21693

ABEL'S PHOTOGRAPHIC WEEKLY

'Entered as second-class matter June 10, 1909, at the Post Office at Cleveland, O., under the Act of March 3, 1879'

Vol. XIX. No. 471 SATURDAY, JANUARY 6, 1917 Price Five Cents $2.00 a year

Watch the work of the man who uses

ARTURA

EASTMAN KODAK COMPANY
ROCHESTER, N. Y.

All Dealers

Paid Circulation: 1,907 owners of studios will read this issue of Abel's Weekly. So will 68 of the largest dealers, and 85 traveling salesmen and demonstrators.

Crisp, Sparkling Negatives with depth of color and fullness of detail are only made on plates of highest grade.

THE BEST ARE MADE ON

HAMMER PLATES

Hammer's Special Extra Fast (red label) and Extra Fast (blue label) Plates for field and studio work and
Hammer's Extra Fast Orthochromatic and D. C. Orthochromatic Plates for color-values.



Hammer's little book, "A Short Talk on Negative Making," mailed free

Hammer Dry-Plate Company

Ohio Avenue and Miami St. : : : : : St. Louis, Mo.



Speed That You Can Use

A fast lens that has to be stopped way down is not fast at all. The

Bausch and Lomb TESSAR Ic,

Is the lens for indoor portraiture. To catch those fleeting changes of expression and unconscious attitudes, which are the most prized remembrances of childhood days, requires an ultra-fast lens such as the **Tessar.** For all work requiring speed the Ic Tessar is supreme. In addition to its great light-transmitting power, it is the equivalent of the IIb Tessar, if used at F:6.3, and has the same depth of focus as other slower lenses when stopped down to their speed. It is a pleasure to answer inquiries on matters photographic. To make intelligent recommendations, we should be given the length of bellows draw, front board dimensions and size of trade name of camera.

Bausch & Lomb Optical Co.

631 ST. PAUL STREET ROCHESTER, N.Y.

NEW YORK WASHINGTON CHICAGO SAN FRANCISCO

Leading American Makers of High-Grade Optical Products.

ABEL'S PHOTOGRAPHIC WEEKLY

A JOURNAL FOR THE PROFESSIONAL PHOTOGRAPHER

Member of Audit Bureau of Circulations

JUAN C. ABEL, Editor — CHAS. L. ABEL, Associate Editor

Published Weekly at 917 Schofield Building, Cleveland, Ohio, by The Abel Publishing Company

VOL. XIX. No. 471 SATURDAY, JANUARY 6, 1617 PRICE FIVE CENTS $2.00 A YEAR

Terms: Two dollars a year in advance. Postage free to all subscribers in The United States, Mexico, Hawaii, Porto Rico and the Philippine Islands.
FOREIGN SUBSCRIPTIONS: Canada, $2.50; other countries, $3.00 per year in advance.
TO PREVENT loss or delay by mail, all communications and photographs should be addressed to Abel's Photographic Weekly, 917 Schofield Building, Cleveland, Ohio.

In Passing By

IN ACKNOWLEDGMENT. This is in acknowledgment of the many kind greetings and good wishes we have received from our friends. It will be impossible to give the names of all who have wished us well while sending us renewals of subscriptions but we have received personal cards, also, from the following:—Mr. and Mrs. Ernest Cramer; Martha and Aileen Harris, the charming little daughters of G. W. Harris; Mr. and Mrs. Pirie MacDonald; Mr. and Mrs. Wm. H. Towles; Mr. and Mrs. Chas. Anthony (Ansco Company; Mr. and Mrs. C. W. Taylor (Hammer Dry Plate Co.); Mr. and Mrs. W. A. Rockwood (Ansco Company); Mr. and Mrs. L. A. Dozer; Goodlander Sisters; Belle Johnson; Mr. and Mrs. A. E. Anderson (Tarkio, Mo.); Mrs. C. R. Watson; Mr. and Mrs. John I. Hoffman (Sec., P. A. of A.); S. L. Stein; E. L. Mix (Pres., N. Y. State Society); Ben Larrimer; A. A. Chilcote (Chilcote-Sargent Company); Frank Chambers (Editor, the Bulletin); William Shewell Ellis; Jim Schriever; L. L. Higgason (Asheville, N. C.); Sherman Danby (Boye Studio, San Francisco); Thos. J. McKearnan (Mrs. Melvin Sykes Studio); W. J. Lafbury Company; Steenson and Van Vlack; F. P. Rehmeier (Keokuk, Ia.); J. M. Maurer (Galveston); Fred Boothe (Toronto); J. J. Flaherty (Pittsburg); Richard Salzberger (Hammer Dry Plate Co.); Herman Sievers (Sweet, Wallach & Co.); Wilfred French and A. H. Beardsley (Editors, Photo Era); Jimmie Evans (A. M. Collins Mfg. Co.); "Billy" Rau; Allison and Hadaway Corporation; Al. Wunderlich (John Haworth Co.); Alfred Clements (Willis and Clements); Jos. Knaffl; D. D. Spellman; Thomas Coke Watkins (Editor, Photographic Journal of America); Clint Shafer (Hammer Dry Plate Co.); C. H. (Pop) Wells (Zimmerman Bros., St. Paul); John Tennant (Editor, Photo-Miniature); F. J. Trost (Toledo); C. H. Claudy; O. H. Peck Co. (Minneapolis); J. A. Dawes (Wollensak Optical Co.); Herbert W. Medlar; Herman Boers (L. Black Co., Detroit); The Crosbys (Youngstown, Ohio); I. Buxbaum; J. Chester Bushong; Mr. and Mrs. F. L. Fadner (Neenah, Wisc.); A. D. Childs (Cooper Hewitt Electric Company); A. T. Proctor; Photo Products Co. (Chicago).

And then, as we go to press, come cards and greetings from Ryland W. Phillips (president of the P. A. of A.), Clarence Stearns, F. Schmid (manager C. P. Goerz Am. Opt. Co.), Mrs. Emma Root, Julius Strauss (with a

real portrait this time instead of a cartoon), "Pop" Core, H. Lee Bell, Sammy Lifshey, George Harris, Mr. and Mrs. Frank Scott Clark, R. A. Heath (Pontiac, Ill.), E. H. Gloege (Monroe, Wisc.), W. H. Littleton (Muncie, Ind.), Tony O. Babb (Manager Howland and Dewey, Los Angeles), Gerhard Sisters, E. Poole (St. Catharine's, Ont.), Mr. and Mrs. P. F. Murray (Minneapolis), and Wade (The Baby Photographer of Youngstown, Ohio).

As we said last week, the greeting cards reaching us this year run largely to the simple but artistic order, though, of course, the calendar card is always with us.

To all—Our very best wishes, many thanks, and the same to all of you.

Display Advertising

IT is for the best interest of the manufacturer and dealer that the photographer should be both busy and prosperous. That they should be interested in all that contributes toward the welfare of their customers is not benevolence or charity, but broad-minded business judgment of the best type. It is a self-evident fact that buyers who are large users of material and of established credit and contented with their business outlook are infinitely pleasanter to do business with than small buyers of doubtful credit and a dissatisfied, complaining habit. Therefore, the dealers and manufacturers are quick to notice any move that contributes toward the welfare of the trade and acts as an impulse and stimulant to business.

Photographers must advertise. There is no getting behind that fact. What advertising they do must bring results commensurate with the thought and money expended on it, and these truths have received a great deal of attention from some exceedingly clever men who are wise in advertising methods. All advertising pays, but some is profitable and some is not, so that the advertiser of small means who expends a dollar and can not trace but fifty cents' return on the investment, must know, if he knows anything about his business, that this particular bit of advertising has brought some returns, but not enough to make it profitable in its immediate returns. The lasting effect may bring in business for a year or more, so that it is not lost energy. But the immediate effects are what supply the confidence and energy that encourages a man to persist and push. As there is rather a lack of confidence among photographers of the effect of advertising, we welcome the growth of a new idea that has been found to be both economical and quickly profitable, and that is the special display idea that has been developed so rapidly during the past two years.

In many of the large cities, the photographers have organized for the purpose of improving the business in photographs and the medium of advertising that has proved itself to be the most economical and effective is the public display of pictures. The Louisville Photographers' Association have held two exhibitions, and while they, as an organization, have tried some other forms of publicity, they have proved to their satisfaction that the exhibit is far and away ahead of any other method. The immediate results are quite apparent, and the lasting effect carries over a long period. In several cases it has come to light that orders placed this Christmas were the direct result of the exhibition held in November, 1915, and that advertising did bring its fruitful results until just one year later. Such evidence as this commands earnest consideration, for it demonstrates that for the photographer here is a method of advertising that is at once dignified, immediately productive of business, and effective in its influence over a long period. This fulfills every requirement of a profitable advertisement, and as such is bound to have consideration.

Where a number of studios in a large city can combine and make a big display that will attract large numbers, it might be argued that the same scheme was not appropriate nor practical for the small town where there might be but one or two photographers. This is by no means true. The essential idea having been pronounced correct and good, it then requires only that it may be adapted for use in different ways that will bring it within the reach and scope of the photographers in smaller towns, for the problem of profitable advertising is just as serious for them as it is for their broth-

Special Supplement to Abel's Photographic Weekly
Vol. XIX, No. 471, January 6, 1917
Sample Studies No. 132



By N. Levinsohn, Fulton Studio, Baltimore, Md.



Home Portrait by L. O. Wirsching, Danville, Ill.



By Howard D. Beach, Buffalo, N. Y.



By Miss Katherine Jamieson, Pittsburg, Pa.

SERMON IN BRIEF No. 194

Special to Abel's Photographic Weekly

PAY OF THE ABLE MAN

BY CHARLES GRANT MILLER

THE president of a New York trust company says that his salary of $100,000 a year was awarded as "an indication of appreciation of able management."

There is question as to the "able management." But there is no question to the fact that infinitely superior and more useful men than any trust company president are not so highly paid.

The president of the United States, who more than any other man controls the political, commercial and social destinies of 90,000,000 people, gets $75,000 a year.

Of highest importance to society in a republic are its educators. The pay of the mass of these character builders varies from $200 to $1,500 a year. College professors average about $2,000. A few teachers of world-wide fame, in Harvard, Yale and Chicago, receive from $6,000 to $10,000.

There are said to be only three congregational clergymen in this country—all of national fame and immeasurable influence, who receive more than $5,000 a year. An Episcopal bishop receives from $3,000 to $12,500. Great city parishes in a few cases pay clergymen as high as $10,000.

Emerson, America's greatest philosopher, who has done more than a million trust company presidents to bring the public to better thinking and happier living, lived upon an income of $1,000 a year, eked out by lecturing, while writing his poems and essays.

ers in the cities. How, then, can the plan be modified to fit the conditions encountered by the photographers in the smaller places?

The first suggestion comes from the West, where there is being spread the gospel of "Print Exhibit Day" among the smaller towns. We have the reports of two towns where the plan has been tried sufficiently long enough ago to form some idea of the results. In one case there was just one photographer in the town, and he worked out his plans to fit his own needs. He changed the entire arrangement of his reception room, hall and operating room, so that the prints could be exhibited to advantage and lighted so as to attract. This required quite a little thought, but the effort produced the most startling results, for the general character and appearance of his studio was so changed that it excited the most pronounced comment and admiration. By a newspaper advertisement and special invitation, the good people of the town were informed of the display, and the results were beyond all expectation.

The complete transformation in the appearance of the studio supplied the stimulant for arousing enthusiasm and interest. The attractiveness of the pictures created the desire, and the attentiveness of the proprietor made the buyer feel under obligations. The new business obtained was not at the expense of any competing photographer, but was a bid for business in competition with the jeweler, the dry goods store, the novelty store, etc.

The other instance was a town where there were three studios. There was no attempt at a combined exhibition, but it was arranged that each of the three would make their exhibits during the same week.



R. F. Pratt, Savannah, Mo.

The BEST ADVERTISING "STUNT" I EVER TRIED

A Child Portraiture Booklet

R. F. PRATT, of Savannah, Mo., found his best advertising stunt in the booklet on child portraiture suggested and laid out in "Practical Studio Advertising," our recent book of advertisements for photographic studios. The booklet as gotten up by his printer consisted of four pages and cover, the inside white stock, and the cover tan, with a photograph tipped on to the front cover. He used the wording and layout as in our book. For the picture on the cover he used a photograph of the daughter of the Superintendent of Schools, a child well known and exceptionally well liked. Mr. Pratt goes on as follows:

"I think this little book has brought in more sittings and created more favorable comment than any advertising I have ever done. The cost, considering the results, was comparatively nothing. The printer charged me six dollars for two hundred booklets. The prints for the covers cost about two-fifty, and the postage two dollars, making a total of about ten dollars. I can trace twelve sittings directly to the first hundred books I mailed. How many more were indirectly influenced, I am, of course, unable to tell."

Other readers who would like to make use of this booklet as given in "Practical Studio Advertising," may be interested in the fact that Mr. Pratt's printer—G. W. Burstrom, of Savannah, Mo.—Will make them up at a price of $5.00 for the first hundred, or $6.00 for two hundred, provided there is no extra composition. Whether this includes tipping on the prints he does not say, but we presume not.

Why Not Try It Yourself—This Means YOU

It was made a "Photograph Week," and while each studio made its own plans and its own display, the fact that all of them had displays on set the town talking about photographs in a most unusual manner. The keen rivalry of the studios was commented on, and their push and up-to-date methods received the widest praise. But the point of the story is that this keen competition was along perfectly legitimate lines and in a measure co-operative. Prices were not cut, nor special inducements offered. Each photographer hustled and planned to get the most he could out of the exhibit,

and to attract the most attention. The public went from one to the other, and the effect was seen in a quick increase in business for each one of them. There may have been some customers exchanged, but it was an exchange, and not a steal. Trade conditions were not upset, yet each one got the benefit. It exemplified the truth of the motto that competition is the life of trade, without warping the true meaning of competition. It was rather the stimulation of trade through competitive effort than the ruinous competition that creates enmities and ultimately spoils the business. It yielded a profit, both immediate and lasting. This is the very essence of good advertising.

We repeat that we favor most strongly any plan that will increase the business and profits of the photographer, and while we can lay no claim whatever to having had any part in originating this idea nor planning its adoption, we commend it unreservedly for the reason that it appeals to us as the most unique and effective method of presenting to the public the art of photography. We feel that it is capable of great future development, and will affect not only the actual business of the studio, but will result in improving the appearance and fittings of the rooms, so that they will prove more attractive to the public eye. It is full of the greatest possibilities, and we propose to endorse the plan whole heartedly and enthusiastically. It is the big idea for the new year, to be fostered and encouraged to the end that 1917 will prove a big milestone in the business career of many of our customers and friends.—*Trade News.*

About Focussing

TO old photographers it may seem that all that could be said about focussing has been said over and over again, and this is, perhaps, true, but at the same time there are many young workers who are very weak in this operation, and who fail to get the best work out of an expensive lens through ignorance of its capabilities and limitations. We do not propose to deal with focussing by scale or depth of focus, but simply to give such instructions that will be helpful in ordinary studio and outdoor work.

The first point to be touched upon is the surface of the ground-glass, which is not always as satisfactory as it might be. If at all granular, it should be replaced by a finer sample. Acid-etched glass has been recommended, but the peculiar grain given by the etching does not seem so satisfactory as the mechanically-ground. Before using, a little grease, say olive oil or vaseline, should be rubbed over the ground surface, as much as possible being polished off with tissue paper. This removes the white powdery appearance and makes the image much more easily visible. A focussing eyepiece or magnifier is a great help to most people, as it enables the operator to judge more accurately the degree of definition on various planes and to do so quickly. In studio work the desideratum is to work with as large an aperture as possible, which can only be effected by a careful study of the peculiarities of each type of lens. For example, a portrait lens and a modern rapid anastigmat require totally different handling when dealing with standing or sitting figures, the difference being due to the form of their respective fields. The young photographer who finds that he cannot get uniform definition cuts the knot by reducing the aperture of the lens. He thereby not only prolongs the exposure, but affects the quality of the image, which loses in plasticity when a small stop is used. When photographing a subject on one plane, such as a standing figure, the image produced by a portrait lens can be brought to uniform sharpness only upon a concave surface. As our plate is flat, we find either that the head and feet are sharp and the waist unsharp, or *vice versa.* Here there is nothing to be done but to stop down the lens, although, if the lens has sufficient covering power, a little improvement may be effected by lowering the rising-front so as to bring the axis of the lens nearer the top of the picture, and swinging the back to bring the feet into focus. We have seen a satisfactory 8 x 10 full-length produced in this way, when another photographer had failed to get a 5 x 7 with the same lens. With a sitting figure the round field of the portrait lens is a positive advantage, as the head and knees, falling on different planes, come naturally into focus on the flat plate.

With anastigmats the case is different. Here we have even definition over a flat field, and the standing figure is perfectly rendered at full aperture, while the swing-back is needed to give satisfactory sharpness with a sitting pose. The side-swing may be used with either type of lens, but great discretion should be excercised in its use, as it naturally tends to make the perspective more sudden by bringing a nearer

position of the subject into focus on a slightly larger scale. It is always advisable to focus at the aperture with which the exposure is to be made, not only on account of the possible presence of spherical aberration, but also that one is then certain as to the actual degree of definition which will be present in the negative.

In architectural work, indoor or outdoor, less skill is necessary in focussing, as objects at different distances have to be taken at the same time, and except with very small sizes, large apertures cannot be used. It is, however, very necessary to remember that many good rapid and wide-angle rectilinears and symmetricals have a small amount of outstanding spherical aberration, which causes an alteration of the position of the image, when the size of the diaphragm is altered. Hence, with such lenses, the final focussing must be done with the aperture which is to be used for exposure: with one exception, that of large rectilinears, in which the best results are sometimes obtained by focussing at f/16 and using either a larger or smaller aperture as may be desired for the actual exposure.

If a color-screen or ray-filter be used, it should always be put in position before the final focussing. If possible, such screens should be placed behind the lens instead of in front, as not only do they appear less likely to affect the definition, but there is less risk of their introducing internal reflections.

Focussing upon clear glass is sometimes recommended, and for some scientific work, especially where the illumination is weak, it has its advantages. There is, however, always a danger of getting perfect definition on a plane different from that of the focussing-screen, unless the precaution is taken of fixing a small piece of tinfoil or very thin black paper on the surface of the screen. If when the image appears to be in focus and, upon examining through an eyepiece, it also appears stationary with regard to the edge of the paper when the magnifier is moved up and down, the image will not be in focus upon the plate.

It may be asked why all this trouble should be taken to focus at a large aperture whn th same result can be obtained by stopping down. To this we can only say that if only one larger-sized aperture be used, a 250 H. and D. plate becomes equal to a 500 H. and D., and if such a plate exists, a 500 becomes 1,000, with no deterioration of quality.

One necessary preliminary to the use of large apertures is a careful testing for coincidence of the register of the focussing-screen and plate holder. This is easily done with the aid of a stout lath with an ordinary screw fixed in the center, used as a depth gauge on both the focussing-screen and a plate *in situ* in the plate holder.

'TIS HERE—MAYBE!

We note that Photographer Everett E. Neukom, of the Dayton Electrical Laboratories, Dayton, Ohio, is to conduct a class in photography once a week in the local Y. M. C. A.

We are still selling copies of "The Balance of Light and Shade," Will Towles' well known lecture in book form. The price is $1.50 bound in cloth. Better order your copy soon.

After several weeks in a hospital and three operations, E. E. Doty is back at his studio in Battle Creek, Mich., and hopes now to be able to tackle the problems that are confronting him as president of the Ohio-Michigan Association. We wish him luck now and hope that this year will fully make up for all the losses he sustained by being helpless during the Christmas season.

We understand that a celluloid factory has been erected in Russia, at Kalino, on the Perm Railway. A consular report also states that attempts are being made to manufacture optical glass in Russia, and that difficulties are gradually being successfully surmounted.

After an interval of nineteen months, another issue of "Camera Work" has been published by Alfred Stieglitz.

Jim Schriever, of Scranton, Pa., writes us that Mrs. Schriever, after spending some time at a hospital, has been taken home, with very small chances for recovery. We are very sorry, indeed, to hear this, and sincerely trust that Mrs. Schriever will manage to regain her grip on good health.

J. W. Chase, of Mt. Olive, Ill., photographer in that city for many years, died recently at the age of 56. It is expected that his studio will be carried on by his widow.

Sweden has prohibited the importation of photographic dry plates.

The Campion Studio, of Spokane, Wash., was damaged by fire on December 15th, with a small loss.

The Eastman professional school is coming back to Cleveland in February with a brand-new program, very practical, and one that no photographer can afford to miss. The dates are February 20, 21, and 22.



By Clarence Stearns, Rochester, Minn.

Single - Solution Non - Acid Permanganate Bleacher for Sulphide Toning

BY T. H. GREENALL

WITH the use of permanganate as a bleacher in a sulphide toning, either with hydrochloric acid or with salt and sulphuric acid, many workers are now familiar. The present method had its origin in the accidental omission of the acid in the mixture of salt and sulphuric acid, a mistake which was at once made evident in the deep staining of the prints. On clearing and sulphiding, however, the prints were found to be fully toned, and of a purer brown with less of the purple than is usually obtained in sulphide toning. Of course, in the case of a weak print, the purple tone may be an advantage, but for a good print, and especially for sunshine effects, woodland pictures, and portraits, the warmer and purer brown will be preferred by many.

The chief advantage, however, of dispensing with the acid is that the working mixture keeps perfectly in a condition ready for use, and may be used over and over agaiin. This greatly facilitates dealing with a large number of prints, as one print after another may be put in the same bath —those which are ready being taken out and others put in, provided, of course, the total bulk of solution is sufficient.

The formula adopted is as follows:—

Solution of potass. permanganate
(2 grains in 1 oz) . . . 4 to 5 fluid ozs.
Common salt . . . . . 1 oz.
Water to make . . . . . 20 ozs.

It will be observed that this contains a little under half a grain of permanganate to the ounce and about fifty times as much salt. The addition of half an ounce of powdered alum quickens the action, but is not necessary. The salt should be ordinary lump salt. Some of the fancy table salts contain potato starch and are unsuitable. The above quantity of solution is ample for eight or ten 10 by 12 prints, or, say, 50 post-cards. It costs less than a cent, and the waste is still of use as a deodorizer for the waste sulphide.

The prints do not bleach out as in acid permanganate, but the image changes from black to dingy brown grey, and as soon as the deepest shadows are seen to be affected by the solution the bleaching may be regarded as sufficient. With fresh solution the time varies with the character of the print from two to five minutes. Short bleaching is the best for weak prints lacking in depth in the shadows. Longer bleaching gives the warmest tone, but after the shadows are distinctly veiled over doubling the time in the bleacher makes little if any appreciable difference in the final result.

With acid permanganate it is customary to sulphide the prints direct as taken from the bleacher, and clear afterwards, but with the non-acid solution we must reverse the process, and clear before sulphiding. The clearing bath must not be too strong, nor contain excess of sulphite, nor acid sulphate, and as there is a possibility of some continuing action it is well to use hydrochloric acid, or salt in all cases. The following is perfectly satisfactory:

Diluted hydrochloric acid (1 in 5)	2 fluid ozs.
Sol. of common salt (1 in 10)	1 fluid oz.
Water to make	20 ozs.

To each ounce of above solution add, *at time of using*, not more than 20 or 30 minims of a 1 in 5 solution of soda sulphite, i. e., 1 oz. to 20 ozs. The clearing solution may be used until it gets too slow, and must then be thrown away—*not strengthened.* Clearing takes about half to one minute, but five minutes have not been found injurious.

In dealing with many prints the simplest procedure appears to be to have three dishes, the first containing water in which the prints are to be rinsed on taking them from the bleacher; the second, clearing solution in which the prints must remain until perfectly white back and front, with more or less of grey image remaining; and the third, water in which the cleared prints may remain until a convenient time for sulphiding. Before sulphiding, the prints should, however, be rinsed in three changes of water, occupying about a minute, to get rid of the products of the clearing bath.

An instructive experiment is to take a piece of unexposed bromide paper and fix it out in the usual fixing-bath for the usual time. Wash for at least five minutes—noting the time—then pass the paper through the bleacher, etc., and finally sulphide. The bromide paper should be as white after as it was before sulphiding. This shows how short—with permanganate—you may cut the washing after fixation. It may also reveal unsuspected causes of stain.

Sulphide should always be freshly dissolved, and 2 grains to the ounce is amply sufficient. A good test is to treat a piece of *unfixed* bromide paper with the solution. It ought to be instantaneously stained a deep brown black.

Optical Glass: A Brief Historical Review

THOUGH photography is not responsible for the introduction of optical glass, yet it affected its manufacture to a considerable extent, as it imposed special conditions that otherwise need not have been considered. Different varieties of glass are needed for use in different instruments, and photography has demanded a much higher degree of chromatic correction than was required for other purposes, while the necessity of securing a well-defined image over a large field has imposed a fresh condition requiring other special types of glasses. The all important distinction between optical and other or ordinary glass is, however, not merely one of composition but one of quality; it must be perfectly homogeneous and free from striæ. The method of producing such glass was only discovered about 1807, and its successful manufacture only accomplished about 1814, Guinand, a Swiss, being credited with the first conception of the method, and Fraunhofer, a Bavarian, with the development of its application. Through Guinand's sons the secret of the method of manufacture found its way into France and eventually into England. The manufacture of optical glass in the former country began to be important about 1829, and in England (by Chance Brothers) about 1848, and these two countries rapidly secured the lead in the industry. Prior to the discovery of the right method of making optical glass opticians had to be

The New Developer:

KODELON

(Paramidophenol-Hydrochloride)

An economical and highly successful developing agent, used in connection with Hydrochinon, for all developing-out papers.

It bears the Eastman Tested Chemical Seal.

THE PRICE

1 oz. bottle,	$ .85
¼ lb. "	3.15
½ lb. "	6.15
1 lb. "	12.00
5 lb. cans,	59.50

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

All Dealers'

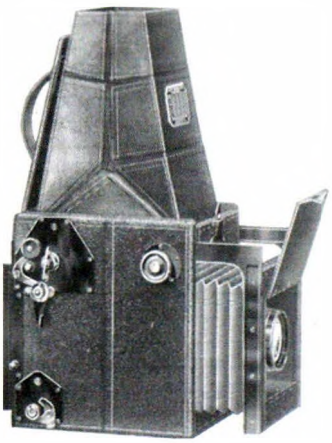
content with merely selecting the best samples of glass they could find from material made in ordinary fashion, in consequence of which only small lenses could be produced. The discovery of the right method of manufacture enabled Fraunhofer to produce lenses of nearly 10 inches diameter, while the further improvements made by Messrs. Chance Brothers in England led to the production of 29-inch lenses in 1855.

While these manufacturing developments were taking place various experiments were also being made in respect to the composition of glass. Just about the time when Fraunhofer succeeded in mastering the mechanical details of optical glass-making he also discovered a method of testing the optical qualities of glasses of different composition, and of expressing those qualities in figures. In 1804 Wollaston discovered the black lines in the solar spectrum, which were afterwards called Fraunhofer lines. In 1814 Fraunhofer investigated the same subject much more closely, and, with the aid of these lines, contrived his method of spectroscopically testing and definitely describing the optical qualities of glass, whereupon he promptly set to work to produce and examine new varieties. It should be understood that up to this time only two varieties were in use for optical purposes, crown and flint glass, and while both were used for the purpose of producing achromatic lenses, the manner in which they were used was more or less empirical in the absence of exact measurements of their optical qualities. With regard to the discovery that a combination of crown and flint lenses could be achromatic, Dolland is generally assumed to have been the originator in 1757, though Chester Moor Hall produced the first achromatic telescope in 1733. Properly the credit belongs to Hall, but he was a gentleman of independent means living in Essex and not in any way interested in the matter of precedent. He was a lawyer and mathematician, not an optician, and appears to have been quite content to let Dolland reap the credit of being the first discoverer of the principle and the advantage of securing the patent rights. Out of this discovery eventually grew a demand for more varieties of glass, for with simple crown and flint only a limited correction was possible. At first the only need was for visual correction, that is the bringing together of the more visible rays of the spectrum. Photography when it appeared demanded more. It wanted brought together both the visible rays for focussing purposes, and the invisible actinic rays, so that visual focussing should suffice to produce a sharp photographic result. Color photography has made further demands, as it requires perfect correction for the red, green, and blue-violet rays, together with the more readily visible ones. Practically, color work wants the lens to be corrected for the whole of the visible spectrum, and such a result cannot be brought about unless we have glasses that differ as regards their effect in the same proportion throughout the spectrum. Ordinary crown and flint do not do so, and therefore with them only a limited series of colors can be brought together. Hence it was necessary to search for other kinds of glass possessing the required proportionate dispersion.

Fraunhofer, having found a means of testing glass, set about this task, but his early death stopped further progress. Here it may be as well to deal briefly with the composition of glass. Speaking generally, glass is essentially a compound of an acid, an alkali, and a metal. The usable acids appear to be limited to silicic, boric, and phosphoric, while the possible metals are numerous. Ordinary crown glass is a silicate of soda and calcium. Ordinary flint glass a silicate of potash and lead; while an intermediate type contains barium in place of lead or calcium. Barium (or baryta) has been used in place of lead since 1830, but not especially for its optical qualities, merely as a substitute for the more expensive lead. Flint glass (or crystal glass) was introduced in England in the seventeenth century before there was any optical demand, and lead was a constituent of glass in very early ages before the lead-potash or flint combination was invented. We may look upon crown as ordinary quality of glass, and flint as an extra fine quality of glass, devised especially for high-class table-ware. It was not until long after the introduction of flint glass that its optical qualities became recognized or of any importance.

The deficiencies of flint and crown achromatic combinations were recognized early, and attempts were made to substitute liquid lenses for flint. According to Coddington, Dr. Blair used a lens filled with solutions of ammoniacal and mercurial salts with very great success, while Professor Barlow used a lens filled with "liquid sulphuret of carbon," but, obviously, the problem could only be solved satisfactorily with glass. Fraunhofer made and tried various kinds of crown and flint glass, including a boro-silicate flint in which both boric and silicic acid were combined with lead and alkali; also a crown glass in which probably potash was used. About the time of Fraunhofer's death, or soon after, Faraday also produced a boro-silicate flint glass. A Frenchman, Maes, produced a zinc crown, apparently a boro-silicate zinc. Glasses containing fluorine

The Revolving Back Junior



The Revolving Back Junior makes 2¼ x 3¼ pictures on roll film, plates or film packs. It is fitted with the Graflex Focal Plane Shutter operating at any speed from "time" to 1-1000 of a second. When you look in the focusing hood, you see the image right side up, the size it will appear in the finished picture, and this image remains brilliantly visible up to the instant of exposure.

The back of the camera revolves, enabling the user to make either vertical or horizontal negatives without turning the camera on its side.

SEND FOR CATALOG

Folmer & Schwing Division
Eastman Kodak Co.
ROCHESTER, N. Y.

and thallium were also tried in France, while in England Harcourt and Stokes experimented with boro-phosphate glasses, and also discovered the fact that boric acid lengthens the red end of the spectrum. Dr. Hopkinson followed their example in this country, while a magnesia crown glass was produced by Schoeder, but the difficulties and expense of the work handicapped and discouraged all experimenters on a small scale, and little real progress was made. It is however, evident that the possibilities of various glasses were realized and a fair variety tried, while all that was wanted for further progress was the necessary capital and means for carrying out a full investigation. There is no reason but inertia why this should not have been done in England, but the German Government was far-seeing. When Abbe and Schott showed their willingness to undertake the work at Jena, a liberal Government grant enabled them to carry the matter through, and as the result of a vast number of trials and tests they produced glasses well adapted to the production of achromatized lenses.

In the meantime another requirement had cropped up. In 1829 Coddington published the optical condition governing the production of flat field anastigmats, the importance of which was only manifested later when photographic lenses became necessaries. Fourteen years afterwards Petzval, of Vienna, rediscovered this condition (or else followed up Coddington's work, it is not clear which), which was then known as the Petzval condition. This condition, however, could not possibly be fulfilled with ordinary flint and crown glass, which fact both Petzval and von Seidel pointed out. The thing looked as if it would always be impossible, and no attempt was made to conquer the difficulty until Abbe and Schott began their work. They tackled this problem as well as that of producing glasses for more perfect achromatic correction, and solved both more or less completely. Thus practically all the requirements of the optician in regard to material were met, and big developments in optical apparatus became possible. The example of Abbe and Schott was followed closely by Messrs. Chance in this country, also by M. Mantois in Paris, and at the present day optical glasses of great variety are obtainable. It should be noted that Fraunhofer should fairly receive the lion's share of the credit due to those who have helped to develop optical glass. If he had not died very young he would probably have seen the thing through. The later work has been much simpler that his, and has depended mainly on the provision of money and time sufficient to complete a very laborious and more or less mechanical task. Practically the same materials are used now as were used by him and by the other early workers, and the main result is that their use has been systematized and reduced to formulae, while manufacturing methods have naturally advanced and improved very materially.

Criticisms of This Week's Supplement

BY G. HANMER CROUGHTON

THE study of expression (as I suppose it is) by N. Levinsohn, Baltimore, Md., is very successful in the rendering of flesh tones. It is a strong composition. The hair is a trifle blocky and the white fabric on the dark dress too edgy, particularly at the bottom of the picture. The eyes are carried along the edge to the bottom, where they are carried right out of the picture. The hand is well posed and is most beautiful both in shape and texture.

A very successful child home portrait is the one by L. O. Wirsching, of Danville, Ill. The action is very childlike and the tone values of flesh and drapery are good. One cannot well criticise home portraits, as the photographer has not the control over surroundings that he has in the studio. I can only say that if the strong line of the white dress at the bottom could have been subdued and the Japanese vase could be lowered in tone so as not to be so insistent, the picture would be improved.

Mr. Beach is, I suppose, not to be blamed for the fussiness of the lady's dress. We can only blame Dame Fashion, but those ruffles certainly demand more attention than they are worth. The face appears to me to be over touched. It is some polished material, not flesh, and that spot of light on the background amid the blackness is not only too insistent but makes the outline hard against it.

Roses and a Girl would be my title for Mrs. Jamieson's picture. With everything else in quiet harmony flesh tones, drapery and background, even the hat, that might easily have been troublesome kept in its place, well spaced and good manipulation, yet you see those roses first, last, and all the time. You try to see the face and your eyes are drawn down from it to the roses.

"BRITISH JOURNAL ALMANAC" 1917
Ready about February 10th
Contains a fund of valuable photographic information; tables, formulae, making it the photographer's daily compainion.
PRICE—Paper edition - 50c
Cloth edition - $1.00 Postage extra according to Zone.
American Agents:
GEORGE MURPHY, INC.
57 East 9th St. NEW YORK

"CALCARD MOUNTINGS"

ARE MADE BY

CALIFORNIA CARD MFG. COMPANY

SAN FRANCISCO, CALIFORNIA

Our 1917 Sample Line represents the very latest

NEW SHADES - QUALITY MAINTAINED - NEW STYLES

You will soon receive notice when our representative will have the pleasure of calling on you. Do not order until you see the most beautiful line of samples ever submitted to you.

"CALCARD MOUNTINGS" stand for "EXCLUSIVENESS"

EASTERN REPRESENTATIVES

M. M. FREY . . 30 E. Randolph St., CHICAGO. ILL.
H. L. BURD - - 3735 Grand Central Terminal, NEW YORK, N. Y.
W. A. LEONARD 3735 Grand Central Terminal, NEW YORK, N. Y.

TWO THOUSAND

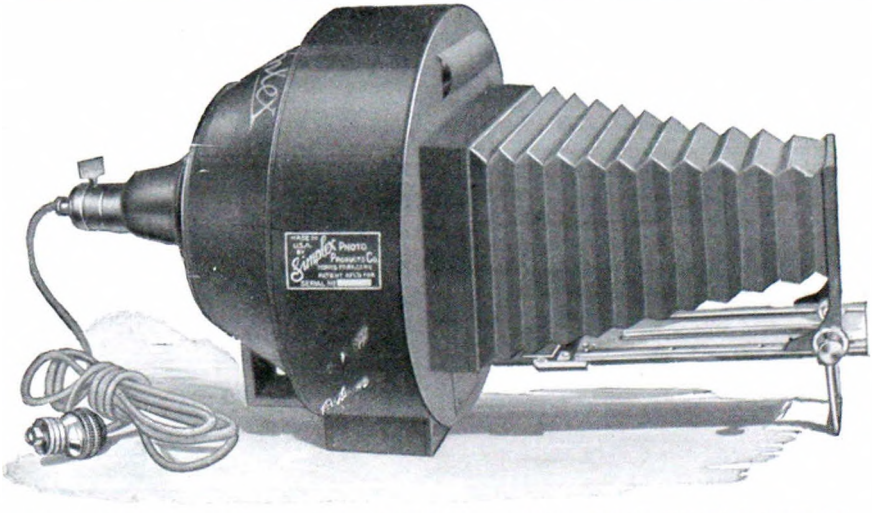
of the best photographers in America belong to the

Photographers Association of America

Two Dollars and Twenty-five cents pays dues for one year.

For further information write

Jno. I. Hoffman, General Secretary, 12th and F. Sts., Washington, D. C.



NO CONDENSORS,—NO CARBON ARC, YET MORE EVEN ILLUMINATION OF NEGATIVES.

The most compact and efficient enlarger made. Constructed entirely of metal, fitted with a No. 3 Multiflex mirror reflector. Accommodates plates or film up to 5 x 7 inches in size.

Send for catalogue describing and illustrating the complete line of Multiflex mirror reflectors and enlarger. Also our Northern Lights for Studio illumination, used by Garo, Strauss, Pierce, Gerhard Sisters and hundreds of others.

SIMPLEX PHOTO PRODUCTS CO.

RICHMOND HILL, L. I., NEW YORK.

Metol and Amidol Poisoning

NOT much is known about diamidophenol (amidol) poisoning, but here follows a formula which one of our correspondents sent us some time ago as being of great benefit in such cases:—Camphorated spirit 1 oz., glycerine 1 oz., carbolic acid 20 drops. After washing the sore places this mixture should be rubbed over. Here are also two other prescriptions, the one a lotion and the other a salve, which are the recommendations of Dr. Beers, a well-known skin specialist. These were published some five years ago in reference to metol, but it is very often found that what will be of benefit for the one developer is also of service for the other:

LOTION

Acid carbolic	40 grs.
Powdered calamin	60 grs.
Zinc oxide	2 drs.
Glycerine	2 drs.
Lime water	1 oz.
Rose water to make	4 ozs.

The lotion may be applied during the day and a salve by night, covering the parts with a little absorbent cotton and a light bandage or glove-finger. When the disease arrives at the chronic form, where the skin peels off and a denuded area exists, the use of a soothing ointment is recommended.

SALVE

Acid salicylic	15 grs.
Acid boric	1 dr.
Powdered starch	2 drs.
Zinc oxide	1 dr.
Petrolatum	1 oz.

If cracks form on the finger ends or the skin remains rough and scaly, use one of the above salves at night, wash off in the morning, and, after careful drying, apply flexible collodion with a small camel-hair brush. The collodion serves as a thorough protective during the day, and allows one to dispense with bandages, glove-fingers, etc. At night a little ether will remove the collodion preparatory to applying the salve. Many chronic cases heal nicely under flexible collodion alone. Do not apply the collodion too thickly, lest it cracks and the cracks extend into the skin. Always wash off one layer with ether before applying in order to prevent cracking later.

Moving Lamps or Moving Sitter

SHOULD the electric light be fixed or movable? is a question often addressed to us by those who contemplate an installation—a question, like many others, which cannot be answered by a direct statement. Much depends on the class of work done and the time which can be allocated to each sitting. Much also depends on the type of lighting and of lamp employed. In general, we should say lamps of the arc type are better fixed in definite positions, preferably behind some form of artificial window on which blinds may, if necessary, be manipulated in the ordinary way. One great advantage of such a method, which may, of course, be adopted equally well with the nitrogen Mazda lamps, is the freedom from obstruction of the floor space and the keeping out of sight of the machinery, so to speak. Further, we are inclined to think that movable lamps encourage some operators to "fiddle about" in a way that is exasperating to many sitters, and that costs more in damaged expression than is gained

The ONLY SILENT STUDIO SHUTTER

CONLEY CAMERA CO.
Rochester, MINNESOTA

FOR SALE BY ALL DEALERS

Stanley made a hit at the Convention this year, painting backgrounds and tapestries to order. Stanley will paint your old grounds over in your own studio, or paint your studio walls for background or decoration purposes. Stanley's six-in-one screen, the very latest. Write at once so Stanley can arrange his Fall and Winter route to take in your studio. Stanley Bros., 642 Cherry Street. Grand Rapids, Mich.



The New "IMPROVED PORTABLE SKYLIGHT"

"Best by Test"

Sold on a GUARANTEE

The machine that is recognized at the conventions.

Two Sizes
Larger $35 — Smaller $25

Complete Machine as shown in cut weighs 10½ lbs.

The SHOBERG CO.
Sioux City, Iowa

SELL LARGE PORTRAITS AND MAKE MORE MONEY

H. D. BRIDLE
THE PHOTO-ENLARGER
1034 Arch Street Philadelphia, Pa.
Over 20 years at the same address

CLARK & FREED
Quality Enlargements
Write for Booklet.
4 East 8th St. NEW YORK CITY

AN OPEN LETTER OF APPRECIATION TO THE PHOTOGRAPHERS OF THIS COUNTRY

All that we are—or ever hope to be—we owe to you—the photographers of this country.

We are grateful, gentlemen, deeply so, for the *unstinted* confidence that you have placed in us—in our methods—in our merchandise.

Thus, do we publicly acknowledge our gratitude! Our only regret is that we cannot thank each one of you in person.

There are over *ten thousand* of you to thank. Do you realize what that means? It means that seventy-five per cent of the photographers of the country are buying FAULTLESS FOLDERS by mail—are saving the middleman's profits.

Could anyone *possibly* have predicted that in two short years such accomplishments might be recorded? We confess frankly that not in our fondest dreams had we dared to hope for the almost unbelievable stream of orders that has poured in the past year.

Over fifteen thousand orders—think of it, gentlemen—*over fifteen thousand orders* for FAULTLESS FOLDERS were received and shipped by us *during the month of December alone!* Lest to some of you our figures seem unreal—inflated—permit us to add that we would appreciate the opportunity to verify them for you.

Men—we have done a big thing in a big way—a tremendous accomplishment made possible only by the help—by the co-operation you have so unhesitatingly accorded us.

We are crowding the leaders, gentlemen, crowding them uncomfortably. We've got a flying start—our principle is right—our merchandise is right.

And last but not least, we have indisputably disproven that fallacy of years standing that the photographer cannot take his rank with business men and business methods. Having been shown the way to overcome that evil of all evils—the middleman and his profits—over ten thousand business men—photographers every one of them, unhesitatingly put the right foot forward in the right way.

Again we thank you for having made possible the fulfillment of our ideals. We shall go on—heads up—shoulders back—serving the photographers of the country—rendering you the only service that, after all is said and done, *really counts*—the actual, visible dollars and cents saving.

Sincerely yours,

CHICAGO PHOTO MOUNT COMPANY

223-233 West Erie Street **CHICAGO**

ELIMINATE THE MIDDLEMAN'S PROFITS
—BUY FAULTLESS FOLDERS BY MAIL

by improved lighting. While we would not lay down any hard-and-fast rule, we think there is much to be said for acquiring the habit of putting the sitter into the right place straight away and of then making the subtle modifications which may be necessary by means of one or two portable and easily manipulated head-screens. We regard this as the *direct method* of going to work. It saves time and often irritation, and a capable operator will rapidly accustom himself to it.

The Illumination of Printing Cabinets

THE almost universal employment of electricity as the illuminant for printing cabinets has often caused these to be made smaller in their dimensions than is advisable. As there is comparatively little internal heat, the box is usually made too shallow, and, consequently, except with quite small negatives, the surface is unevenly lighted. This defect may be avoided by various expedients, the simplest, being to increase the distance between the light and the negative by making the box deeper, or else by using several smaller lamps and spacing them so as to distribute the light more evenly. Another excellent device, when it is desired to use only a single lamp, is to make the bottom of the box in the form of the inverted frustum or lower half of a hollow pyramid lined with looking glass. If this be quadrangular and the lamp be correctly centered in it the effect will be almost equal to that of a group of five lamps. While on this subject, it should be noted that a very shallow box does not tend to the production of good vignettes. There should be sufficient room to shift the position of the vignettes so as to get the desired effect. For this class of work, vignettes painted with opaque upon tracing paper are to be preferred to the ordinary cut-out card. They should be supported upon a glass plate sliding into any one of a series of grooves below the bed plate on which the negative rests.

Easy Method of Plate-Marking

MANY more prints would be plate-marked if it were generally known how easily the operation can be performed. The way generally recommended of burnishing the print down upon a cardboard shape with a bone paper-folder is tedious, and does not usually give a well-defined edge, but a method given by an old photographer, who has practiced it for years, is much easier and more certain, especially when a number of similar prints have to be treated. A piece of tough paper, glazed manilla, answers well. It is cut to the outside size of the prints, and upon this are pasted two pieces of very hard card exactly the shape of the desired plate-mark, one being fixed upon either side of the paper and exactly in register with each other. Two prints are taken and placed face to face with the cards and paper between, the paper insuring that the cards will not move out of center. The whole is then placed between several thicknesses of soft paper and run through a wringer-mangle or rolling-press. If the prints are not too dry a sharp and permanent plate-mark will be impressed upon each. A rubber wringer gives the best results, but hard rollers will answer well if there is enough soft backing paper to take

Bargain List No. 20

You will exclaim at the low prices quoted in our latest list. Everything in cameras and lenses at lowest prices. We buy, sell and exchange the highest grade of foreign and domestic cameras, lenses and equipment. Headquarters for Cyko and all other photographic papers, plates, etc.

Write for a free copy today

New York Camera Exchange
109 Fulton St., New York

SATISTA—Matt Surface

for black and white prints of Superior Quality.

For Particulars Write

WILLIS & CLEMENTS
PHILADELPHIA

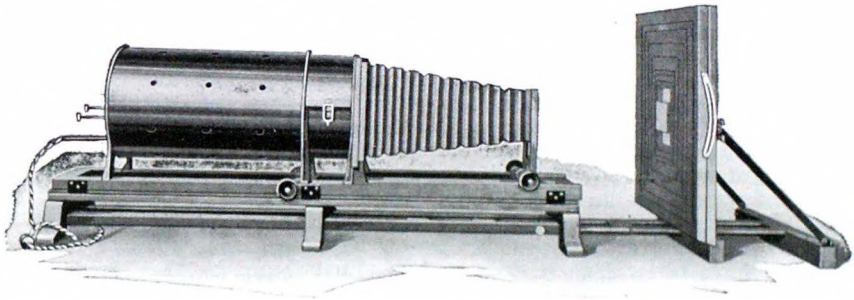
A Credit to Yourself

to your studio, to your street, to your city be your picture display.—Read our booklet No. 4 and select negatives of prospective customers for "Luminous," Sketches, Porcelains, etc.—Give us a little liberty for spacing and arranging.

EDUARD BLUM
32 So. Wabash Ave.
CHICAGO

The **Photo Art Shop** in the service of the profession.

Don't overlook the big profits of the enlarging business.



We have increased the efficiency of the

EASTMAN ENLARGING OUTFIT

by equipping it with a lamp giving double the volume of light of that formerly used.

Mazda Nitrogen lamp 500 Watt—lamp and reflector adjusting screws outside of lamp-house—camera and lamp-house on roller bearings and fitted with quick acting lock nuts—10-inch condensers affording perfect illumination of 5 x 7 negatives—revolving adjustable negative carrier—drop front and hinged back easel and full set of kits to 20 inches—these are a few of the features of the Eastman Enlarging Outfit.

THE PRICE.

Eastman Enlarging Outfit complete with lamp, but without lens,	$100.00
Planatograph Symmetrical lens, 8-in. focus, - - - - - -	12.00

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

All Dealers'.

the impression. Flat pressure in a screw press also answers fairly well, but considerable power must be used.

Furniture as a Background

WE are inclined to doubt whether the average professional portraitist has yet become fully alive to the value of furniture as a background, and the unquestioned distinction that may be given to portraits by the judicious use of really good and well-chosen pieces. We know beforehand the objections which might be alleged, such as a small studio, cost of suitable pieces of old furniture, lack of space for storing and consequent monotonous effect in the portraits, and so on. We know all this, and we know that getting out of the rut is always difficult to those who have allowed themselves to get in. But we are very certain that just as the combination accessory that is a piano on one side and a rustic seat on the other has been banished from every good studio, so the days of the painted background are numbered. The careful purchase of pieces of furniture, either antiques or some of the really admirable reproductions, should result in the gradual acquiring of a collection which might be rearranged from time to time in the studio and other rooms, so assuring some considerable variety of effect in the portraits. It is not an easy matter to acquire good pieces nowadays at moderate prices, though the chance does occur sometimes, and it is to be remembered that such furniture does not depreciate in value in the way modern stuff does. Sometimes indeed it appreciates.

Advertising by Motion Pictures

THE above is the title of a 255-page book just issued by the Standard Publishing Company, Cincinnati, Ohio, at $1.50 postpaid. The author is Mr. Ernest A. Dench, whose articles on the movies are familiar to readers of the various photo-

DEALERS WHO WANT YOUR TRADE

ATLANTA, GA.—Glenn Photo Stock Co., Eastman Kodak Co., 117 Peachtree St.

BOSTON, MASS.—Robey-French Co., Eastman Kodak Co., 38 Bromfield St.

BOSTON, MASS.—Ralph Harris & Co., 22-26 Bromfield Street. New York City Office, 176 Fulton Street.

CEDAR RAPIDS, IA.—Camera Shop, 306 Second Ave., East.

CLEVELAND, OHIO.—Fowler & Slater, 806 Huron Road, S. E.

CHICAGO, ILL.—Sweet, Wallach & Co., Eastman Kodak Co., 133 North Wabash Avenue.

DALLAS, TEXAS—C. Weichsel Co.

DENVER, COLO.—Denver Photo Materials Co., Eastman Kodak Co., 626 16th Street.

DENVER, COLO.—The Ossen Photo Supply Co., 415 16th Street.

DES MOINES, IA.—Des Moines Photo Material Co., Eastman Kodak Co., 517 Locust Street.

DES MOINES, IA.—W. P. Henry, 819 Walnut Street.

GALESBURG, ILL.—Osgood Photo Supply Co.

INDIANAPOLIS, IND.—The H. Lieber Company, 24 W. Washington Street.

INDIANAPOLIS, IND.—Lyman Brothers, 223-225 East Ohio St.

JACKSONVILLE, FLA.—H. & W. B. Drew Company.

KANSAS CITY, MO.—Kansas City Photographic Supply Co., 1010 Grand Avenue.

LOS ANGELES, CAL.—Howland & Dewey Co., Eastman Kodak Co., 510 South Broadway.

MILWAUKEE, WIS.—Milwaukee Photo Materials Co., Eastman Kodak Co., 427 Milwaukee Street.

MILWAUKEE, WIS.—Henry Reimers, 238-240 West Third Street.

MINNEAPOLIS, MINN.—O. H. Peck Company, Eastman Kodak Co., 112-114-116 So. 5th Street.

NEW ORLEANS, LA.—Standard Photo Supply Co., Ltd., Eastman Kodak Co., 125 Baronne Street.

NEW YORK CITY—Herbert & Huesgen Co., 311 Madison Avenue.

NEW YORK CITY.—George Murphy, Inc., 57 East 9th Street.

NEW YORK CITY.—New York Camera Exchange, 109 Fulton Street.

NEW YORK CITY—Willoughby, Inc., 110 W. 32nd Street.

OMAHA, NEB.—The Robert Dempster Co., Eastman Kodak Co.

PHILADELPHIA, PA.—John Haworth Co., Eastman Kodak Co., 1020 Chestnut Street.

PITTSBURGH, PA.—W. S. Bell & Co., 412 Wood St.

ST. LOUIS MO.— Hyatt's Supply Co., 417 N. Broadway.

ST. LOUIS, MO.—W. Schiller & Co., 6 South Broadway.

ST. PAUL, MINN.—Zimmerman Bros., Eastman Kodak Co., 380 Minnesota St.

SALT LAKE CITY, UTAH.—Utah Photo Materials Co., 423 Main Street.

TOLEDO, OHIO.—George L. Kohne, 602 Summit Street.

The Balance of Light and Shade

By Will H. Towles

46 pages, profusely illustrated, bound in cloth. The substance of Mr. Towles' lecture at many conventions. Pronounced one of the important books of the year.

$1.50 per copy--POSTPAID

Your dealer has it or will get it for you. If not, write

ABEL'S PUBLICATIONS

917 SCHOFIELD BLDG., CLEVELAND, OHIO

PRACTICAL STUDIO ADVERTISING

$2.00 per Copy, Postpaid

YOUR DEALER HAS IT OR WILL GET IT FOR YOU. IF NOT, WRITE

Abel's Publications

917 Schofield Bldg., Cleveland, O.

graphic journals.

The motion picture has achieved widespread fame as a form of entertainment, and it is now likely to repeat this performance in the advertising field. It is an entirely new publicity medium which is destined to become very popular and very effective.

The subject is one on which there is scarcely any information available, so this work by Mr. Dench is the first in the field. This new method of advertising is almost certain to come into general use. The author, who is recognized as one of the foremost motion picture authorities, has covered every phase of his subject in a thoroughly practical and understandable way. The business man who is seeking up-to-date methods, whether he be manufacturer, wholesaler or retailer, will welcome this suggestive handbook on what is probably the most original and effective way of advertising yet devised.

The book covers the subject from all angles, although it does seem to be in great part an advertisement of Mr. Dench's personal proclivities in the line of motion picture publicity.

CLASSIFIED ADVERTISING RATES

SITUATION WANTED: Under 30 words, two insertions, free; further insertions, 30c each; over 30 words, first two insertions, 30c each; further insertions, 50c.

HELP WANTED: 50c per insertion.

FOR RENT and **MISCELLANEOUS:** Under 30 words, 50c per insertion; over 30 words, $1.00 per insertion.

STUDIOS FOR SALE: Under 50 words, $1.00 per insertion; over 50 words, 2c per word.

SITUATION WANTED

In first class studio as printer. Thoroughly experienced; can assist in all lines. Can join at once. State what you have to offer in first letter. J-1, care of this journal. 30-12-2

First class operator and retoucher desires position in high class studio. Prefers proposition rather than straight salary; now employed; reasons for desiring change very good. Learned business from bottom. Prefer middle west or Denver, Colo. Address T-1, care of this journal. 6-1-2

Skilful etcher and retoucher, fair operator; assist at other work; sober, honest, reliable. Wants early position at moderate salary. Pierre Porter, 4207 Central Avenue, Cleveland, Ohio. 6-1-1

HELP WANTED

First class ticket man, very soon, references required. Reply to V-1, care of this journal. 16-12-4

A first class all-round photographer, capable of taking charge of a large ground floor studio; can connect with a live concern on a year's contract. Salary no object; what we want is a man who can produce the business. Canton Photo Supply Co., Canton, Ohio. 6-1-1

Permanent position is open to good operator-retoucher; good pay and treatment for really competent man or woman, young preferred. D. A. Lowe, 1110 Peach St., Erie, Pa. 6-1-1

Receptionist Wanted—Prefer one who has had experience in telephone work and capable of selling high class work. References required. Steady position; salary $20.00 per week to start. No railroad fare paid. Morrall-Hoole Studios, 154 East Avenue, Rochester, N. Y. 6-1-1

At Once, all-around man; must be first-class retoucher, and capable of handling both Artura and Cyko papers. Steady position to the right man. Only those with good appearance need apply. Address Dunne's Studio, 759 Main Street, Hartford, Conn. 6-1-1

A young enthusiastic operator for best of trade, studio and home. Send samples and photograph of self to Koehne, 104 S. Michigan Ave., Chicago, Ill. 6-1-1

SPECIAL

Exchange 14x17 19-in. Focus Platyscope Lens, cost $100.00 new, for No. 12 Hammond typewriter. Address "Lens," 1649 Shady Ave., Pittsburgh, Pa. 6-1-1

STUDIOS FOR SALE

On account of a very large commercial business and wishing to develop it, I will sell my studio very reasonable. City of 100,000, best location, good business. Reply to V-2, care of this journal. 16-12-4

Only studio in town of 2,500; good water, electric lights, good north light, on main street; $450 cash. For particulars address Tony Lewellyn, Dugger, Ind. 6-1-1

A fine Studio in a wealthy residential section of large N. E. city. Has always done a high class business at good prices. Best of reasons for selling. H. 21, care of this journal. 6-1-1

Well established, profitable Photo Supply business, located at Fargo, No. Dak., invoicing about $8,000. Will sell at sacrifice. Do not write unless you have $3,000 cash, which will handle. Balance on liberal terms. Unable to give same proper attention. N-3, care of this journal. 6-1-2

SEED GILT EDGE 30 PLATES

All the quality you look for in a plate—all the time.

This is what you get in the Seed 30 Gilt Edge—crispness and snap, without harshness—an abundance of detail, without flatness—exceptional speed, without the sacrifice of latitude or gradation—and all these qualities with the consistent uniformity necessary to continuous and dependable quality in your work.

It's a Seed Plate you need.



All Dealers'.

Seed Dry Plate Division,
EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

Better enlargements sell in greater quantities at better prices.

Enlargements on

ARTURA CARBON BLACK

Are better enlargements because they retain the contact quality.



All Dealers'.

ARTURA DIVISION,
EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.