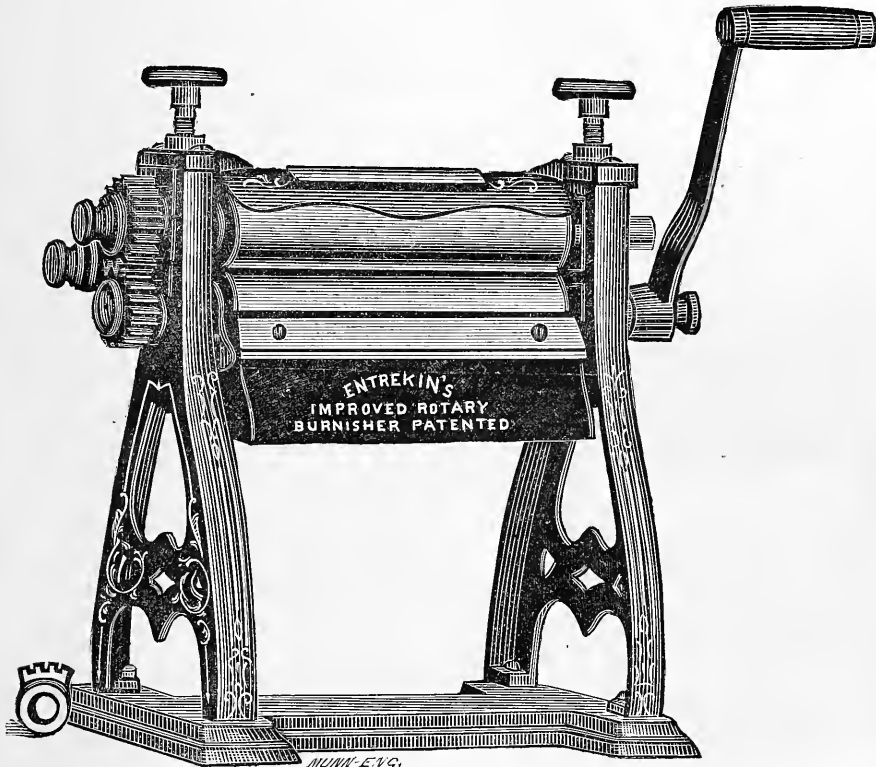
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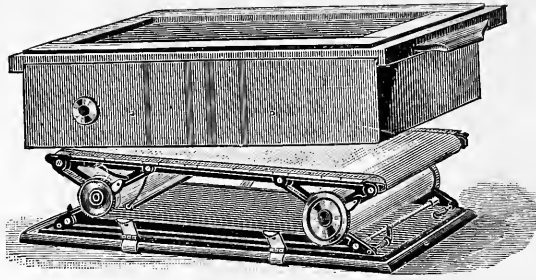
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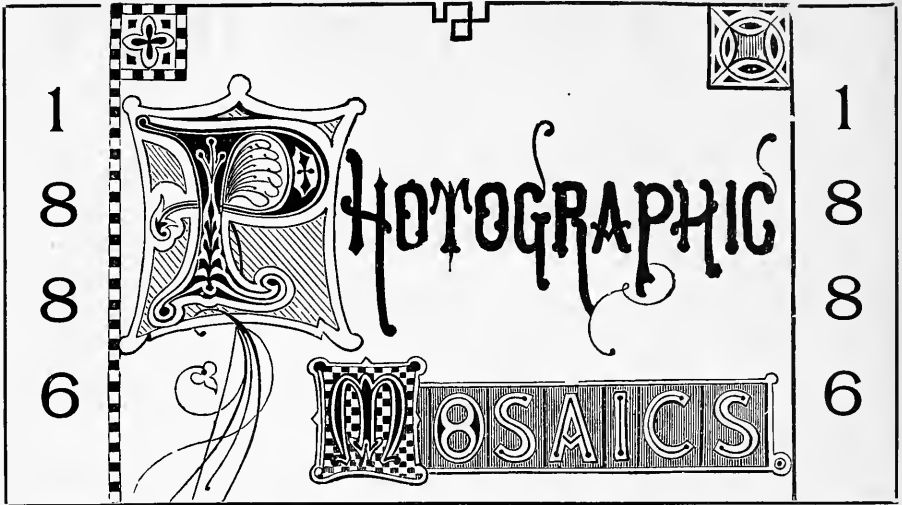
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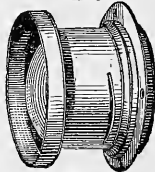
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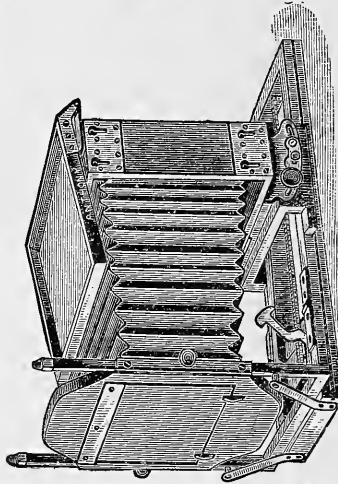
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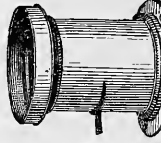
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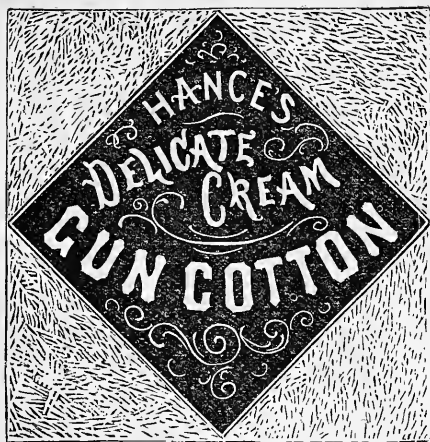
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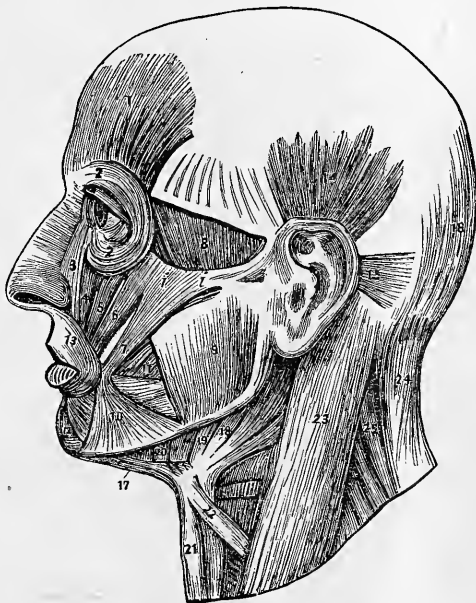
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Vol. XXII.

NOVEMBER, 1885.

No. 263.

WALTER BENTLEY WOODBURY.

ON Saturday last Mr. Woodbury was buried. *Stat magni nominis umbra.* Today we purpose to give a brief account of the man whose funeral was attended in sorrowing affection—if not in presence, in sympathy—by the whole photographic world, for whom he labored, and for whom he did so much.

Walter Bentley Woodbury was born June 26, 1834, at Manchester, Eng., where he was educated. He was named after his maternal grandfather, Walter Bentley, a naturalist of some repute. He was the eldest of five children. His father, John Woodbury, was one of the original promoters, if not the originator, of the early closing movement. His mother, the daughter of Walter Bentley, was much respected for her high principles and gentle nature, qualities inherited by all her children.

Readers of this journal will remember his interesting "Reminiscences" which he contributed last year, from which it is evident that his love for "things photographic" was developed at a very early period of his life. "I had always been great," he writes, "in 'camera obscura' of various forms—cigar-boxes and spectacle-lenses being the general basis—and my greatest pride, at the age of twelve, was to take my boyish companions to the garret, at the top of the house, where I had, by means of an old magnifying mirror, from which I had removed the mer-

cury backing, and a sheet of looking-glass, been able to throw a two-foot image onto a table beneath. The foreground of the picture consisted mainly of chimney pots and roofs, but above these was a more extensive view, embracing the tower of the old Cathedral of Manchester, 'Th' owd Church,' as it was generally designated. To be able to show the time on a sheet of paper below, without going on the roof, where the best sight could not have distinguished the fingers of the clock, was my grand *tour de force*. The idea that such a picture could be fixed was too wild to be even dreamt of in my young philosophy." Yet, Hamlet-like, he soon discovers after all that there *are* more things in heaven and earth than those of which his young philosophy may dream. Pocket-money and "tips," instead of being invested in the customary jam, tart, and Swiss roll, are heroically saved for "pyro" and other photographic dainties—at all which things, like good amateur photographers, we smile, and exclaim with the poet, "*macte novâ virtute, puer, sic itur ad astra.*"

For some years Walter Woodbury plods sturdily on in all the fervor of love's young dream. Cameras are constructed out of stout mill-board, with the assistance of strong black tape—"dark slides" of a similar material varnished. "Lenses" are extemporized out of all sorts of impossible materials. Neither barrel-shaped lines, or the reverse, disturb his equanimity. Where

there's a will there's a way, and all goes well. But, alas! the course of true love never did run smooth. Photography finds herself face to face with a rival in the young enthusiast's heart. Or to change our metaphor. "Gold fever" is in the air, Walter Woodbury catches it, secures his passage in some "outward bound," and sails for Australia.

"My old love, my idol, was shattered and forgotten entirely. Cradles, tents, picks, spades, and revolvers put camera and collodion entirely on one side. I was off to Australia, with all the requisites to make my fortune in a few months, and, what is more, I really, believed I was going to do it."

There is an old and respectable saying which asserts that all is not gold that glitters. We must not for a moment be understood to cast suspicion on the purity of Australian gold, nor would we wish to damp the ardor of any future diggers; but we feel bound to chronicle the fact that the young searcher after gold experienced the truth of the saying. The gold, at all events, did not glitter for *him*, no nuggets illuminated the darkness of *his* "diggings." Many a time during the troubles and hardships of the next few years he must have sorrowfully confessed that it was distance, and distance only, that had lent enchantment to the view of his El Dorado.

Yet, in this world, as Dr. Pangloss, if we remember rightly, tells us, "all is for the best." Australia, after all, does not consist entirely of fields of inaccessible gold. She has, at least, one fine field where photography may flourish. Walter Woodbury discovered it. Like a certain Hebrew monarch, he went out seeking asses and found a kingdom.

Let him once more speak for himself. "On arrival at Melbourne, I found that everybody was returning from the gold diggings disgusted, and the town was so full, that another town of tents, called Canvas Town, had to be built. Not being encouraged to try my fortune at the diggings after learning this, and after some months trying to get some congenial position, I found my little means almost exhausted, being reduced to about £6, besides being thousands of miles from home. But just

at this time, of all extraordinary things, what should I see in an old store-shop but a camera and lens for sale. My old love returned at the sight of it—it had evidently never left me—and I, recklessly, never thinking of the question, 'What will I do with it?' went in and spent two-thirds of my last remaining worldly wealth in its purchase;" or, as Mr. Pritchard puts it, "Like Moses with the green spectacles, he forthwith purchased a camera with his available cash, about the most useless thing he could possibly buy, without chemicals and other necessaries for the taking of photographs."

Poor Walter Woodbury! only £2 in his pocket, and a superfluous camera on his back! But, no matter; at least he is "off" with the new love, and "on" again with the old; once more the lovers are joined, for no man henceforth to put asunder. For some time it is uphill work. Walter tries his hand at everything, and his camera at nothing, rubbing the latter no doubt carefully the while, and keeping it against the day when the sun shall shine. He becomes successively bullock-driver, cook, paper-hanger, writer of tickets, surveyor's laborer—everything, in short, by starts, and nothing long. Cuts down trees with all the vigor of Gladstone, splits them up into pegs, and helps to lay out the town of Ballarat; failing in his endeavor to break stones simply from the fact that there are so many clergymen's sons and Oxford graduates who had prior claims. To one thing, and one thing only, is he constant. In all his wanderings his faithful camera "still bears him company." "Even in the bullock cart, which for a time was my only home, my old love, my camera, accompanied me; and I often regretted, when surveying some of the untrodden wild spots which we had to go through, that I had not got the 'chemicals and other necessaries.'"

At last came the proverbial turning in the lane. His new position (draughtsman in the engineering department of the water-works at Melbourne) gave him plenty of spare time, some of which he devoted to the procuring of the "other necessaries," and the rest to his no longer barren camera.

The hour has come and the man. A

timely exhibition is held in Melbourne. Walter Woodbury, needless to say, "amuses himself" by taking views of the building while it is in progress. The committee see the views and appreciate (let us hail them as amateur photographers and brothers!). Walter Woodbury is invited to take a small view of the completed building, to be sent to England that a design for the medal may be made from it. *Venit, vidit, vicit.*

"Up to this time," he writes, "I was still an amateur, but had a great run on me to take portraits of the heads and employés of the building, until some one, wiser than myself, one day suggested that I was spending all my little earnings in buying chemicals and glass without any remuneration for myself, and that I ought, at least, not to be the loser." Generous Woodbury! always, to the very last, willing to let others reap where he had sowed. "He was full of ideas," says a friend, "for the improvement of apparatus. These he did not trouble to carry into effect, but gave them away freely to others, who have adopted them." *Sic vos non vobis mellificatis, apes.*

"From that day," he remarks, "I ceased to be an amateur photographer. I have, while I write, the relief view of the Exhibition Building in the form of a medal, awarded to me for a series of collodion views (taken of the principal buildings of Melbourne) in the year 1854, while I was still an amateur, and this I shall always value more than all others I have since obtained, even the grand gold medal of Moscow."

Our photographer may have once suffered from an attack of gold fever—at least he is now completely cured!

By this time Walter Woodbury had been for some four or five years in Australia (he left England in the year 1851, at the age of seventeen), and has gained a mastery over the details of his craft. He now starts for "fresh woods and pastures new," and erects his tent, or at least his camera, in Java.

Now, as it is in Java, that according to the hymn "Every prospect pleases, and only man is vile," we might assume, *a priori*, that some things existed not unworthy of being fixed by a "permanent process," even had we not the result of Mr. Woodbury's Java labors to assure us of the fact. In

1859, he returned to England, unfortunately somewhat impaired in health, but with a magnificent set of Java views, subsequently purchased by Messrs. Negretti & Zambra, and by them published, in part, as stereoscopic slides.

In 1860 he returned to Java, and settled in the capital, Batavia. Here, in spite of enormous difficulties of climate with which he had to contend, he established his reputation and gained unequivocal success. In connection with a Mr. Page, he established a firm, which still flourishes, and the name of "Woodbury & Page" was known throughout the East. Unfortunately, his health at last gave way, but he returned to Europe with three good things, money, reputation, and a wife. The latter, a Dutch Indian lady, married in 1862.

In a recent number (March 20, 1885), we have alluded to Mr. Woodbury's labors from 1864 onwards. From 1864 to 1884 Mr. Woodbury took out no less than twenty patents; some, of course, dealing with the production of surfaces in relief, and printing from metal intaglios, others for producing designs on wood, paper, metal, cloth, etc. etc.; and a series relating to improvements in optical lanterns, stereoscopes, kaleidoscopes, barometers, hygrometers, and photographic apparatus. In the course of this period he contributed to the *English Mechanic* an exhaustive series of papers on the various scientific experiments which could be shown in the optical lantern; and these articles were subsequently republished under the title of *Science at Home*. His contributions to the photographic journals and year-books have been numerous, and a correspondence he entered into with Professor Tyndal was published by that gentleman in the columns of *Nature*. Mr. Woodbury also edited, illustrated, and published a work containing a series of views from all parts of the world, entitled *Treasure Spots of the World*. Lastly, we must not forget that he was the pioneer of balloon photography.

The master invention which will always be associated with the name of Woodbury is, of course, the permanent printing process which bears his name; and, as to many of our readers, its details are probably unknown, we venture to give them in the

words of one of his many friends and admirers. He had himself promised us a description from his own pen, a promise which, alas! he did not live to fulfil.

"First of all, an ordinary negative is required, and the better the negative the better the results will be. It should be brilliant and transparent, either moderately dense or full dense, while even a thin one will give excellent results. Fog is fatal to good results, whatever the density, just as it is for all processes except albumenized paper.

"Behind this negative in an ordinary pressure frame is exposed to light a film of gelatine impregnated with potassium bichromate, which has then the property of becoming insoluble to a greater or less depth, according to the amount of light which has fallen upon it. This is also the basis of the carbon or autotype process. The picture is formed by washing away in hot water the gelatine which has been protected from the light by the negative, leaving the insoluble gelatine on some support. This fragile gelatine picture is in relief—that is, the deep shadows have an appreciable thickness, probably about the $\frac{1}{250}$ th of an inch, while all the half-tones are represented by corresponding fractions of that thickness, while of course in the whites of the picture there is no gelatine left. Hence the reason for a support; in this case it is a film of collodion which holds the several parts together. In a carbon print or autotype the paper serves the same purpose.

"The finished gelatine picture is now called a 'relief,' and serves as a matrix to produce the printing blocks. These are made by pressure. The relief is laid on a *perfectly true* steel plate, a sheet of lead laid upon it, and subjected to a pressure of at least four tons to the square inch of surface; even more pressure is desirable. If the operation has been skilfully performed, the result is an intaglio plate, a faithful reproduction of the relief, and this plate is capable of giving a very large number of prints; while, strange to say, the delicate gelatine relief is, or should be, totally uninjured, and capable of yielding an indefinite number of intaglio plates or 'moulds.'

"It will be seen that if this mould is *perfectly true*, and it is exactly fitted up with a

transparent colored pigment, the resulting *cast* from this *mould* will be a perfect picture. The printing, therefore, demands a succession of perfectly true and parallel surfaces; the steel plate must be true, the 'mould' must be true, the printing press must be true, even the paper must be true. If there is the slightest inequality in it, every little hollow will be filled up with color, and the picture spoilt."

Think now, reader, of the labor involved in working out such a process. Remember that an error of planimetry of the $\frac{1}{1000}$ th of an inch will infallibly make a shadow of a quarter the depth of the deepest shadow in the picture, and you will hardly wonder that Mr. Woodbury had exhausted all his resources by the time he had approximately conquered the principal difficulties, and that the six or seven years spent in bringing the process to a workable state were years of unremitting labor and expense.

It is on account of these great difficulties that so few people have succeeded in working the Woodbury process satisfactorily, and so many have failed. The marvel is that the difficulties should have been overcome at all.

The Woodbury process is still in its infancy. It is not twenty-one till the 24th of this month, and is still capable of great expansion. The results produced by it are, in innumerable cases, infinitely superior to silver prints from the same negatives; with the further advantage of absolute permanency, and perfect regularity of depth and tone.

To the money troubles which cast a cloud over his later years we will not allude further than by saying that, such as they were, they were manfully borne. He is now beyond the reach of sorrow and sighing.—*Amateur Photographer.*

DEVELOPMENT.

BY THOMAS PRAY, JR.,
One of the plate busters.

THERE is no use, in this mundane sphere, for any rule to work by. Go it blind; guess at quantities, guess at exposure, and then, when it has been slop work all the way through of the most outrageous kind,

and the development has turned out some ghosts, or black plates, lie back and swear about the blamed old plates. No exaggeration, reader. This is the way many a man works, and why? Because some of the platemakers give the most outrageous messes, and style them developers. Then they, these same platemakers, send out circulars, and tell you "how to do it;" and the directions are definite(?) And so between the happy-go-merry amateurs who use three different brands of plates each week, and four different lenses and several developers, and the far-fetched stories of quick lenses, that cover a plate all up with a snap shutter, etc. (see the circulars), the boys have lots of fun, and the printers have everything in the shape of a negative—from a starved ghost (almost clean glass) to a negative so dense that it wouldn't print in a July sun on bromo-gelatine paper in four weeks—brought to them to "doctor," that "my photographs" can be shown to admiring friends, etc.

The whys and wherefores are not so far to seek but that they can be found on the same day. Some of the developers are chemical curiosities, or would be, if any man could ever get the mess to stay in solution. The solutions of "pyro" are, indeed, fearfully and wonderfully made, but with a pertinacity worthy of emulation, it refuses to amalgamate, dissolve, stay so, and if the immature commences all right, and does not guess at his exposure, he gets a fair negative or two, and in a week or so after he "drops" on some view and goes home to behold a charming example of a thin negative, never dreaming that his pyro compound solution, *minus* bromide of brains, is as uncertain as a saturated solution of anything made up from two different lots of chemicals. Having made his exposure, and supposed it is normal, he proceeds to mix a "normal developer" see circular. The image commences to come too fast; he slaps in plenty of bromide, and it calls a halt, and he gets an uncertain amount of density, a marvellous lack of detail, and a most beautiful and conspicuously charming lack of harmony or gradation. The developer is then poured down the spout and a new one made up for the other plate.

Having profitted by his experience(?) he now commences with less pyro and alkali, and all comes up pretty well. But somehow it soon commences to drag, and when it has come to a certain point it refuses to get denser, or to give out the detail. More pyro, and it gets worse; more soda, and it looks better; and finally it goes through the alum and hypo, and comes out a ghost—past all patching, and our immature then goes for the platemaker more vigorously than politely.

We have solutions which contain quite too much alkali, and sometimes, if we follow the exact formula, we find a superabundance of material which lies harmlessly in the bottom of the bottle, undissolved and useless. Some of the pyro solutions are charming instances of chemical ignorance, if not comical in their effects, and many of our platemakers seem to ignore the fact that pyro *cannot* be kept in any solution, so far as is yet known, and retain its power to develop; and if it could do so, bromide of any kind should not be added to pyro solution. If the most perfect results are desired or expected, and if the positively best results are desired, then no bromide of any kind should be put in the developer in any form. But it is so exceedingly difficult to give exactly the correct exposure that some bromide is necessary; and a better way is to dilute your developer, slightly, and make use of a little more time in development, gaining density not at the expense of detail or harmony. But here enters another element, and one which accounts for very many failures or perplexities of both professional or immature photographer. Professor H. J. Newton has said that in some of the developers no one of the bromides was allowable except the bromide of soda, and my own experience has entirely proved to my own satisfaction that Mr. Newton is theoretically and practically correct, and the resultant proves it by a superlatively excellent result whenever a near approach to correct exposure has not been made, and bromide has become necessary to maintain correct action upon the sensitive surface. And in this connection it may be proper to say that Professor Newton has fully demonstrated that the use of bromide in the solu-

tion of pyro necessitates more pyro to produce the same result, and also, that pyro kept in solution for a few weeks decreases in activity on the sensitive film as 5 to 2, thus requiring five grains of a two months' old solution to do what 2 grains *is supposed to do*. Now, is there any wonder that failures are the result. But these facts are not in every case generally known, and there seems to be a predilection, in many cases, for the platemaker or demonstrator to use some especial compound as a developer, or some concentration, or other style, which, in all time to come, will, and must be, subject to chemical changes that seem not to be overcome without the introduction of discordant elements and the ruin of the solution as a developer.

Experiment sometimes demonstrates the fact that developing does not of necessity follow cast-iron laws; but if the emulsion has been carefully put on the plate, and the exposure in some proportion is correct, that some other fellow's developer will make just as fine if not a better negative than the compound concentrated anti-commonsense, so much recommended.

The writer has been patiently over a very great number of these so-called developers—and with different plates—and for many months could develop by any one of a dozen different—always ready—ones as occasion required, or that fancy dictated, and as a result has thrown all but the pyro potash and pyro soda (pyro not in solution) down the spout, and has adopted Professor Newton's standard as the most perfect in its every requirement, and the nearest to a real scientific developer of any so far found or used; and it has the additional advantage of being very clean to handle, and of giving the most beautiful effects; and it brings out more detail with same exposure and plate, in some cases already tried, than the developer recommended by the maker of plates. The writer has used it on Stanley, Cramer's blue and yellow label, Carbutt's A. and B. and Special, Ripley's, and one or two others. With Newton's standard, bromide of soda *must* be used; and it is used when necessary in a solution fifteen grains per ounce, added by pouring off the developer from the plate upon the bromide solution in the grad-

uate so as to mix thoroughly; and all this can be done in six to ten seconds if provision has been made. For underexposure *dilute* and wait; using bromide of patience instead of cyanide of haste. Some of the snap-shutters may expect to develop a plate in four seconds, and finish off a print from the negative in the same unreasonable way, but such impossibilities are unattainable.

One more thing and we are done: commence the use of dry pyro if a lot of plates are to be developed; a solution of 2 or 3 grains per drachm can be made,—or of any multiple desired,—and then, with little trouble, any amount needed can be used quickly, cleanly, and *surely*.

As it may not have been remembered, or of ready reference, we give the formula just as Prof. Newton gave it:

No. 1.

Water,	.	.	.	32 ounces.
Yellow Prussiate of Potash,	3			"
Carbonate of Soda,	.	.	3	"
Carbonate of Potash,	.	.	3	"

Mix and filter.

No. 2.

Water,	.	.	.	32 ounces.
Sulphite of Soda,	.	.	3	"

Mix.

In both solutions the troy ounce of 480 grains is meant—not the avoirdupois ounce of 437½ grains.

Normal Developer.

No. 1,	.	.	2 drachms or ¼ ounce.
No. 2,	.	.	14 " 1¼ "

Which makes up two ounces or sixteen drachms, or No. 1 one part; No. 2 seven parts. Now, when No. 1 and No. 2 are mixed add two grains of dry pyro for each *one* ounce of mixed developer.

This is normal developer for somewhere near *normal* exposures; if you have a lot of guesswork plates to develop, make up your pyro in No. 2 and flow it over the plate, and then add the No. 1, or alkali (?), in small quantities until sufficient detail and harmony shall come out.

Overexposure can be cured by use of bromide of *soda* solution previously mentioned, or by dilution of developer, to an extent that will reduce it to a proportionate strength

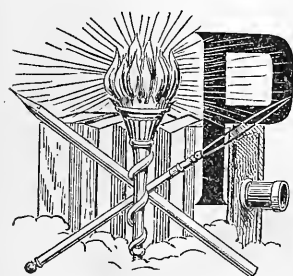
with exposure, but on no account use either bromide of ammonia or potash with this developer; you will be "left" if you do.

Underexposure, so far as it can be cured, can be handled by increase of amount of No. 1 to several times normal.

This developer will not bring out the object if a plate has been exposed $\frac{1}{1000}$ the proper time; nor will it make so harmonious a negative in a plate that has had one thousand times normal exposure; although such an absurd comparison was made by people pretending to be photographers, at the last Professional Photographic Convention, in 1885, not with relation to this developer, but to exposure; and we have seen one of the participants in that very debate send several negatives clear up "salt river" in development since that debate, and we can produce one of the most reliable chemists in the country to corroborate our statement: "he did not make any provision for overexposure."

Lastly, bromide of brains is one of the most valuable, least used, of all the essential requisites for an immature photographer. Our immaculate full-fledged professionals, many of them, look down on us in disdain; but it does not amount to much, for they are not one bit better than we are, and they do as much guesswork as we do; and after all, we are all and only plate busters.

THE SUN AT WORK.



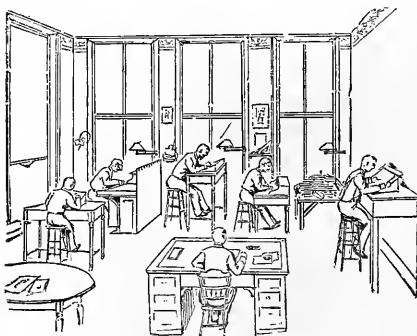
PHOTOGRAPHY has of late years developed into one of the most potent factors in the progress of the graphic arts. The chemical action of light

is replacing the laborious tool handling of the graver. Its practical application has been attempted with varying degrees of success ever since the discovery of the chemical action of the actinic rays of sunlight. It is no longer a scientific novelty, and its success

as a commercial product already attained gives large promise of the future.

The Levytype Company, with its three fully equipped establishments in Philadelphia, Chicago, and Cincinnati, takes the leading rank in the United States for this work. It was established by Louis E. Levy, who, with David Bachrach, Jr., of Baltimore, successfully experimented upon and developed the process for which they secured the first American patent of this class.

Unless absolute accuracy is required in the reproduction, the photograph, print, or the article of which the fac simile is desired in metal, is first taken to the studio, where



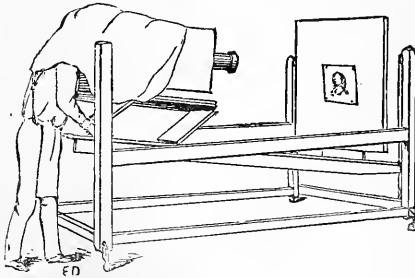
Drafting Room.

a half dozen artists are seated at tables and amidst the paraphernalia of their profession, in the arrangement of which the conventionalities are discarded and the picturesque is subordinated to the practical. With the photograph as a guide the draughtsman draws the outlines in the deepest black lines upon the most glaring white surface. When a more mechanical reproduction, without heightened artistic effect, is desired, the article or picture is rephotographed, twice the size of the plate desired, with specially prepared chemicals on specially prepared paper. The lines of the photograph are traced in black upon the photograph itself. The picture so prepared is subject to a bleaching process, which removes all traces of the photographer's art, and the artist's pen and ink lines stand out in bold relief upon a perfectly white background.

The work thus prepared is now ready to be returned to the photographer, whose department is known as the light-room. Upon

the perfection of the work done now depends the success of the whole process.

The ordinary photographic apparatus is used, but the vibrations of the building, however slight, are sufficient to blur lines whose sharpness of definition is the crowning point in the successful picture. This difficulty has been overcome by placing the camera and the frame for holding the object upon a suspended table. The vibrations are



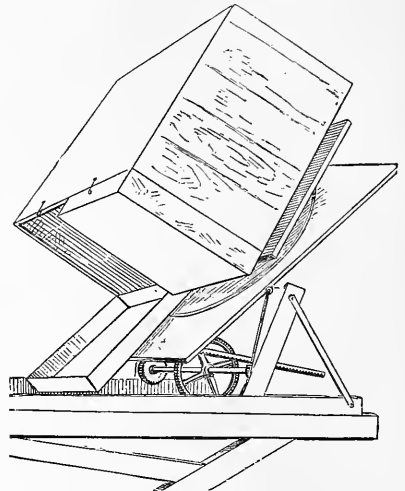
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thus corrected, and every motion is transmitted equally to the camera and the picture to be photographed. If success attends the efforts of the operator, the negative secured shows the lines of the picture transparent on an opaque ground, and as clearly defined as if cut out of the background with a graver's tool. In this negative the picture has been reduced to the size desired for the finished plate, and the lines are found to be refined in proportion.

In the meantime, in another department has been prepared a base of plate-glass upon which has been coated a thin film of chrome-gelatine, which is simply a mixture of bichromate of potash and gelatine. This, when dry, is sensitive to light and takes the place in this process of the sensitized paper of the photographer. Before exposure to light the gelatine is only partially or not at all soluble in water. Over this gelatinized plate is carefully placed the negative, and the two are firmly clasped together.

These two plates, with as many other similar pairs as are ready for this portion of the process, are placed in the heliostat, which is so arranged as to secure an exposure to the sun's rays which allows them to impinge upon the exposed negative at right angles. The action of the sun is so to

tan the gelatine film that it is incapable of combining with or taking up water at all. This part of the work is carried on day and night. Cloudy days do not effect a stoppage or delay. On such occasions the rays of the sun are replaced by the powerful light



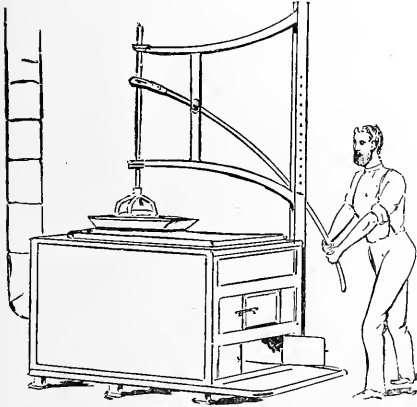
The Heliostat.

from a 5000 candle-power Thompson-Houston electric lamp, whose arc is three-eighths of an inch. The lamp has been especially constructed for this purpose, and is operated by an engine on the premises.

After the gelatinized plate has had its tanning, it is passed through a series of chemical baths, in which the unprotected gelatine swells and leaves the picture sunken in it, a perfect matrix. Into this is poured a composition whose base is gutta-percha, which is allowed to stand and harden. When it is taken out of the gelatine mould the picture appears upon its surface with the lines raised. From this out the process is simply that of stereotyping.

This gutta-percha plate is used in making a cast or mould of plaster of Paris. The plaster-of-Paris plate goes through the stereotyping manipulations in pans constructed to meet the special requirements of the work. When taken out of these moulds the type-metal plates are slightly more than one-eighth of an inch in thickness, and are taken to the finishing-room. Here the backs are levelled and planed down to a

uniform thickness of an eighth of an inch. Those parts of the plates which lie outside the lines of the picture are cut out and deepened by a "routing" machine, in order to remove the base of the plate as far as possible from the printing rollers which put the ink on the raised lines of the picture.



Stereotype Furnace.

From the routing machine the plates are taken and fastened to wooden or metal blocks, which raises the surface of the pictures to the height of printing type. The wooden blocks are used when the cuts are intended for ordinary commercial printing, but when thousands of impressions are to be taken, as in the illustrations of newspapers, the plates are mounted upon metal.

PROTECTING PHOTOGRAPHIC MATERIALS FROM AIR.

BY W. H. HARRISON.

THE published instructions issued by the Eastman Company for the preparation of the developer for use with their negative paper, raise the question in the mind of the reader why the solution does not deteriorate in a very short time; yet I was told that some of it, of light color, which I saw in use on their premises, had been prepared a fortnight before. The official formula is: "Warm water, sixteen ounces; sulphite sodium crystals, pure, half a pound; allow to cool, and add one ounce of pyrogallol acid, and then a quarter of a pound of carbonate of soda (not bicarbonate of soda).

For use, dilute one part of stock solution with four of water." Thus but one solution is used for developing purposes, except in cases of over-exposure when a little bromide of potassium is added. Here, then, is a highly alkaline developer which keeps, so I asked the operator why it did not blacken and decompose rapidly. He replied that it depended upon using water which had been boiled; if unboiled water with the normal proportion of air in it were substituted, the developer would blacken rapidly, and go on blackening, he said, after it had absorbed all the oxygen of the air held in solution in the first instance, by the water. The sulphite of soda must also be very pure; indeed, the photographic merits of this salt never comes out unless it is pure.

The foregoing facts seem to show that there are great advantages in using boiled water for pyrogallol stock solutions, and this, combined with M. Audra's system of development, will conduce to comfort and efficiency in the future use of this unstable organic absorbent of oxygen. Boiling for a few minutes does not get rid of the whole of the air and traces of other gases dissolved in water, and perhaps the properties of water properly freed from dissolving gases might be worth trying in photography.

Rain water, after a prolonged downpour to clear away the floating dirt in the atmosphere, is the purest water naturally available, it having been distilled by the heat of the sun; but every hundred cubic inches of such water contains about two and a half cubic inches of air and of gases mixed in small proportion with the said air. Water freshly distilled is not free from air. To get rid of this air, it is necessary to steadily boil the water for not less than one hour, with brisk boiling for a few minutes at the close, to drive all the air out of the neck of the flask, when it is intended to close the latter, which should be strong enough to bear the pressure of the external atmosphere, when, by cooling, a comparative vacuum is produced in the upper part of the vessel.

The remarkable instrument, the water-hammer, is made by taking a V-shaped glass tube, say with each of its legs eighteen inches long, and an inch in diameter; this tube is closed at one end. Thoroughly

boiled water is made to fill the tube, and is then boiled nearly half away in the tube itself; when the ebullition is at its briskest the open end of the tube is softened by heat, the tube is then withdrawn from the flame which produces the ebullition, and the moment that ebullition ceases the softened opening of the tube is closed. Thus enough well-boiled water is left in the tube to completely fill one of its legs, and about one-fourth of the other leg. If the water-hammer be turned bottom upwards thus Λ , when one of its legs is quite full, the water in the other leg will not fall; it refuses to obey the law of gravity unless the tube be tapped, and when the water is made to fall it produces a somewhat metallic sound like one hard solid body striking another. In fact, air in water acts as a kind of elastic spring, and when that air is removed the particles of the water lock themselves more firmly together. Thus water scientifically boiled until it is free from air has curious properties, and whether it will by absorption permeate an air-charged gelatine film more rapidly than other water, or whether it will exercise any influence upon the delicately-balanced phenomena of photographic development, is worth trying.

When it is desired to protect oxidizable aqueous solutions from the action of air, the best plan is to take advantage of the properties of the paraffines, for paraffine, whether solid or liquid, will effectually exclude the air on the one hand, and prevent evaporation of the water on the other. Few chemical substances will attack it, and among those which do so are none likely to be used in photography. So proof is it against damp, that the late Mr. C. F. Varley adopted it for making his electrical condensers for working the Atlantic and other cables, and to this day it is the best substance known for the purpose; it is also a splendid insulator, which is why the cheap mineral form of it, the residue left in the retort in the distillation of the mineral paraffine, ozokerit, is used mixed with a small portion of India rubber, for a cheap insulating coating of the wires employed for electric lighting purposes. Some photographers already use common liquid paraffine upon the top of their stock developer, to protect it from the

air, for then it is safe even from the attacks of the air inside the top of the bottle. A device has, however, to be called into play to draw off some of the developer when wanted; as simple a plan as any would be to use a little glass barrel with a glass tap, and cover the developer with half an inch in depth of liquid paraffine. The tap should be lubricated with another paraffine, namely, vaseline.

The imperfections of common ground-glass stoppers as a means of excluding air from the interior of bottles, is scarcely sufficiently recognized. Ground glass consists of an infinite multitude of small hills and valleys; consequently, when two such rough surfaces are laid one against the other, plenty of small irregular channels exist, through which air can pass between the pieces of glass. In experimental illustration of this, a small bottle with a stopper ground to fit in the ordinary way, or even finely ground to fit the neck of the bottle more accurately, may be one-third filled with bisulphide of carbon. The bottle should then be placed in a basin containing cold water, enough to cover the vertical bottle above the level of its stopper, after which boiling water should be added from time to time to the cold water in the basin, to slowly raise its temperature and that of the bottle. The air and bisulphide of carbon vapor in the top of the bottle tend to expand as the heat increases; as their pressure increases, they force their way between the stopper and the neck of the bottle, and emerge into the water in lines of bubbles and globules. The stopper should be tied down to the neck of the bottle with string, that it may not be blown out, and a very small bottle should be used and submitted very gradually to the increases of temperature to lessen the risk of its bursting, small bottles being stronger than large ones in proportion to their size. Very little warmth will thus prove the defective nature of common-stoppered bottles, and an increase of heat will put the best of bottles to a severe test. There is considerable gain in security by substituting the best class of finely ground German stoppered bottles for the stoppered bottles in ordinary use; but in any case it is best that the stopper should be lubricated. I have, however, a fine

specimen of Signor Cetti's glass grinding, consisting of a stoppered glass vessel, with a smaller stopper carrying a tube, and passing through the larger one; despite its double stopper, the grinding is so accurate that a good vacuum can be maintained in the bottle for a great length of time. Alterations in temperature exercise a pumping action inside common-stoppered bottles; the interior air or vapor expands by heat, and contracts by cold, thus causing currents backwards and forwards along the space between the stopper and the neck of the bottle, but the little channels being so very small, the pumping action is much retarded. For many purposes a good cork is in several respects more convenient than a stopper of the common type.

Coming now to the question of the best lubricants for stoppers, the paraffines stand at the head of the list for the protection of all but the few chemicals which attack or dissolve them, their affinities being of the most limited. The hardest of the series, and the one which has the highest melting point, is the mineral paraffine, ozokerit; next come the softer paraffines, produced in the destructive distillation of vegetable matter, and which can be obtained with varying degrees of hardness; next come vaseline and ozokerine, which are of the consistency of soft grease, and, last of all, the liquid paraffines are available. Vaseline and ozokerine are the best substances for lubricating the stoppers of bottles; should the two substances for some purposes not be deemed hard enough, by mixing with them one of the softer solid paraffines, a hydrocarbon paste of any desired consistency can be obtained. The smell of the liquid paraffines might suggest that they are not such very inert substances after all, but that they are in somewhat rapid decomposition, for the smell of essential oils, or the essences of flowers is due to the oxidizing action going on; perfectly pure turpentine, oil of juniper, and other essential oils carefully rectified out of contact with air, have no smell whatever; they begin to smell when an oxidizing action has been fairly set up. Mr. Leopold Field informs me that paraffine oil has no smell of its own, the smell which accompanies it being due to essential oils

and impurities it contains; traces of sulphur often contribute to the bad smell of paraffine.

Of the two paraffines most available for our purpose, namely, vaseline and ozokerine, the former is the more homogeneous. Ozokerine, when first distilled, tends to separate into solid and liquid portions; a little paraffine of harder consistency is consequently mixed with it, and it forms a soft waxy yellowish mass. Near one particular temperature in the distillation of crude ozokerit, a number of paraffines come over almost together, and the mixture of these forms ozokerine. It consists of eighty-seven per cent. carbon, and thirteen per cent. hydrogen. Crude ozokerit itself is a most rare mineral, its source of supply being almost entirely confined to one country, Austria, and in Austria only the ozokerit from the Boryslaw mine is good for much. Its sources of supply and of distribution are in the hands of a few capitalists. Gmelin states that a soft sticky ozokerit is found in Urpeth coal mine, near Newcastle. Can any Newcastle reader of these lines give any information on the subject? Gmelin states that this Urpeth product melts at 60° C., and that it contains 85.18 per cent. carbon and 14.06 per cent. hydrogen.

Vaseline is of American invention, and the information of a chemical nature published about it by its London agents is meagre. It is a hydrocarbon obtained from a crude oil of offensive smell, found floating on the borders of Lake Seneca, in the western part of New York State; this oil belongs to the paraffine series. Instead of submitting it to destructive distillation, Mr. Robert A. Chesebrough, by an elaborate system of filtration, succeeded in purifying it "without the aid of any chemical whatever," which I presume means that he filtered it through plenty of animal charcoal, on the principle on which sugar is purified in sugar refineries. In the act of distillation paraffines are liable to what the trade calls "cracking;" that is to say, breaking up into a variety of hydrocarbons, of about the same melting point, and the necessarily different method of preparation may explain the difference between vaseline and ozokerine.

The carbonic acid contained in ordinary water tends to the injury of photographic prints in the washing stages. Last Tuesday night, at the meeting of the Photographic Society, Mr. W. M. Ashman pointed out the injury done to prints by washing water containing carbonate of lime, especially when particular samples of paper were used.

Pure carbonate of lime, and carbonate of magnesia, are both insoluble in pure water, but are soluble in water containing carbonic acid gas. A gallon of rain-water usually contains four cubic inches of nitrogen, two cubic inches of oxygen, and one cubic inch of carbonic acid. The latter is the solvent of the chalk and limestone rocks; the minute traces of carbonic acid in water carved most of the beautiful scenery of Derbyshire, cut its river beds deep in rocks and dissolved out its caverns, carrying off in weak solution its limestone and its chalk, to injure the prints of inoffensive and unsuspecting photographers living lower down on the banks of the rivers. Because of the solvent action of carbonic acid in water, the scenery of extensive limestone regions is always beautiful; the lower Valley of the Wye, about the region of Tintern Abbey, is a good illustrative case in point.

The way water companies usually soften chalk-water, is to add more lime to it; the carbonic acid takes this up to form carbonate of lime, which is precipitated along with the carbonate of lime previously held in solution. This can be done on a small scale, by stirring up a very small quantity of lime with the water in the water-butt, taking care not to add more than enough to neutralise the carbonic acid; the whole of the lime in the water will then be precipitated, and time should be allowed for it to settle down. Bischof, about the best authority on the subject, says that one part of carbonate of lime dissolves in about 1000 parts of water saturated with carbonic acid. Fresenius, however, states that it dissolves in 883½ parts of boiling water and 10,600 parts of cold water, a difference from his own results which Bischof remarks that he cannot explain.—*British Journal*.

READ *Mosaics* for 1886.

A PHOTOGRAPHER ON PIKE'S PEAK.

SALIDA, COL., Oct. 3, 1885.

Editor PHILADELPHIA PHOTOGRAPHER:

If you remember, I contributed to you, about two years ago, some negatives of one of our Colorado canons. At that time I was considerably "out of my head," and felt quite indignant when you politely informed me that the negatives were hard and unfit to print from. But now I am thankful that I received such a back set. From that time I began to study, and read, and practice. I soon found that your judgment of my work was correct, and when I think of it, I am ashamed that I had learned so little of the photographic art in the four years of experience. Though I have now some good things, I would not feel safe in sending you another set for your journal.

I have taken great interest in the work of the Photographic Association, though I am not a member, and since I made a visit to Pike's Peak, I have thought what a fine thing it would be for the Convention to be held in Colorado. All you sun-struck photographers would think this country a Paradise, and so it would be when compared with your hot, suffocating days of August.

The only difficulty in coming here is the fact that a two days' sojourn would furnish only about one thousandth of what there is to see. Were the Convention to be held in Denver, the main points of interest could be visited at small expense. The railroads would get up photographic excursions, and it would be a comical sight, as soon as a train stopped, to see five hundred "shooters" shooting in every direction. I started out to give you a brief account of my Pike's Peak tramp, hoping that it might induce the Association of Photographers to favor us with a visit in the near future.

It was just a month ago to-day that I mustered up courage enough to attempt the ascent of the peak, so famous all over the world. For six years I had viewed it from the base, and let it go at that, but getting tired of so many fun-poking fingers at my timidity, I resolved to scale "Pike's Peak or bust."

From Manitou to the summit is twelve miles by the trail, and one gains in that distance an altitude of 8000 feet. To make this ascent on foot, and carry on one's back a twenty pound outfit, requires any amount of grit. Luckily, I had a friend in the shape of Tom Hine, who is affectionately dubbed "The Walking Crank," by some. After he had stuffed me chock full of his wonderful exploits, and boasted that I was not able to make the ascent on foot, I was so full of the indispensable "grit" that it slopped over and ran down on the outside, and on the 3d of August, at 4 A. M., I packed my traps on my back and struck out with the step of a sturdy mountaineer.

My way lay through a deep, wooded trough in the mountain side, down which rushes the sparkling waters of Ruxten Creek. The first mile is comparatively level, and one passes a half dozen mineral springs of soda and iron, where he can drink enough to last all day. We soon begin to climb up, up, up. It gets fearfully steep, and my load gets terribly heavy. My eyes are on a level with the ground only ten feet ahead of me. Phew-ew! how I sweat, and how I blow. Can't get half enough air in my lungs. My mouth isn't big enough in this emergency. I had undertaken more than I had bargained for, but the braggadocio expression on the countenance of the "Walking Crank" spurred me from behind, and after a short rest I pushed forward with renewed vigor. It was now 6 o'clock, and I had made only about three miles. I stopped to make three exposures, which occupied an hour or more, and then began my last mile, which I was obliged to make before breakfast. I had not gone far when I stopped on a high point to hunt for some breath and cool air, for the sun was coming down hot, and no breeze was stirring.

Looking around, what a beautiful sight opened out before me. Where I was the sky was perfectly clear, but floating gracefully over the valley 3000 feet below me, lay a thickly matted blanket of vapor. For fifty miles, north, east, and south, it stretched out, completely hiding everything beneath it. A light breeze sprang up, and sweeping down the side of the mountain, lifted

the western edge of the cloud, exposing to view a scene almost as black as night. Through the darkness the white cottages of Manitou could be seen but indistinctly. While watching the changing of the fog at this point, farther out on the plains clouds were forming into clumps, and at one time a sudden rift in the thick fog uncovered the beautiful town of Colorado Springs, the morning sun lighting up with such brilliancy and splendor a scene one never forgets, and but few are so fortunate as to witness.

Some Coloradoans live on light air and scenery, but I can't, and I began to be conscious of a bread-and-butter gnawing at the front door of my interior department. Eight o'clock found me stuffing said department with such energy as I did not know that I possessed, but to satisfy one's stomach here is to empty one's pocket. One slice of bread, two glasses of milk, a little cold meat, and a piece of pie—"dirt cheap"—only seventy cents.

A few tourists caught up with me here, all of whom were mounted on horses. They looked so comfortable, climbing the steep trail without an effort, that I adopted the same plan, and found that it worked admirably for about an hour, but my pony was an old-timer, and knew how to fool me. He had evidently "spotted" me, for before I mounted him he eyed me from head to foot, snuffed me all over, and then, with an innocent expression on his ear, dropped it gently to a reclining position, and waited for me to say "go." I noticed a perceptible movement when I said the word, but when I stuck the spur into his ribs he left the dust behind him.

I worked harder to get the pony along now than I had done to get myself along before breakfast. When I first started on him I happened to touch a tender spot, but I never could find it afterwards, and a mile or two of this work satisfied me. Hanging my "traps" on the horn of the saddle, and cutting a sharp stick, I got into the trail behind, and, with the little end of his tail in my left hand, the persuading influence of the stick in my right, I managed to steer him to the very summit without another stop.

Leaving my "lump of laziness" hitched to the peak of Pike's Peak, I clambered around over the sharp-pointed rocks to see what there was to be seen. The summit is almost level over an area of about two acres, on which the U. S. Signal Station stands. About five years ago, when everything was rude, and the station was built of loose rock, a family by the name of O'Keif lived here and reported on the weather changes. The husband, wife, and child lived, month in and out, all alone, as but very few visitors at that time made the ascent of the peak. The child had a sad ending, being devoured by mountain rats (of course, you have heard the story), and its remains were laid away 14,147 feet above the level of the sea, and to-day a simple white headboard marks the nature of the sacred spot.

What a beautiful day I had for this trip! Standing on the western side of the peak, I could distinctly see the Continental Divide, with its hundreds of snow-capped peaks, an hundred miles to the west, stretching along the horizon as far as the eye could reach. Rivers, valleys, deep dismal canons, black pine forests, and thousands of acres of rocky barren wastes lay between. I now turned my attention to the eastern side, and a few minutes walk brought me to the very "ragged edge." What a sight! It was awful! it was grand! it was sublime! On the brink of the crater lay a huge snow drift, reflecting the dazzling rays of the hot sun; and rolling up out of the dizzy depths beneath came huge chunks of vapor, writhing, darting, plunging together in grand confusion; now approaching, now receding; rising high above me, then lowering far below, and boiling furiously before the screeching wind. A moment more and I am completely surrounded with the thick mass of drenching fog; but I hardly have time to think, when a gust of wind lifts it high above my head, and, carrying it far out between heaven and earth, leaves it gracefully poised in the thin air like a great bunch of spongy cotton. This wonderful phenomena lasted about ten minutes, and the sky again became as clear as before. Not a cloud near. All had vanished as mysteriously as it had come.

I was just on the point of leaving, when,

from some unseen place, came a weird, rushing sound of wind; and, on looking over the edge again, the most beautiful sight of all was presented to view. There, a thousand feet below me, in the hollow basin of the crater, were other vapors forming fast. They seemed to come out of the very rocks and eaves, shooting straight into the air, rushing together, hurrying hither and thither, changing and rechanging into fantastic shapes, till a lull in the wind brings it to a standstill, but only for a moment, when it seems that, from some peculiar influence, these vapors draw to one common centre, rolling into graceful curves, until a huge fleecy cloud is formed, beautifully outlined against the deep blue sky. What a beauty! Soaring away in mid air; casting a cool, delicious shade upon the little town of Manitou—only a speck—8000 feet below. The cloud is growing thick and black. A peculiar sensation creeps over me, and my hair seems to stand straight up. My camera spits fire, and the ends of my fingers prickle as though they were asleep. I was not frightened, because I had realized these sensations some three years previous, while viewing on the summit of the Continental Divide. I'll admit I was frightened then, out of my wits, for I picked up my outfit and "streaked" 'er a "bee line," cutting "pigeon wings" every ten feet, till I was a thousand yards below, panting and blowing for dear life. This time I stood still and enjoyed it all. As the cloud floated away, the electricity in the air left me and charged to overflowing the black vapor in the distance.

Thunder? Yes, it is thunder. Forked tongues of fire dart in spiteful jets from the blue black mass, while deafening peals of thunder echo and reëcho among the dark canons below. Now a white streak starts from the cloud, descending rapidly towards the earth; another and now another, coming thicker until one broad body of water descends in one spout and fairly deluges the dusty streets of Manitou. A half hour afterward, that which once was like a great ball of fire, then a boiling, roaring, seething mass of midnight blackness, is almost entirely disappeared; nothing but a light, fleecy cloud far away in the distance.

This was my first and only visit to the summit of Pike's Peak. Who would not enjoy the same experience? At 8 o'clock that night, after leading my pony nearly all the way home, I plunged myself into a downy bed, all "broke up," and six inches shorter (stove together in coming down the mountain trail) than I was when I started out with so much grit in the early morning.

I will leave you now, hoping that it will not be long before the many members of the Photographic Association of America will make a visit to our "wonderland" of America. Very respectfully,

GEO. E. MELEN.

"NO BOOKS FOR THE P. A. OF A."

DETERMINED that this cry should not be repeated, the Secretary and Treasurer kept a systematic set of books this past season, and can show every moneyed transaction, they claim. What follows is a section from the Treasurer's book, and illustrates the system followed.

HOW THE THUMB-MARKS WILL BE TAKEN.

When the thumb-mark shall have been prescribed as necessary, it will be an easy matter to obtain the marks. An ink pad will be provided similar to those used with ordinary rubber stamps. The applicant for a certificate will be compelled to place his thumb lightly on the pad and then on a piece of paper where the impression will remain. A right and left impression should be taken and should be entered in the books with the original application. If it is considered desirable, the impression may be enlarged by photography. When a Chinaman applies for admission to this country, the inspector will at once take his thumb-marks and compare them with the marks entered on the book. If they agree, the Chinaman can be safely admitted; if they do not agree, the Chinaman will not be admitted. The proof will be undoubted and indisputable. Same height or different, pockmarked or smooth, will make no difference.

PROVIDENCE, R. I. 188

Received of

For Initiation	- - - - -	\$	.....
For Dues for the year ending Dec. 31, 188		\$	<u>.....</u>

EXTRACT FROM CONSTITUTION.

Total

ARTICLE 2, SECTION 4.—The annual dues become payable on January 1st of each year, and any member failing to pay the same prior to the adjournment of the annual meeting shall forfeit his right to membership, and can only be reinstated on payment of an initiation fee (\$3.00) as provided in case of admission of new members.

No *Treasurer.*

THUMBS DOWN.

MR. I. W. TABER, the famous San Francisco photographer, sends us a copy of the San Francisco *Daily Report*, nearly one page of which is devoted to illustrations and descriptions of a novel method of identifying the Chinaman, who would an American "merchant" be, when he makes an attempt to defraud our Government by the presentation of "borrowed papers."

The plan is to take impressions of his thumbs, whose lines "never change."

IDENTITY OF THUMB-MARKS

will prove identity of Chinamen, and dissimilarity will show that the wrong man is applying for admission. Photography could be very conveniently employed to procure duplicate thumb-marks, so that those in the original books need not be disturbed, but duplicate books could be prepared.

The advantages of the method suggested are manifold. Not only would it furnish sure means of identification, but it will have the advantage of expediting the Cus-

tom-house business. Instead of each Chinaman requiring several minutes to supply a full description a few seconds would suffice for each. A simple apparatus to secure the thumbs in the correct position and put the right amount of pressure might easily be devised, so that no blurring could occur. It would, moreover, enable the Custom-house officer to comply with the strict letter of the law as well as the spirit.

THE MAN WHO HAS PERFECTED THE
THUMB-MARK METHOD.

Mr. I. W. Taber, the photographer, stated to the *Daily Report* reporter that when Judge Lawton suggested the idea to him he was unacquainted with it. He had made many experiments, and at last had hit on the method which he considered as perfect as could be desired. He described his method as it has been described elsewhere in this article. He had become interested in it as a curiosity, as well as for its practical value. The value of photography as applied to the matter was merely for the purpose of enlargement, and to prepare exact duplicates for reference. His examination had convinced him that close examination and measurements would show as much character in some of the less wavy lines, so that if the thumb should be scarred after the impression was taken it would matter little.



The thumb marks of I. W. Taber, the photographer, are even more different. On one the lines cross with but little break, while in the other they are convoluted.

He was enthusiastic on the subject, and intended to work out the matter still farther. He intended to make a chart of greatly enlarged thumb-marks and expose it to view in front of his studio on Montgomery Street, that every one might study the matter at leisure.

We expect now that the idle time of our

readers will be taken up in following the fashion led by Mr. Taber, whose individual thumb-marks we append as a sample. The difference between the right thumb and the left is undoubtedly due to the rack and pinion of his lenses. We noticed, on comparing Mr. Taber's thumb-marks with those of a Chinese laundryman (given in the *Daily Report*) that Mr. T.'s "lines" were more clogged than those of Lee Yek. This is due probably to the excessive use of pyro in Mr. Taber's practice; while the alkaline developer used by the aforesaid Yek is only soap!

Mr. Taber says

THUMB-MARKS CAN BE USED FOR OTHER
PURPOSES.

In the course of his experiments, Mr. Taber has had brought forcibly to his mind the various uses to which the thumb-mark could be put. Not only will it be invaluable for the purposes of Chinese identification, but for that of others as well. A man applying for a letter of credit would be required to furnish his thumb-mark to the bank. It would be sent to the corresponding institutions, and when application was made for the money a corresponding thumb-mark would be sufficient identification. There would be no need of hunting up acquaintances for identification, an impossibility frequently in a strange city. The thumb-mark would be all-sufficient.

Banks might even require it in cases where large sums were to be paid in checks, in addition to the signature. Each bank might keep a book of thumb-marks of large depositors. Forgery would be impossible where thumb-marks are used. The thumb-mark might be added to the signature in the form of a seal in all cases where much depends on a signature, as in deeds, wills, or marriage contracts. Instead of John Doe His X Mark would appear John's thumb-mark, as perfect a signature as that of the most finished scholar. Private correspondence might be signed by thumb-marks, for each thumb would be as well known to an intimate correspondent as the photograph of the face. Thumb albums would replace autograph albums, and would furnish a record of more characteristic marks than

could the signatures of sentimental friends. Charts would be prepared of thumb-marks of great men, and books be written on the common characteristics. Season tickets to the fair, passes on railroads, and all non-transferable tickets could be signed with the thumb-mark. The uses which may arise from these experiments of Mr. Taber are almost limitless.

We leave the matter between the thumbs of our readers.

OUR PICTURE.

It was our intention this month to use as our embellishment, a mosaic made up of nine selections from the German pictures to which the second Gennert prize was awarded at Buffalo, but an unusual amount of bad October weather has prevented us from getting the prints done in time.

It will be no loss to our readers, however, for it shall come next month. Moreover, we are thus given an opportunity to return to the American series of portraits, which we have had in preparation some time. The negatives were made by Messrs. Chandler & Scheetz, a young, enterprising, and growing firm of this city. The lady is Miss Ethel Lynton, an actress of great fame and talent, and whose amiability gives us this pleasure.

A number of negatives were used to print our edition, varying only a little in pose, and all showing the graceful sympathy for the photographer evinced by a subject whose vocation is the stage.

The *principles* of art are the same in every art, so that it is not hard for a votary of the stage to understand the photographer and to help him, and it makes easy work for the photographer to pose and make pictures of such good-hearted people.

Messrs. Chandler & Scheetz have done their best in this case, and have provided us a fine study.

The prints were made at our own printing-rooms, by ordinary formula, upon the celebrated N. P. A. paper, supplied for the purpose by the importers, Messrs. E. & H. T. Anthony & Co., No. 591 Broadway, New York.

GLEANINGS.

Mr. BOHLING has found that 100 c. c. of boiling water poured into a new vessel, dissolved of this vessel, in two seconds, sufficient alkaline silicate to neutralize one c. c. of a solution of oxalic acid, containing one gramme of oxalic acid for each litre of water. This is certainly not much, but sufficient to exercise an influence in many cases on the results of the manufacture of emulsion. In old vessels there is no appreciable quantity of alkaline silicate dissolved.—*Revue Photographique*.

PLATINOTYPY.—Mr. G. de Vylder, Professor at the Industrial School of Ghent, gives the following formula, which, however, he does not claim to be his own, for giving a more agreeable sepia tone than is generally found in prints made by this process.

Prepare with heat, on the one part :

Water,	1000 c. c.
Neutral oxalate of pot- ash,	300 grammes.
Oxalic acid,	10 grammes.

and on the other part, also with heat, 100 c. c. of a saturated solution of chloride of copper.

Pour the second solution into the first and keep the temperature at about 80° centigrade. Plunge the prints into this liquid and then in diluted hydrochloric acid—now pass in a five per cent. solution of sulphate of iron, to obtain a delicate sepia tone. Then in water acidulated with sulphuric acid. Finally, wash with care.—*Paris Moniteur*.

A VERY curious chemical experiment has recently been made by Mr. Cabell. He saw that when nitrate of silver is precipitated by means of potash, we obtain, ordinarily, a granular and brownish precipitate of oxide of silver. When the precipitation is made under a very considerable degree of cold, about 140° below zero, Fahr., the precipitate is white and flocculent; this is the veritable hydrate of silver (hydrated oxide of silver), and it is slightly soluble in water. At a few degrees above this very low temperature, the precipitate is already of a pale brown.—*Paris Moniteur*.

STUDIO STUDIES.

EVEN the humblest photographer can relate some funny experiences, and oftentimes with a good moral attached. As a rule,

practice, however, have caused the average skylighter to look out for his own interests more than formerly, and we really often hear of him maintaining both his dignity and his rights.



however, he is more apt than his patron to be the one at whose expense the humor comes.

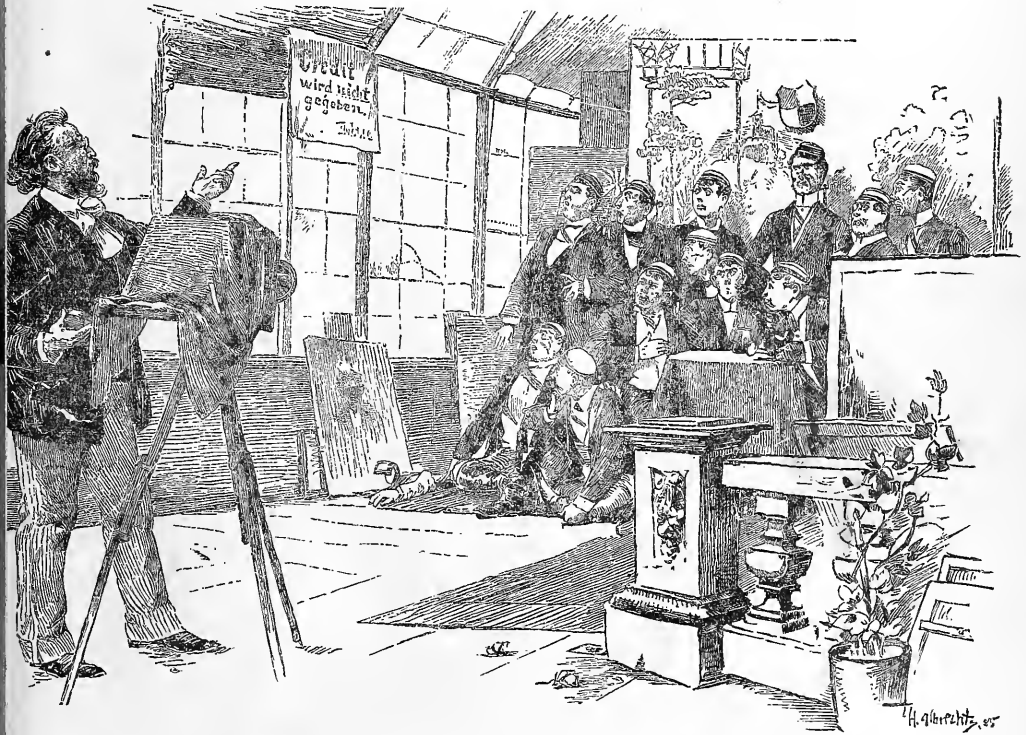
Low prices and modern "cut-throat"

So much is this the case that we not infrequently see the situation both described and illustrated in the secular (sic!) press.

One of the very best humorous papers of the world is the *Fliegende Blatter*. We have enjoyed it for a number of years, because of the genuine fun we get out of it, and because of its really æsthetic character. Its illustrations are largely from pen sketches by famed artists, reproduced by photo-engraving. This last fact places the *Blatter* in sympathy with the photographer, and we find in its pages occasional sketches of studio experiences which are very funny—so much so, in fact, that we are tempted to step aside from our usual grave course, and, by means of the Levytype process, share the

crayoned, enters the studio on an errand of inspection, and is met by the artist, who places the picture on the easel before her. She looks quietly and silently, whereupon he exclaims, "It is very handsome, madam," And she: "Yes, *quite* handsome. But you have made one great mistake, somehow. It is not a likeness—it does not look like me." Then he: "Oh! very true, madam; but, then, if you want a *likeness* you must go down stairs to the photographer. *I am an artist, thank heaven.*"

The next *seance* is in the skylight. Subject, a base-ball club. After much fussing



pleasure of several of them with our readers. We hope to be pardoned if we make any mistake in trying to brace up our fellow-sufferers during this calamitous season of dull weather and depression of dollars.

The first extraction is entitled *Artistic Pride*. The scene is "up stairs" where the crayon man covers over the work of the photographer with his chalks, and scrawls his own name at one corner. Madame, the

and fixing, the poor underpaid photographer under pressure of dire apprehension lest he never realize a dollar out of the whole transaction, summons up courage to say: "Now, are you all *ready*?"

All: "Yes; pitch away, partner."

Photographer, in a bland and fascinating tone; "Very still, then; and all turn your eyes to the right and fix them upon the little placard against the window."

They all turn heads and see.

"Credit wird nicht gegeben" (we do not give credit). The club was "caught out," gave up its design, and paid before proof. To be continued, unless—

GERMAN CORRESPONDENCE.

Isochromatic Photography—New Bodies for Improving the Development of Dry Plates—Photography of the Aurora—Shell Cards—Portrait Photography and Platinotype—New Observations on the Chemical Action of Light—Making Negatives by Drawing.

I SEE from the September number of your journal, Mr. Ives takes the greatest pains to try to lessen the importance of my discoveries in isochromatic photography, and to depreciate my wet eosine process, which is at present used by the great reproduction galleries year in and year out, and with the greatest success, forgetting that his chlorophyl process, which no man but himself uses, is nothing more than an improvement on that made long ago, before his experiments, by Ducos du Hauron. Mr. Ives makes a mistake when he says, I no longer dispute his claim to priority in practical isochromatic photography. *I do dispute these claims, and declare again that I made the first isochromatic photograph in the year 1873 (seventy-three), as he may read in the Photo-mittheilungen, vol. 9, No. 236. The main point in my discovery lies in the principle laid down by me in 1873, that we are able to make bromide of silver sensitive to the light from any color, that is to say, to increase the already existing sensitiveness to the peculiar color by the addition of matter which absorbs the particular rays of color.* That is the isochromatic principle which includes all absorbing media, and with which, two years later, Becquerel, Waterhouse, and others, also experimented, using chlorophyl and other dye-stuffs, which confirmed my principle on which are founded all present so-called isochromatic processes, and not on Draper's, who never regarded the influence of bodies on the light sensitiveness of bromide of silver.

It is well known that hyposulphite of

soda, in very dilute solution, acts as an accelerator in the development of dry gelatine plates, and therefore, with good results, may be employed as a preliminary bath in the development of azaline plates. Now Dr. Messerschmidt has found that nitrate chrysantine, in dilution of 1-2000 parts, has a like action: likewise sulphate of cinchona, 1-300. Of especial interest is the fact that chrysantine, as a preliminary bath, not only makes the plates more sensitive, but also represses the maximum effect of green. Advantage may, therefore, be derived from this practice, but for color-sensitive plates it has no value, inasmuch as the sensitiveness for yellow or red is not increased thereby. Plates bathed, in this way, yield softer negatives in the light not strong, as others not so treated. This point is of importance, and demands further investigation.


The astronomer, Mr. Baltin, made known at the Society for Advancement of Photography that he was in the habit of regenerating his iron developer by the following method: By precipitating the iron with acetate of potassa, and adding oxalic acid. He took occasion to remark that the repeatedly regenerated developer changed its nature, and that, finally, all the iron could not be precipitated with the potash. The renewed developer, thus not having the same quantity of iron as a fresh one, works, however, softer. The time of exposure must, therefore, be shortened, which fact is of value in the development of instantaneous pictures. Herr Richter said that he thought that the constantly used developer gradually extracted material from the gelatine film, and that such organic substances retarded the precipitation by an alkali. A striking fact was that such regenerated developer, in spite of its acidifying by oxalic acid, became of itself again alkaline. Lately Herr Nimly has brought into commerce an addition to the developer, which he calls Excelsior.

Nimly uses two different substances, the one for alkaline pyro, the other for oxalate development.

Herr Haberlardt, who has tried the addition, says, that he has achieved very good results with it. He lays special stress on the fact of the preservative action of the added body, so that it is possible to develop

more plates. He has found it to work well the next day after mixing.

Lately, Prof. Trunholt sent samples of his Auroral Photography; they are the first examples of the application of azaline plates to the subject, inasmuch as the ordinary gelatine plate is not sensitive to red rays. These photographs gave a remarkable expression of the phenomenon that upon one of the picture was seen the aurora as a simple illuminated arch, whose perpendicular bands formed rays, from which, by regular degrees, higher rays branched out. Upon the second image were two such arches together. The third showed three attached arches, but the band of the innermost appeared in the most distant part split, and the two ends bent down to and fro in different ways. Here is matter for investigation. These photographs, after Kayser's lightning pictures, are the most remarkable pictures of natural phenomena; one of the most beautiful attainments of the color sensitive photography.

For a long time we have had nothing essentially new in the territory of photography, therefore a little novelty, which appears in the shape of shell mounts, may be of interest. Under this designation, H. Eckert, Court Photographer of Prague, has brought out, at the suggestion of Herr Count Johannes Thun, a new form of mount for photographs, which is taking considerably with the aristocracy. The form is square, the shorter side being the basis of measurement. Mignon shell form, 45 mm.; carte de visite form, 70 mm.; cabinet shell, 110 mm. The corner and not the edge the base of the picture , by which up and down, right and left, and not as hitherto indicated by edges, but by corners.

In America enlargements are generally made with silver prints, here all large forms are taken in phototype, and lately in photogravure, which is now in operation in eight different galleries in Germany. I received from Messrs. Harsen and Weller, in Copenhagen, beautiful work, costume figures, from the Jubilee Festival of 3d December, 1884, made, according to the ideas of Prof. Holberg, reproduced from the negatives by the firm of R. Schuster, in Berlin. Hitherto

the photogravure has been confined to reproduction of oil paintings. Here it is advancing into a new departure, portrait photography. Certain examples seem to us too dense in shadows, but the greater number are excellent. It is known that the platinotype gives very excellent pictures, and I believe that it deserves all attention of the portraitist, on account of the greater permanency over silver prints.

It is known that the chemical action of light on vegetable life plays an important part, greater even than in photography. Lately, a man of the same name as mine, Vogel, of Munich, has confirmed this. From different hot-houses he examined cinchona plants, finding in none the characteristic reaction. He therefore came to the inevitable conclusion that the absence of the cinchona was due to the want of sufficient sunlight in the places where the plants were raised. Therefore the sun is a great factor in the production of the alkaloid in the living plant, but it is also to be remembered that the sun has an injurious effect upon the dried barks in eliminating the cinchona, forming dark uncrystallized resinous masses. Therefore, in the factories the drying must be done in the dark. This peculiarity of cinchona has its analogy in the action of chlorophyl in direct sunlight. Leaves of plants raised in the dark do not show any presence of chlorophyl; as soon, however, as the chlorophyl is separated from the living vegetable the action of direct sunlight tends to decompose it. A. Vogel supposes that the formation of tannin in the living plant is also influenced by light. The quantity of tanning properties of beech and larch bark is in proportion to the different positions from which it is taken from below or above. The sunny-exposed trees yield the greatest amount of tannin; likewise the leaves which are exposed most to light are rich in tannin property.

Lately Mr. Sherkerdorfer patented a process for producing at once paper negatives of drawings, writings, etc. Arrowroot paper is dipped in a solution of iodine, which turns it brown, and the character or drawing is made with hyposulphate of soda, giving white upon a dark ground.

Yours truly, H. W. VOGEL, Ph. D.

CAMERA AMATEURS.*

SPREAD OF THE MANIA FOR PHOTOGRAPHY
—TAKING VIEWS ON THE WING—SCENES
IN THE AMATEURS' ASSOCIATION ROOMS
—ODD AND ARTISTIC WORK.

(Continued from page 338.)

SEEKING SUBJECTS.

In their trips out in the country the amateurs have a fashion of making what artists call "studies." A fence corner, an arching oak, a tangle of ferns, a cloud-capped mountain, a scrambling litter of little black pigs, a friendly calf, or frightened hen with her chicks, a plodding farmer—all these and dozens of other such subjects are taken and finished. Some of the amateurs follow peculiar lines of subjects. One pays almost exclusive attention to interiors, and his friends are incited to the most artistic arrangement of their parlors, libraries, bedrooms, and dining-rooms by his passion for photographing them. Another has a craze for cloud and fog effects, and many of his pictures would be identified by San Franciscans if accidentally seen in Egypt. Another pays close attention to the details of trees and shrubbery, and his work is also charmingly characteristic of California. It is the general testimony of the amateurs that the desire of the average human being to be "in" a picture is only equalled by his desire to see a finished picture an instant after it is taken. It takes a day to finish and mount properly a photograph from the negative, yet the spectator of the amateur at work invariably expresses disappointment that the picture cannot be shown as soon as taken.

BLUE PRINTS.

There is so much work about printing from the negative, toning, fixing, mounting, polishing, and otherwise preparing a photograph from the negative, that sometimes the amateurs make what are called "blue prints." The blue prints are in appearance what their name indicates, and are produced with little trouble, being simply printed and washed, the troublesome processes of toning and finishing being omitted. These blue prints, especially in some classes

of water views, are very pretty and effective. Some amateurs do even less than this. They take their negatives only and send them to professionals, who print, prepare, and mount them. There are professionals who do nothing but this, taking no negatives themselves, while some amateurs are too busy or too indolent to do their own finishing; others do an elaborate amount of work. Double printing comes under this head. Double printing, which may be called decorative photography, is where two negatives are printed on one piece of paper. A gracefully grouped bunch of ferns or stalk of flowers may be first photographed. When it is printed part of the paper is covered so that a blank space is left in the centre, perhaps where a portrait or some appropriate view is afterwards printed, and the work is so nicely dovetailed that it appears to be one print. When the mania for photography takes possession of a man it is said to exceed in strength the passion for French cookery. The camera is as constant a companion as tobacco to a smoker. One young lawyer who has the disease very bad is having a camera constructed to look like a couple of law volumes. Another amateur has had a little dark-room built in his grounds at a cost of \$750. An interesting feature of the craze is the practical uses which have been discovered by artists in oil. Several artists have thrown old prejudices aside and use the camera for their compositions. If it is a group of Chinese actors, or a group of barnyard chickens, which is to be painted, the faithful camera supplies the composition with absolute truth to nature.

THE SUN AT WORK.—Photographers who find "business poor," should read the chances given them to pick up trade by the Levytype process, in the chatty article on another page.

THE New Orleans Exposition opens November 10th. It will be a grand display, no doubt, and, so far as we know, without any systematic photographic exhibition.

MR. T. H. BLAIR, President of the BLAIR TOUROGRAPH AND DRY-PLATE Co., Boston, called upon us, October 13th, on his way to the Cincinnati branch.

* San Francisco Daily Chronicle.

SOCIETY GOSSIP.

THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the regular meeting, held Wednesday evening, October 7, 1885, the President, Mr. J. W. Bates, in the Chair.

Attention was called by the Secretary to the circular announcing the third annual exhibition of the Boston Society of Amateur Photographers, which is to be held about the latter part of November. It was urged that as many members as possible contribute pictures.

The Committee on Membership reported the election of Mr. J. Mitchell Elliot as an active member.

Three new names were also proposed for active membership.

Mr. Wood stated that he had found much difficulty in obtaining a knife for trimming prints which would hold its edge for any length of time. He finally made one from an old "hack saw," grinding it to the proper shape, and fitting it into a handle. The quality of the steel was such that the edge could be maintained a long time, and it answered for trimming prints on glass better than any knife he had ever used.

Mr. Carbutt exhibited two cabinet pictures taken on his special plates by Mr. George A. Lenzi, in his studio at Norristown. The pair told the story of an amusing episode in the experience of two darkey boys during the watermelon season, and the poses and expressions were as lifelike and natural as they could well be. Two lantern slides of the same subjects were also shown, which had been made on "A" plates, developed with pyro and potash with excellent success.

Some slides were also shown by Mr. Burroughs, from negatives made by him in New York Harbor during the International yacht race.

Mr. Corlies showed some interesting pictures of salmon and salmon fishing, taken by him on a recent trip to New Brunswick, Canada.

Mr. Wood showed a number of excellent figure studies, including some characteristic pictures of darkey life.

Some good pictures illustrating certain interesting geological formations in the vi-

cinity of Philadelphia were shown by Mr. Hardin, who also brought with him a number of most successful portraits of children taken in a "back yard," with background accessories of very simple yet effective character.

Mr. Croughton showed some "wet" lantern slides which had not been toned after development, for which he claimed greater clearness in the shadows than was usual with toned slides, the toning tending to clog up the shadows to some degree.

Some excellent and interesting slides were shown by Mr. Hazzard; also some by Mr. Hood, Mr. Bartlett, and Dr. Jordan.

Adjourned. ROBERT S. REDFIELD,
Secretary.

EXHIBITION OF PHOTOGRAPHS BY THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—The Committee in charge of the Exhibition are in receipt of most encouraging responses to the circular issued early in the summer. These responses indicate that a widespread interest is being taken in the project, and that large and attractive exhibits may be expected from Boston, New York, Rochester, Pittsburg, Cincinnati, Cleveland, San Francisco, and from smaller towns in Pennsylvania, New Jersey, Rhode Island, Virginia, and California.

Several beautiful exhibits have already been received from England and India, and others are expected; also some from Canada, Nova Scotia, and South America.

The time and place for holding the Exhibition have not yet been determined, but a decision in the matter will soon be made and duly announced.

THE SOCIETY OF AMATEUR PHOTOGRAPHERS OF NEW YORK held a special meeting September 22d, in plenty of time to catch our last issue, but we did not receive the record until October 12th, nearly three weeks after the meeting. As an enterprising magazine we decline to publish stale matter, or to be behind in presenting news to our enterprising readers.

For the comfort of our more practical readers, we would say that the meetings of this Society are largely devoted to the exhibition of apparatus with which we are all familiar. Our amateur friends will find the

proceedings published in full by the magazines emanating from the stockhouses, into whose hands the Society seems to have unconsciously lapsed.

THE PACIFIC COAST AMATEUR PHOTOGRAPHIC ASSOCIATION.—Regular meeting of the Pacific Coast Amateur Photographic Association, held on Thursday evening, October 8, 1885. President Smith in the Chair.

Minutes of last meeting read and approved.

The Committee on Exhibition requested further time to report. Granted.

Messrs. Shafer and Haines were proposed for membership. Referred to proper committee.

The Prize Print Committee, Messrs. Oliver, Abadie, and Passavant, were granted one week further time to report.

After considerable discussion, "Caught" was chosen as the subject for the next prize picture.

The Corresponding Secretary read a large number of communications from American and foreign amateurs and Photographic Societies, and passed around for inspection about a hundred exchange prints.

Mr. Partridge exhibited the Eastman Roll-holder, and explained the working thereof. The beauty of the workmanship and ease of manipulation elicited much praise from the members.

Mr. Gibbs showed several fine marine views, and also an instantaneous whole-plate print of the tug "Rockaway," taken upon an Eastman film. The negative was made late on a cloudy afternoon, an 8x10 Ross lens, middle stop being used, with a very quick drop working behind the lens. The exposure was about $\frac{1}{100}$ second.

The negative is clear, bright, fully exposed and full of detail, and is a practical proof that it is possible to do good instantaneous work with paper films. The negative was developed with potash and sulphite.

A very large number of prints and negatives were exhibited by the different members.

At a late hour the meeting adjourned.

W. B. TYLER,

Cor. Sec.

At two o'clock, Thursday morning last, the large paper warehouse of Crocker & Co., Bush Street, San Francisco, caught fire. A general alarm was soon sounded, and Thursday noon found the exhausted firemen still fighting the flames. The entire building was gutted. Two firemen had been killed by falling ruins, and several severely wounded and crushed. Just at this moment an enterprising photographer appears on the scene, boldly crosses the danger line and blandly requests permission from the chief engineer to take an instantaneous photograph of the scene. The obliging chief consents, and Mr. Photographer carefully sets up his camera, focuses, inserts a plate, and stands ready to seize the favorable moment. "Steady there, boys!" yells the chief, and steady it would have been had not one of the firemen slipped on the wet stones of the street, and the hose got away from the men holding it. There was a wrestle for the vagrant line; a shower of water falling on every one in the vicinity, while the photographer and his apparatus go scooting down the street propelled by the force of the water gushing from that line of hose.

This is the quickest change on record from the dry to the wet process.

W. B. T.

SAN FRANCISCO, October 10, 1885.

A WORTHY LIFE ENDED.

WALTER BENTLEY WOODBURY.

WHEN about to keep our promise to prepare a sketch of the life of our dead friend, we feel our utter inability to do him justice.

We thought ourselves able, after an intimate friendship of nearly twenty years, to tell the story of his life. But it has been better done by those who lived nearer to him, and who saw him oftener than we could. So we reproduce from the *Amateur Photographer*, on another page, a historical sketch that will prove interesting to all who may take time to read it.

But it by no means tells *all*. No one ever *can* tell all that was done for our art by Mr. Woodbury. He was *constantly* doing, and his life was a most busy one. We have spent many happy, interested hours with him in his "dens" and in his home,

and he has been a guest for weeks at a time in our home—a welcome visitor to our office.

The last time we saw him was nearly three years ago in London, *en route* to the Orient. He met us at the Charing Cross station and remained with us several hours, doing kind little offices for us until the departure of the Parisian train. A few months later we returned to his home, made lovely by its lo-



cality, his amiable wife, and his beautiful children. We shall never forget our last parting. Little did we think then it would be the last. Even now we hear the little humming sound which it was his habit to make when engaged in thought—a happy, kindly sound it was.

Lovely, amiable, tender-hearted, generous Woodbury, how our heart sank when we learned of his premature end, and how our fists clenched and resentful feelings arose.

Some have dared to insinuate that our friend was a suicide. Shame upon them! He was murdered rather. There are men—wealthy men—alive now upon whose skirts his blood-stains are. Men who have robbed him of his rights—who are making money, and have been so doing for many years, from the fruits of his inventive genius, and upon whom we call now to divide

with the widow and the fatherless, before their names are made public.

In his very last letter to us, written but a short time before his death, he alludes to this, and mentions one of the parties, or more.

A few months ago (see page 144 of our present volume) a committee was formed to raise a fund for Mr. Woodbury to enable him to recover his health and to work up his inventions.

Owing to the unappreciative element in human nature, the result was but a “sop.”

Deeply did our friend feel it. Rather would he have had no effort made than to have had so little result, when scarce an art store exists without a stock of the lovely pictures produced by one of his processes.

Oh! Shame upon the men who thus gain wealth at the expense of the blood of the poor inventor.

Even though want had forced a sale, the honest man would turn back and reward the inventor when the fruit began to come. But such men did not find Woodbury. Yet on he worked, humming his cheery little tunes, a faithful devotee to our art.

The process of which he was most proud was his “Photo-relief printing process.” A fine example of it was given in the January, 1870, issue of our Magazine, and another one in the *Photo. World*, January, 1871.

A company was organized in this country with ample capital, and superintended by Mr. John Carbutt, to work the Woodbury processes, but the effect of our climate upon the gelatine of that day prevented the enterprise from being a success.

Photolithography rather took its place, though in England, France, and Germany it is still practised with great success and with lovely results.

The plant of the American company was sold to Jas. R. Osgood, Esq., and was destroyed in the great Boston fire.

For lantern slides and window transparencies, the Woodbury process was excellent. All the slides of the 1876 Exposition were printed by it, and we have some valuable treasures in that line.

But now the greatest inventive genius ever given to our art is gone. We shall see

him no more, but as long as we live our fraternity will profit by his labor.

When his application for the American patents came before the veteran Patent Office Examiner, Titian R. Peale, Esq., he said, "This is an invention. The most of the things which come before me are modifications, but *truly* this is an invention."

Each week our foreign exchanges bring us mournful tributes to the memory of our dead friend. A recent letter from Dr. Vogel says: "You have read of the decease of Woodbury. How sorry I am. He also was one of the people who worked for the progress of photography without thanks, and without being paid as he should be."

In his last letter to us, Mr. Woodbury sent us the last photograph made of him, from which we present a Levytype above. He says, concerning matters photographic, etc.: "I had a bad time of it with 'diabetes,'—a nasty, weakening disease—but under proper treatment my health has much improved.

"Mr. Walker, the representative of the Eastman Company, called on me some time ago, as they are very anxious to get a really transparent medium, but mine will not suit their system as I cannot make it in lengths. They are a very pushing firm, as you can judge by their advertisements in this country. See in to-day's *News* the little tribute paid to me in the leader. . . . I will send you some of my transparent paper in a few days as I am making some further improvement in it. . . . I enclose the last portrait I have had taken. It is not very good, but the only copy I have of it. Remember me kindly to the *little ones*."

Yours ever truly,

W. B. WOODBURY.

Since the receipt of this letter, we have met Mr. Walker—the day he returned from England—and learned the particulars of Mr. Woodbury's death.

The pangs of disappointment—the feeling of being under-estimated, under-paid, and taken advantage of—wounded him, but he bore it all manfully and worked away until he died.

What we have written is with the hope of perpetuating pleasant memories of our common benefactor.

IS PHOTOGRAPHY TO BECOME A LOST ART? AN ANSWER TO THE QUERY.

BY D. BACHRACH, JR.

No one who reads the article in the September number of this journal with the above question for its heading, but must have been struck with the extremely pessimistic view taken by the author, who must have had good cause for it, probably in similar experiences to ours in this city, as well as in some other quarters. He evidently alluded to portrait photography as a *business*, for he must have known that the *science*, if not the *art* thereof, must be practised as long as the sun shines. Good as his cause must be, I still cannot help thinking that his digestion must have been in a condition to give him a very bilious view of the matter. His comparisons, taking the ill-fated chromo as a standpoint, are also irrelevant, as he can convince himself by a little consideration of my reasons. There are three elements entering into this profession which do not enter into that of the chromo or any other matter having close relations to this subject. First and foremost, human vanity; second, the affections; third, necessity.

Any portrait photographer of long experience can testify to that peculiar element of human vanity, or ambition, to be presented to the surrounding world, either by name, fame, or more largely by *personal* impression, in the most favorable light, and particularly so to posterity. And the one who is thought capable of perpetuating their *personal* representation in the most favorable light is sure to receive their patronage. Photography has placed this within the reach of every one as no other art or science now known can, and *this element is a part of human nature*. Is it not well known to every observant portraitist how sensitive even the most intellectual and highly cultivated persons are upon this subject, be they as homely as ogres, in spite of all efforts to hide this feeling. But a still stronger hold has portrait photography on the affections. Every new addition to a family has its hold upon the affections, and the visit of the shadow of death to any member of a family circle

without a good portrait of the lost one as a memento is now looked upon as a double calamity. I can testify to this feeling from my own experience, and to me the portraits of lost ones are priceless, and photography offers the nearest representation of *actual personality* of any art extant, despite the carpings of those who ask, "Is photography an art?"

How much more value our history would have, did we possess actual photographic portraits of George Washington, Napoleon Bonaparte, and other great historic characters, instead of the pictures of at least doubtful accuracy that we possess! But when we consider of what priceless value photographic portraits of the noted historical characters of the earlier centuries would be to history, we can see that photographic portraiture has become also an actual historical necessity. It is now as much a necessity as any essential part of our daily life, and all attempts of the so-called fashionable world to taboo photographs always have been, and always will be, attended by failure.

As photographic portraits have, therefore, come to stay, it must be equally evident that various degrees of skill and excellence now always obtain their just reward. If any set of men had little reason to become optimists upon this subject, it would certainly be the photographers of this city, including the writer, who have been cursed with worse charlatanry and degradation than have been inflicted upon any other community of photographers. The man who had grown rich from the patronage of photographers, possessed of ample capital and with the most expensive studio in the city, with all the arts of a quack medicine advertiser, was the one to lead in its degradation. In addition to this, he had bought out three additional studios as branches, making pictures at the lowest prices ever known in this city; and yet, in spite of all this, the few studios who obtain the best prices are doing the best paying business, after a bitter contest of years with all the odds against them. But when I see, in addition, that in an old country like Germany, where competition is keen, and artistic skill much more plentiful than with us, the

leading studios have of late years constantly advanced their prices, until now fifty and sixty marks per dozen for cabinet portraits (equal to from \$12 to \$14 of our money) is obtained for not a few of them, it seems to me that portrait photography is not to become a lost art, nor remain a degraded one.

PHOTOGRAPHY AND ART.*

BY XANTHUS SMITH.

OUR friend Mr. Clements has paid me the compliment to ask me to make a few remarks to you this evening upon matters pertaining to the art part of the pursuit of photography, and it is with much diffidence that I comply, for there has been so much writing and talking about art, in its various phases, during the past ten years, that, instead of its being a subject confined to professionals and a few *dilettanti*, as formerly, it is now pretty universally discussed, and to so great an extent understood that I can scarcely hope to give you anything new. And then, too, it is a subject which is now generally considered does not come under rules, but is governed solely by personal fancy, which is not at all surprising when we see how widely at variance are the views of the most eminent and popular critics; and even artists themselves, owing to their training in one school of art or another, differ so much in their opinions of what constitute merits or defects in works of art, that what I have to say to you must be taken simply for what it is worth as suggestions, and which, if at all in conformity to the views of any of you, may form groundwork for thought and advancement of the subject by you.

There is a great deal of discussion now as to the true position of photography in the fine arts; some making the statement that it is not an art at all—in fact, nothing more than a mechanical handicraft; but this, I think, cannot by any means be admitted; for, as it deals with precisely the same subjects as painters do, and has full power in the important qualities of drawing and light and shade, within the sphere to which it is limited, it has the power to make

* Paper read before the Philadelphia Amateur Photographic Club.

complete and beautiful works of art; and then, from its powers being limited, it does not follow that those who practice it need be any the less on the alert to make the most of those powers. Indeed it might be said, I think truly enough, that where there are no chances for tricks of composition or brilliant effects of color to catch the eye, the more training, knowledge, and taste can be brought to bear by any one using the camera as a means of reproductions, the better it must be for himself and his work.

Now all of you who have gone out with a camera to take landscape views, are so well aware of the way in which one is trammelled, by the want of the power which the painter has to seize upon the essential and leave out all marring features, that I need not dwell upon the difficulties encountered in the way of intervening trees and bushes, commonplace buildings, fences, and telegraph poles, and the impossibility often of getting a proper point of sight, on account of the ground being too high or low; but will call attention to some of the essentials which go to the making up of a good picture; so that, when a scene in nature or a group is found which conforms to these principles, it may be seized upon and the most made of it.

Light and shadow, composition and perspective, are the qualities which we have to deal with; and, as photographs are upon flat surfaces, the same as paintings, the photographer, like the painter, should seize upon all the means which he can to make his distances retire and foregrounds advance. There are three principal devices which conduce to this result, the first in importance being linear perspective, a thorough knowledge of which is extremely essential to the painter, for without it he runs into all manner of absurd blunders, all of which trouble the photographer is spared, as his lens takes care of his perspective for him, with one drawback, however, which I shall refer to further on. The next, and a very important one in landscape, is atmosphere. Either moisture in the air, or smoke or dust, which more and more obscures the detail of each receding passage, sending it away, and making each nearer passage, by its increased depth of shadow and detail marking, ad-

vance so nicely to the immediate foreground. And, third and lastly, composition, by a skilful use of which objects are gracefully and agreeably disposed, prevented from running awkwardly into each other, and nearer objects prevented from sticking fast to those which are at a greater distance, thereby bringing them forward beyond their proper place.

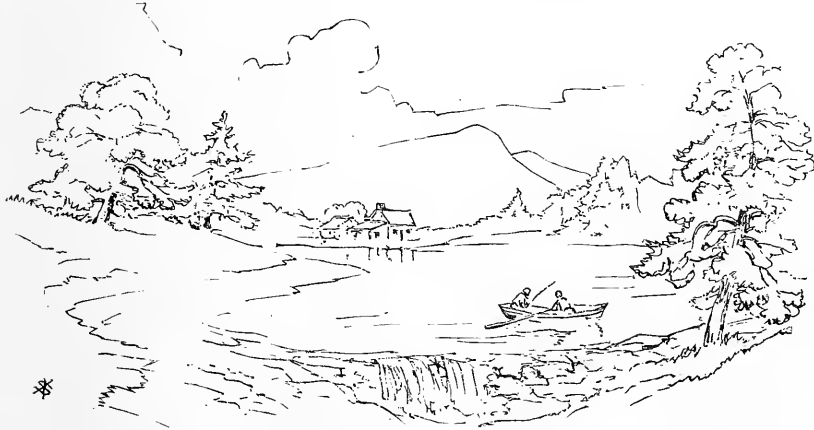
In relation to linear perspective, there is, as I said, little difficulty for the photographer, provided he makes a careful use of the swing of his camera, and can get to a sufficient distance to prevent too sudden divergence of lines, except in the one particular, of the distortion of objects by most of the lenses in use, by which nearer objects are made to appear entirely too large for those at a greater distance. This is a matter about which there is a good deal of discussion at present, and, even if I were more thoroughly up in, would cause too much digression to enter upon here; but I will merely say that this distortion hurts much work very greatly, and takes the picture-like or artistic appearance out of it, by giving gigantic proportions to some ugly foreground feature, or features, and by dwarfing, taking all the dignity out of fine middle distance and distant passages. Particularly is this the case, I think, with mountain scenery.

Aërial perspective is to be come at only by working on atmospheric days. Perhaps I attach too much importance to this quality, but I think it adds an immense charm to landscape views, and it is on this account that most English landscape work is so much more picture-like than much done on the Continent, especially in the Alps, where, unlike Britain, the air is very clear, passages of distance ten miles off appearing as a part of what is in the foreground. And in this country, too, on account of our prevailing clear air, we have not as yet paid enough attention to atmospheric affects. And if a scene can be found with a number of intervening passages from the foreground to the distance, and taken when there is enough intervening haze to separate each passage nicely, the eye will be gradually led into the scene and an amount of sentiment and picturesqueness given, which would be impos-

sible of an absolutely clear day, when the shadows would be as black, and objects as distinct, miles off as in the foreground. Of course, I am not referring now to work done simply as views of places, which come more under the head of the topographical, but to the making up of agreeable works of art.

A variety of means are used in composition to lead the eye into a scene, and take

never be so agreeable to the eye as where there are full rounded and sweeping lines; provided, however, that these be not portions of circles, for so much is the eye enticed by variety, that rounded lines running into straight, or broken by angles, or reversed, as in the famous line of beauty, will impress much more agreeably than a monotonous series of parts of circles.



away from it the appearance of flatness. As the boundaries of a picture are generally square, a scene, in order to be picturesque and agreeable to the eye, should be to a great extent free from unbroken horizontal and perpendicular lines, because, by repeating themselves and also repeating the horizontal and perpendicular boundaries of the picture, they give a stiffness and monotony that will

We all know how troublesome unbroken and repeated lines are when we come to pose a figure or a group out of doors about a house; doors, windows, and veranda posts and rails making themselves so obtrusive that, instead of the attention being concentrated upon what should be the principal object or objects of the picture, it is bewildered by a confusion of perpendiculars,

horizontals, and angles, which is ten to one heightened by another set of angles, in shoulders, elbows, and knees; and we certainly would not remedy the matter if we posed our group against the ends of a lot of barrels piled up, although by so doing we should get entirely rid of regular lines and angles. But, if we hang up drapery, we get variety of lines, or if we can have foliage, or a wall with the shadow of foliage cast upon it, provided we can get a quiet passage back of the principal part of our group, we at once have a variety that is agreeable. And speaking of this quiet passage back of our group brings us to a consideration of the important matter of light and dark, a proper distribution of which in a picture goes so much to the making up of its beauty. It is a theme given much attention to by painters, and should be held no less in importance by photographers, as the camera deals principally with, and shows its mastery in, gradations of light and dark. I can say nothing though, I feel, that will be new to you in regard to this, so well aware you all must be of the importance of a proper amount of half light and half shadow, to

prevent harshness, the beauty of some very clear high-light and intense shadow, which gives brilliancy; and, if these can be brought in juxtaposition in agreeable forms, how the attractiveness and pleasing effect of the picture is heightened! As the photographer has not the power always to arrange these matters, though, as the painter has, he is compelled often to trust to chance for catching such effects; and, if he makes many failures, he must not be discouraged; for, when he makes a successful hit, it is, indeed, a success; for, as it is, out and out, nature's work, it is free from any conventionality which a painter might be accused of; and then an exquisite amount of truth of form and detail is rendered, beyond the reach of painters.

I do not wonder, gentlemen, that you are carried away by this fascinating pursuit, when you may, at an odd moment of leisure, and as a mere pleasing pastime, secure with your camera a beautiful little picture, and so finished in its details that it surpasses a work which is the result of hours and even days of patient labor of the painter.

Editor's Table.

A WELL attended meeting was held in parlor No. 17, Lindell Hotel, on September 29th, for the purpose of organizing an amateur photographic society in St. Louis.

Mr. M. H. WILCOX was elected Chairman, and JAS. A. SHERRARD, Temporary Secretary. Messrs. BEHRENS, OLSHAUSEN, and BISHOP were appointed a committee to draft a constitution and by-laws. After comparing notes and exchanging ideas, the meeting adjourned to meet on Monday, October 12, 1885.

The outlook here is very promising for a large and influential society.

JAMES A. SHERRARD,
Temporary Secretary.

THE FIRST LIGHTNING-STREAK picture sent us was from Mr. A. W. MANNING, Edina, Mo., some time last spring. It was overlooked, and we failed to notice it at the time. We have received another copy from Mr. MANNING, which is a scientific wonder in its way. It proves that the electric element does not come down to us step

by step, but wriggles in gracefully curved lines, and is always in a hurry.

"DETECTIVE" camera pictures, a merry-making lot, are before us from Mr. TYLER, the amiable Secretary of the Pacific Coast Photographic Society. One is of our unconscious friend, Mr. I. W. TABER, talking to an amateur (the "lion and the lamb" together); and others, of coast-sailing life, are particularly fine. "The Meeting of the Waters" is one of the finest examples of alkaline development we ever saw. The whole lot is fine.

A STAUNCH SUBSCRIBER says: "I have taken the PHILADELPHIA PHOTOGRAPHER for twelve years, steady, and I do not know how I should do without it. C. S. GURNEY."

Another one says: "Your magazine is chuck full of good, interesting news, and should be in the hands of the entire photographic brotherhood. A W. MANNING."

PICTURES RECEIVED.—From Mr. COSS, Kenton, O., some examples of dry-plate cabinet work, vignetted, posed, and lighted very creditably. Mr. H. E. NOBLE, Lincoln, Neb., sends us the premium baby-pictures this month. A little girl (whether a Noble one or not, we know not), dressed in "old clothes," is very sweet, but she is prettier in her "little barefoot" costume. Mr. G. L. HURD, Providence, R. I., favors us with an 8 x 10 picture of the rapids above Niagara Falls—"a souvenir of the Convention"—which is a marvel of careful exposure, ready development, and splendid printing. It hangs in our study to bring back recollections of happy days and of a pleasant friend.

ITEMS OF NEWS.—Mr. VAN LOO, the talented Toledo photographer of the second generation, received a nice recognition from the *Detroit Trade Journal*. The *Cleveland Argus* has been interviewing our veteran master-photographer and friend, Mr. J. F. RYDER, on amateur photography. Mr. R. opened the *Argus'* eye to its satisfaction. Mr. E. LONG, Quincy, Ill., the solar enlarger, says: "Business is considerably ahead of last year." Good! may it be enlarged. "Then and Now," was the subject of a paper read to the New York photographers, October 6th, by FATHER ABRAM BOGARDUS. Mr. G. M. CARLISLE, Treasurer of the P. A. of A., says his report has been delayed by one or two delinquents who have not yet paid up.

BOSTON SOCIETY OF AMATEURS.—The third annual exhibition of this Society will be held in the gallery of the Boston Art Club, corner of Dartmouth and Newbury Streets, November 24, 25, 26, 27, and 28. Packages by express should be marked, Boston Society of Amateur Photographers, care of Boston Art Club. All packages by mail should be sent to the Secretary, John H. Thurston, Cambridge, Mass. Those intending to exhibit will please notify the Secretary as early as possible.

A SAD ERRAND.—Mr. WILLIAM P. BUCHANAN, of the firm of BUCHANAN, SMEDLEY & BROMLEY, of this city, was summoned to Covington, Ohio, on the 17th inst., to attend the funeral of his mother, who died suddenly the previous day.

No doubt the many friends of Mr. BUCHANAN, both East and West, will sympathize with him in this severe affliction.

Mr. A. H. PLECKER, Lynchburg, Va., has occupied his new art gallery, and receives much praise from the press.

"THE PHOTOGRAPHIC BEACON" is the name of the new (to be) photographic magazine to be started in Chicago, under the editorship of Dr. JOHN NICOL. "Independent."

Mr. F. JAY HAYNES is now running a "palace-car studio" on the Northern Pacific Railway. A grand affair.

MESSRS. A. B. PAINE & Co., Fort Scott, Kan., have opened a first-class stock depot in their city, and will push it vigorously. Success to them.

THE best pictures of the Flood Rock explosion at Hell Gate have been sent us by Messrs. BUCHANAN, SMEDLEY & BROMLEY, Philadelphia. They were made on the Ripley plate, for which these gentlemen are agents. The one of the explosion is a magnificent example of quick plate-work, marvellously soft and delicate.

MOsaICS, 1886.—Room for a few articles only. Mr. DAVID COOPER, the well-known demonstrator for the EASTMAN DRY-PLATE AND FILM Co., says: "*Mosaics* has always appeared to me to be a kind of annual-experience contribution, and many a point of value has come to me through its columns." Mr. COOPER contributes a very useful article for *Mosaics*, 1886.

OUR FOREIGN APPOINTMENT.—We give place to the letter following, and call upon our friends in the countries named to contribute papers and exhibits for our St. Louis Convention, soon:

E. L. WILSON, Esq.,
Philadelphia, Pa.

DEAR SIR: I have the honor to request that you act as solicitor for essays and exhibits from France, Belgium, and Denmark for the next P. A. of A. Convention.

You will also please write, or have some competent person to write, a paper on "The Progress of Photography" in the countries named.

By taking this step now, ample time is given to prepare and send essays and exhibits which shall be a credit to the intelligence and skill of the parties concerned.

Should you accept, I feel assured you will undertake the task with "heart and soul."

Awaiting your acceptance, I remain

Your obedient servant,

W. H. POTTER.

Mr. DAVID COOPER, of the EASTMAN DRY-PLATE AND FILM Co., Rochester, N. Y., delivered

a practical and interesting lecture on "The Progress of Photography," at Mr. CONLY'S rooms in Boston, October 8th, to a large and interested audience. The *Boston Herald* reviews the meeting and the lecture at considerable length. Thus we progress.

NEW AND USEFUL ARTICLES. TRY THEM.—Kuhn's Clearer, for removing fog from dry-plate negatives. Kuhn's Reducer, for reducing the intensity of dry-plate negatives. Kuhn's Lightening Intensifier, for dry plates. Kuhn's Sensitized Paper, Stretcher, and Dryer. Peck's Compound Film; Foreground Negatives, with a single plain portrait negative, may be combined in a great variety of these foregrounds. Samples mailed on application. All for sale and recommended by Mr. H. A. HYATT, St. Louis.

STAMP PORTRAITS.—The celebrated interference proceedings in the U. S. Patent Office, KUHN vs. HULBERT (GENNELLI), has just finally been decided against GENNELLI and in favor of KUHN, the Board of Examiners in chief, and also the Commissioner in person, having awarded priority to Kuhn.

All photographers, as well as others, are therefore hereby cautioned against hereafter purchasing *stamp portraits* from any other than the undersigned.

KUHN-BROS.,
1513 & 1515 Olive St., St. Louis, Mo.

THE ST. LOUIS PHOTOGRAPHER for October supplies an admirable illustration of the *truth* which can be secured by an "untouched" negative. The prints are of a tragedienne in characteristic attitude, from negatives which have not been worked upon by the retoucher. The effect is surely preferable to those seen in the many portraits which meet our eye every day, reminding one of a finely chiseled head with the quarry marks left all over the body. It is fine. The negative was made by Mr. J. A. Scholten on Cramer plate. Our warm-hearted contemporary seems to improve every month, and has given us a useful study *this* time surely.

A PICTURE OF TRIPLETS—and a finely caught trio too—comes to us from M. MUELLER, Owatonna, Minn., together with a number of other admirable examples of his work. The general appearance of the picture is excellent. The babies triple XLNT.

CHARLES COOPER & Co.'s CHEMICALS are, we learn, gaining steady popularity among the craft, and deservedly so, for they are as pure as the purest, full weight, honest measure and in every way equal to any in the world. Their goods are

"standard," and may be had of all dealers. Send for the price-list.

THE retail lantern-slide trade heretofore conducted by EDWARD L. WILSON was sold September 1st to Mr. T. H. McALLISTER, New York. (See advertisement.)

MR. HURD is heard from as follows: "My attention has just been drawn to a communication in the last number of your journal, signed JOHN A. LORENS, charging me with having appropriated, in a paper I read at the Buffalo Convention, the ideas embodied in an article contributed by himself to the *Yonkers Gazette*."

"It is with a becoming sense of my ignorance of the great writers of photographic literature that I confess that Mr. LORENS'S name is entirely new to me. I am glad that you published his article entire, so that your readers may not only have the advantage of its perusal, but may also be able to judge how far his thunder has been stolen. He should comfort himself with the reflection that small writers can scarcely write at all without poaching upon the domain of men of universal knowledge.

"Very truly yours,

"G. L. HURD."

[We think Mr. LORENS did not intend to find fault with Mr. HURD, but only intended to remark the coincidence of thought in the two papers. We think the charge of plagiarism was most remote from his thoughts.—Ed. P. P.]

THE Photographic Society of Philadelphia is actively preparing for its exhibition. Full particulars, entry blanks, etc., are to be had of Mr. ROBT. S. REDFIELD, Secretary, 1601 Callowhill St., Philadelphia. Plenty of chances for prizes.

THE death of Mrs. M. E. HILLYER, wife of Mr. H. B. HILLYER, Austin, Texas, has cast a sad gloom over a community who knew her well, and afflicted a father and son well known in our art.

MR. C. M. FRENCH has removed to Oneonta, New York, and is continually busy supplying his "ornamental relief borders." (See advertisement.)

MOZAICS, 1886, will be a splendid book, and ready early in November. (See advertisement.) "The interesting pages of *Mosaics* are always looked forward to with eagerness by me.

C. M. FRENCH,
Oneonta, N. Y.'

Specialties.

MAKE OUT YOUR OWN BILL, and remit cash with your advertisements, or they will not be inserted.

ADVERTISING RATES FOR SPECIALTIES.—Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to *secure* insertion. Advertisers will please not ask us for recommendations. ~~We~~ We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement. **Postage-stamps taken.**

SEAVEY'S NEW YORK NOVELTIES.

FALL SEASON.

OUR small size (6 ft. x 8 ft.) interior and exterior backgrounds for full and $\frac{3}{4}$ lengths, at from \$9.60 to \$14.40, have struck the popular taste.

They are new in design, quiet in tone, first class, and different from any before offered.

For further description, see last month's advertisement. Send for samples. For the fall season, orders should be given now.

LAFAYETTE W. SEAVEY,
216 E. Ninth St., N. Y.

ROCKWOOD SOLAR PRINTING CO.

17 Union Square, New York.

TIME.—It is our intention that every order received in the morning's mail (when not to be put on stretchers) shall leave this establishment the same day or the following morning. If too late for the morning work, it is sent on the second day. Having our own engine and electric light, *we are not at all dependent on the weather.*

GEORGE H. ROCKWOOD,
Business Manager.

W. F. ASHE ARTISTIC BACKGROUNDS AND ACCESSORIES,

REMOVED TO 68 WEST FOURTH ST.,
4 BLOCKS WEST OF BROADWAY, N. Y.

My new studio is fitted up with all the modern improvements, and the most refined demands from a critical public can be satisfied. A visit to my establishment, which has the largest showroom, containing the greatest amount of stock of any place in the world, will be gratefully appreciated.

I have again added numerous new designs to my great variety of patterns for *backgrounds* and *accessories*, and keep also in stock a large quantity of goods for parties to select from, saving time and delay on orders.

STOP THE LENS THIEF! \$25.00 REWARD.—Stolen, from our branch gallery, 96 South Illinois Street, September 23, the following lenses: One 2 B. Dallmeyer lens, No. 13,397, no cap, but the central stops were probably taken with the tube. One 3 B. Dallmeyer lens, No. 12,695, with leather cap which had been repaired with silk plush; probably three of the central stops were with this tube, and in addition to the maker's name engraved on it, there was also engraved "Sold by William Morley, London." One set of four 1-4 tubes in brass plate; one cracked lens in one of the tubes. Three 1-9 tubes, without plate. If such lenses are offered for sale, have the thief jailed, get his name, and send to us or the chief of police here, and we will have him sent for. We will pay the above reward for his capture and the return of the tubes, or one-half the amount for a return of the tubes or information which will lead to their recovery.

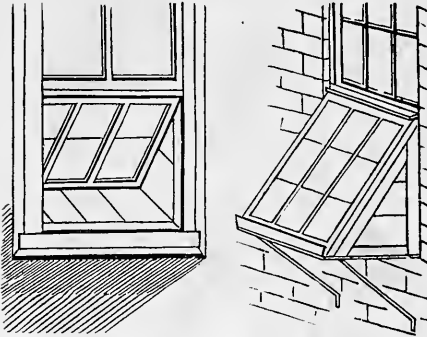
CADWALLADER & FEARNAUGHT,
16 and 18 E. Washington St., Indianapolis, Ind.

WILSON'S PHOTOGRAPHICS.

\$4.00

\$4.00

The Best.



Look into it for anything you want; you are pretty sure to find it. The Photographers' Encyclopedia.

BACKGROUNDS! BACKGROUNDS! BACKGROUNDS!
—I undertake to paint them for photographers.
Send for particulars.

M. H. ALBEE,
Marlboro, Mass.

PORTRAITS IN CRAYON.

The new book by E. Long, on the art of making portraits in crayon on solar enlargements, covers the entire ground, and is sold for the low price of fifty cents. For sale by

EDWARD L. WILSON,
Philadelphia.

METAL GUIDES

FOR

A. M. COLLINS, SON & CO.'S

No. 26 GILT BEVELLED-EDGE CARLS.

The fancy-shaped mounts now so fashionable among photographers, require metal guides with which to cut the photographs. They are now kept on hand, and can be supplied in the following shapes, and at the prices mentioned:

	Each.
Cross.....	\$1 05
Star.....	1 00
Palette.....	90
Leaf.....	90
Bell.....	90
Crescent.....	80
Egg.....	59
Triangle.....	90

For sale by EDWARD L. WILSON,
1125 Chestnut Street,
Philadelphia, Pa.

K U H N'S

SENSITIZED PAPER, STRETCHER, AND DRYER.

THIS simple arrangement cannot but commend itself to every practical photographer. Paper dried in this manner lies perfectly flat, and therefore better prints can be made, and you can also cut your paper either lengthwise or crosswise of the sheet, as it neither stretches nor shrinks afterwards. In addition to all the above advantages, the paper is much more easily handled than in any other way; in fact, it is no trouble at all. The Stretchers are made in two sizes, for whole or half sheets. See circular.

Price, either size, each \$1.50. For sale by all dealers.

H. A. HYATT, Trade Agent, Dealer in
Photographic Goods of every Description.
8th and Locust Sts., St. Louis, Mo.



WILSON'S PHOTOGRAPHICS

Teaches how to get rid of every monster and trouble in the practice of the art.

\$4.00

\$4.00

M. WERNER,

PORTRAIT ARTIST,

No. 102 N. TENTH STREET, PHILADELPHIA.

Photographs finished in crayon, India ink, water colors, and pastel, in all sizes, in the very best styles, and at moderate prices.

Solar Prints and Enlargements Furnished.

EVERY photographer in want of excellent lenses, for any purpose, will best serve his interest by consulting the new illustrated price-list of Messrs. BENJAMIN FRENCH & Co. before purchasing.

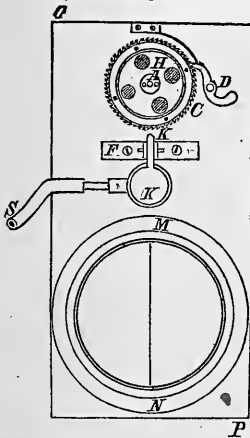
VOGEL'S

Photographic Progress.

\$3.00

\$3.00

347 Pages.



A word for all, and you never shut-ter without learning something useful.

K U H N'S

LIGHTNING INTENSIFIER FOR DRY PLATES.

Owing to the great rapidity of Dry Plates, it often happens that the negatives made are either over- or underexposed, and it becomes necessary, as with the wet process, to strengthen them, in order to get good results. It is usually done with bichloride of mercury and iodide of potassium. But this has serious drawbacks, as plates intensified by this method require a great deal of washing, and, after printing a quantity of pictures from such a negative, it will not retain its original color, but turns yellow, and then a good print cannot be obtained. This Lightning Intensifier, when applied, gives a beautiful blue or cherry color to the negative, and has the following advantages: It stands the light, and keeps its original color; admits the light through and prints beautifully. Besides this, it can be applied on any part of the Plate to lighten the deep shadows, etc., by applying with a soft camel's hair brush. In fact, the finest results from under- or overexposed negatives are obtained if these solutions are used as directed. The solutions are very concentrated, and are put up in two bottles containing two ounces each, and, when diluted to proper strength, each bottle makes sixteen ounces of solution, or it can be used in the more concentrated form if required.

For sale by all dealers.

H. A. HYATT, Trade Agent, Dealer in Photographic Goods of every Description. 8th and Locust Sts., St. Louis, Mo.

THE STANLEY PLATES.

CHICAGO, May 30, 1885.

MESSRS. E. & H. T. ANTHONY & Co.

GENTLEMEN: I have tried the Stanley Plate you sent me lately, and I am quite satisfied that it is as good a plate as I could wish for, working quick, clear, with fine details and beautiful roundness of image. I tried different developers on them, but find the pyro and potash to give the most satisfactory results.

Yours truly,

H. ROCHER.

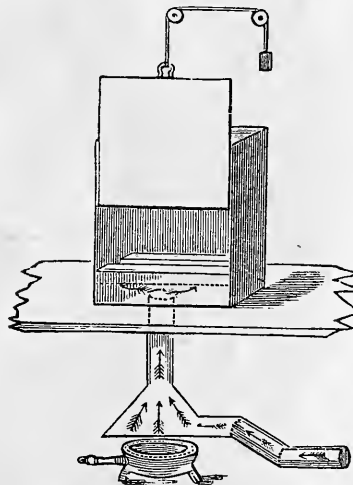
NEW YORK, June 8, 1885.

MESSRS. E. & H. T. ANTHONY & Co.

MY DEAR SIR: The four dozen Stanley Plates I had from you last week were all that could be desired—rapid, intense, and with not the slightest disposition to fog. For instantaneous exposures of steamers under full headway, I gave 1-50 of a second; for reproductions by gaslight, 5 seconds; for ordinary negatives, 15 feet distant from a common gas-burner, and the contrast of the pure white and black is remarkable. I am, very truly yours,

J. J. HIGGINS, M.D.,

23 Beekman Place.



WILSON'S PHOTOGRAPHICS.

All about emulsion work and plate making—a whole big chapter. See index.

\$4.00

Buy it.

\$4.00

ADDRESS T. W. POWER, N. Y., Secretary of Association of Operative Photographers of New York City, for operators, printers, and retouchers 392 Bowery, or 487 Eighth Avenue.

LIST OF ARTICLES FOR SALE AND PRICES FOR SAME.—All cameras in list are American Optical Company's best quality. Used by Edward L. Wilson at the New Orleans Exhibition:

	Each.
1 10 x 12 D. S. B. Revolving Camera	
Box, back focus	42 00
1 Hinged Tripod	3 50
4 14 x 17 New Style Plate Holder, extra	9 00
20 15 x 8 " " " " " "	1 35
2 14 x 17 Flat Printing Frames	2 00
4 10 x 12 " " " " " "	70
10 8 x 10 " " " " " "	60
100 5 x 8 " " " " " " \$45 per 100	50
6 Drying Racks	30

Cash. All guaranteed in good order.

Address EDWARD L. WILSON,
1125 Chestnut Street,
Philadelphia, Pa.

THE PLATINOTYPE (Patented).

Send ten cents for instructions and sample, portrait or landscape.

WILLIS & CLEMENTS,
25 NORTH SEVENTH ST., PHILADELPHIA, PA.
BUCHANAN, SMEDLEY & BROMLEY,
General Agents for the sale of materials.

FOR SALE CHEAP.—The best photo wagon in the country. Address

W. W. SILVER,
102 Fulton St., New York.

FOR FALL ADVERTISING, try "A Quiet Chat on the Prices of Photographs," by the Chief Photographer, to his patrons.

This little leaflet has been compiled with the view of helping you to raise your prices. Look it over carefully and see if you cannot make it serve you a good purpose. Nerve yourself up in the matter. Make the effort and you will succeed.

You can have whatever you want on the first and fourth pages of the cover without extra charge. Add your new scale of prices, and get advertisements to help pay you. The rest is stereotyped.

PRICES.

1000 copies	\$15.00
3000 "	36.00
5000 "	50.00

Send for sample copy. It will help keep prices up.

EDWARD L. WILSON, Publisher,
1125 Chestnut St., Philadelphia.

S & M.

CAUTION.—The genuine and original S & M EXTRA BRILLIANT PAPER always has the *water mark* S & M in every sheet.

A good deal of paper is sold with merely the stamp in the corner. This may be good, and it may not, according to what paper is used by the parties who want to work it off by putting on a stamp that has a reputation.

Look through the paper for the water mark.
E. & H. T. ANTHONY & Co.

WANTED.—A first-class artist in crayon, India ink, and pastels. To such a good salary will be paid. Address

EDWARD, Care Allen Bros.,
Detroit, Mich.

FOR SALE.—A gallery established ten years, averaging a business of \$800 per month. Well supplied with instruments, backgrounds, etc. Prices good. No club work. Will sell whole or half interest to right party. Don't write unless you have some ready cash. Address

OPERATOR, Care of Geo. Murphy,
250 Mercer St., New York.

FOR SALE.—The most complete portable photographic house ever built; 39 feet long, 18 feet wide, 8 feet high, 12 feet in centre, 6 x 6 feet dark-room, dressing-room, printing-room, reception-room. Cost, one year ago, \$300. Will sell for \$150 cash. Ill health cause of selling. Address

DEANE,
306 Preston St., Houston, Texas.

WHAT THE SUTER LENS DID.—I saw last week a very large photograph which was sent from New Orleans to Allen Brothers, of this city, which is, perhaps, the best picture ever taken. It was done by Edward L. Wilson, photographer, author, and traveller, who has charge of the photographic business at the great Exhibition. The picture was of the British Honduras section at the Exhibition, and the amount of well-defined detail was nothing short of marvellous. The netting, lettering, etc., and the thousand different articles that made up the British Honduras exhibit, were all shown as perfectly as if each piece had been photographed separately under the best light. The work was done by a Suter lens, a lens made in Switzerland.—LUKE SHARP, in *Detroit Free Press*.

CIRCULAR TO THE TRADE.

I HAVE this day sold to Mr. T. H. McAllister, 49 Nassau St., New York City, my entire stock of imported lantern slides, and have transferred my retail business to him. I take pleasure in recommending him to my former customers. They will find in his establishment the largest and best assorted stock of views in the world, and the most approved styles of lanterns, stereopticons, and apparatus, as will be seen by a perusal of his 136 page illustrated catalogue, which he forwards on application.

I continue to manufacture all my personally made slides, detailed in my catalogue on pages 15 to 37 inclusive, and also the following series: Centennial Exhibition, pages 46 to 48. Journeys in Foreign Lands, pages 63, 64. Switzerland of America, page 78. Colorado and New Mexico, pages 80, 81. Statuary, pages 82 to 84. Thorwaldsen's Statuary, pages 86 to 91. Piton's Foreign Comiques, page 96. Zoölogical Garden, page 97. Miscellaneous, page 98. Clouds, Snow, and Ice, page 99. New Dissolving Views, pages 122 to 134.

Sold to dealers in slides only—plain, or colored by Briggs. I continue to make slides for amateurs and lecturers, to order, from their own negatives, or from anything that can be photographed.

Slide making, plain or colored, of the finest style of the art—the best in the world. All dealers will keep my slides catalogued above.

Send your orders for special slides to order direct to my office.

A needed slide can be made and shipped the day the order is received.

My facilities are unequalled in the world. References—all over the world, and twenty years at it.

EDWARD L. WILSON,
1125 Chestnut St.,
Philadelphia, Pa.

PHILADELPHIA, Sept. 1, 1885.

CAMERA, FIELD, AND BOOK.

A MAGAZINE DEVOTED TO OUT-AND IN-DOOR LITERATURE AND THE CAMERA.

No amateur can afford to do without it. Specimen copy free. One year, \$1.00; 6 months, 50 cents; three months, 25 cents. Send silver or currency by registered letter at our expense. Address
CAMERA, FIELD, AND BOOK,
Bristolville, Ohio.

FOR SALE.—One of the most popular and prosperous galleries on Broadway, New York. Strictly first-class. None but the appreciative need apply. Address M. A. E.,

Care of E. L. Wilson,
Philadelphia Photographer,
Philadelphia, Pa.

ON 30 DAYS' TRIAL.—Upon receipt of \$2.00, I will send my Automatic Retoucher; C. O. D., \$5.00. Express agent will hold money and refund it if not satisfactory. E. A. GILBERT,
Jamestown, N. Y.

FOR SALE.—The leading gallery in Livingston County, Michigan, at a reasonable price. Gallery is fitted with the best north light, best location; one opposition; county seat: population 3000. Good farming country. For particulars address, with stamp, N. P. Jensen, Howell P. O., Box 643, Livingston Co., Mich. No postal cards noticed.

FINE PORTRAITS.—Those wishing to make the finest enlargements on albumen or plain paper, equal to contact work, from card and cabinet negatives, without reducing them, by a new and rapid process, enclose stamp at once for particulars.

E. A. GILBERT,
Jamestown, N. Y.

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

As operator in a good gallery, or would run on shares, with the privilege of buying. Ten years' experience. Address Box 199, Ovid, Mich.

By an operator of fifteen years' experience. Understands all branches of the business. Address "E," 112 E. Canal St., Richmond, Va.

By a German, who has a thorough knowledge of retouching, coloring and working in crayon and pastel upon life-size enlargements. Best of reference. For particulars, address Paul Gunter, Marien Strasse, Hanover, Germany.

By a photographer of experience and well up in dry-plate work, as operator. Competent to manage a good gallery. For samples, etc., address Photographer, 420 First St. N. W., Washington, D. C.

By a young man of two years' experience, a position as retoucher or printer. References. Address N. D. Page, Norwood, St. Lawrence Co., N. Y.

In Washington, D. C., or New Bedford, Mass., by a young man who can print and tone, and make himself generally useful, but wants to learn more of the business. Address "C. A. R.," Lock Box 97, Rutland, Vt.

By a retoucher, with fifteen years' experience. First-class samples and references. Address M. J. Gmelch, 1000 Vine St., Philadelphia.

As operator in a strictly first-class gallery. Samples sent. Address L. D. Thompson, 179 Duffield St., Brooklyn, N. Y.

As retoucher or assistant operator. Worked for Edward L. Wilson at the New Orleans Exhibition, and refer to him. Address A. A. Baldwin, Ludlow, Vt.

As reception lady. Good retoucher, and capable of assisting in general gallery work. Experience in first-class galleries of Cleveland, Ohio. Address Miss M. L. E., Box 31, Woodstock, Ontario, Canada.

By a first-class artist, as operator or retoucher. A moderate salary required. Address Photographer, 46 Boliver St., Cleveland, Ohio.

Will be open for an engagement January 1st. Samples will be sent on application. See notice of work in PHILADELPHIA PHOTOGRAPHER. Address H. G. Coss, Lock Box 131 Kenton, Ohio.

By a young lady to retouch. Will send samples if required. Address Nellie Reed, Lyons, Clinton Co., Iowa.

Correspondence solicited with a party desirous of engaging an operator; one who is up to the times, and possesses ability and experience. Address Photographer, No. 231 31st St., Chicago.

The Finest Negatives of
FLOOD ROCK EXPLOSION at HELL GATE
WERE MADE ON



(See *Scientific American* of Oct. 17, 1885.)

The RIPLEY PLATE is the Plate upon which *absolute reliance* can be placed. Only the *finest glass* obtainable is used in their manufacture, selected of *uniform thickness*, and cut to *exact size*. The most extreme care is taken to render them both *mechanically* and *technically perfect*. They are consequently the only really cheap plate in market, and are *absolutely indispensable* alike to professional and amateur photographers who desire to produce the finest possible pictures.

BUCHANAN, SMEDLEY & BROMLEY,

General Agents for Phila.

No. 25 North Seventh Street.

F. DRESCHER & CO.'S
Improved Gelatine for Emulsion.
(HARD AND SOFT QUALITY.)

We beg to request our friends to give us their orders for supply during the winter. The steadily increasing demand for this celebrated make is a proof of its superiority over all other products. *It has no rival, and is specially known for its purity and fine body.*

Write for samples for trial. Obtainable of the **SCOVILL MFG. CO., New York,** or direct from the manufacturers,

F. DRESCHER & CO. GELATINE WORKS,
Oberndorf-Schweinfurt-on-Main, Germany.

GAYTON A. DOUGLASS.

HENRY G. THOMPSON.

DOUGLASS, THOMPSON & Co.

229 & 231 State St, Chicago, Ill.

MERCHANTS IN SUPPLIES FOR THE

Art-Science of Photography

Photographers' Booksellers, Stationers, and Newsdealers.

**CARBUTT'S
Keystone Dry Plates**

AND PHOTOGRAPHIC SPECIALTIES.



Specials for Portraiture.

A. for Transparencies.

B. for Landscapes and General Photography.

OPAL PLATES, Gelatino-Albumen or Gelatino-Chlorides, for Positives and Transparencies.

Multum in Parvo Dry-Plate Lantern.

Carbutt's Pyro. and Potash Developer, Concentrated,
Two 8oz. bottles 75 cents.

Ruby Paper and Negative Varnish.

FOR SALE BY ALL DEALERS.

JOHN CARBUTT, Keystone Dry-Plate Works,
Wayne Junction, Philadelphia, Pa.

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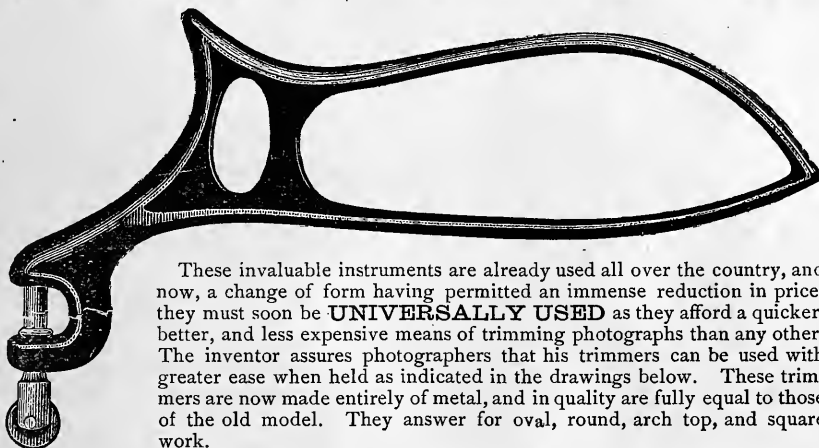
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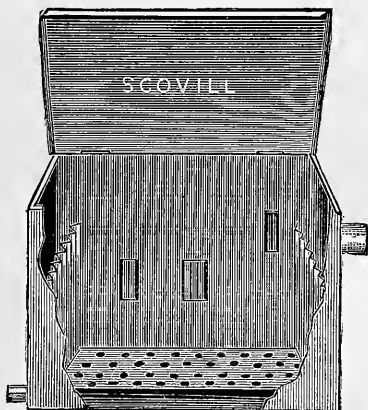
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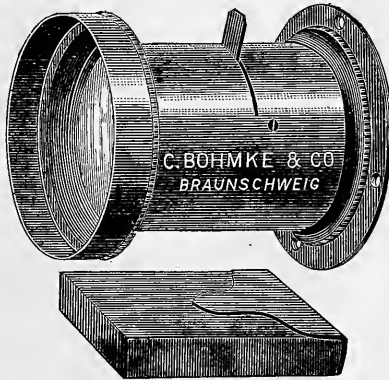
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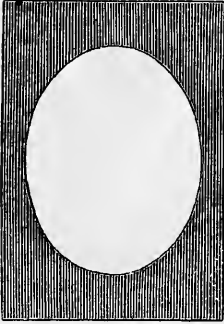
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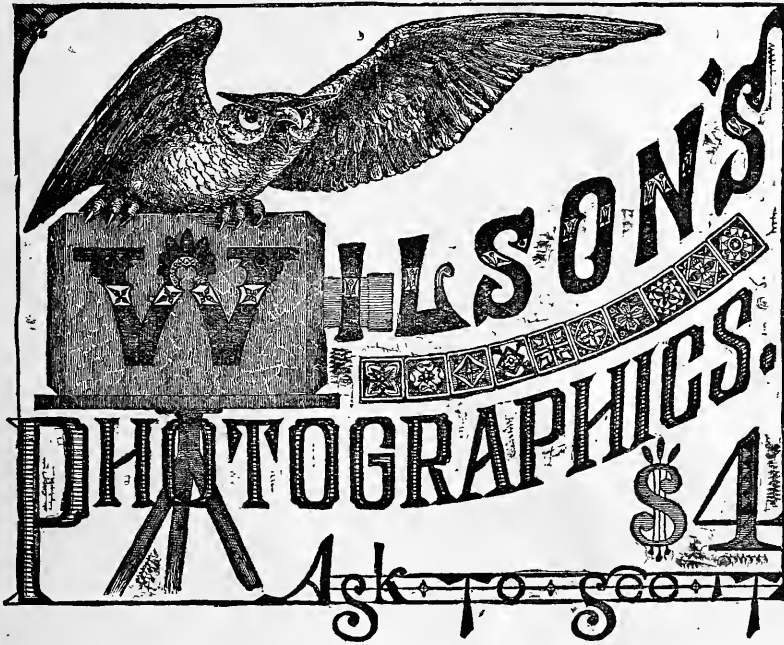
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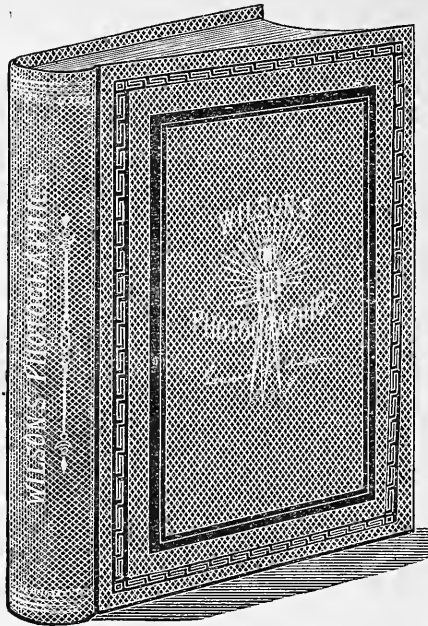
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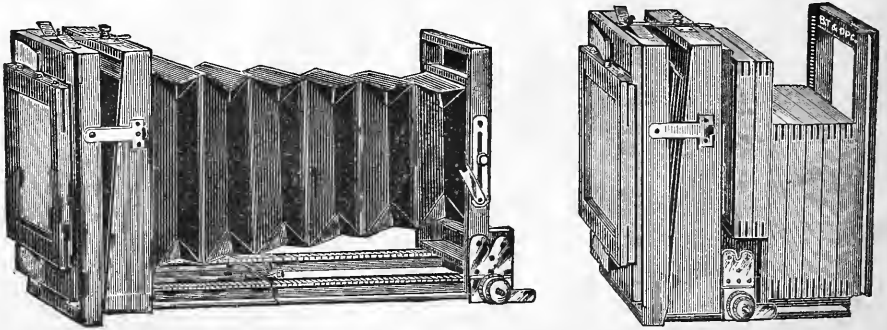
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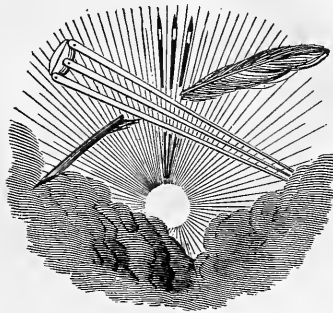
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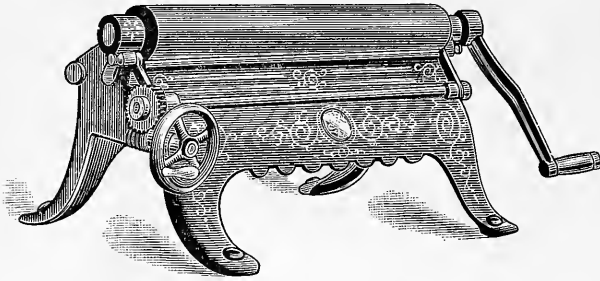
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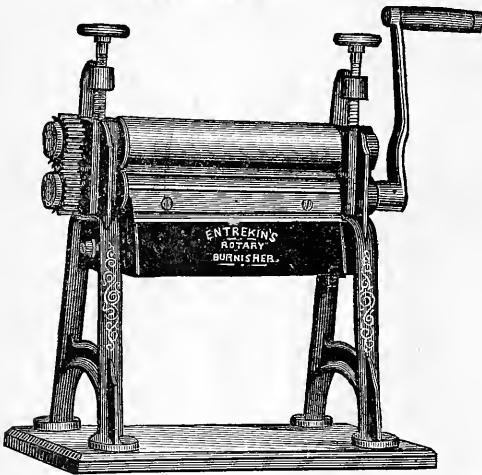
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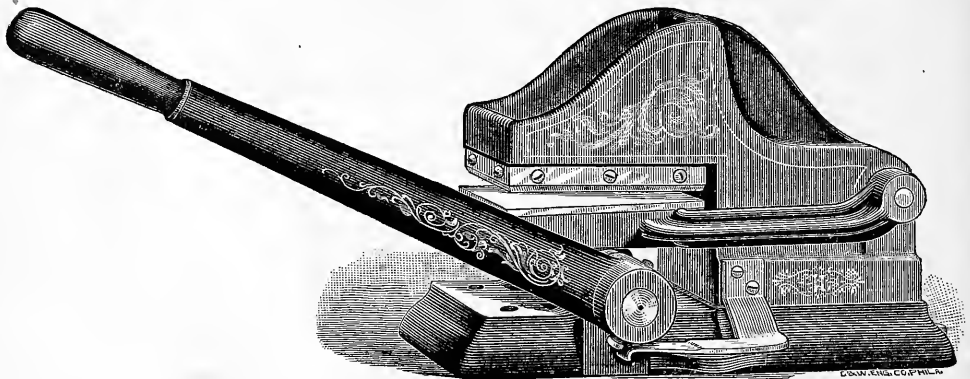
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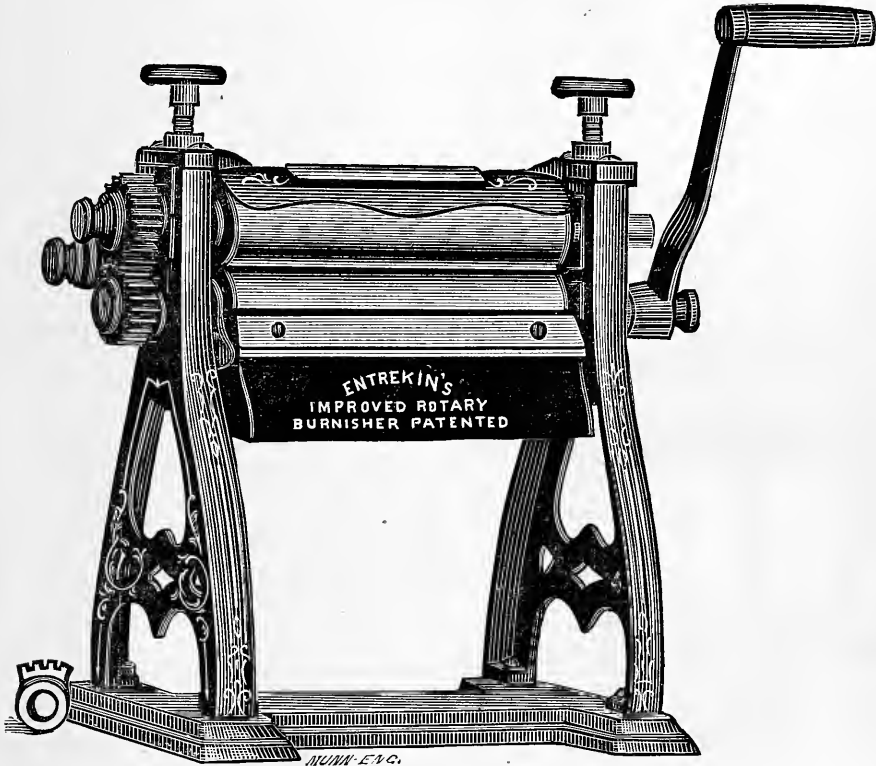
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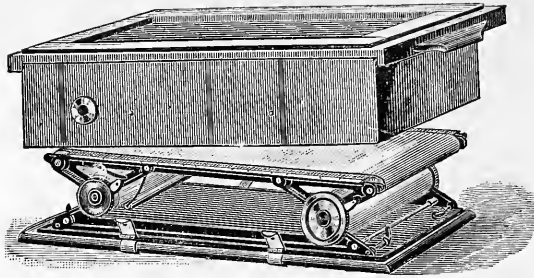
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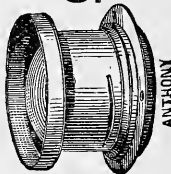
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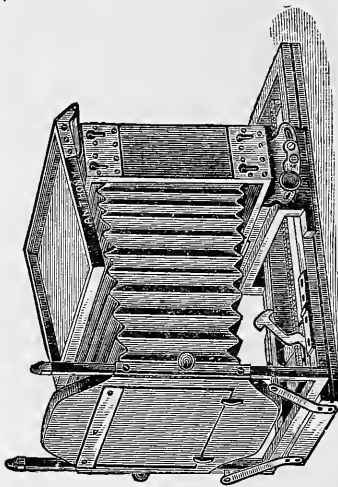
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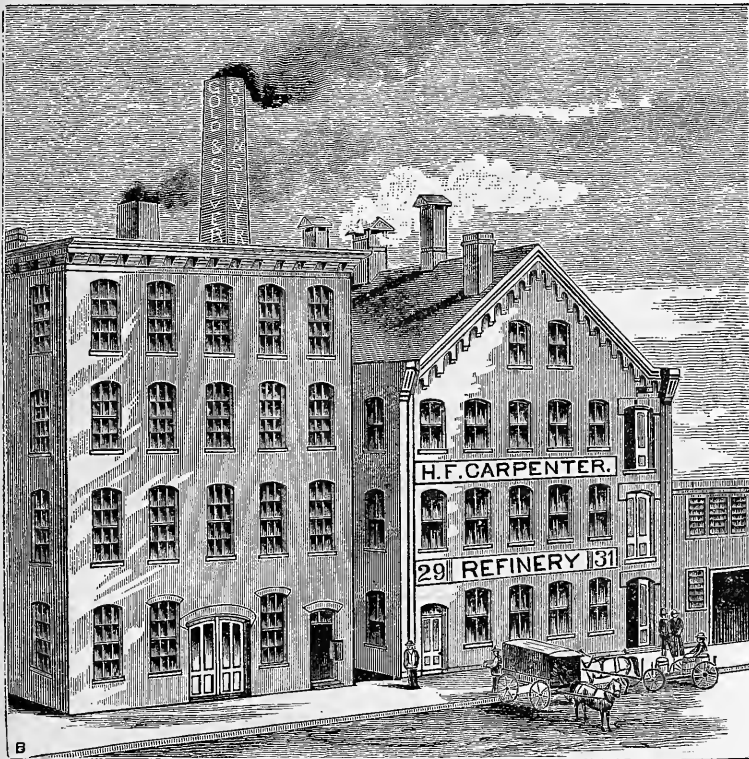
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I hope that every photographer will see to it that his \$4 goes direct to you, without any dealer's commission off, in order that you may have the full benefit of its price—a benefit indeed for the many years you have played your part so carefully upon the photographic stage for us.—FRED. C. PHILLIPS, St. Thomas.

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Of all the photographic literature published, this book seems the very best.—J. P. SPOONER, Stockton, Cal.

I am very much delighted with it. The treatises on dry-plates, emulsions, etc. etc., are all very minute in detail.—J. A. VAN DREZZEN, Peoria, Ill.

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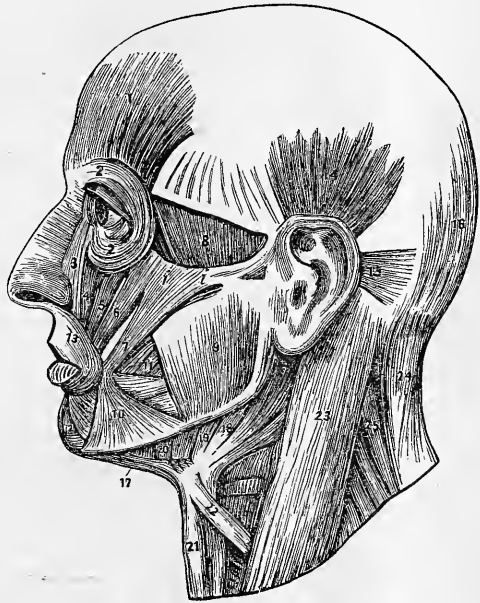
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THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XXII.

DECEMBER, 1885.

No. 264.

ADIEU TWENTY-TWO.

WE are too old now to try to attract, or to expect very much attention to be given, to our birthdays; but we would like to say a few words to our readers at this the end of our twenty-second year.

We expect to continue another year. We shall issue at least twice a month without any advance in price. We shall incorporate many new features, especially in the direction of photographic practice, and very materially in the elements of art principles applicable to photography. Magnificent illustrations and embellishments, foreign and American, are in preparation. A more entirely independent course will be pursued. An entirely new class and order of contributions is arranged for the correspondence column; the world's photo-work; the queries corner; the illustrated articles; the working department; the amateur news column; and the editorial, will all be augmented by the careful personal work of the editor, whose time will be more entirely devoted to the PHILADELPHIA PHOTOGRAPHER than ever before.

The determination is to continue it, as it always has been, the *very best* magazine of its kind. To accomplish all this, however, we are largely dependent upon the help of our patrons.

This is the time of year when the majority of your subscriptions end. Will you not kindly inform us during the present

month whether or not you wish to continue for any time in the future? It is very important to us that we should know, in order to complete our contracts for 1886.

We ask prompt remittances. Do not fear to remit for a quarter of a year, if unable to remit for the whole volume, for we do not wish to discontinue a single old friend.

We *do* desire to *double* our usefulness. Our interests are identical, therefore we look to you confidently for help in this direction. Also, see page 3 of our cover.

Now a right hearty wish for your welfare and progress during the new year, and then adieu twenty-two.

PHOTOGRAPHIC MOSAICS, 1886.

WE have been careful this year not to announce *Photographic Mosaics* until it was quite ready, and on the shelves of all enterprising dealers.

Should you not find it, we shall be glad to supply you by post. It is full of good, as will be apparent to those who are interested enough to scan the partial list of the articles it contains, given in the advertisement.

As its title-page declares, it is "a Record of Photographic Progress," and it has now arrived at the twenty-second year of its existence. The present edition, besides giving a carefully arranged and classified *résumé* of the year's work, contains an unusually large number of bright, practical articles,

which will serve all who are interested in the practice of our art, be they adepts or be they amateurs.

All the year round, photography *grows*—in influence, in usefulness, in excellence. Those from whom we hear through the magazines are not, however, the only ones who help it grow. Our country is full of thoughtful, ingenious practitioners, who say and write but little, but who are, all the time, persistently pushing photography into new fields—who are discovering new methods, and who lift it higher and higher.

These men consent to let us hear from them through *Mosaics* once a year, and you *lose* if you do not know what they say. Were it not for *Mosaics* we should never hear from them—though their work would go right on.

Look at the names; some of them were never heard of before. Many of them are young men whom we had to discover and bring out. We know that two among the best papers in *Mosaics* this year are by young men who arrived at their majority since the articles were prepared. They are intensely practical—positively.

Veteran names are there, too, in plenty; and you can scarce scan a page without finding some thoughts of value.

Moreover, the papers come from Cape Breton to Guatemala, from the Atlantic to the Pacific, and from artist, adept, and amateur.

Several thousand copies are already sold, and there was one printed for every needful earnest photographer—unless the supply is soon exhausted; 144 pages, 50 cents in paper, \$1 in cloth.

ABOUT INSTANTANEOUS PICTURES.*

BY PROF. H. W. VOGEL.

THE reason why I have chosen such a subject for a contribution to your valuable little annual, *The Photographic Mosaics* for 1886, lies in the fact that during my summer rambles I met with many a solitary wanderer who seemed to torment himself to secure instantaneous pictures, but who in

spite of his pains achieved nothing. Such a votary I saw engaged in attempting to seize the beauties of the well-known Gollinger waterfall, in Salzburg. The sky was overcast with heavy rain clouds which threatened every moment to break, and the wind kept in constant motion the trees in the foreground, and yet the amateur posed in the immediate foreground, imagined he could secure an instantaneous view under such conditions. I examined his instrument. It had a landscape lens of primitive form with a stop about the same size, and I could not help remarking to him, that, taking into consideration the state of the atmosphere and the nature of his apparatus, the chances of securing an instantaneous view were almost hopeless.

When informed that I belonged to the profession he unbosomed his mind to me and told me that he never had any luck with waterfalls. He had sought the advice of many photographic physicians, applied to various dealers to furnish him with the proper sort of lens to take waterfalls. With all varieties of eloquence some had recommended this, some that. But now he thought he had surely attained his longed for desire in the lens he was using. He related that a certain photographer whom we will call X., whom he had met in Switzerland, had, after much persuasion and for a certain sum, handed over what he denominated a waterfall objective, and now he hoped to attain his long wished-for picture. I asked him whether he had also purchased the instantaneous shutter of the same photographer. He replied he had bought this at the advice of another amateur who never made any views but instantaneous pictures. To my question whether he had ever made any views with the new apparatus, he made the usual evasive answer that he had not yet developed them.

Such cases as I have related always strike the professional as comical, but they are not rare. On another day I came across a painter with his camera ready to shoot upon a very dusty roadway frequented with vehicles of all sorts, and lined and shadowed with heavy trees. He made use of an Applanatic lens and second stop, and had his instrument directed straight at the middle

* Written for *Mosaics*, but received too late.

of the road patiently waiting for a wagon-load of Bavarian peasants, which he expected to secure *en passant* at about ten paces distant.

There is a regular mania for instantaneous work amongst the *dilletante*. If possible, the lightning express at full speed must be impressed upon the sensitive plate. The first failure by no means depresses their ardor. The want of sharpness they attribute to some trifling mishap, and hopefully set to work again without once stopping to consider whether the circumstances are favorable for securing an instantaneous view or not.

It is a fact that the great sensitiveness of dry plates facilitates in an extraordinary manner the taking of such instantaneous pictures, and that there are even cases when it seems impossible to give short enough exposure.

Dr. Neuhaus, who has recently returned from the Sandwich Islands with a number of remarkable pictures, declares, that he found it necessary to make use of a Steinheil wide-angle lens with the smallest stop—that is, the smallest opening which can practically be used in operating upon open, sunlit landscapes. All views not so taken with the instantaneous shutter, showed themselves over-exposed, so brilliant is the light in that region. But it does not follow that we should always use for instantaneous work and under every circumstance a wide-angle lens with smallest stop. What would do well enough for open landscape will not serve in shady forests, or narrow places, or rocky cavities where the light of the broad sky is only filtered, as it were, through small openings, and what is possible in the broad light of noon is not possible when the sun is declining or when the sky is overcast with clouds. Finally, a point of great importance is the distance of the passing object from the camera, the manner of its passage, and its position, whether perpendicular to the camera or nearly in the direction of the camera.

Every professional of experience is well aware that an express train impresses itself upon the field of vision with a velocity of thirty feet with an objective of six inch focus at a distance of twenty paces, and

which lasts for one-twentieth of a second, makes a motion of one-twenty-seventh of an inch upon the plate; that is, almost a half line, which will give the impression of a blur. At double that distance, forty paces, the blurring is only half as much; at three times, one-third; and much less when the direction of motion is oblique to the axis of vision. Such facts are usually overlooked by the amateur.

Photography is at present an easy thing, but a certain amount of mother wit is necessary when we expect to succeed with difficult subjects.

SHALL WE USE QUICK OR SLOW PLATES FOR LANDSCAPE WORK?*

BY DR. S. C. PASSAVANT.

THIS is a question that is daily asked by the users of gelatine plates, and the whole subject has been discussed at length in photographic societies and journals, but, like most photographic matters, it is still debatable ground, and the opinions of even the best workers differ.

The difficulty, perhaps, is that not many have seen both sides of the shield, and while Mr. "Expert" is making first-class negatives on a plate showing twenty-three to twenty-five degrees Warnerke, Mr. "Tyro" is doing equally as good work with a plate of half the rapidity, and *vice versa*.

The question being still unsettled, I may be permitted to give briefly my views on the subject.

For landscape work, pure and simple, where an instantaneous exposure is not required, I believe, and always advise, that a slow plate of fourteen to sixteen degrees Warnerke will give better and more satisfactory results than a very rapid plate, and for the following reasons: A slow plate gives great contrast and a brilliant image, while a rapid plate gives a soft effect and a certain flatness, which are not easily overcome. In portraiture, where hard contrasts should be avoided, these rapid plates are very suitable. The brilliancy and intensity in a slow plate are, of course, largely due to

* Written for *Mosaics*, but received too late.

the inherent chemical quality of the emulsion.

Again, more latitude is allowable both in exposure and development with a slow plate. A photographer may be perfectly acquainted with the capabilities of his plate and lens, and on ordinary subjects will hit pretty nearly the right exposure nine out of ten times. But the image on the ground-glass is deceptive, and there is an endless variety of subjects where the most expert photographer is puzzled, and hardly knows what exposure to give. For example, dimly lit landscape under trees; autumn foliage, with non-actinic red, yellow, brown, and dark green leaves; heavy black foregrounds with well-lit distances, need all the latitude possible, and here is where the advantage of the slow plate comes in. In doubtful cases, like those mentioned, a very full exposure may be given, and five or even ten seconds too much will not prevent a good negative from being obtained, while with a rapid plate a difference of two or three seconds may ruin the resulting negative, for it is almost impossible to get anything but a flat picture on an overexposed rapid plate.

It may be suggested that by using a small diaphragm the same latitude of exposure may be obtained with a rapid plate as with a slow one. This may be so to a limited extent, but working a very small diaphragm lessens the atmospheric effect and gives a certain flatness and lack of brilliancy. Diaphragms ought not to be used as a means to lessen the light, but only to get a sharp picture all over the plate; the largest diaphragm that will effect this is the right one to use, a smaller one will give only monotone pictures without any advantage.

Then, again, in development a slow plate will stand more variation and rougher treatment without fogging. It is easier restrained, and can be forced, without losing its printing qualities, to an extent which would be total ruin to a rapid plate. The greater intensity of a slow plate allows one to use a very dilute developer, thus keeping the plate under perfect control, and saving many negatives that would otherwise be lost through overexposure, but with a rapid plate no such treatment is allowable, and

overexposure cannot be corrected by diluting the developer, as the resulting image will be flat and thin, and worthless for printing without intensification. Such a plate can only be saved by the addition of plenty of bromide from the very beginning, and even then it is necessary to vary the component parts of the developer so often that the whole operation becomes perplexing and uncertain.

My advice, therefore, is, use a slow plate for landscape work, give generous exposure, and dilute your developer.

TEAR-DROPS ON GELATINE NEGATIVES.*

BY JAMES INGLIS.

TEAR-DROPS on gelatine negatives may be prevented by wiping off the surplus water from the face of the negative before setting it aside to dry, either with a squeegee or a tuft of cotton, or any other convenient thing.

Should a negative get spotted from uneven drying, put it again in water and be careful to wipe the water off this time before setting it aside to dry, and it will be entirely free from any previous marking; tear-drops have a tendency to form upon some plates, but with this precaution observed they will never occur.

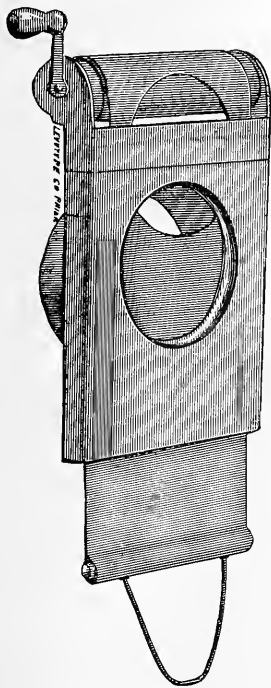
Brown-yellow stains coming upon negatives after they have been used a short time, are, if *in* the film and not on it, from *lack* of fixing. If a speck in a negative should seem to hang back and not fix like the rest of the plate, unless special precaution be taken with this plate a stain is almost sure to appear on this spot, sooner or later. In such a case wash the plate for five minutes or so after it seems to be fixed, then place it back again, for a few minutes, into the fixing solution, or, better still, pour over it an almost saturated solution of new hypo. This will invariably clear off the most stubborn case. These spots that are slow to fix are from too thickly coated parts of the plate, and when they remain in the soda for a long time the pores of the film become close and impermeable to the fixing solution,

* Written for *Mosaics*, but received too late.

but are immediately opened again when put into water, and will fix as readily as at first when put back into the soda.

COLONEL BARATTI'S SHUTTER.

OUR Italian friend, Colonel Ottavio Baratti, kindly sends us, in a personal letter, a photograph of a very easily made shutter of his own contrivance, from which we present a Levytype below :



Its construction will be understood at once. Col. Baratti says: "I find it convenient on every occasion. It will act instantaneously if you desire it, and very slowly if you wish it. Moreover, it is easily made at little cost."

We are glad to hear from our old co-worker in such substantial shape.

The Art and Practice of Silver Printing, by H. P. ROBINSON, second edition, has been received from SCOVILL MANUFACTURING Co., New York, the American publishers. Price, 50 cents. This being the only work on practical printing now in the market, it must meet the great demand it deserves. It is beautifully gotten up.

OBSERVATIONS ON SILVER PRINTING.*

BY F. M. SPENCER.

SILVER printing is a subject of discussion that may fairly be said to have acquired a veteran condition. Nevertheless its interest, its plucky and commanding place among all light processes, its faults and difficulties, its successes and failures, and its beauty and commercial favor continue to force its claims and studious consideration upon us. Sensitive in the extreme to varying atmospheric conditions, it requires constant and intelligent attention to adapt it to those conditions. Its chemical behavior requires the closest attention all the way from the printing-frame to the mount. The object of this paper is to point out some of these conditions and reactions, and note the way to success.

The choice of paper will ever remain one of divided opinion, but it is manifest that the printer is more often at fault than the paper. But before we enter into the technical discussion, let me state an analysis of my subject. The silver print: it is a pictorial representation of some object usually upon a piece of salted and albumenized paper, prepared by the manufacturer, as he styles himself, and by processes he fancies peculiarly his own, and the formula jealously withheld from the consumer; the pigments are salts of silver and gold, developed by light and chemical decomposition or substitution; the albumenized paper contains a percentage of some soluble chloride, the kind and amount unknown to the printer. When a sheet of such paper is floated upon a solution of silver nitrate a film of silver chloride is formed, which darkens by the action of light, but it also carries a variable proportion of free silver nitrate, which, together with the organic matter of the paper, plays an important and beneficial part in producing the print, and is also often permitted to *play havoc afterwards*.

Chloride of silver is quite insoluble in water, soluble in ammonia, solution of chloride of sodium in excess, and completely soluble in hyposulphite of soda to saturation.

* Written for *Mosaics*, but received too late.

Nitrate of silver is soluble in water, but forms insoluble precipitates by reaction with hyposulphite of soda and other sulphur compounds.

I believe it is now proven that the print before toning is composed of silver *subchloride*, and that the subchloride of silver has the property of decomposing gold tetrachloride, hence the value of gold as a toning agent, a portion of gold quite stable in its nature being substituted for a portion of silver subchloride. Subchloride of silver is bleached or soluble in some of the soluble salts of iron in the presence of chlorine.

Alkaline carbonates precipitate nitrate of silver in the form of carbonate of silver in an extremely fine state of division, and is the cause of the troublesome white deposit upon the prints when hard water is used for first washings.

With this analysis of the print and the materials incident to its production, before us, I will proceed to describe some of the manipulations and their relation to that analysis. We will suppose N. P. A. Ex. Brilliant Albumen Paper to be the representative of the brand used. A plain nitrate of silver solution, fifty or sixty grains to the ounce of water, and slightly alkaline with ammonia, will constitute the bath, and enough of it used to fill the dish to a depth of at least three-quarters of an inch, the more the better if it does not overflow. The paper should be just moist enough to float, with a slight tendency to curl backward, for not over ten seconds after drawing it upon the solution; if it be too dry, its tendency to curl backward is very annoying, and weak or measly silverings and teardrops are likely to occur. To keep the paper always in a favorable condition, I have adopted the method of keeping my paper in a deep closed drawer, and I also place in the drawer a large earthen bowl with a big farrier's sponge in it saturated with water, If at any time the paper becomes too moist, remove the bowl as long as it, the paper, remains sufficiently moist. I have no trouble in that way, however. The paper should be allowed to float from two to three minutes; draw the paper from the bath by a steady sweep over a glass rod to remove the surplus solution, and hang at once upon frames

provided with spring clips at the corners, and hang away to dry; two sheets may be dried upon each frame. Drawing over the glass rod secures even silvering, and the frames compel the paper to dry flat and evenly and quickly. Use artificial heat *only* in drying when necessary. When the paper is dry, being already in frames, the frames may be placed in the fuming-box *in another room*, and fumed strongly for thirty minutes. It sometimes happens that the paper prints are *red* even after very strong fuming. Why? By the action of light the chloride of silver is reduced to a subchloride, evolving chlorine, and if the paper be damp the chlorine is taken up by the water in the paper probably as hydrochloric acid, and reddens the paper just the same as it would redden litmus paper, and also serves in a measure to assist the printing. The remedy is easy; dry the paper and the pad just before placing it upon the negative. An oil or gas stove should be kept handy for that purpose, but care should be exercised not to dry the paper too much, as some little moisture seems also to facilitate the reduction of the chloride of silver. Very dry paper is also both brittle and disagreeable to handle. I have seen prints come out weak from excessive dryness of the paper when it was fully silvered. Having produced a rich print with clear high lights and deep, slightly bronzed shadows, it ought to tone up rich and strong, and if it does not do so the error was surely *after* the printing; look for the failure close to the point where failure first revealed itself.

The water used in washing the prints before toning should be soft or very nearly so. The first water should be acidulated with acetic acid, one ounce to each gallon of water, put the prints in it face downward, and keep handling them over carefully and rapidly until they are quite as red as desired before toning, when the acid water should be drawn off and frequent changes of water made until no trace of *free nitrate* of silver remains in the print or wash water. It is most important that this point should be strictly observed, as the permanency of the print centres strongly upon it, for if any free nitrate of silver pass the toning-bath it will most surely be reduced to a

sulphate in the fixing-bath, and being insoluble cannot be washed out of it, and such a print is sure to testify *against* you. The object of the hyposulphite bath is to remove completely the remaining chloride of silver, and should be strong enough to do it completely in from ten to fifteen minutes, and to prevent or control the tendency of heavily albumenized papers to blister. They should be passed directly from the fixing-bath to a strong bath of Ashton salt, in which they should be allowed to remain not more than five minutes, when they may be transferred to the tank for final washing, which should occupy at least five hours with frequent and complete changes of water. When good hydrant water can be had, an automatic washer, with siphon attachment to make the changes, is no doubt the best plan yet devised. It should be observed that in *no part* of the manipulations incident to toning ought the prints be allowed to rest; constant agitation should be maintained.

The paper, the silver bath, gold bath, and the fixing-bath even have, doubtless, often been heaped with curses most unkind for a chain of evils belonging to the water used in the preliminary washings. I cannot make a better explanation than by relating a bit of experience. For twenty years I was located where the most practical means of water supply at my command was buckets and resolute arms to bear them. I had the freedom of all the wells in the neighborhood and a good creek hard by until a corporation sewer invaded it. I had my choice of water and used it, and I enjoyed it too. Last January I moved into new rooms fitted with gas and water, and the best of operating and printing lights. My water is forced by windmill to a large storage tank, and comes to me through about twenty rods of wrought-iron pipe. I had trouble with my prints from the start; no matter how fine they came from the printing-block, they would be stained and weak—in fact, bilious, and the consumption of gold would put the blush on a Wall Street broker. The stains were the neatest specimens of nastiness I ever saw—very suggestive of “crude oil.” I suspected the water, and found that it contained sufficient soluble

iron to supply a dozen summer resorts. The solution of my trouble was complete. Soluble iron in the presence of chlorine did the bleaching, reduced the gold, and stained the prints by oxidization. A three hundred-barrel cistern of soft water in the cellar furnished the remedy, but I am convinced that there is an immoral accent to chalybeate waters for photographic use.

MANSFIELD, PA.

NO BLISTERS IN MINE.*

BY H. MCNEILL.

Mosaics has been a great help to me in years past, and if this article will help any one out of trouble I shall be glad.

Now, in the first place, I wish to say that I have been bothered occasionally with blisters, and I have been experimenting for the past year to find a cure for them.

The paper used has been N. P. A. and Eagle brands. I have tried some of the nicely printed formulæ sent out by the dealers handling these papers and I could get some of the most beautiful blisters that I ever saw. My experimenting has shown me this:

1st. That gold and hypo the same temperature will not prevent blisters.

2d. That using water the same temperature for washing the prints will not prevent blisters.

3d. That paper dampened before silvering will not prevent blisters.

4th. That a bath of salt and water after fixing will not prevent blisters.

Now I wish to give the way that I have worked, without once seeing a blister in printing nearly three thousand prints.

Formula for bath: Silver bath, from fifty to sixty grains of silver to the ounce of water.

Put *nothing* into this silver bath when it is made up but silver and water.

Keep the paper in a dry place, and float it when it is dry one and one-half to two minutes, dry thoroughly before fuming and fume fifteen minutes.

Wash the prints in three waters, then red them in water, one gallon to one ounce of

* Written for *Mosaics*, but received too late.

salt. Wash in two more waters and tone with gold slightly alkaline with sal soda.

Fix as usual in one ounce of hypo to four ounces of water.

Wash prints in running water two hours for final washing.

FREDONIA, N. Y.

MR. IVES TO THE PUBLIC.

EDITOR PHILADELPHIA PHOTOGRAPHER:

Kindly permit me to repeat that I have always acknowledged Dr. Vogel's claim to be the first to make bromide of silver sensitive to color by staining it with dyes, and the estimate I have given of the practical value of his early "process" with corallin *was quoted from his own writings*. But I have also proved by his own writings that he did not publish or realize a practical process of photographing all colors correctly in 1873, nor in 1874, nor in 1875, nor in 1876, nor in 1877, nor in 1878, nor in 1879, nor in 1880, nor in 1881, nor in 1882, nor in 1883. Although he has recently asserted that chlorophyl plates, which he tried in 1875, were substantially the same as my own, he certainly did not use myrtle-chlorophyl, did not say that he had exposed any kind of a chlorophyl plate through a yellow color-screen, did not suggest the possibility that any chlorophyl plate could by any means be made to photograph all colors correctly, and did not even announce that he found chlorophyl superior to corallin, which is about eight times less powerful than eosine. Even Ducos du Hauron did not use myrtle-chlorophyl, did not use a collodion emulsion, did not say that he had ever exposed a chlorophyl plate of any kind through a yellow color-screen, and never once claimed to have tried to make what we now call an orthochromatic photograph.

I have shown that I not only published a complete process, in full detail, but that the plates would give better results than the eosine plates for which Dr. Vogel claimed so much. Dr. Vogel denies this superiority, but it is no less a fact; and it is well known to many who have seen our exhibits at the Novelties Exhibition of the Franklin Institute that even Dr. Vogel's most recent and secret "azaline" plates do not give better

results than my chlorophyl process, which is the first method by which all colors were photographed correctly.

It may be true that the wet eosine process is largely employed in Germany, but so is the ordinary bath process; both are useful processes, and neither of them will photograph all colors correctly. Dr. Vogel persists in ignoring the fact that my chlorophyl process of 1879 will photograph all colors correctly, while his wet eosine process of 1884 is insensitive to scarlet and ruby-red. He ignores the fact that even as recently as 1884 he expressly stated that his early researches (previous to the publication of the wet eosine process) were "of merely scientific value," asserted that the wet eosine process was the "solution of a problem," and that although others might have a similar process "nothing had yet been published." He ignores the fact that he *never* published, fully and connectedly, any process of photographing *all* colors correctly. He charges that I have misrepresented his processes. I most emphatically deny that I have ever stated anything but the truth about them. I do not pretend to know who uses my own process, because any one may do so without my knowledge; but when Dr. Vogel asserts that it is used only by myself, he asserts what he does not know.

Respectfully,

FRED. E. IVES.

[If Dr. Vogel could read, write, and speak English more readily, we think there would be a better understanding between Mr. Ives and him. We do our best at translating the good doctor's German, but we may make awful blunders as he must sometimes make when trying to understand what we write.

We know him so well that we are sure he would not purposely make a misstatement. And we believe we can say the same for Mr. Ives. Two such men—so genuinely desirous of promoting the growth and good of photography far above all selfish interest, should not be made to appear at sword's points—*aber hier zu verstehen sind wir verloren.*—ED. P. P.]

Photographic Mosaics for 1886 is now ready. It is replete with good things. 144 pages 50 cents, mailed free.

PERTAINING TO THE



REPORT OF THE TREASURER.

TREASURER'S OFFICE,
PROVIDENCE, R. I., Oct. 30, 1885.

At last I am able to render my report. Should have done so long ago were I not delayed by not receiving all the money due the Association, and even now there is money due, but Secretary McMichael says he has given all ample time to settle were the parties inclined to do so.

In printing report, please observe foot-note with reference to the box broken at Cincinnati. W. A. Armstrong declined to pay the draft made upon him by President Kent and Secretary Weingartner, and we had to pay the expense of bank protest, which reduces our showing \$56.92, but for all that, I hope we have done what will please the members.

Also, please observe foot-note with reference to number of paying-members.

Fraternally and cordially yours,
G. M. CARLISLE.

P. S.—By referring to Mr. Armstrong's report last year, you will observe that he and Mr. Weingartner took five per cent. of the balance turned over to them by the former Treasurer. I cannot so construe the Constitution as to allow me to do so.

G. M. CARLISLE.

G. M. CARLISLE, Treasurer, in account with the Photographers' Association of America, 1885:

Receipts—1885.

January 29, received from W. A. Armstrong	\$601.44
July 14-18, received from—	
194* members, \$5 each	970.00
Forward	<u>\$1571.44</u>

Brought forward	\$1571.44
431* members, \$2 each	862.00
Admission to Exhibit, 715 people at 25 cents each	178.75
H. McMichael	1711.34
Aug. 4th, from H. McMichael	110.50
Sept. 16th, from Blair Tourograph Co.	120.00
Oct. 21, from H. McMichael	58.50
Oct. 23, from H. McMichael	19.00
From sale of step-ladder at Buffalo . . . . .	.75
Total	<u>\$4632.28</u>

Expenditures—1885.

Jan. 25, paid—	
For books for the Association (vouchers)	16.00
A. Field & Co., for 100 notices (vouchers)	3.00
For 1600 wrappers for mailing by-laws	3.00
Paid at Buffalo for—	
Blotting-paper, pens, ink, and screw-driver	1.15
Conductor's punch	1.25
Tacks to put up German Exhibit	6
Cotton cloth (voucher)	11.32
Step-ladder (voucher)	1.75
Messenger boy . . . . .	.20
Advertising in local papers (vouchers)	7.00
A. Cutler & Son, carting desks (voucher)	5 00
Printing 1000 admission tickets (voucher)	2.75
David Tucker & Co., exchange on drafts	1.05
For clerk hire, wrapping, stamping, and addressing 1600 by-laws at 1 cent each	16 00
Postage, telegraphing, and express to date	29.20
Draft† 1, J. F. Ryder, expense Ex. Com. meeting	23.00
Forward	<u>\$121.73</u>

* I reported at Buffalo an attendance of 434, but upon counting up I discovered an error in the numbering of the receipt stubs, which reduced the actual number of paying members this year to 425.

Brought forward	\$121.73
Draft† 2, W. A. Armstrong, ex- pense Ex. Com. meeting	53.60
Draft† 3, J. Lundy, expense Ex. Com. meeting	39.75
Draft† 6, G. M. Carlisle, expense Ex. Com. meeting	30.00
Drafts† 7 and 8, L. Weingartner, expense Ex. Com. meeting	36.00
Draft† 4, H. McMichael (money for sundries)	150.00
Draft† 5, Scovill Manufacturing Co., for box broken at Cincin- nati	56.92
Drafts 9, 10, and 11, H. McMi- chael	90.00
Drafts 12 and 14, Cyrus Morgan (stenographer)	350.00
Draft 13, N. H. Baker, use of chairs	80.00
Draft 15, Edward Hayes, carpen- ter's bill	307.78
Draft 16, G. L. Hurd, writing up exhibit	25.00
Draft 17, rent of hall	500.00
Draft 18, John Flanagan, police- man, taking tickets at door	4.00
Drafts 19 and 20, H. McMichael	527.93
Draft 21, Scovill Manufacturing Co., die for badges	50.00
Draft 22, J. F. Ryder, notices (reduced railroad fare) to mem- bers	4.50
Draft 23, J. Landy, expense to Buffalo, July 1, 1885	30.00
Draft 24, H. McMichael	25.00
Draft 25, G. Gennert, expense on German exhibit	31.00
Draft 26, W. A. Armstrong, copying list of names	3.94
G. M. Carlisle, 5 per ct. receipts	201.54
<hr/>	
Total	\$2718.69
Cash in hands of treasurer	1913.59
<hr/>	
	\$4632.28

Respectfully submitted,
G. M. CARLISLE,
Treasurer.

† Items marked (†) properly belong to expense account of 1884.

THE BICHROMATE DISEASE.*

BY DR. JOHN H. JANEWAY, U. S. A.

I HAVE lately been consulted by a gentleman for a peculiar and painful skin affection, with deep and intractable ulcerations, which, upon hearing the history of the case, left no doubt upon my mind that I had to deal with a case of metallic poisoning, and known as the bichromate disease; and I thought that a note of warning to the amateur photographer would not come amiss; as a knowledge of the source of the trouble would simplify the case, lead to a correct treatment, quicken the relief of this painful disease, and successfully cure it. Blyth, in his manual on *Poisons: their Effects and Detection*, says, "That the only salts of chromium of toxicological importance, are the neutral chromate of potash, bichromate of potash, and the chromate of lead; that in the chromates of potash there is a combination of two poisonous metals." Harts-horn's edition of Taylor's *Medical Jurisprudence* states that there can be no doubt that this salt (bichromate of potash) is a very active poison; that Mr. West has recently published a case, from which it appears that a medical man who had inadvertently tasted a solution of bichromate of potash, suffered from very severe symptoms, resembling those of Asiatic cholera. Again, several fatal cases from this poison have recently occurred in this country, especially in Baltimore, where this salt is manufactured on a large scale.

In Wharton & Stillé (*Medical Jurisprudence*) it is stated: "This salt being extensively used in dyeing, has given rise in several instances to accidental poisoning. Locally applied, its action is irritant, causing the workmen who make use of it troublesome sores and ulcerations upon the hands. Several fatal cases from drinking a solution of this salt have been reported in this country from time to time." The case of a photographer of Boston is reported, who

* This paper may save many lives and should be printed in every language. We commend it to the careful reading of all who have to do with poisons.—Ed. P. P.

Read before the Society of Amateur Photographers of New York, October 13, 1885.

mistook in the dark room a solution of bichromate for ale, and drank a glass of it. He discovered his mistake immediately and used appropriate antidotes, but his life hung on a thread for a number of days, and it was a long time before he entirely recovered. But it is not with the acute poisoning that we have now to deal, but with a much more insidious, more common occurrence—and often unsuspected—the absorption of the poison in very minute quantities, either by the air passages or the skin of the hand.

Blyth states "that the workmen engaged in the manufacture of potassic bichromate, exposed to the dust, have suffered from a very peculiar train of symptoms, and which was first described by Dr. B. W. Richardson in the *British and Foreign Medico-Chirurgical Review*, October, 1863, and *London Lancet*, March 11, 1882: "It appears that if the workmen inspire the particles chiefly through the mouth, a bitter and disagreeable taste is experienced, with an increase of saliva. This increase of buccal secretion gets rid of most of the poison, and in that case but little ill effect is experienced; but those who keep the mouth closed and inspire by the nose, suffer from an inflammation of the septum, which gradually gets thin and ulcerated. Finally the whole septum is in this way destroyed. It is stated that when a workman has lost his nasal septum he no longer suffers from nasal irritation and has a remarkable immunity from catarrh." The same author states that the bichromate also causes painful skin affections, eruptions akin to eczema or psoriasis, also very deep and intractable ulcerations; that these cutaneous maladies start from an excoriation; that so long as the skin is not broken there seems to be little local effect, if any. It is also stated that horses employed in these factories suffer from ulcerated hoofs and sometimes lose them. It is to the statement that an excoriation must exist to produce the injurious effects, that we must pay attention. The absorption of the poison through a denuded skin—small though the abrasion may be—is not to be denied, and we believe from experience that frequent exposure to the poison increases the liability to absorption in an increased ratio; for the irritant effect of the salt increases the area

of abrasion, and stimulates the absorbents to take up a larger quantity of the poison each time. And it must also be admitted that the poison is absorbed by contact with the delicate mucous membrane lining the air passages, principally the nose; though I must differ with those who think that the poison expends itself there by destruction of the tissues only; for I think that some cases of constitutional disturbances can be clearly traced to the inhaling of the poison in a very finely divided solid state, as dust, and by inhaling the vapors arising from the process of solution. There is a peculiarity with this poison, which I do not find mentioned in any article upon this subject, very similar to the effect of some of the living vegetable poisons, that is, the point of saturation seems to be very far off, if arrived at all. I mean in those who are affected by the constitutional or cutaneous form of the disease, and not those who have had the disease in a more violent form as by losing the septum of the nose—and who seem really to have arrived at the point of saturation, and that is, the increased liability to the effects of the poison. Let a person once become affected through an excoriated surface, and have the constitutional effects presented, such as eczema, psoriasis, or deep, troublesome, intractable excoriations, either on the hand or in the form of painful, itching, hard, and so-called slow boils in different parts of the body, and he is extremely liable, whenever he works with bichromate, to have another attack; and in each attack it seems to require a much less concentrated form of the poison to produce the characteristic symptoms of this painful disease.

As no one knows his susceptibility to the effects of this poison without experience, or when a presumed immunity from them may cease, it is well to handle this salt with extreme care either in the dry state or in solution. The fine dust arising from the friction of the crystals inhaled by the nose, even in a very minute quantity, often gives rise to a distressing and obstinate catarrh. An unsuspected abrasion of the skin upon the hand or finger, and especially around the nails, affords a site for absorption when a solution is employed.

Symptoms, in a general way, by contact

with the nasal membranes: A slight tingling with a sensation of heat, followed by persistent sneezing; then all the characteristic symptoms of a sharp catarrh of the head, and which strongly resists all remedial agents—a continuous exposure resulting in destruction of the nasal septum. When this occurs, the person seems to have arrived at a point of saturation, and immunity from further constitutional effects. But, owing to some idiosyncrasy or peculiarity of constitution, or from less exposure, the poison, instead of destroying the tissues, manifests itself in some constitutional form, similar to those produced by absorption through an abraded surface.

Symptoms following from contact with an abraded surface: A sense of tingling or smarting, followed by heat and soreness at some small spot on the finger or hand. Continued exposure, by dipping the hands in a solution or handling this salt in a dry state, increases the effect, and we have excoriations obstinate in their character. These, followed by the constitutional symptoms, characterized either in the form of eczema or psoriasis on the hands, in the flexures of the joints, or on different parts of the body, resembling, oftentimes, boils, hard and painful, and with little breaking down of their substances by suppuration, etc. The victim experiences frequent crops of them, often without any apparent cause; but, errors in diet or sudden changes in temperature frequently seem to induce a fresh eruption. The obstinacy of this disease is characteristic, and the person's life is rendered miserable for a long time by its persistency and liability to recur.

HOW THE NEW YORK "WORLD" EXPATRIATES ON PHOTOGRAPHY.

BY AN AMATEUR.

THERE was a time when a man could be pretty certain that he had a vested, inalienable, and indisputable right to the sole possession of his own features. Unless he was a criminal and forced to sit for his portrait as a much-needed addition to the Rogues' Gallery he felt that he had a certain control over any counterfeit presentment of himself which might come into existence. A little

while ago a man knew pretty well when he had his picture taken. It was an event rather than an episode. It meant putting on his Sunday clothes in the middle of a week, taking two or three hours out of a busy day, brushing his hair with a very suspicious-looking brush, being set up in a chair with his head in a vise, being told to "wink as often as you choose," and feeling more like a fool than he did when he was married.

But all this has been changed. No man is safe now during the hours of daylight, even in his own house, and in the street he is actually in peril of having his picture taken at any moment. This is due to two things. First, the rapid increase in the number of amateur photographers; and, second, to the invention of the "Detective Camera." The amateur photographer has been hitherto an obvious nuisance. His three-legged infernal machine has been set up in the face and eyes of the community at all sorts of times and places, opportune and inopportune, but now all this is changed, and he can and does "marvel" about the world, like a thief in the dark, taking instantaneous photographs while his unwitting victim is all unconscious of the fact that he is being made ridiculous for the benefit of posterity—and somebody else's posterity at that.

The Scovill Manufacturing Company, on Broome street, is the great depot for amateurs' supplies, and here the cost of the amusement was investigated. "An outfit for \$10," was the reply to the first question. "That is the camera, lens, and tripod. With all the materials to make pictures, develop, print, and mount them about \$20 is the lowest figure. From that up almost any amount of money can be spent if the amateur is rich or extravagant. Everybody now uses dry plates, of which there are several makers. These are put in a box and kept as long as you wish before developing. You can go in a dark room at any time, however, at night and with a red lantern develop. Many amateurs put ruby paper over the windows of a bathroom and use that with its running water as a very practical and convenient dark-room. Plates cost from forty-five cents a dozen up, and

sensitized paper prepared for printing costs \$3 a dozen sheets, 18 x 22. These do away with all the dirty work which formerly deterred many people from becoming amateurs in photography." The way people learn the art was demonstrated by showing me seventeen different handbooks on photography.

"Now show me a detective camera." I was handed something which looked exactly like a small, black, Russia-leather handbag, and directed to take it under my left arm. I did so.

"Put your left hand under the bottom." I obeyed orders.

"Do you feel a small string? You do? All right. Now turn around and point it out of the window. That's right. Now lift up that small ornamental piece of leather at the end of the handle with your right hand." I followed these directions and saw a small circle of ground-glass little larger than a half dollar, upon which was the reflection of an Italian in a red shirt washing himself in a tin basin on an iron fire-escape. I looked out of the window, and there was the Italian outside a rear tenement.

"Now press the spring once quick." I did so, and heard a sharp click as the instantaneous exposure was given through a small opening in the end of the bag. Then the bag was opened, the negative removed, developed in a few moments, and I had taken one of the most remarkable pictures on record—that of an Italian washing himself. Except by the aid of a detective camera, or a search warrant, no Italian could possibly be discovered so engaged.

PYROGALLIC ACID AND OXALATE OF IRON.

BY M. ROSSIGNOL.*

IN spite of certain well-known objections, oxalate of iron development is still, up to the present time, the oftenest used, and almost the only one recommended in the notices accompanying the gelatino-bromide plates made by the different manufacturers

* Paper read at the regular meeting of the French Photographic Society.

The pyrogallic process, on the contrary, the given formula for which is almost always inexact and impracticable, is really known by only a very small number of operators. Its merit, however, is incontestable, and by its use the time of exposure offers no longer any difficulty. But pyrogallic acid, it is said, is more difficult to use, and requires more care than oxalate of iron; the exposure is longer; the negatives are of a less agreeable tone; and finally, the images have often in the shadows a green fog which interferes with the printing. In order to make pyrogallic acid better appreciated, I think it useful to publish the experiments I have made, and which have led me to a very simple formula, very easily worked, and much superior, in my opinion at least, to oxalate of iron. I prepare:

1. A solution of pyrogallic acid of 5 grammes for 100 c. c. of alcohol.

2. An alkaline liquid, composed of 10 grammes of carbonate of soda and 1 c. c. of ammonia, for 1 litre of distilled water.

Pure carbonate of soda is preferable to pure carbonate of potash; but, if need be, the ordinary commercial carbonate of soda may be used, adding a few more drops of ammonia. Instead of distilled water, scarce in travelling, ordinary water may be equally as well used, if care be taken first to dissolve the soda salt to allow the carbonate of lime to be precipitated, and to add to the clear liquid 2 c. c. of the ammonia—that is to say, a double portion. We may also have concentrated solutions of known strength, whose use will avoid weighing at each new operation.

A third solution may be useful: 1 gramme of bromide of potassium or ammonium in 100 c. c. of water.

The normal development is made by the mixture of 20 parts of the alkaline solutions for 1 part of the pyrogallic liquid—say for a plate 18 x 24 centimetres 120 parts of carbonated water and 6 of the pyrogallic solution. The plate plunged into the liquid shows more or less quickly, according to the intensity of the light, or the length of the exposure; and, in regard to this, I cannot indicate the time necessary for the appearance of the first traces of the image, as this evidently depends on the permeability

of the gelatine. One or two trials will show this as well as the duration of the operation, which, on an average, lasts three minutes, and would give no better result in exceeding ten minutes.

To develop a negative successfully it is necessary to know under what conditions the exposure has been made—that is to say, if the subject was uniform, or if it offered strong oppositions of light, and also the nature of the negative to be obtained, transparent or intense.

When the image appears slowly, indicating a short exposure, it suffices to allow the developer to act until all the details are obtained.

If, on the contrary, the image appears too quickly owing to a too long exposure, which would give a gray print, it is only necessary to add water to the liquid in the dish; and if the exposure has been much too great to obtain a suitable strength and modelling, withdraw the plate and place it in a dishful of water, add to the developer from 1 c. c. to 5 c. c. of the bromized solution (at 1 for 100), then continue in this manner the development.

When the object is too equally lighted, a condition which requires relatively a very short exposure, I do not use the bromide, but I increase the quantity of pyrogallic acid, and more frequently a better result is obtained than by adding bromide or any other moderator. All the substances used for the purpose of retarding the development partially destroy the impression made by the light, and cannot be useful unless the exposure has been too long, unless the sensitized plate has received a weak impression other than that of the subject to be reproduced, or the light was too strong.

The green fog, often attributed to the alkaline development, is caused by the ammonia; this product, which is used in the preceding formula to neutralize the bicarbonates or the weak acid accidentally contained in the developer, is reduced to a very small proportion, insufficient to produce the green fog. The brown color of the negative, sometimes intense, when the action has been prolonged, instantaneously disappears in chlorhydric acid diluted with from fifty to one hundred times its volume of water.

It has appeared to me, after a certain number of comparative experiments, that pyrogallic acid, thus used, allows an exposure as short, even shorter, than the oxalate of iron.

Moreover, it may be remarked that this developer may be kept for almost an indefinite time; is always the same, and is easily used. Is it possible to add to it accelerating substances, or those capable of giving still better results?

I have experimented with a great number of substances; hyposulphite and hypophosphite of soda, morphia and its salts, chloral, aldehyde, cyanide, ferro-cyanide and sulpho-cyanide, the formiates, etc. None of these products increase the sensitiveness and facilitate the development; they are either useless or injurious, according to the quantity used. The sulphite of soda, when neutral and in small quantities, produces no appreciable effect, and does not prevent the appearance, always disastrous, of the ammoniacal green fog; when citric acid is added it greatly retards the appearance of the details, and seems to efface the luminous impression. As a preserver of pyrogallic acid, if necessary, I prefer salicylic acid in the weak proportion of 1 gramme to 10 grammes of pyrogallic acid.

Such are the reasons which induce me to use pyrogallic acid rather than oxalate of iron; this process being always successful, even with a much too long exposure, and giving at will transparent or intense negatives, is, consequently, much safer than the iron, which rapidly oxidizes and varies from day to day in its properties; the sesquioxide salts of iron, not only act as moderators, but destroy the effect of light on sensitive surfaces.

WATERPROOF VARNISH.—A good waterproof varnish for paper may be made by digesting for fifteen days one part gum damar and six parts of acetone in a well-stoppered bottle. The clear part is now decanted, to which four parts of collodion are to be added. After repose it will become clear. This varnish may be used for making travelling appliances.—*La Nature*.

STUDIO STUDIES.

(Continued from page 364.)

WE hear a good deal at conventions and such about "individuality"—putting one's self in one's work, etc., and undoubtedly it

usually successful artist is dismayed. Reputation is gone if he fails. An inspiration seizes him which brings out his individuality away up to his brains, so that when he coaxingly cries to the funeral crowd, "Come,



is a good remedy, especially if the artist be a genial, pleasant man. We find an illustration quite to the point in the *Blatter*. It

now, look right friendly," we see a remarkably expressive group substituted.

Whatever it was it seemed infectious.



is called a "Study in Physiognomy." An old-time farmer makes his appearance with his family at the studio of the Hof photographer. It is apparently a serious business with them all. Each particular costume has had much time devoted to it, apparently regardless of cost. The pose is arranged after the true diagonal and pyramidal rules, but the group is full of strange squints and idiotic stares. The

The Journal of Microscopy and Natural Science, for October, has arrived. It is edited by ALFRED ALLEN, Esq., 1 Cambridge Place, Bath, England. Quarterly, one and sixpence per number. It is wondrously full of information. Its illustrations are fine, and it is well printed. All scientists should have it. Photography is so much used now by microscopists that our work has become kindred in a great degree.

COLORED MEDIA FOR THE PHOTOGRAPHIC DARK ROOM.*

BY WILLIAM H. PICKERING,

Massachusetts Institute of Technology, Boston.

SINCE the advent of the gelatine dry plate, many photographers have complained that their eyes are injured by the dark red light generally used in development. Considerable discussion of this subject has been aroused of late, but the only experiments made, so far as can be learned, have been to determine how much plates fog when exposed at the *same distance* to the various media tried. The experimenter then examines some object at that distance, and if he thinks he can see it about as well, and the plate is less fogged, the medium is pronounced an improvement.

In order to obtain more satisfactory results the following problem was proposed: For a different distinctness of vision, what medium, or combination of media, will give the least fog on a gelatine plate? In order to determine at what distance from the lights equal distinctness of vision was obtained, a negative having some fine markings upon it was held at such a distance from the various sources that the details were just distinguishable from one another. Different portions of a sensitive plate were then exposed at these distances, one after another, to light coming through the different media, and the plate was then developed. Exposures with both daylight and gaslight as sources were made on the same plate, and, as was to be expected, those made by daylight were much the more fogged. If more colored glass was used, the daylight was too faint. So, for this reason alone, gaslight would be preferred. Add to this, that, if the gas-flame be placed at the bottom of a properly constructed flue, it will serve to ventilate as well as light the dark room; and also that it can be used in the evening and on dark afternoons when daylight is out of the question. Moreover, since the gas-flame is much more uniform in brilliancy, it is correspondingly easier to determine when a plate is properly developed, and fewer plates are lost in this way.

Experiments with the following media have been made, and are numbered in the second and third columns in the order of their desirability. It will be noticed that there are five media which with gaslight give better results—*i. e.*, unless fog, than the best medium with daylight. In the second series the third column gives the distance in inches in each case at which the fine details were visible from the gas-flame. No medium is wholly satisfactory with daylight unless it contains red glass or paper. The window used with the gaslight measured six by seven inches, and was situated fourteen inches from the gas-flame. The window used with daylight measured five by five inches. Direct light from the clouds was used. The plate was developed in the first series with oxalate, and in the second with pyro and soda developer.

First Series.

Colored Media.	Gas.	Sky.
Red and yellow glass	1	12
Red and ground glass	2	6
Post-office paper	3	14
Red glass	4	8
Yellow glass double	5	16
Yellow and violet glass	7	18
Carbutt's red paper	9	10
Red glass double	11	13
Yellow and green glass	15	17

Second Series.

Colored Media.	Gas.	Inches.
Canary paper double	1	8
Golden fabric double	2	29
Red glass	3	38
Golden fabric single	4	58
Red, yellow, and ground glass	5	11
Red and yellow glass	6	22
Canary paper single	7	19
Post-office paper	8	15
Yellow and green glass	9	41

It was found that ground glass transmitted fifty-five per cent. of the light from a gas-flame coming through red glass, while it transmitted only about nine per cent. of daylight under similar circumstances. Its effect is therefore similar to yellow glass. The fact that the yellow-violet combination was so satisfactory with the gas-flame was probably due to the capacity of the yellow to cut off the small amount of violet emitted by this source, while it was quite inadequate to de-

* Proceedings of Amer. Acad. of Arts and Sciences.

stroy it in the case of daylight, as is indicated by the figures. The precise order here given is not insisted on, but only the general sequence, as in the case of most of the media there was very little difference in their desirability, and sometimes the position of two media on the line would be reversed by a negative. One fact was brought out, however, with great distinctness in all the series, and that was the great inferiority of the yellow-green combination. This was, of course, to be expected; but, as many photographers still use this medium in their dark rooms, it was considered desirable to include it in the list, merely to show its inferiority. Although in the second series canary paper double seemed to give the least fog of any of the media, the light transmitted by it proved to be so faint that it was quite inadequate for satisfactory illumination of the dark room; and, owing to its opacity, some doubt was cast on the accuracy of the observation. The second medium on the list has therefore been selected as the best practical one to employ with gaslight illuminations. Its color is very pleasant to the eyes, and being translucent, instead of transparent, it lights the whole room in a very satisfactory manner. It is advisable to place it behind a sheet of glass, in order to protect it from being soiled by the chemicals employed. If one is obliged to use daylight as a source of light, it is probable that a sheet of red glass in connection with one or two thicknesses of golden fabric would form as satisfactory a combination as any.

Experiments were next made to determine how bright a light is permissible with the medium adopted. The fish-tail burner which was used on the gas-lamp was placed fourteen inches behind a double sheet of golden fabric, measuring twenty-four by sixteen inches. An extremely sensitive gelatine plate was placed at a distance of twelve inches in front of the medium, and a portion of it exposed for one minute. It was found, that if the gas-flame measured only one inch in height, not the least trace of fog was produced by the exposure. This is too faint a light for satisfactory use, however, and as a very minute amount of fog does not injure a negative perceptibly, and the

direct exposure to the light in normal practice is much less than a minute, the flame is turned up to a height of an inch and a half or two inches for ordinary development. By this light one can readily see to read the finest type, and the light pervading the whole room is very satisfactory. After a short exposure to it, in fact, it seems almost like white light.

In this connection may be mentioned a device which has proved very useful as an auxiliary in enabling one to judge of the proper development of a negative. A square hole measuring an inch and a half on a side is cut in the upper portion of the golden fabric, and a piece of red glass inserted between the two thicknesses. If a negative be now held near this hole, a red square of light will be cast upon it. This square can be seen even when the lights of the negative are quite intense, and by noting its distinctness, one can judge of the opacity of the high lights as accurately as he can of the details of the shadows of the picture. If the high lights reach their proper intensity first, he develops for the shadows, and *vice versa*.

As the whole question of the proper medium to use resolves itself merely into what part of the spectrum to employ, red, orange, or orange-yellow, and all three of these yield nearly equally good results, it is evident that no important improvement can be made in the future. But as the orange-yellow is much the more pleasant light of the three, and seems to give rather less fog than either of the others, it is the color to be recommended. Any medium which will transmit this color will be found satisfactory, but golden fabric is perhaps as convenient as any.

A very portable form of lantern to be used when travelling consists of a strip of golden fabric a foot wide by two and a half in length. When one wishes to use it, it is rolled into a cylinder a foot long, and five inches in diameter, and pinned. A kerosene lamp with the wick turned down low, or a candle is then placed inside, and the lantern is complete. The circle of white light formed on the ceiling is not bright enough to do any harm. The lantern is set several feet away from the exposed plates, and they

should in general be protected as much as possible from direct illumination. There is then plenty of light, and yet not the slightest danger of fog.

GERMAN CORRESPONDENCE.

Accelerator for Development—Removing Varnish from Plates—Development in Two Solutions—Best Lenses for Landscapes.

For some time past the preliminary bath (Vorbad) has been playing a rather practically important part in photography. In development it has come into service. It is well known that underexposed plates give very strong contrasts in light and shade, the high lights becoming very intense before the shadows show any detail, the more delicate parts being lost. These defects may be avoided by immersing the plate, before development, in a bath of 1 part hypo to 5000 parts water, then using the ferrous oxalate as a developer. The image quickly appears, the high lights are not so intense and the time of development is reduced one-third. The same effect is not had with the pyro developer. Recently besides hypo other bodies have been used which accomplish the same result. To these belong, in especial, Lohse's preliminary bath, recommended by Dr. Messerschmidt, consisting of a solution of nitrate of chrysaniline 1:20,000. According to the experiments, this bath worked very energetically, even more so than the hypo, without the disadvantage which the latter sometimes occasions, the formation of a fog. Mr. Quidde has also used the chrysaniline with excellent results. He is also convinced that the action is more energetic than the hypo. He employed, at first, a solution of 1 part in 3000 of water, later making the dilution 1:20,000, but no apparent difference in the action of the two baths could be perceived. One thing was sure, there was no appearance of any fog, but he did observe in all his experiments numerous small specks on the plate; on examination he found that the chrysaniline had not been thoroughly dissolved, hence the small, undissolved particles were the cause of the specks on the plate. Afterward filtering the solution, the specks

entirely disappeared. Grounding my opinion on my own discoveries, I doubted whether the hypo as a preliminary bath, or chrysaniline as a sensitizer, in the proper sense of the word, really increased the sensitiveness. This is generally taken for granted and upon the ground of experiment, but the fact is, when two plates of the same exposure are taken, and the one dipped in the hypo bath 1:5000, and the other in the chrysaniline, and both developed in the ferrous oxalate developer, the plate subjected to the preliminary baptism comes up more rapidly; but let both plates lie the same time in the developer and it will be seen that one has greater rapidity than the other, and, hence, the conclusion is jumped at that one has a greater increased sensitiveness than the other; but this is not so, for if the plate which has not been immersed be allowed to remain in the developer it will be found that gradually more details come forth, and in the end it has the appearance of as much exposure as the other. The only advantage in the use of the preliminary bath is the decrease of time required in development, and the increase of harmony obtained thereby, the over-intensifying of the high lights being prevented by the previous dipping. One of our best dry-plate makers, Herr Gaedicke, confirms this on the ground of his experiments with the sensitometer. Two plates of the same kind were exposed under the same conditions of light and time; the one developed without the Vorbad, the other after being treated to an immersion in hypo; both gave exactly the same number on the sensitometer.

Lately, among other things, I had an opportunity to discover how easy it is to remove the varnish from gelatine plates. Some gelatine plates which had been varnished, on printing showed themselves to be too thin. In order to strengthen them the following method proved so excellent that we would like to recommend it. The varnished negative was laid in 90° alcohol in which one per cent. of acetate of potash was dissolved; in five minutes the varnish was so softened that it could be rubbed off with the finger without any injury to the gelatine film. Even the retouching could be rubbed off with the finger. Afterwards the plates

were laid for two minutes in pure spirits and thoroughly washed under a tap, then strengthened in a solution of bichloride of mercury, 1:100; here they strengthened gradually and uniformly, and after drying were revarnished.

Just now the process of developing by the use of two different solutions is all the rage. For the oxalate development Liesegang recommends the following procedure: The plate after having been exposed is laid first of all in a dish of water for a minute and a half, and then two minutes in a concentrated solution of sulphate of iron, next it is transferred to a concentrated solution of oxalate of potassa. The image appears very rapidly, is clear in the shadows, and gradually acquires intensity. Overexposed plates develop very clear in this manner when the solution is diluted. Three plates were exposed under the same negative by gaslight for one, five, and fifteen seconds. The exposure of one second showed that to be the proper time; that of five seconds was veiled all over with fog. Now the solution of iron and the solution of oxalate were both diluted with ten parts of water, the fifteen second plate was then first laid in water for one minute and a half, then two minutes in the iron, and finally transferred to the oxalate and left there over night. Next morning a beautiful, clear, positive transparency was found on the dish. When the overexposure is great it may be advisable to employ bromide of potassium. In this way much developing material can be saved, an item of much importance in travelling; one-tenth of a litre going as far as a whole litre.

I have often been asked what objective do you recommend for landscape photography. The size, of course, depends upon the size of the plate. I myself make use of a five-eighth size on my journeys, which is convenient to carry. Now what is the best lens for this size? you will say. I used to carry a regular stock of lenses with me, but experience has confirmed my opinion that the high sensitiveness of dry plates necessitates the use of only two objectives. Sometimes for special purposes, group portraits, or for dark places, I provide myself with a third lens of longer focus and greater rapidity. My photographic outfit for plate

13 x 21 cm. usually includes three different lenses. 1st, a wide-angle (I recommend Steinheil's wide-angle 7 mm. opening, focal length 12. Price, 60 marks) or a Bush pantascope, No. 3, both afford a range of 87° and cover finely the size plate named above. 2d. An aplanatic of about 25 mm. aperture, 19 cm. focus, and angle of 60°. For the size plates mentioned I recommend Steinheil's Aplanatic No. 3, 24 mm. aperture, 189 mm. focus; or Bush's of similar construction, 200 mm. focus, 28 mm. aperture, or a *Suter* instrument of 24 mm. aperture. The Steinheil costs 75 marks, the Bush 68 marks; the latter gives the objects larger, the first has the larger field, which is generally an advantage. With this objective I have made most of my instantaneous views. Only for special cases have I made use of a more rapid lens of greater focal length. Voigtlander Euryscope, 39 mm. aperture, 243 mm. focus, or an aplanatic Steinheil No. 4, 43 mm. aperture, 240 mm. focus; both are excellent for anthropological subjects where special parts, as the head of the subject, are desired in larger dimensions. I do not think it advisable to use on journeys objectives of longer focus, because they necessitate a longer draw on the camera bellows, which is not convenient for packing. Many objects which appear too small in the picture may be enlarged from the small negative with advantage. I have Egyptian hieroglyphics enlarged fourfold. Of course, it is understood that other instruments than those here named may be employed with advantage.

Very truly yours,

DR H. W. VOGEL.

BERLIN, November 15, 1885.

THOSE "THUMB" MARKS.

BY THOMAS PRAY, JR.

AMONG other good things in the November PHOTOGRAPHER the "Thumbs Down" has been noticed. It is not at all a new matter in this part of the country, and while I have no wish to detract from Mr. Taber's work in San Francisco, I do wish to call attention to some of the points to which you refer in the PHOTOGRAPHER.

Some few years ago it was my privilege to be one of three persons who interested one of the clubs of Boston with a lantern exhibition of new discoveries, or new scientific investigations. My own part was of my microscopic work, while Prof. H. P. Bowditch, of Harvard College Medical School, showed quite a collection of "Thumb Marks" from subjects one year old up to adult thumb marks, and one of his points was that radical changes do occur as the child grows older, and that cuts or burns upon the thumbs make radical changes in the appearance of the lines. Prof. Bowditch had then been several years at the study of the subject, and made some very forcible remarks which I wish could be properly and correctly given.

His slides were made by printing ink pressed upon mica and there was no photography about it then—what he has since done is not known to me, as my removal from Boston to New York has prevented our meeting very frequently.

The toes and heels are much more reliable so far as recognition or identification goes than the thumbs, for the reasons that a severe burn, scald, cut, or bruise which breaks through the skin, will introduce into the "mark" a new and changed element and more especially if a scar be added.

Chemicals act upon the skin, and a man who is handling almost any chemicals in photography, bleaching, dyeing, tanning, or in color-work, will make a very different mark one week as compared with any other, if he changes his occupation somewhat, as in case of handling dilute sulphuric acid one week and soda or potash the next.

In polishing or rubbing down the varnish finish of clock cases and other such work where the hand is used, most material changes occur, as at one time the lines will appear fine and distinct, and again rough, broken, coarse, etc. Other changes do, and will take place which need not be particularized.

The subject is not by any means so well understood as it should be, and more light might be thrown upon it with decided advantage to all, and let us hope the "broaching" which it receives will be followed up with most decided advantage. In children

the changes which do occur will be all the more interesting if they are watched, noted, and illustrated; and if some of the readers of the PHOTOGRAPHER have been in the experimental line let us hope they may be heard from.

If the thumbs of any person were not almost constantly in contact with rough surfaces, or some liquid containing chemicals, then there is very little doubt that the changes which occur would make a record far more reliable than taking the thumbs of people who are in daily pursuit of their regular employment.

Printing ink rolled upon a flat surface makes an excellent medium to use for the transfer to any other flat surface; and a white card or any transparent medium as sheet gelatine, mica, or perhaps glass, and I have several times noticed at a lantern exhibition various "marks" of "some feller's" thumbs upon the gelatine slides used to show not only the view on the slide but some one's gross lack of care—and in many of the Amateur Society's "shows" "thumb marks" have almost unconsciously entered—but they were very plainly visible on the screen.

If Mr. Taber will use a rubber cot on his thumb for a month and make an impression, then discard the cot for a month and dip in pyro, hypo, and the iron cyanide and all the rest, as frequently, as a worker has need to do, and scrub the nitrate stains off his "thumbs" with stone a few days of the month, he will be a disgusted man when he gets his second impression,—and has compared it—more especially if he makes both impressions on a clean, clear sheet of mica, and uses red or blue ink, as the colored inks usually are finer than blacks. If he wishes to carry it further, and he is the lucky possessor of a family organ, with 2000 reeds, no stops, etc., one that can crow or howl, let him make an impression every three months from the heel, every toe, and every finger and thumb, and compare them carefully; at the end of a year he will discover some sound reasons why banks would soon decline to go into the "cashing checks" upon "thumb marks" instead of the orthodox "sig.," or else he will have made the not perhaps very striking discovery that my

own observations are of no great value, and perhaps the thumb or heel and toe albums will soon be in the market. But no doubt the signing of railroad passes by the hardheaded railroad presidents by their "thumbs" will not be adopted. As to marriage certificates, it may do; but how will the Judge fix it when he cuts the "knot?" "not," perhaps, with his thumb; and, of course, he would not sign with his heel. Thumb marks might do for lawyers and ministers, but if a druggist should have to stop to look up whose thumb was on the "R," meanwhile the patient would get well. Imagine the messenger boys gathering on the corner and comparing the "thumb marks" on their books; business would be retarded, if not brought to a standstill. Perhaps I may send you some negatives of "thumb marks" later on, if the subject proves worthy the space.

A CONVENIENT ARRANGEMENT.*

BY F. B. ZAY.

IN the arrangement of large plates in the dark room it will be found convenient to have the light so arranged that a negative may be examined by transmitted light while developing, without handling it or the developing dish.

For this purpose the light must be one-half above, and one-half below a skeleton shelf, and the developing dish must have a glass bottom. Let the light be, say twenty inches square above, and twenty inches square below the shelf. Now make two curtains of heavy paper twenty inches square, and supply them with sticks at the top and bottom. Hang the one above the light by means of a cord pulley and balance weight, and suspend the other from the bottom of the upper curtain so that there is a space of twenty inches between them. When you raise them, the light will be clear above the shelf, and when you lower them the light will be open below and closed above, and you can examine your negative at leisure.

* Written for *Mosaics*, but received too late.

EXHIBITION OF THE SOCIETY OF AMATEUR PHOTOGRAPHERS.

BY CHARLOTTE ADAMS,
New York.

AN exhibition held at New York during several days in the month of November, may be regarded as marking the dawn of a new era in American photography. The growth of the art principle in photography has increased with every year since art began to play an active part in our national development a decade ago. Here and there, a photographer has distinguished himself by his judicious application of art theories to his professional practice. At the same time, the proper public recognition of the vital importance of the art element in photography, has not, until now, been given due place in the artistic scheme of the country. Every other form of American art has been placed more or less prominently before the public at that great centre of results, New York, by means of exhibitions, either periodical or occasional. Photographic exhibitions have been held here, but they have not been exhibitions which had the development of the art principle for their motive power, The honor of concentrating the diffused photographic art feeling of the country in a brilliant focus, was reserved for the Society of Amateur Photographers of New York, whose first annual exhibition closed on November 18th. It presented a collection of plates admirable both technically and artistically. The significance of this exhibition in its bearing upon artistic photography, cannot be too highly estimated.

The Society of Amateur Photographers was organized March 28, 1884, and incorporated June 9, 1885. The officers of the Society are: Mr. F. C. Beach, President; Dr. John H. Janeway, U. S. A., Vice-President; Mr. Joseph S. Rich, Treasurer; Mr. Charles W. Canfield, Corresponding Secretary, and Mr. C. W. Dean, Recording Secretary.

The Society meets twice a month in a room at the Sloane Building, corner of Thirty-second Street and Broadway. The exhibition was held in a large apartment on the floor below the Society's permanent home. The collection was divided into

twenty-three classes and a diploma was awarded for the best work in each class. The awards were as follows: Landscape without figures, Mr. Frederick A. Jackson; landscape with figures, Mr. H. G. Runkle; marine (surf), Mr. J. H. Maghee; marine (sails), Mr. John E. Dumont; architectural subjects, Mr. Ralph McNeill; interiors, Mr. H. G. Runkle; portrait, not taken under a skylight, Mr. Edward M. Franklin; group, not taken under a skylight, Mr. John E. Dumont; cloud effect, Mr. Randall Spaulding; flowers, Mr. Charles W. Canfield; animals (cattle) Mr. Francis Blake; still life, Mr. Gilbert A. Robinson; street views, Mr. Ralph McNeil; compositions, "Expectation" and "Halt," Mr. W. H. Bartholomew, and Mr. Jackson; rustic bridge, Dr. P. H. Mason; enlargement, stereoscopic, and transparencies, Mr. L. P. Atkinson; lantern slides, Mr. James E. Brush; photomicrographs, Mr. L. P. Atkinson; platinotypes, Mr. J. H. Maghee; entire collection, Mr. John E. Dumont.

The judges were Mr. G. W. Pach, a photographer, and Mr. J. O. Davidson, an artist. The good judgment, fairness, and even balance of elements, which distinguishes this young society were well illustrated by this choice. The technical side of photography was represented by Mr. Pach, and the artistic by Mr. Davidson.

It is something to be able to say of so large a collection that there was not a really poor plate in it. Some of the photographs were genuine works of art. There were others from which professional artists might have learned lessons in composition and pictorial effect. In technique, the exhibition was above the average of the professional standard.

The most striking example of artistic composition was Mr. John E. Dumont's "Listening to the Birds" which showed a number of children grouped among bushes and trees. The arrangement of lines and masses was very good, the figures were naturally and harmoniously posed and the facial expressions were well conceived and rendered. There was better composition in this plate than one frequently finds in ambitious oil pictures. Mr. Dumont's large composition "Selling Baskets" showed

equal aptitude for pictorial composition and a curious kind of tact in adapting suggestions derived from pictures in handling subjects photographically. "Selling Baskets" is quite different in subject from anything Millais ever painted, but it is markedly reminiscent of his style. Mr. Dumont's landscape plates were of a superior order. Mr. R. A. C. Smith's exhibit consisted principally of a number of plates of Cuban subjects, in which the sunlight effects were very noticeable for truth in the reproduction of the glare peculiar to the tropics. He also showed several plates of animals, among them one of poodle dogs which was cleverly executed. His study of two white horses' heads resting on a dark fence-bar was a very artistic bit; it offered a good example of photographic impressionism. The delicate modelling of the horses' heads, the strong contrast of light and shade, and the softness of tone in this plate made it unusually valuable. Mr. J. H. Maghee's fine head of a horse and his groups of dogs, cats, pigs, and fox hounds, showed excellent technique and appreciation of the artistic as well as the photographic possibilities of the subjects. The same may be said of his studies of a female model, which excelled any shown of the same class. A good example of the platinotype class was "Early Spring on the Bronx River." Mr. Philip Meeher's bits of landscape and masses of leafage contained some remarkable qualities. In a plate which showed a heavy climbing growth of woodbine, the relief of the leaves and the strong, yet soft play of light among them, produced a charming impression of open-air effect.

The exhibit made by Mr. and Mrs. Robert W. de Forest, was of much interest. It included Moorish, Egyptian, and Greek subjects. A Moorish archway, with the sun's light streaming through it, shows good composition of masses of lights and darks. A fine Egyptian plate had massive ruins in the background, and a group in the foreground, in which dark figures of Egyptians were well posed in themselves, and relatively to the accessions. The plate was full of diffused sunlight, intensified by the presence of the ruins, and the back figures formed strong accents in the foreground. The technique of this plate is excellent. The olive

trees from the groves on Mount Hymettus, are photographed with accuracy, and even with appreciation of the classic sentiment that belongs to them. The power of expression, and the nice graduations of feeling, of which the photographic camera is capable under favorable conditions, have never been better illustrated than by certain of the plates in this collection. Some of the best plates have landscape subjects for their motives. The landscapes and coast views by Mr. E. M. Franklin, showed versatility and cleverness, in applying painters' methods to photography. The landscapes by Mr. P. H. Mason, were broadly treated, good in impression, and well worked out in detail. Peculiarly artistic in treatment and effect, were the landscape plates by Mr. H. N. Tiemans. A decorative use was made of the delicate, leafless boughs and stems, which form a network against the sky, or occupy the foreground of the plate. The clear cut workmanship of the detail, is technically and artistically beautiful. Mr. Hyde's landscape, showing a brook with trees, was pictorial composition, good in rendering of foliage, and strong in effect of reflected light. A good piece of sunlight photography had for its subject, a shanty of the kind peculiar to the upper part of New York. It was pitched in a light key, and was judiciously accented with half tones of shadow. Mr. William Chamberlain sent a series of photographs taken on the deck of an ocean steamer, in which the striking masses of form were kept well subordinated to the idea of composition. These plates had quite a modern artistic feeling in their treatment. They were sharp and clear cut, and the lights and darks were cleanly contrasted. The human groups were well handled. A number of marine subjects of good quality, were found in this collection.

Mr. Charles W. Canfield's flower subjects were quite a revelation. There is no reason why photography should not be applied to flower subjects with advantageous results, but, hitherto, nothing very good in this line has been brought to the notice of that portion of the public which is interested in the higher kind of photography. Mr. Canfield showed three plates, chrysanthemums, roses, and orchids. In the first a strong, well-

balanced effect of light and shade, was produced by the opposition of large masses of whites and blacks, carefully graded in tone. In the roses, which were small and pale ones, with many leaves, fastened in a graceful flat bunch against a flat board, a charming and artistic effect of composition was presented, and the execution was skilful. The group of orchids, which formed the subject of the third plate, was not as artistic in effect, but the character of the orchid afforded the photographer an opportunity for doing some brilliant work. The little spots, veins, filaments, and short curves of the flower, were presented in a crisp and delicate manner, and the small masses of light and dark were kept beautifully distinct. The photograph was full of color. This plate might have been regarded as an example of modern pre-Raphaelite photography. There is a fine field for some photographer to work in decorative flower subjects, which might be made to have a commercial, as well as an artistic value, and to supplant the monstrosities of colored lithographs, which even the best publishing houses send out in portfolios and holiday books, accompanied by appropriate verses. Mr. Canfield also exhibited some Japanese still-life subjects, which were well composed, and good in arrangement of light and shade, besides rendering in a clever manner the grotesque spirit of the originals. Mr. Randall Spaulding has a flower subject, which, while not as artistic as Mr. Canfield's, showed sharp, clear, decisive forms, and judicious distribution of masses of light and shade. Mr. G. A. Robertson made an interesting exhibit of plates dealing with the house at Mount McGregor in which General Grant died. The chairs in which he sat, his bedroom, and other objects of interest were well reproduced. These plates were realistically treated, with no attempt at modifying or softening down harsh and unpleasant facts. The photomicrographs were curious and interesting, and excited afresh one's admiration for the wonders of nature, as well as for those of the camera. Here, were seen the tongue of a blow-fly, enlarged seventy-five diameters; the eye of a robber-fly; the scales of a butterfly. A grain of Norway seashore sand was visible in all its beautiful geometric

precision. There was a good showing of platinotypes. The figure subject, "Expectation," showed a little boy dressed in men's clothes, holding newspapers under his arm. The figure is placed on a table. "Halt" shows a man driving a horse, while a small boy grasps the horse and forces him to stop.

Mr. Chas. Wager Hull, the veteran amateur, exhibited some admirable marine views. There were many other fine things worthy of mention, but my space is too small to include them here.

It may be said, in conclusion, that a repetition of this exhibition every year must need have an elevating effect upon the photographic art-development of the country. It would be well if every city in the Union could be the centre of a similar organization, with corresponding members in outlying towns. The camera in the hands of an intelligent person, with a fair knowledge of photographic technique, becomes an important factor in general art-education. It seems rather a pity that the professional element should be excluded from the Society of Amateur Photographers. Amateurs cannot, in justice to themselves, be brought into competition with professional workers in any calling. The distinction in this case does not appear to lie in the question of rivalry on technical merits, but rather in this, that the amateur photographer regards his work from the standpoint of art, while with the professional it is a trade, an affair of routine, a means of making money. The amateur may please himself; the professional must please the public. The amateur may indulge in fancies, experiments, art theories, made tangible. The professional must move cautiously, if he would go at a faster and freer pace than the jog-trot of custom allows.

SOCIETY GOSSIP.

THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the stated meeting held November 4, 1885, the President, Mr. Joseph W. Bates, in the Chair.

The minutes of the last stated meeting having been approved, the Secretary read a notice in regard to the third annual exhibition of the Boston Society of Amateur Pho-

tographers, which, it was announced, would be held in the rooms of the Boston Art Club, from November 24 to 28.

The resignation of Mr. Charles H. Mann was read and duly accepted.

The Exhibition Committee reported that arrangements had been made to hold the exhibition in the galleries of the Pennsylvania Academy of Fine Arts during the week beginning January 11, 1886. It will be kept open day and evening, and it is proposed to exhibit the lantern slides sent to the exhibition in the lecture room of the Academy upon one evening during the week. It was also stated that all restrictions as to including pictures of different classes in a single frame had been withdrawn. The pictures will not be hung by classes, but all of each person will be hung together, without regard to class.

The Committee on Membership reported the election as active members of Messrs. William C. Tripler, Edward D. Page, and Prof. W. D. Holmes.

Mr. Coates asked for the experience of members in the use of paper negatives. But few of those present had used them to any extent. An objection to their use seemed to be the oiling that is necessary. There is considerable difficulty in doing this properly, and it was mentioned that reoiling was sometimes necessary. Some prints had been made without oiling with good success, though, of course, more time was necessary.

The question was asked whether any harm would result if, when intensifying a plate with mercury and cyanide of silver, the blackening action was stopped before it had permeated entirely through the film, the underside being left as whitened by the mercury? It was thought that the film should always be blackened entirely through to prevent future injurious action of the mercury on the negative. If this made the negative too intense, reduction could be resorted to to bring it to proper printing density.

Mr. McCollin showed one of M. A. S. Barker's "Focal Plane" Shutters. With this shutter the exposure is made through a narrow slit in a curtain passing directly in front of the plate. In describing the shutter, Mr. McCollin said:

"Every point of the luminous image formed on the sensitive plate in the camera is the focal point or apex of a cone of rays whose base is the field of the lens. A little study of this optical truth will show wherein Barker's Focal Plane Shutter has a great advantage over other expositors. It will be conceded that any exposing aperture will occupy a less time in passing a given point than it would require to traverse the field of the lens; and, as the point thus exposed contains the concentrated volume of rays from the whole field of the lens, the time is shortened without loss of actinic effect."

Some photographers who have not looked particularly into the optics of photography do not at once grasp this wonderful fact of the innumerable cones of rays proceeding from one base to all points of the plate; but every one knows that if he has a small stop in his lens and removes it, he immediately increases the brightness of the whole picture—of the whole focal plane.

A small portion only of the plate being exposed at any one time, it is protected from the action of the diffused light always present in the camera to some degree, especially when a large stop is used. The plate is also protected from any motion in the object, except on that portion which is actually being exposed.

One of the pictures exhibited by Mr. McCollin shows the method of discharging Belgian paving blocks from a vessel. An iron tub or bucket has been hoisted from the vessel with upwards of a ton and a half of granite blocks, and is seen overturned in the air, with the blocks falling to the pile on the wharf. The blocks in the air are as sharp as those lying in the pile below, and the dust made by the grinding together of these heavy stones is a striking feature of the picture.

Mr. McCollin also exhibited two plates secured by Mr. Barker during a thunderstorm on Thursday evening, October 29. The scene was illuminated by a single flash of lightning for each plate; yet there is a clear sky, details of the landscape both near and far, and altogether a fair photograph of the stable and surroundings, considering the circumstances under which it was made.

Mr. W. D. H. Wilson also had a new

shutter to bring to the notice of the Society, being the latest invention of Mr. Prosch, known as the "Duplex Shutter." This shutter is made to work between the combinations of a rapid symmetrical or rectilinear lens, a special tube furnished with the shutter taking the place of the original lens tube, so that it is preserved intact for other use when desired. The original diaphragm of the lens can be used. One of the most valuable features is that, by a simple adjustment, the shutter may be opened by the pneumatic release, remaining open as long as desired, and then closed by pressing the rubber bulb a second time. This makes it a very perfect expositor for either time or instantaneous work.

Mr. Walmsley showed a new camera, made by the Scovill Manufacturing Company, for copying and for making photomicrographs. A number of valuable features had been combined in the camera. It was provided with a double shifting front of value in making lantern slides, where it was desirable to reproduce only a certain part of the negative. By detaching the rear portion of the bed, and attaching the camera to a tripod, it answered well for landscape or other ordinary work. In the centre of the focussing screen a small disk of thin glass was cemented, forming a surface suitable for the delicate focussing necessary for microscopic work. A door in the side gave access to the lens in the middle of the camera when used for copying purposes.

Mr. Bartlett having noticed that the substances used in treating the sensitive film for isochromatic photography were generally fluorescent bodies, suggested that experiments be made in this direction with *æsculin*, the active principle of the horse chestnut, which is a very beautiful fluorescent body.

Adjourned.

ROBERT S. REDFIELD,
Secretary.

EXHIBITION OF THE PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—We have already published the announcement of this Exhibition, and now add the particulars as to dates, directions for shipping, etc.:

The Photographic Society of Philadelphia will hold an Exhibition of Photographs, in

the galleries of The Pennsylvania Academy of the Fine Arts, beginning January 11, 1886, and continuing one week.

Pictures will be received only in accordance with the rules and classification given in the circular issued May 1, 1885.

Those proposing to send pictures will please notify the secretary immediately, stating the probable number and size, in order that entry blanks and labels may be furnished them.

All entries must be made in accordance with Rule 4, and particular attention is called to Rules 5, 6, and 7.

Early notice in regard to transparencies and lantern slides is important, in order that proper arrangements for exhibiting them may be made.

A lantern exhibition will be given upon one evening during the week.

Pictures should be sent to arrive after December 25th, and not later than January 6th.

They must be marked (except when sent by mail), "Photographic Society of Philadelphia, care Pennsylvania Academy of the Fine Arts, Broad and Cherry Streets, Philadelphia, Pa."

All transportation charges must be prepaid.

All mail matter should be addressed to the secretary, as below.

Copies of the rules and classification, and any further information required, will be furnished on examination.

ROBERT S. REDFIELD,
Corresponding Secretary.

1601 CALLOWHILL ST., PHILADELPHIA, PA.
November 2, 1885.

[We believe the exhibition promises to be one of the finest ever held anywhere, and hope it will be an occasion whose advantages will not be overlooked.—ED. P. P.]

PACIFIC COAST AMATEUR PHOTOGRAPHIC ASSOCIATION.—Regular meeting of the Pacific Coast Amateur Photographic Association, Tuesday evening, October 29, 1885, at the Association rooms, 318 Pine Street, San Francisco. Vice-President Lowden in the Chair.

Minutes of last meeting read, corrected, and approved.

The committee on the prize picture for October, "A Hard Blow," reported in favor of Mr. Tyler's print.

A committee, consisting of Messrs. Tyler, Partridge, and Gibbs, were appointed to examine and pass upon the prize prints for November, subject "Caught."

After consultation, the committee reported in favor of Mr. Blackburn's print.

Mr. Blackburn was very happy in his choice of a subject, which represented some boys caught by the tide in a cove at the seashore.

After considerable discussion, "Solid Comfort" was chosen as the subject of illustration for the December meeting.

The report of the committee being favorable, Messrs. Haines and Sharer were elected members of the Association.

Messrs. C. P. Goddard and A. W. Stanford were proposed for membership, and referred to proper committee.

A letter from Mr. Sanford Robison, a member now residing in Guatemala, to Mr. Gibbs and the members of the Association generally, was read and listened to with great interest.

Mr. Robison has a magnificent field for photographic work and is evidently taking advantage of it. He reports that it is simply impossible to make good silver prints, because of the heat and dampness, and that he has been obliged to content himself with blue prints; he has not been troubled with frilling, which he attributes to his method of development. Mr. Robison uses the potash developer in an extremely diluted form, never using more than two-thirds of a grain of "pyro" to the ounce of water.

Moved that the secretary provide a scrapbook for the preservation of formulas, etc. Adopted.

On motion adjourned.

W. B. TYLER,
Secretary.

PHILADELPHIA AMATEUR PHOTOGRAPHIC CLUB.—The regular monthly meeting took place on Monday evening, November 16th, with Vice-President Haines in the Chair.

After the minutes of the previous meeting were read and approved, nominations of

officers to serve the coming year were made with the following result:

President.—H. Pusey.

Vice-President.—Wm. A. Haines.

Treasurer.—A. Thompson.

Secretary.—W. W. Randall.

The Treasurer's report, which showed a flourishing condition of the Club's finances, was read and approved.

Mr. Clements then remarked that, being of the opinion that our dark-room was not so well lighted as it might be said, he had written to several prominent plate-makers to get their views on the subject. Among the replies received by him was one from Mr. M. A. Seed, of St. Louis. As this letter was thought to be of particular interest, it was decided to incorporate it in the regular minutes of our meeting.

St. Louis, November 7, 1885.

A. CLEMENTS, ESQ.

DEAR SIR: I consider the question, "How to light a dark-room?" an important one, for the following reasons:

First. A light which is not in the least injurious to the eyes, and, consequently, a pleasure to work in, is desirable. Secondly. One that will not fog the most sensitive plate. Thirdly. A uniform light to enable you to get uniform intensities.

Nearly all dark-rooms have one side of wood, so I would propose that an opening be cut in the partition 8 x 10 inches, fitted with orange and green glass, with a sheet of English tissue paper, white or yellow, between the glass. Outside the 8 x 10 opening inclose with a 10 x 12 box. Insert a lamp having a $\frac{3}{4}$ wick. Always put the light the same height, and see that the top and bottom of the box have plenty of air-holes.

The sample of glass I send you by express. I would further suggest that, when an extremely sensitive plate is to be developed, that it be only held near the light while the developer is being poured on; when the plate is thoroughly wetted and covered, hold your tray so that the light will not touch the plate until it is about half developed. Then let the light shine on it as much as you like to see clearly its progress. I think, with the above arrangements, you will find that the development of a dry

plate is simple and easy, not injurious to the eyes, and the results uniform.

Truly yours,

M. A. SEED.

Mr. Haines then showed one of the new Prosch shutters, which was kindly loaned by Messrs. Wilson, Hood & Co.; and also announced that he had, for trial, a package of the "Inglis Triumph" plate from Mr. Walmsley.

A committee, consisting of Messrs. Cunningham, Gillingham, and Randall, was appointed by the Vice-President to look into the question of incorporating the Club.

After a recess for a lantern exhibition, the meeting adjourned.

W. W. RANDALL,

Secretary.

THE SOCIETY OF AMATEUR PHOTOGRAPHERS, NEW YORK, have had some interesting meetings of late, especially on October 13th, when the experiences of those who photographed the effects of the Hell Gate explosion were compared, and Dr. Jane-way's excellent paper (p. 386) was read.

We seemed to the worthy Secretary of this Society, to have appeared a little too severe in our remarks at the foot of page 367, last month.

We did not intend to be unjust. We spoke *pro bono publico*, and with no harsh intent whatever, proof of which we are glad to give by adding the letter of the secretary as follows:

"NEW YORK, November 4, 1885.

"DEAR SIR: Your 'skit' at our Society in your last issue is not particularly creditable to your spirit of fairness. Our copy is sent out to all photographic journals alike; and it is certainly no fault of ours if your publication-day comes before or after the day when we can get out our copy and when you receive it, as we do not make it a point to arrange our meeting-nights so as to 'cater' to the publication-day of yours or any other journal.

"You do not seem to take into consideration the fact that this Society is the only one in the world that goes to the trouble and expense of having a stenographic report of meetings.

"Taking the last meeting (last week Tues-

day) for example: The report came from stenographer Saturday; was split up and sent out for correction same day; and is not yet received back from authors with corrections. With your experience you will readily see that to make eight or ten copies of this by hand is impossible; and that to get this set up, typographical errors corrected, revise galley-proofs got out and distributed, will take surely three or four days more after it all comes in, and then allowing for Sundays, etc., and delay in mail, the time you mention is not impossible, though it is longer than usual; and, while we have not a printing office at our disposal, delay cannot be easily avoided.

"To your statement that the meetings of this Society are 'largely devoted to the exhibition of articles with which we are all familiar,' I take emphatic exception: that is, so far as it implies a defect in our management of meetings. Of course, as to the omniscience of the editorial '*we*,' and the extent to which it is well informed, in common with its 'more (than what?) practical' readers, that is a matter of conjecture (or opinion). The scope of an *amateur* society is to 'introduce many of its members to old principles and results;' in furtherance of which, many things which are, doubtless, not new of themselves, have since been put forward, though almost always with improvements of some sort, either applied or suggested, as they are made. But aside from this, we show far more novelties than 'chestnuts,' and more than any other society of similar scope anywhere, in proportion to the field we have to draw from. Of course, the old established societies of Europe have larger membership, and more compact and scientific, to turn to. A careful examination of our proceedings will show this to any disinterested observer.

"As to the insinuation you throw out regarding 'stock-house' influence, I would say that we were prepared to encounter such charges, having been warned by our older members to look out for that 'rock ahead;' but scarcely expected that the 'first stone' would be cast by the PHILADELPHIA PHOTOGRAPHER. If the thing is as you say, then it must have taken place *very* 'unconsciously' to those interested, whose

aim from the first has been to avoid any such complication, and who, in their own opinion, have so far succeeded.

"Very truly, yours,

"C. W. CANFIELD,
Secretary."

We duly received the following invitation:

"First Annual Exhibition of the Society of Amateur Photographers of New York, held at 1262 Broadway, corner 32d Street. Admit Mr. E. L. Wilson and friends. With compliments of C. W. Canfield, Secretary. Tuesday Evening, November 17th, 7.30 to 10.30; Wednesday, November 18th, 10 A. M. to 5 P. M. Take elevator at 32d Street entrance."

We attended in person and made notes for future use. Meanwhile we employed Miss Charlotte Adams to give us her able criticisms,—a piece of enterprise we hope our N. Y. Society friends will receive as assurance of our sincere desire for their best growth and welfare. At present our space is too small to hold all they send us to print, even did it come in time. Presently we shall have things better.—ED. P. P.

COLUMBUS AMATEUR PHOTOGRAPHIC CLUB.—A regular meeting of this Club was held on November 16, the newly elected officers being at their posts: Prof. N. T. Lord, President; Prof. W. S. Goodnough, Secretary.

A motion was carried that every member should be prepared, in alphabetical order, to appear before the Club, one each evening, with a contribution, paper, or demonstration; each person to furnish an abstract of his paper, if desired.

It was suggested that the necessary appliances for developing and carrying on other demonstrations and experiments were needed, and the President and Secretary were appointed a committee to prepare a list and estimate for the next meeting.

Members were requested to try to comply with a rule of the Club that requires every one to bring a negative and a proof or print from it to each meeting.

Mr. W. H. Miller had some successful paper negatives and prints from them.

The matter was discussed as to whether a

portrait lens, stopped down, would give as good results, in making lantern transparencies with the camera, as a lens of the rectilinear class, a single view or a wide-angle lens. Several members claimed that it made little difference, if the portrait lens was a good one and well stopped down.

W. S. GOODNOUGH,
Secretary.

OUR PICTURE.

THE set of nine pictures given with this number, are part of the exhibit of Frederick Müller, of Munich, which secured the second Gennert Prize of the Buffalo Convention.

In some respects, they are more interesting than those which secured the first prize. They are not so large, only about $7\frac{1}{2} \times 4\frac{1}{2}$ inches, but there is in them a deal of quiet artistic feeling. The first prize pictures were admirable examples of artistic portraiture. In these pictures the artist has gone beyond that, and made single figure pictures which tell their own stories with more or less success. The top left-hand picture might be called "Take a Pinch;" the old German dominie extends his snuff-box, with the loving look of an inveterate snuff-taker. The attitude of the head, the pose of the figure, and the position of the hands upon the box are all excellent, but the expression of the face is perfect, and shows that Mr. Müller knows how to select and drill his models. The next picture to it, and the one below that, girl with havmaking rake, are the only two in the collection which may be called ordinary subjects. Excellent photographically and artistically as to composition, light and shade, etc., they lack the interest of special attitude and expression, which is seen in the others. Notice the musical tramp at the top right-hand corner. Does it not at once suggest the title "Down on his Luck?" The hands in pocket, the raised shoulders, hattered hat, head inclined forward, and sunk in his neck, and the woebegone expression of his face, tell the story of tramps in the cold from one saloon to another, the playing of cheerful or lively tunes, when feeling the very reverse of cheerful, and the hungry despair with

which he tucks his instrument under his arm when he has failed to earn a cent. A story full of pathos could be written from that picture.

Very different are the first and second pictures on the left from the top. The under picture (the workman in his apron) is evidently the same as the snuff-taker, but how different the attitude and expression, which say without words, "I will pay you to-morrow! do you think I want to cheat you?" The hands thrust to the bottom of his pockets in the fruitless search for the money to pay for his drink, and the air of offended dignity, shown as much by the pose of the head as by the expression of face, makes this picture (next to the tramp) the best in the collection.

In all, except the two named above, there are great study and artistic knowledge displayed by the photographer, but with so much art that the study is not apparent at first sight. The stories are told without effort, and in a quiet, natural manner, without any aiming at extremes of action or light and shade. They convey a lesson to photographers on this side which we would do well to study. As a rule, photographers who make a break from the ordinary rank of portrait photography, and attempt to tell a story by their cameras as painters do with their brushes, make the same mistakes as young artists make when they first leave the art schools, viz., they are too ambitious, and attempt things which are beyond their powers. We have never known a young art-student, fresh from the academy, who was not going to immortalize himself right away by some grand historical or classical painting; we have seen many such commenced, but not one can we remember to have seen finished; for experience teaches that simpler subjects can be made as effective, and if the student has any real art in him at all, he finds that the road to progress is to attempt those subjects which are within his powers. So photographers would do well to give up for a time attempting such subjects as shipwrecked people upon a raft waving signals of distress, burning martyrs at the stake, etc., which have only excited the derision of the outside press. Keep well within the limits of our own knowledge of

art, and the capabilities of our art-science, and try to produce such pictures as are here presented.

The pictures were printed on the N. P. A.

paper, and the reductions made on Stanley plates, both supplied us by Messrs. E. & H. T. Anthony & Co., New York.

Editor's Table.

ITEMS OF NEWS.—The South Bend *Daily Tribune* devotes nearly a column to the praise and description of AND. McDONALD'S new and beautiful studio. We are pleased at such evidences of prosperity.—“Clear, brilliant, and beautiful, full of individuality,” says the Canon City *Record*, is the work of Mr. CHARLES E. EMERY, our talented subscriber. Good!—The *Sporting and Dramatic Journal* has a fine engraving of EDWIN FORREST LANDY, champion bicyclist and son of ex-president JAMES LANDY, of Cincinnati, and an editorial a column long, praising our young friend.—The *Cleveland Voice* has been interviewing our friend, ex-president J. F. RYDER, and in an article entitled “Miracle Photography,” about three columns long, inserts a number of engravings from Mr. RYDER'S photographs. They are all very amusing.—By the way, photography is responsible for the great wave of newspaper illustration which is now passing over the country, for without it the infection could not be. May its shadow never grow less.

A FINE INTERIOR.—Messrs. BLAIR & PRINCE, 148 W. Fourth St., Cincinnati, Ohio, agents for the “Blair Tourograph and Dry-plate Co.,” Boston, have favored us with an admirable 8 x 10 view of their salesroom, No. 1. Besides being an excellent view, it is a very interesting one of a finely supplied stock depot—cameras, cards, chemicals, and all sorts of appliances, even in the extreme rear of the wareroom, are sharply depicted, and must have been taken by the Blair Combination Camera. The establishment seems to be most convenient and well-lighted.

MR. CYRUS PROSCH, of 36 Platt St., N. Y., the ingenious manufacturer of shutters, called upon us a few days ago and exhibited his marvellous DUPLEX SHUTTER, described in Society Gossip.

GOLD AND SILVER AND WASTES.—The fine establishment of Mr. H. F. CARPENTER, 29 and 31 Page St., Providence, R. I., is represented in our advertising columns this month by an engraving, to which is appended Mr. CARPENTER'S

announcement to the trade of his desire to be useful to the craft. His long and good standing in his line will continue to enlarge his business, and we hope our advertisement will help. You will do well to note his price for gold.

A NEW DRY-PLATE FACTORY is to be opened soon in New Jersey, near New York City—a sort of union of eastern and western talent to work it—an expert dry-plate maker, his late managing man, a veteran New York stock dealer, and a glass importing firm, will make a strong syndicate.

THOSE THUMB MARKS.—Why did we not think to say last month that the “thumb-mark” method is not altogether new after all? Mr. PRAY shows his hand on another page, but even he was antedated by Mohammed, who, when he ceded the territory to the monks for the convent of St. Catherine, not being able to write, sealed the compact by dipping his whole hand, thumb and all, in ink, and pressing it upon the parchment. First!

WHO WAS IT?—On a tiny wooden roller, came to our office a photograph of a camera with a drop attached—wheels, cards, pulleys, etc. Please tell us who sent it?

THE announcement of the FRANKLIN INSTITUTE LECTURES, 1885-1886, is received.

THE OVERFLOW BOOK ADVERTISEMENT does not appear this month, but we have a few books left. Order quickly.

THE 110TH THOUSAND of “HOW TO MAKE PHOTOGRAPHS,” has been sent us by the SCOVILL MANUFACTURING Co., N. Y. Important additions have been made to it. Send for a copy. No charge.

THE MOSS ENGRAVING Co., 535 Pearl St., N. Y., issue two large sheets of splendid holiday photo-engravings and a catalogue. Every photographer, by a little push, can get more or less of this work to do. You must all come to it.

COL. V. M. WILCOX (E. & H. T. ANTHONY & Co., N. Y.) has obtained a patent for his new dry-plate packing-box, noticed by us a short time ago. Soon the "STANLEY" plates will come to us in the WILCOX case.

YENOWINE'S "SUNDAY NEWS," Milwaukee (Geo. H. YENOWINE, editor and proprietor), is a bright, snappy sheet, most ably edited, and amply illustrated by photo-engraved pictures. It is a newspaper of the times, and the pictorial work is hardly excelled. Another creation made possible by photography.

MESSRS. DAVID TUCKER & Co., Buffalo, N. Y., are agents for the HOOVER SHUTTER, an ingenious contrivance on new principles.

MR. L. M. RICE, Warren, O., says: "Running a gallery without your valuable journal is hardly the thing."

MR. E. LONG, Quincy, Ill., has sent us a photograph of his model solar-printing establishment. Seven direct printers stand with their one eye solemnly directed to the heavens while they work—and it *does* take LONG to fill orders. It is a clean, comfortable-looking place. Have you Mr. LONG's little book on "Portraits in Crayon"?

MR. H. BUTLER, Vermillion, Dakota, has sent us some excellent portraits; some street views; a wonderful horizontal streak of lightning, and a lovely view in the city park for our illustration. All are examples of excellent work.

MR. J. A. FRENCH, Keene, N. H., has sent us some new examples of his outdoor work, which are most excellent.

SICILIAN PHOTOGRAPHS.—We have received some admirable groups from Sicily, of peasants and children, from gelatine plates, and printed upon ready sensitized paper, both manufactured by Baron TOMASO MELAZZO, of Naples, Italy. The pictures are remarkable for their naturalness and lifelike expression, showing that the plates must have been very sensitive. It is claimed too that the paper named will last for months without deterioration. It is refreshing to see such work.

THE POSITIVE PROCESS UPON GELATINE PAPER, WITH SPECIAL REFERENCE TO CHLORIDE OF SILVER GELATINE. By DR. E. A. JUST. Published by the author at Vienna.

The above work is an exhaustive treatise upon a subject which is at present gaining the

attention of practical workers in photography—the preparation and application of gelatine emulsion to paper, for positives.

The author has treated the subject both practically and scientifically, in a clear and forcible manner, showing a wide experience in the various operations of photography.

The advantages of the new paper are touched upon. Its great superiority over the old silver albumen paper, its durability, the greater richness and delicacy in the shadows which are secured, the facility with which the operation may be performed by artificial light, its application and enlargements for crayon work, and the greater softness and harmony in the tones.

In the characteristic German manner every step is pointed out definitely, the difficulties shown, and the remedies in case of failures suggested.

The work is especially valuable in the theoretic principles it evolves for the explanation of exposure, development, etc., which cannot fail to be of interest to the scientific investigator whether his attention be drawn to paper positives or to the general philosophy of photographic action of light.

An appendix to the work explains the mechanism of the automatic exposer—an instrument invented by Engineer SCHLOTTERHAUSE, for exposing continuous rolls of the gelatine paper, by means of which the time of exposure is mathematically regulated, a great saving in time and labor effected, and cleaner and more brilliant results secured than when the operation is performed by hand. The work of Dr. JUST is embellished with a number of beautiful prints made by the process in a variety of pleasing tones, for presentation of which the author makes apology in his preface, but they demand the highest praise for artistic selection, for the clearness and softness of the high lights, and a richness and transparency in the shadows and half tones. If nothing else were to recommend the gelatine paper to the profession, we are assured these prints would.

MOZAICS, 1886, is ready. 144 pages. 50 cents.

THE FALL CATALOGUES are beginning to come in. We think the *very* handsomest is from Messrs. WM. H. WALMSLEY & Co., 1016 Chestnut St. Its literary character is first class; its appearance is beautiful, and its arrangement on an excellent plan. It contains 84 pages, and is bound in an enamel paper cover, elaborately illustrated. It is supplemented by a number of useful formula.—Messrs. LOEBER BROS., 104

Fulton St., N. Y., also favor us with a copy of their new catalogue of 50 pages—most carefully and compactly arranged, and to which many useful hints are added. Be sure to consult it.

SCOVILL'S DETECTIVE CAMERAS are now made of two sizes— $3\frac{1}{4} \times 4\frac{1}{4}$ and 4×5 inches, and are supplied with or without the EASTMAN Roll Holder. They are very compact, and it will take more than a detective to detect that they are "detective." A fine chromatic price list is now ready for applicants.

MOSAICS, 1886, is ready. 144 pages. 50 cents.

"A PHOTOGRAPHER'S VISIT TO PETRA" occupies some twenty-seven pages in the *Century Magazine* for November, and is illustrated by some twenty superb engravings from Mr. EDWARD L. WILSON'S photographs. The photographs are followed exactly, in line, light, and shade, so that the engravings (costing in all about \$2500) are admirable examples of what the three arts—photography, drawing, and wood engraving—can produce. We have done our best with the literary work too, and wish that all our readers might see and enjoy it all. All newsdealers sell the *Century*. It is the best illustrated magazine in the world.

We attended *The AMATEUR SOCIETY'S EXHIBIT* in New York, and shall comment thereon. Meanwhile, the notice from the talented pen of Miss CHARLOTTE ADAMS will be read with much profit. The exhibition was a creditable success.

MR. EDW. C. LITCHFIELD, Arlington, Mass., has occupied his new studio.

LICENCE'S CANADIAN PHOTOGRAPHER'S EXCHANGE, is a new monthly journal devoted to the photographic trade in Canada. It is bright and sprightly, and will be of good service. Mr. R. J. LICENCE, Toronto, publisher. Fifty cents a year.

MRS. C. W. CLARKE, artist colorist, has removed from Baltimore to 1926 North Seventeenth St., Philadelphia. See advertisement.

A GOOD SIGN of photographic growth is the announcement made by Mr. G. CRAMER, in his advertisement, of the growth of his dry-plate trade. It has forced him to double his facilities for manufacturing plates, in order to keep pace with the orders which pour in upon him. We are glad to see such appreciation of earnest

effort to produce plates of the best quality. May it continue.

WILSON'S PHOTOGRAPHICS. A series of lessons in photography, By EDWARD L. WILSON, Ph.D., Philadelphia. In a handsome square octavo of 346 pages, we have one of the best written volumes on photography that it has been our pleasure to read lately. The author divides his subject into twenty-seven lessons and treats of every conceivable phase of purely photographic work, using a method of description at once plain and to the point. The points in which Dr. WILSON excels are those that refer to the artistic treatment of the subject, and the lesson that discusses this point is the best piece of work of the kind we know of. Beginning with some plain and exceedingly interesting remarks upon the rules of art work, he leads the reader through a number of steps in the study to a realizing idea of the object to be attained in taking a picture. Never in the history of photography has there been a greater need of just such study than at the present day. To the professional photographer we can recommend Dr. WILSON'S book as one of those that should certainly be within reach for reference, as it is full of the experience of the best photographers at home and abroad. For the amateur it contains a store of photographic and artistic information we have not found elsewhere, and it will lead him into many interesting experimental regions filled with promises of discovery.—*Anthony's Photographic Bulletin*.

MOSAICS, 1866, is ready. 144 pages. 50 cents.

THE PHOTOGRAPHIC BEACON, announced in our last issue, has made its appearance, dated November 1885. It is edited and published by Dr. JOHN NICOL, lately from Scotland, an able, genial man, and perhaps the one of all of us who has the longest wielded the pen in behalf of our art. It is monthly; \$2 a year.

The *Beacon* is a neatly printed twelve-page journal, pages somewhat wider than this, in very fine type, and is filled with excellent matter, sufficiently varied to make it all readable. We welcome our co-worker, and wish he may succeed in maintaining the position he sets out to uphold. If he fulfils all the promises he makes on the first page he will have to increase the size of the *Beacon* ere long. His office is at the store of DOUGLASS, THOMPSON & Co., 229 State St., Chicago, Ill. Success to it and to all earnest advocates of our art.

Specialties.

MAKE OUT YOUR OWN BILL, and remit cash with your advertisements, or they will not be inserted.

ADVERTISING RATES FOR SPECIALTIES.—Six lines, one insertion, \$2.00, and 25 cents for each additional line, seven words to a line—in advance. *Operators desiring situations, no charge.* Matter must be received by the 23d to *secure* insertion. Advertisers will please not ask us for recommendations. We cannot undertake to mail answers to parties who advertise. Please always add your address to the advertisement. **Postage-stamps taken.**

SEAVEY'S NEW YORK NOVELTIES

FOR YE WINTER

Seavey's Snow-covered Landscapes, Ice Effects, and Cosy Interiors.

LAFAYETTE W. SEAVEY,
Studio, 216 E. 9th St.,
New York.

AMONG all the photographic lenses of various makes and styles which have been introduced during the past ten years, the euryscopes, of which Voightlander & Son are the sole manufacturers, loom up conspicuously. The success of these lenses has been unparalleled, and the demand is as lively as ever. They can be found in nearly every gallery in the land, and the amount of satisfaction and profit they produce is difficult to calculate. Most convincing proofs of their superiority over other lenses is the exquisite work done with them, and the fact that it is simply impossible to get along without them.

FOR SALE.—The best and leading gallery in the State. For particulars, address Box 423, Raleigh, N. C.

FOR SALE AT A BARGAIN.—A fully equipped gallery, situated in a town of 6000 inhabitants, in Western Pennsylvania, and surrounded by a fine farming country. Has been established for fifteen years, and has a splendid record for first-class work. Correspondence solicited. Address

"A. B. C.,"
Philadelphia, Pa.
Care Thomas H. McCollin.

ROCKWOOD SOLAR PRINTING CO.

17 Union Square, New York.

TIME.—It is our intention that every order received in the morning's mail (when not to be put on stretchers) shall leave this establishment the same day or the following morning. If too late for the morning work, it is sent on the second day. Having our own engine and electric light, *we are not at all dependent on the weather.*

GEORGE H. ROCKWOOD,
Business Manager.

W. F. ASHE

ARTISTIC BACKGROUNDS

AND

ACCESSORIES,

REMOVED TO 68 WEST FOURTH ST.,
4 BLOCKS WEST OF BROADWAY, N. Y.

My new studio is fitted up with all the modern improvements, and the most refined demands from a critical public can be satisfied. A visit to my establishment, which has the largest showroom, containing the greatest amount of stock of any place in the world, will be gratefully appreciated.

I have again added numerous new designs to my great variety of patterns for *backgrounds* and *accessories*, and keep also in stock a large quantity of goods for parties to select from, saving time and delay on orders.

CIRCULAR TO THE TRADE.

I HAVE this day sold to Mr. T. H. McAllister, 49 Nassau St., New York City, my entire stock of imported lantern slides, and have transferred my retail business to him. I take pleasure in recommending him to my former customers. They will find in his establishment the largest and best assorted stock of views in the world, and the most approved styles of lanterns, stereopticons, and apparatus, as will be seen by a perusal of his 136 page illustrated catalogue, which he forwards on application.

I continue to manufacture all my personally made slides, detailed in my catalogue on pages 15 to 37 inclusive, and also the following series: Centennial Exhibition, pages 46 to 48.

Journeys in Foreign Lands, pages 63, 64.

Switzerland of America, page 78.

Colorado and New Mexico, pages 80, 81.

Statuary, pages 82 to 84.

Thorwaldsen's Statuary, pages 86 to 91.

Piton's Foreign Comiques, page 96.

Zoological Garden, page 97.

Miscellaneous, page 98.

Clouds, Snow, and Ice, page 99.

New Dissolving Views, pages 122 to 134.

Sold to dealers in slides only—plain, or colored by Briggs. I continue to make slides for amateurs and lecturers, to order, from their own negatives, or from anything that can be photographed.

Slide making, plain or colored, of the finest style of the art—the best in the world. All dealers will keep my slides catalogued above.

Send your orders for special slides to order direct to my office.

A needed slide can be made and shipped the day the order is received.

My facilities are unequalled in the world. References—all over the world, and twenty years at it.

EDWARD L. WILSON,
1125 Chestnut St.,
Philadelphia, Pa.

PHILADELPHIA, Sept. 1, 1885.

CAMERA, FIELD, AND BOOK.

A MAGAZINE DEVOTED TO OUT-AND IN-DOOR LITERATURE AND THE CAMERA.

No amateur can afford to do without it. Specimen copy free. One year, \$1.00; 6 months, 50 cents; three months, 25 cents. Send silver or currency by registered letter at our expense.

Address CAMERA, FIELD, AND BOOK,
Bristolville, Ohio.

THE STANLEY PLATES.

CHICAGO, May 30, 1885.

MESSRS. E. & H. T. ANTHONY & Co.

GENTLEMEN: I have tried the Stanley Plate you sent me lately, and I am quite satisfied that it is as good a plate as I could wish for, working quick, clear, with fine details and beautiful roundness of image. I tried different developers on them, but find the pyro and potash to give the most satisfactory results.

Yours truly,

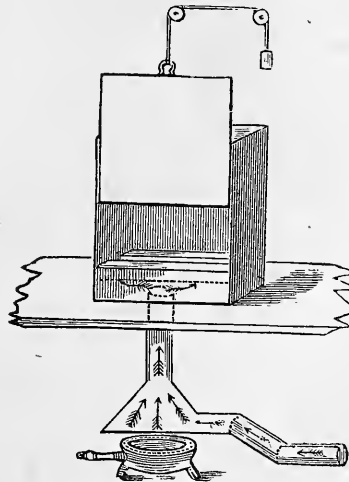
H. ROCHER.

NEW YORK, June 8, 1885.

MESSRS. E. & H. T. ANTHONY & Co.

MY DEAR SIR: The four dozen Stanley Plates I had from you last week were all that could be desired—rapid, intense, and with not the slightest disposition to fog. For instantaneous exposures of steamers under full headway, I gave 1-50 of a second; for reproductions by gaslight, 5 seconds; for ordinary negatives, 15 feet distant from a common gas-burner, and the contrast of the pure white and black is remarkable. I am, very truly yours,

J. J. HIGGINS, M.D.,
23 Beekman Place.



WILSON'S PHOTOGRAPHICS.
All about emulsion work and plate making—a whole big chapter. See index.
\$4.00 Buy it. \$4.00

ADDRESS T. W. POWER, N. Y., Secretary of Association of Operative Photographers of New York City, for operators, printers, and retouchers 392 Bowery, or 487 Eighth Avenue.

S & M.

CAUTION.—The genuine and original S & M EXTRA BRILLIANT PAPER always has the *water mark* S & M in every sheet.

A good deal of paper is sold with merely the stamp in the corner. This may be good, and it may not, according to what paper is used by the parties who want to work it off by putting on a stamp that has a reputation.

Look through the paper for the water mark.
E. & H. T. ANTHONY & Co.

THE PLATINOTYPE (Patented).

Send ten cents for instructions and sample, portrait or landscape.

WILLIS & CLEMENTS,
25 NORTH SEVENTH ST., PHILADELPHIA, PA.
BUCHANAN, SMEDLEY & BROMLEY,
General Agents for the sale of materials.

FOR SALE CHEAP.—The best photo wagon in the country. Address

W. W. SILVER,
102 Fulton St., New York.

FOR YOUR ADVERTISING, try "A Quiet Chat on the Prices of Photographs," by the Chief Photographer, to his patrons.

This little leaflet has been compiled with the view of helping you to raise your prices. Look it over carefully and see if you cannot make it serve you a good purpose. Nerve yourself up in the matter. Make the effort and you will succeed.

You can have whatever you want on the first and fourth pages of the cover without extra charge. Add your new scale of prices, and get advertisements to help pay you. The rest is stereotyped.

PRICES.

1000 copies . . .	\$15.00
3000 " . . .	36.00
5000 " . . .	50.00

Send for sample copy. It will help keep prices up.

EDWARD L. WILSON, Publisher,
1125 Chestnut St., Philadelphia.

GILBERT's rapid albumen and plain paper for making solar prints from strong contact negatives: supplies the place of large and expensive lens and apparatus, plates, etc. These prints are equal to contact. Address, with stamp,

E. A. GILBERT,
Jamestown, N. Y.

MANUFACTURERS and furnishers of engines, tools, and materials for the production and industrial use of paper, who would like their articles to be known in Russia, are informed that, from the beginning of 1886, there will be issued an especial Russian newspaper, *Paper and its Use*, devoted to the paper business. Advertising rates, one rouble, or two shillings, for five lines nonpareil, type measure; or the same amount of space with a suitable abatement if repeated. Advertisements are translated gratis. A very large quantity of the first number of the paper will be sent to paper manufacturers, stationers, printers, lithographers, booksellers, photographers, binders, manufacturers of paper hangings, and other industrials, using paper in Russia. Advertisements for this first number are accepted till the 25th of November, in the office of *Paper and its Use*, St. Petersburg, Russia, 421 Kassanskaja; Aug. Nanmann, editor.

LIST OF ARTICLES FOR SALE AND PRICES FOR SAME.—All cameras in list are American Optical Company's best quality. Used by Edward L. Wilson at the New Orleans Exhibition:

	Each.
1 Hinged Tripod	3 50
4 14 x 17 New Style Dry-plate Holders,	9 00
20 5 x 8 " " " " " "	1 35
2 14 x 17 Flat Printing Frames . . .	2 00
36 5 x 8 " " " " " "	\$45 per 100 50
6 Drying Racks	30

Cash. All guaranteed in good order.

Address EDWARD L. WILSON,
1125 Chestnut Street,
Philadelphia, Pa.

SITUATIONS WANTED.

No charge for advertisements under this head; limited to four lines. Inserted once only, unless by request.

By an operator, who is a good retoucher. Can also print. Good references. Address Howard H. Stern, Lambertville, N. J.

As retoucher and colorist. Salary moderate. Samples and reference furnished. Address R. L. Keeling, Harrisburg, Pa.

As retoucher and reception lady in a first-class gallery, by a young lady of good address. Address Miss Ida Powers, Portsmouth, Ohio.

By a young man of good habits. Viewing, or in a gallery. Address Lock Cox 762, Honesdale, Pa.

A first-class operator, who thoroughly understands the business, wet or dry, fifteen years' experience, wishes to make a change. Address W. A. Van Deroof, Newton, Sussex Co., N. J.

As printer, toner, and assistant operator. Three years' experience. Would work one month on trial. Wages to suit the times. Address Box 115, Strathroy, Ontario, Canada.

By a young lady as retoucher and finisher in artistic work. Thoroughly acquainted with all the routine of a gallery; can also mount, print, and tone. Wages moderate. Address Lillie E. James, 186 Regent St., Saratoga Spa, N. Y.

By a first-class retoucher, of good habit, strictly temperate; a permanent situation. Can operate and assist in all branches of the art. Address Wm. Kesten, Hoosick Falls, New York.

As operator in a first-class gallery. Large experience in best galleries. Samples, etc. Address A. J. Sanders, care Box 578, St. Louis Post-Office, Mo.

By a first-class retoucher. Understands the business, and can, if necessary, assist in other branches. Terms moderate. For particulars, address Miss L. M. A., 1024 Eddy St., Providence, R. I.

By a first-class printer and toner. Best of references. Address F. S. Egrit, Port Jervis, New York.

A prominent operator desires to correspond with leading galleries in regard to situation or lease of a gallery. Address T. M. W., care of H. P. Rolfe, artist, 1123 Chestnut St., Philadelphia.

By a first-class operator, who can also work at other branches. Experience of eight years. Address C. R. Clarke, Box 42, White Bear Lake, Minnesota.

As operator in a first-class gallery, by a young man who thoroughly understands all branches of the business. Address C. H. Mills, 144 Pearl St., New York.

The Finest Negatives of

FLOOD ROCK EXPLOSION at HELL GATE

WERE MADE ON



(See *Scientific American* of Oct. 17, 1885.)

The RIPLEY PLATE is the Plate upon which *absolute reliance* can be placed. Only the *finest glass* obtainable is used in their manufacture, selected of *uniform thickness*, and cut to *exact size*. The most extreme care is taken to render them both *mechanically* and *technically perfect*. They are consequently the only really cheap plate in market, and are *absolutely indispensable* alike to professional and amateur photographers who desire to produce the finest possible pictures.

BUCHANAN, SMEDLEY & BROMLEY,

General Agents for Phila.

No. 25 North Seventh Street.

F. DRESCHER & CO.'S

Improved Gelatine for Emulsion.

(HARD AND SOFT QUALITY.)

We beg to request our friends to give us their orders for supply during the winter. The steadily increasing demand for this celebrated make is a proof of its superiority over all other products. *It has no rival, and is specially known for its purity and fine body.*

Write for samples for trial. Obtainable of the **SCOVILL MFG. CO., New York,** or direct from the manufacturers,

F. DRESCHER & CO. GELATINE WORKS,

Oberndorf-Schweinfurt-on-Main, Germany.

OFFICE OF

G. CRAMER DRY PLATE WORKS,



Shenandoah and Buena Vista Sts.,

ST. LOUIS.

The demand for the Cramer Plates having outgrown our capacity, we have been compelled to enlarge, and are now erecting large additions to our works which will more than double our present capacity, and we hope soon to be able to supply our friends regularly and promptly.

Thanking the fraternity for their kind support, we ask their indulgence for a short time longer.

Fraternally,

G. Cramer Dry Plate Works.

GAYTON A. DOUGLASS.

HENRY G. THOMPSON.

DOUGLASS, THOMPSON & Co.

229 & 231 State St, Chicago, Ill.

MERCHANTS IN SUPPLIES FOR THE

Art-Science of Photography

Photographers' Booksellers, Stationers, and Newsdealers.

CARBUTT'S Keystone Dry Plates

AND PHOTOGRAPHIC SPECIALTIES.



Specials for Portraiture.

A. for Transparencies.

B. for Landscapes and General Photography.

OPAL PLATES, Gelatino-Albumen or Gelatino-Chlorides, for Positives and Transparencies.

Mulum in Parvo Dry-Plate Lantern.

Carbutt's Pyro. and Potash Developer, Concentrated,
Two 8oz. bottles 75 cents.

Ruby Paper and Negative Varnish.

FOR SALE BY ALL DEALERS.

JOHN CARBUTT, Keystone Dry-Plate Works,
Wayne Junction, Philadelphia, Pa.

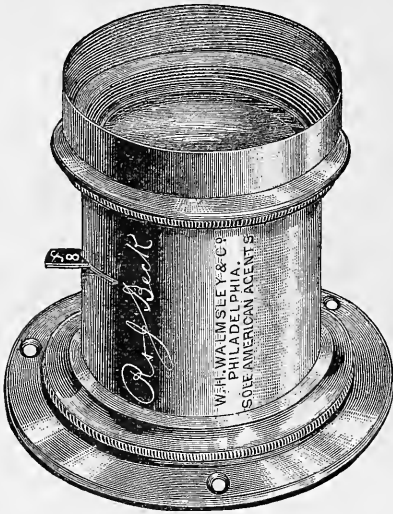
HODGE & HUSTON, THE SOLAR PRINTERS,

622 ARCH STREET, PHILADELPHIA.

PERMANENT PRINTS BY THE PLATINUM PROCESS.

—ELECTRIC LIGHT.—

BECK'S AUTOGRAPH RECTILINEAR LENSES.



THESE extraordinary lenses attracted universal attention at the late Buffalo Convention; the specimens of work in Portraiture, Groups, Landscapes, Instantaneous Views, etc., executed by them being of unequalled excellence. A life-sized head, made with the 8 x 10 lens of 13 inches focus, was considered by the experts present, as being far ahead of any similar performance ever seen. A full description of these and our other specialties will be found in our full catalogue. *Mailed Free.*

W. H. WALMSLEY & CO.,

Photographic Stockdealers.

1016 Chestnut St., Phila., Pa.



FRENCH'S

ORNAMENTAL

Relief-Border Flexible Negatives.

Three New and Elegant Designs

FOR THE **HOLIDAY SEASON** of 1885-6.

Far superior to negatives on glass. Will not break, are flexible, durable, and permanent. Print quickly, soft, and brilliant. Each negative suitable for three sizes of pictures: **CABINET, PROMENADE, and PANEL.**

All three negatives in one clasp envelope, by mail, to any address for \$2.25. They will not be sold singly. Nearly all dealers in photographic materials will keep both negatives and sample prints in stock. Sample prints furnished free on application. Send to your dealer, or to

Patented
July, 1884.
Copyrighted
Aug., 1885.

C. M. FRENCH,

Inventor and Manufacturer,

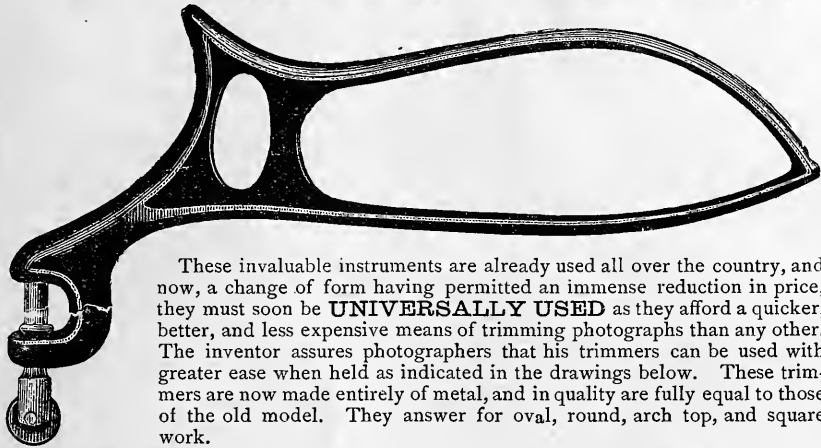
Formerly of Garrettsville, Ohio.

ONEONTA, N. Y.

720 (5 gross) of these trimmers were sold to one party in July.

ROBINSON'S NEW MODEL PHOTOGRAPH TRIMMERS!

This drawing is of the full natural size and shape of the New Model Revolving Trimmer. The Straight Cut is of same size, varying but little in shape.



These invaluable instruments are already used all over the country, and now, a change of form having permitted an immense reduction in price, they must soon be **UNIVERSALLY USED** as they afford a quicker, better, and less expensive means of trimming photographs than any other. The inventor assures photographers that his trimmers can be used with greater ease when held as indicated in the drawings below. These trimmers are now made entirely of metal, and in quality are fully equal to those of the old model. They answer for oval, round, arch top, and square work.



Plan of holding the Straight Cut Trimmer when in use. PRICE, 50 CENTS.



Plan of holding the Revolving Trimmer when in use. PRICE (with one card guide) \$1.00.

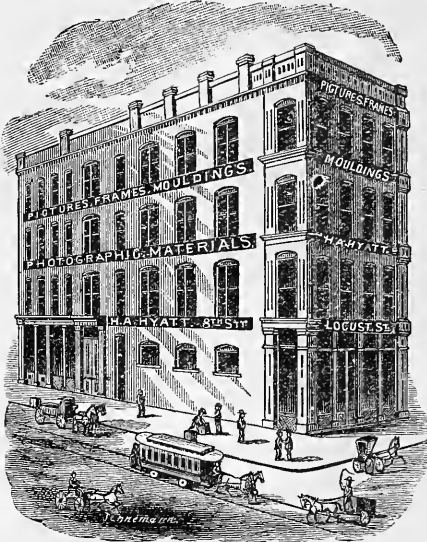
ROBINSON'S GUIDES. MADE OF SHEET-IRON.

We have the following **Regular Sizes** always on hand at 10 cents per inch the longest way of the aperture.

OVALS.			SQUARE OR ROUND CORNERED.		
2 x 2 ¹ / ₈	3 ³ / ₈ x 4 ³ / ₈	5 x 7	2 ¹ / ₈ x 3 ³ / ₈	2 ⁵ / ₈ x 3 ³ / ₈	2 ³ / ₄ x 4 ¹ / ₂
2 ¹ / ₂ x 3	3 ³ / ₈ x 4 ³ / ₈	5 ¹ / ₂ x 7 ¹ / ₂	2 ¹ / ₈ x 3 ³ / ₈	2 ⁵ / ₈ x 3 ³ / ₈	2 ⁷ / ₈ x 4 ⁵ / ₈
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Offers the Most Complete line of
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THE LONGEST, LARGEST, AND BEST.

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PHOTOGRAPHISCHE MITTHEILUNGEN.

We are now prepared to receive subscriptions for Dr. Hermann W. Vogel's magazine bearing the above title.

The **MITTHEILUNGEN** is published in German and is issued semi-monthly at \$3.00 per year, postage paid. To all of our German photographers and many others this will be considered a desirable opportunity.

The Magazine is published at Berlin. Subscriptions received by

EDWARD L. WILSON,

1125 Chestnut Street, Philadelphia, Pa.

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*THE BEST LENSES FOR PORTRAIT, RAPID LANDSCAPES
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Mr. Böhmke, who has been superintending foreman for Voigtlander & Son for 25 years, has lately brought out the above designated instrument, which is in every respect equal, if not superior, to the "Euryscope," combining a large field, perfect definition and brilliant illumination in the highest possible degree.

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The Standard Quality and Purity of our Chemicals make them the most desirable and reliable for photographic use.

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REFINERS of GOLD and SILVER WASTE.

Waste sent through Stockdealers will receive prompt attention.

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TO MEET THE DEMAND FOR

An Extremely Rapid Plate

I am now making the above new brand (blue label), which is about twice as rapid as my "Extra Rapid" and nearly

TWENTY TIMES MORE RAPID THAN COLLODION.

THIS NEW PLATE COMBINES

EXTREME RAPIDITY,

FINE CHEMICAL EFFECT,

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GOOD INTENSITY,

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And CANNOT BE EXCELLED.

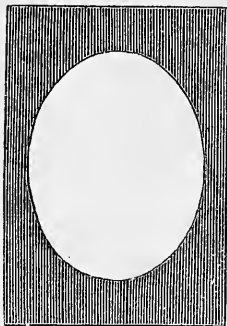
For all cases where EXTRAORDINARY RAPIDITY is desirable and for LARGE WORK these "LIGHTNING PLATES" will, upon trial, prove their superiority over all others.

My regular brand, the "EXTRA RAPID" (yellow label), which is so well known and sufficiently sensitive for general use, *will be kept up to its usual high standard.*

BOTH BRANDS SAME PRICE.

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Are the very best that are made, and are now without a rival in the market. They are clean cut, most desirable shapes and sizes, and made of non-actinic paper, manufactured specially for the purpose. Each package contains 30 Cut-Outs, or Masks, with corresponding Insides, assorted for five differently sized ovals and one arch-top.

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No printer should attempt to make Medallion Pictures without them.

THEY HAVE NO EQUAL FOR QUALITY.

Beware of spurious imitations made of common paper, full of holes, badly cut, and odd shapes and sizes. Ask your Stock-dealer for GIHON'S CUT-OUTS, and see that they are in his envelope, with instruction circular included. The recent packages are composed of an entirely new variety and of a new paper. TRY THEM.

Promenade Size now Ready. Sold Separately at 50 cents per Dozen.

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Is designed for Completely obscuring the Imperfect Backgrounds of Copies, Retouching Negatives, Faulty Skies in Landscapes, Coating the Inside of Lenses or Camera Boxes, Backing Solar Negatives, Covering Vignetting Boards, And for Answering all the Requirements of the Intelligent Photographer in the Production of Artistic Results in Printing.

Wherever you want to keep out Light, use Opaque.


IT IS APPLIED WITH A BRUSH, DRIES QUICKLY AND STICKS.

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NEW DRESDEN
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Although my importations of paper have had a most satisfactory sale, and the old favorite brands will be continued in the market of the same quality, I have a New Brand which I offer for public favor which I believe to be **SOMETHING SUPERIOR.**

☞ \$36.00 A REAM. ☞ A REAM \$36.00. ☞

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Price Lists may be had by intending purchasers on application to us, or to all Photographic Merchants, through whom your favors are respectfully solicited.

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Ross' Portrait and View Lenses.

WE HAVE
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IN STOCK

Portrait Lenses, from 1-4 to 8 x 10.
Cabinet Lenses, Nos. 2 and 3.
Card Lenses, Nos. 1, 2, and 3.
Triplets, Nos. 1, 2, 3, 4, 5, 6, and 7.
Symmetricals. Rapid Symmetricals.

Instantaneous Doublets, all sizes.
Medium Angle Doublets, all sizes.
Large Angle Doublets, all sizes.
Stereographic Lenses, all sizes.
New Universal Lens.

Numerous testimonials pronounce them to be the *best* as well as the *cheapest* Foreign Lenses ever offered to the American Photographer. We will mail price list on application, and promptly fill all orders.

Steinheil's Sons' — NEW — APLANATIC Lenses.

We now have a full stock of these Celebrated Lenses, at the following prices:

No. 1—1-4 size, 3½ inch focus, \$25 00	No. 4— 8 x 10 size, ... 10¼ inch focus, ... \$60 00
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» 3—4-4 » 7 » 45 00	» 6—13 x 16 » 16¼ » 110 00

Nos. 1 and 2 are in matched pairs for stereoscopic work.

We feel sure that at least one of these lenses is needful for the successful prosecution of your business, and so solicit your orders. Always in stock, to suit above Lenses, CAMERA BOXES made by AMERICAN OPTICAL CO., SEMMENDINGER, ANTHONY, BLAIR, etc.

WE KEEP IN STOCK FULL ASSORTMENT OF

AMATEUR PHOTO. OUTFITS

DRY PLATES OF ALL MAKES.

N. P. A. EAGLE and S. & M. PAPER, PER REAM, \$32.00.

Any article needed we can supply, as

WE MANUFACTURE, IMPORT, AND DEAL IN ALL KINDS OF

Photo. Goods, Frames, Stereoscopes and Views,

At prices as low as are consistent with the quality of goods furnished. We are indebted to our customers for the patronage during the past *Nineteen Years*, and our efforts shall be to merit a continuance of it.

Illustrated Price Lists supplied free. Correspondence solicited.

Our Points for 1886.

THIS MAGAZINE WILL BE CONTINUED.

It will be issued Semi-monthly at the old price,
\$5.00 a year.

Several new features will be introduced. Its twenty-two-year editor is engaged for 1886. His personal close care will be given. It will continue to be "*the best of its class.*" It will pay the reader better than any. Every active or amateur not reading it, *loses.*

THE PHILADELPHIA PHOTOGRAPHER intends to help the photographer; to inform him of what the stock-dealer and manufacturer has to sell; to carefully criticise when necessary; to warn the craft against impositions; to instruct the beginner; to interest the skilled employee; to keep the employer informed as to the many changes and wondrous improvements in our most useful art; to promote a healthful feeling among all those connected with it; to represent the interests of all, and to secure a living for the editor who has served the craft for so long a time.

In all these we look for the support and good-will which has followed the career of our magazine for nearly a quarter of a century, and we look for it all the more confidently because it is not published *by* a stock-house, or *at* a stock-house, or *for* a stock-house. If it was, it need not necessarily be ruined; but to publish a photographers' magazine and to keep up a first-class standard of excellence we *must* charge more than when it is used to push merchandise. Understand?

EDWARD L. WILSON, Editor, Publisher, and Proprietor, 1125 Chestnut St., Phila.

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Foreign subscriptions must be accompanied by the postage in addition.

ADVERTISING sheets are bound with each number of the Magazine. Advertisements are inserted at the following rates:

	One Month.	Six Months.	One Year.
One Page.....	\$20.00	\$110.00	\$200.00
Half "	12.00	66.00	120.00
Quarter Page...	7.00	38.50	70.00
Eighth " ...	4.00	22.00	40.00
Cards, 6 lines or less.....	2.00	11.00	20.00

The attention of advertisers, and those having galleries, etc., for sale, is called to our **SPECIALTIES** pages. Terms, \$2 for six lines, and 25 cents for each additional line, seven words to a line, always in advance. Duplicate insertions, 50 cents less, each.

We have added an Exchange Column to our Magazine, wherein photographers having articles for exchange can insert advertisements at the low price of 15 cents per line, or fraction of a line, of seven words to a line.

Operators desiring situations no charge.

OF AGE!

Twenty-one
having
Photo

vice as a Photographic Magazine
ompleted by *The Philadelphia*
in now fully claim to be
OF AGE."

It was born when our art was itself only a stripling, and having grown up with it and lived for it, now comes with confidence to the craft for support during its **Twenty-second year**.

Under the same editorial care which gave it birth and name, it will continue its good work in the interests of the art of Photography, with brighter prospects of usefulness and success than ever before. In looking back upon its past record, the editor and publisher thinks he has won the right to claim

TWELVE REASONS WHY "THE PHILADELPHIA PHOTOGRAPHER" SHOULD HAVE THE PATRONAGE OF ALL LOVERS OF OUR ART, AS FOLLOWS:

1. The photographic studies issued with each number are a great help to workers under the skylight, and well worth the price asked for the whole magazine. Over forty of these studies were supplied last year, and some fine gems are preparing for 1885.
2. The editor having been connected with the art for over one-half of its existence, is wholly in sympathy with the working craft, and well-knows their wants to supply them.
3. Its ability to anticipate the wants of the craft is secured by its connection with the practical men of our art all over the world; and the same long connection creates a ready means of obtaining promptly all that is needed.
4. Its enterprise in taking up and making popular and easy all good processes and measures is proverbial.
5. Its war upon low prices, and its endeavors to lift up the fraternity to better ones, as well as its usefulness in winning the press and the public to a better appreciation of our art, are well known to all.
6. It has always been quick in discovering and exposing frauds, humbugs, and attempts to injure its patrons. It is operated for the good of its patrons.
7. Its long standing as an authority in our art, has won it connection with scientists and scientific bodies all over the world, who send their new things to its editor first, over all of its class.
8. Its circulation is International. There is not a land where English is read that it does not go to. It also circulates in every State in the Union, about as follows:

New England,	21.5 per cent.	Western States,	24.4 per cent.
Middle States,	24.1 "	Canada,	8.3 "
Southern States,	16.4 "	Foreign,	5.3 "

Thus giving the best means of advertising, and thus securing the best circulation among the active votaries of the art.

9. Its form has been adopted by all the other American magazines of our art (all its junior), but its quality and artistic appearance have not been reached by any.
10. Its standing as the leading magazine of its kind, has been maintained ever since it began. "It is the best of its class," say press and patrons.
11. Its success has been a success, though its price is higher than that of any of its contemporaries. The best artists often write, "I don't care how many other journals there are, or how low-priced, I *must* have THE PHILADELPHIA PHOTOGRAPHER."
12. It is the *cheapest* of all, because "the best is *always* the cheapest." You cannot, therefore, afford to do without it.

SUBSCRIBE NOW. \$5.00 a year; \$2.50 for six month; 50 cts. a copy.

It has been our custom for many years, to give old subscribers a *premium* for new subscriptions *sent in addition to their own*. We continue this plan by offering one dollar's worth of our publications for each such additional subscriber for a year. Please do all you can to increase our usefulness in behalf of the glorious art of photography. It is to *your* interest to do so.

For 1885 we have some useful schemes and novelties under way, which will be presented from time to time. Our old subscribers are asked to **renew now for 1885**, so that the January issue will reach promptly. **IT WILL BE A GEM.**

Contributions from both *Actives* and *Amateurs* are invited. Proceedings of Societies are very useful and should be sent promptly.

EDWARD L. WILSON, Editor, Publisher, and Proprietor, 1125 Chestnut St., Phila.

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Operators desiring situations, no charge.

TO OUR
PATRONS AND THE FRATERNITY.

GENTLEMEN :

At the beginning of another year we solicit your attention to our claims for your patronage. We have mastered the difficulties of a trying year, and while we may not come out richer in pocket, we are surely many per cent. richer in experience, and in that respect more able to serve you. We are constantly putting new goods on the market, and it will be our endeavor to give you the best results of our energy and thought; we are young and ambitious to be considered the best and ever progressive, whether we are capable of the honor or not, we must leave it with you to decide. It shall be our aim to give you the best goods rather than the cheapest; good workmen use good tools—for these we wish to cater. We do not publish testimonials, although we have some of the most flattering on our letter-files (all coming unsolicited), believing that intelligent men tire of such useless literature, especially since most flowery and profuse ones are obtained of articles devoid of merit, for the good and the bad they read alike. Our apparatus factory is now, we believe, one of the largest and most complete in the world, the machinery being new and made especially for our purpose.

In our combination with Mr. A. Marshall forming the MARSHALL & BLAIR Co., we believe we have struck the key-note to a plan for furnishing photographers with a plate which will equal any in the market. While our facilities enable us to place them on the market at a modest figure, it has always been our belief that some effort should be made to furnish photographers with a reliable plate at a small margin of profit, owing to the quantity used. In doing this we believe the best interest of the manufacturer, dealer, and consumer would be promoted. To the accomplishment of this end we are laboring, and trust you will give our plate a trial and be convinced we are worthy of our encouragement. In wishing you a prosperous New Year, we would ask you not to forget us or fail to read our advertisements; they will appear monthly in the advertising columns of this journal.

Fraternally,

THE BLAIR TOUROGRAPH AND D. P. Co.,

T. H. BLAIR, Treas. and Manager.

(SEE PAGE 24.)

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(Oct., 1885, 20,000)

BOSTON PUBLIC LIBRARY.

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