



J. C. WALKER

TORONTO

STAR PLATES

N. Y. ARISTOTYPE PAPER

The Canadian Photographic Journal

DEVOTED TO THE INTERESTS OF THE

Professional and
Amateur Photographer

G. GILSON,
H. C. TUGWELL, } *Publishers.*
Address: 194 King Street West.

VOL. I.

Toronto, April, 1892.

No. 3.

Our Terms for Subscription:

\$2.00 per Year. \$1.25 per Six Months.
Single Copies, 20c. In Advance.

Advertising:

Rates for space furnished on application.

Fifty Dollars in Gold.

WE desire to furnish our young amateur readers a series of practical and instructive articles on photography. After carefully considering several methods of obtaining these articles we have decided upon a novel method, which, we hope, will be at once productive of what we want and interesting as a competition.

The series we wish we shall divide into ten progressive chapters, giving each month the subjects to be written on for the following *two* months.

We offer five dollars for the best article received and a year's subscription to this journal for the second best article, on the subject given for May, and will do the same each month for at least ten months.

The article awarded first prize will be printed in THE JOURNAL in its proper month, the writer's name being given or not, as desired. Competent judges will make the award, and we hope enough

interest will be taken in the competition to warrant us in adding additional prizes.

The only conditions are that the articles accepted and paid for by us as above shall become our property, and that papers submitted reach our office not later than the 20th of the month of publication.

We hope the idea will be favorably received by our readers and *acted upon*.

The subject for May "The Camera and How to Use It."

The subject for June "Focusing and the Use of Diaphragms."

A New Price List.

WE are pleased to note that the Photo Supply dealers have arranged and adopted a scale of prices slightly in advance of what they have been getting for Canadian plates in small quantities. This is a move in the right direction. Considering the high standard now attained by Canadian makers, their plates should bring as good a price as any of foreign make. The revised price list went into effect March 21st, and is signed by every dealer of any note in Canada.

Raising Prices in Ottawa.

THE photographers of Ottawa lately came together and agreed to do no work *less* than three dollars per dozen.

What an exceedingly good thing for the profession if this movement would become general.

The subject of prices should appeal to every artist photographer in Canada, and we cannot forbear saying a few words on the present ruinous rates at which work is being done in a great many galleries in Canada, and especially Ontario, for, strange to say, far better prices prevail in Quebec than in our province. There is also better harmony among the photographers of the lower provinces, and less of the cut-each-others'-throat feeling that exists in a great many Ontario towns. This cut-throat feeling does the photographer no good, he reaps no benefit from it. It is the public who reap the benefit at the expense of the photographer, this same public often using their knowledge of the existence of this warlike spirit between rival galleries to get their work done at prices that are simply ruinous to the photographer. This is not as it should be. There is always a certain amount of work to be done in every district, and the doing of it for half or quarter price does not affect that amount ten per cent.; the only real effect is on the pocket book of the photographer.

The photographer who has mastered his profession, who turns out work that he *knows* is good and is invariably well finished, can *always* get his share of work to be done, and at a price that will enable him to meet his bills and live an honored member of his community. The man who cannot turn out work that will bring a fair, profitable price has "no business to be in the

business," and the quicker he goes out of it the better for the true photographer who is often found trying to compete with him, and for all. The minority who get their pictures taken because they are cheap would be just as well satisfied with tintypes as with the attempts at photographs that are now turned out by cheap Johns, and "John," did he take the tin-type instead of the "attempt," would probably rest easier at night, not having so much on his conscience.

Worse Than Marriage.

A bachelor, old and cranky,
Was sitting alone in his room;
His toes with the gout were aching,
And his face was o'erspread with gloom.

No little ones' shouts disturbed him,
From noises the house was free,
In fact, from the attic to cellar
Was quiet as quiet could be.

No medical aid was lacking;
The servants answered his ring,
Respectfully heard his orders,
And supplied him with everything.

But still there was something wanting,
Something he couldn't command:
The kindly words of compassion,
The touch of a gentle hand.

And he said, as his brow grew darker
And he rang for the hireling nurse,
"Well, marriage may be a failure,
But this is a blamed sight worse."

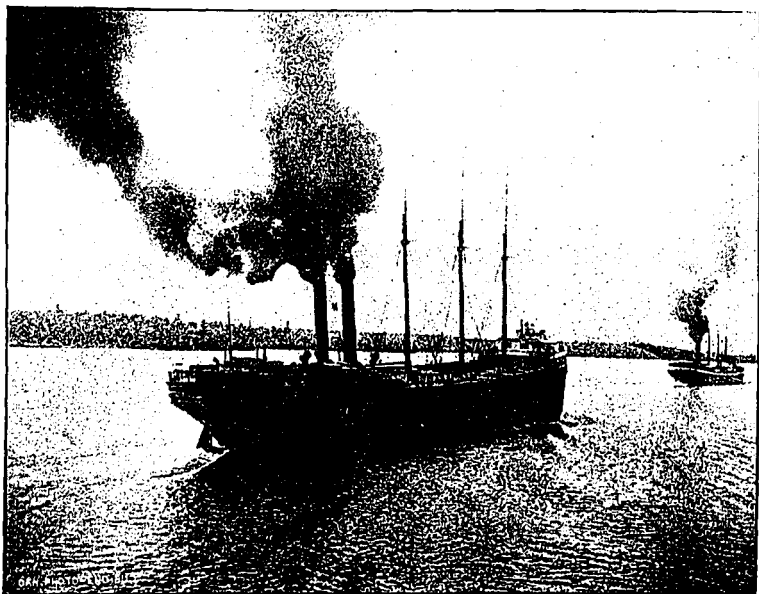
—*Boston Courier.*

Enlargement of Microscopic Objects.

Sir David Salomons recently gave a lecture on "Optical Projection," a simile from which may be quoted. Speaking of the enlargement of microscopic objects, he brought before his audience a comparison which would bring home to the least mathematical mind among them a concrete idea of what a certain amount of enlargement, as expressed in the ordinary manner, really meant. He showed that a postage-stamp, for instance, if enlarged 4500 diameters, would cover two and a half acres!



WHAT ARE THE WILD WAVES SAYING?—DR. W. H. ELLIS, PRESIDENT.



LAKE SUPERIOR STEAM BARGE.—A. W. CROIL.

Our picture for this month is a sweet little child and might rightly be termed "Somebody's Darling." The natural gracefulness of a child picture always appeals to one's best nature, and our little tot is no exception to the rule. The picture shows the fine quality to be obtained from the popular "Star" plate and is printed on the New York Aristo paper, which has become such a favorite with artists wishing to get the very best results possible. The red "N. Y.," the trade mark of this brand, can now be found in most galleries of note in Canada. The negative is the production of Mr. J. C. Walker, the popular vice-president of the Canadian Association.

The Zeiss Lenses.

The following letter from the Bausch & Lomb Optical Co. explains itself:

*The Canadian Photographic Journal,
Toronto, Ont.*

GENTLEMEN,—We notice in your March, 1892, number, page 32, under the heading of "New Lenses," an editorial remark that Messrs. Ross & Co., of London, Eng., have become licensees of Carl Zeiss in Jena for the manufacture of the patented Zeiss anastigmat lenses, and that their license covers the whole of the British Empire. This, we believe, is apt to give rise to some misunderstanding, and we therefore would like to see it stated as follows: Inasmuch as it is true that no other firm in the British Empire can manufacture under the Zeiss patents, all licensees of Carl Zeiss in all other countries are privileged by agreement to sell their manufacture in every country in competition with the manufacturers at home. Being the sole licensees for the United States of America we vouch for this statement. Yours truly,
ROCHESTER, BAUSCH & LOMB OPT. CO.
March 21st, '92. (W. Drescher.)

We understand that this firm are the licensees specially qualified to supply the Canadian market with the Zeiss anastigmat lenses.

The following is a toast to the fair sex, given by a printer: "Woman, the fairest work in creation. The edition is large, and no man should be without a copy."

A Useful (?) Hint.

HERE is a photographer "out West" (it could not possibly be anywhere else) whose handsome house is said to be a monument to the prevailing vanity of women. The photographer is rich, and this is how he became so. Years ago he is said to have noticed that, when he got a lady sitter with a pair of small feet, she generally liked to place herself so that her fairy-like supports were just visible, while the lady with the large misshapen hoofs kept her feet out of sight. From this he inferred that the latter person would much prefer to have two small feet also, and, if she had them, she would want to display them; and then he conceived the inspiration of keeping feet on hand, and supplying them to customers who needed them. He has a dozen pairs of them—small wooden feet, with adorable boots on them—and attached to each of them is about eight inches of leg, clothed in neat stockings, and with a hook about half way up. The lady with the generous extremities is planted in a chair, with her massive limbs and copious boots hidden as far back as they can go without dislocating her knees, and then the artificial legs are carefully hooked on to the inner hem of her dress. Consequently, she looks like a person reclining in any easy attitude, with her beautiful feet exposed by accident, and, if she can stand the strain, the resulting photograph is a beautiful thing to look at. If she can't stand the strain, her real feet come forward just in time to keep the unnatural attitude from wrenching her joints asunder, and then she appears in the negative as a quadruped.

The Cramer plate is *the* plate of the United States, and there is probably more Cramers brought into Canada than of all other makes combined.

Let us have a good Canadian journal. Encourage us with your subscription, and we will make ours the best of its kind.



ON SHARP'S CREEK, NEAR GODERICH.—HON. A. M. ROSS.

Our half-tone illustrations in this issue are the work of Hon. A. M. Ross, Dr. W. H. Ellis and A. W. Croil, distinguished members of the Toronto Camera Club, and show careful handling of their subjects by these gentlemen.

Canadian Photographic Association.
CONVENTION AT TORONTO FIRST WEEK
OF FAIR (SEPTEMBER).

WE are glad to be in a position this month to lay before our readers particulars of the meeting of the Executive Committee of the Photographers' Association of Canada. The principal business transacted was the arranging of the many prizes to be competed for at the coming convention, which takes place in Toronto during the early part of September, and we are safe in saying that never before in the history of the Association has such a list of prizes been offered to the photographers of Canada.

The firm and steadfast friend of the Association, Mr. G. Knowlton, of the Stanley Dry Plate Co., has come forward, with his usual generosity, and donates \$150; next comes Messrs. Anderson, Robinson & Co., of "Eagle" and "Star" dry plate fame, who contribute \$130; Mr. Hopkins, \$100; Messrs. Mulholland & Sharpe, \$50; Photographic Association of Canada, \$25; and, last but not least, THE CANADIAN PHOTOGRAPHIC JOURNAL \$20, in all \$475.

We have taken pattern from our American friends, and for the first time in the history of the Association a competition will take place on the illustration of Tennyson's poem "Dora." The idea of illustrating in photography different poems has been fairly successful in the United States. We have every reason to believe that the experiment in Canada will be equally, if not more, successful. We trust it may, and that it will be only the beginning of greater things. It will give the photographers an opportunity of displaying their artistic feeling, as well as their knowledge of the mechanical and scientific branches

of their business. We expect to see a great number of our photographers compete for these special prizes, and we trust we will not be disappointed.

Below we give the details of the prizes offered and the conditions governing the same. Kindly keep the matter before you, and be prepared in September to compete in some of the branches.

PRIZES

DONATED BY

STANLEY DRY PLATE CO., MONTREAL
PER GEO. KNOWLTON

- 1. For Cities, Cup \$50.00
- 2. " Magazine Camera 30.00
- 1. For Towns, Cash 25.00
- 2. " Cash 20.00

ON STANLEY PLATES

DONATED BY

MR. HOPKINS

FORMERLY BRADFISCH & HOPKINS

- 1. Photos printed on Omega Paper \$35.00
- 2. " " " 25.00
- 3. " " " 20.00

ON ANY PLATE

DONATED BY

ANDERSON, ROBINSON & CO.

OF THE EAGLE AND STAR DRY PLATES

- 1. Trophy (open to all)..... \$100.00
- 2. Places under 10,000, Cash..... 20.00
- 3. " " " 10.00

ON EAGLE OR STAR PLATES, CANADIAN MAKES

Exhibits in each case to be not less than 24 Cabinets, and not less than 10 other sizes 8 x 10 or larger.

MR. HOPKINS

- 1. Views on Omega Paper \$15.00
- 2. " " " 20.00

Each exhibit six Cabinets or smaller than 8 x 10; six 8 x 10 or larger.

STANLEY DRY PLATE CO.

- 1. Retouching, six Cabinet busts and six full or ¾ figures, any plate. \$15.00
- 2. Printing, twelve Cabinets (variety) any plate..... 10.00

MULHOLLAND & SHARPE

1. Illustration of Tennyson's poem
"Dora"\$30.00
 2. Illustration of Tennyson's poem
"Dora" 20.00
- Set of three Photos, 8 x 10 or larger.

CANADIAN PHOTOGRAPHIC JOURNAL
MESSRS. GILSON AND TUGWELL

1. Excellence of prints in any process
other than Albumen or Aristo,
(Gelatin Chloride,) any plate . \$20.00
2. One year's subscription to THE CANADIAN
PHOTOGRAPHIC JOURNAL.

\$25 ASSOCIATION FUNDS

Best enlargement, not less than 16 x 20, any kind except Albumen Paper, must be made by exhibitor and a plain print except ordinary spotting.

No person to receive more than one ordinary prize, but the person receiving an ordinary may be entitled to and receive one special.

Those only may compete for prize or prizes who shall so notify the Secretary-Treasurer on or before July 1st of the intention to compete. Such notification must be accompanied by the annual fee.

Stock houses, studios, hotels or anyone having a dark room for the use of touring camerists should send in their names, which will be printed under our "Dark Rooms." A good dark room for the free use of travellers or resident knights of the camera will generally be found to be a "paying institution."

A useful hint for photographing waterfalls is given by F. Schmidt. He recommends one of some length for the surroundings, and an instantaneous exposure for the fall itself. From the first negative he removes the waterfall by retouching, and prints from it; for the surroundings, introducing the waterfall into the positive from the second negative. This will, doubtless, get rid of the smudgy effect so common in the waterfalls usually shown in photographs, and due to over-exposure.

Rapid Hydroquinone, Para-Amidophenol and Rodinal.

BY DR. A. MIETHE.

RAPIDITY is the watchword for all operations nowadays. The public is impatient if it has to wait only ten minutes in the gallery. The possibility of a quick development without injury to the negative was first established after we had learned to treat the alkali developers, particularly the hydroquinone, correctly. The older hydroquinone formulas, as, for instance, Balogny's and Battin's, did not develop essentially quicker than iron, and the advantage rested more in the convenience and cleanliness, also in the durability, of the ready-mixed developer. I believe Battin was the first who tried successfully the addition of caustic potassa to the hydroquinone developer, which later on was essentially improved by Lainer's classic researches. These rapid hydroquinone developers were, particularly for short exposures, the most complete in use. I have worked for more than two years with Battin's mixed and afterward with Lainer's rapid hydroquinone developer, adding a little dry pyrogallic acid, with the best success. For instantaneous views I applied exclusively rapid hydroquinone of the following composition:

SOLUTION I.

Sulphite of soda.....	35 grams.
Yellow prussiate of potash.....	30 "
Hydroquinone.....	7 "
Water.....	550 c.cm.

SOLUTION II.

Caustic potash.....	30 grams.
Water.....	550 c.cm.

For development I took three parts I. and two to three parts II., according to exposure and desired density. In cases where particular strength was required I added about 0.1 gram pyrogallic acid to 50 c.c. developer.

But no matter how energetically this formula works, and how fine, handsome and clear negatives are obtained, it has also its defects. A slight fog is quite unavoidable if the extreme developing strength is applied. This may be of no great consequence as long as a good printing light is at our disposal during the summer months; however, in winter even the slightest fog may prolong the printing time improperly. But sometimes, which is worse, the caustic potash acts extremely energetically upon the gelatine film; the same swells very much, and on many plates there is a considerable tendency to peel off, and it becomes very injurious. Plates developed with hydroquinone take twice as long to dry as those developed with pyro-soda. The worst, finally, is the danger of yellow fog. If the plate, after being fully developed, looks thin and the development is continued for one or two minutes, to give it strength, a slight yellow fog, sometimes appearing only on some parts, can be calculated upon with utmost certainty. Nothing is known to prevent this.

I have tried replacing part of the caustic potash by carbonate of potassium, to obtain more clearness, less swelling and less yellow fog, without sacrificing rapidity and energy. I succeeded tolerably well with this attempt, and developed with good success with the following developer:

SOLUTION I.

Sulphite of soda	35 grams.
Yellow prussiate of potash....	30 "
Hydroquinone.....	10 "
Water	550 c.c.

(Therefore a little more hydroquinone.)

SOLUTION II.

Caustic potash	5 grams.
Carbonate of potash.....	35-40 "
Water	550 c.c.

The plates so developed work just as quickly and give the same sensitometer number, but the high lights are unfor-

tunately wanting, the two highest sensitometer numbers having no more difference in density, and this is the case with Lainer's formula. This defect might be more injurious to portrait pictures than to instantaneous views.

About a month and a half ago I received from Dr. Th. Schuchardt and from Professor Dr. Witt samples of para-amidophenol, chemically pure, and made some tests with this preparation, based upon Professor Dr. Eder's formula (*Photo Correspondenz*, July, 1891). Eder gives the following prescriptions as being the best:

I. PARA-AMIDOPHENOL AND POTASH.

Para-amidophenol	4 grams.
Potash	40 "
Sulphite of soda	120 "
Water	1,000 c.c.

II. PARA-AMIDOPHENOL AND SODA.

Para-amidophenol	4 grams.
Soda (fused).....	40 "
Sulphite of soda	120 "
Water	1,000 c.c.

I have tried only the first one, and obtained results which are quite analogous to Eder's. The developing rapidity is between hydroquinone—potash and hydroquinone—caustic potash; the sensitometer number obtained is exactly the same with all those developers, the gradation likewise. A tendency to yellow fog I could not discover; the plates were much clearer than with hydroquinone and the covering strength with purely gray color, according to the time of development, a very suitable one. All these properties speak very much in favor of para-amidophenol, which led to the idea, to force the developing rapidity by caustic potash. Eder mentions this experiment, but says that this developer can show no advantages in comparison with rapid hydroquinone. In my hands this developer did not prove to be particularly good. I used the following mixture:

SOLUTION I.

Sulphite of soda	3.5 grams.
Yellow prussiate of potash . . .	3 "
Para-amidophenol	0.4 gram.
Water	60 c.c.

SOLUTION II.

Caustic potash	0.5 gram.
Carbonate of potassium	4.5 grams.
Water	60 c.c.

This developer worked with flash-like rapidity, but it was not possible to obtain a fully developed plate without some yellow fog. Otherwise the gradation was good and the developing strength even rather stronger than in the rapid hydroquinone developer.

All these developing prescriptions, according to my opinion, have now been surpassed by the new preparation rodinal, a developer produced from para-amidophenol by Dr. Andresen. Although I have not made many tests yet with this developer, I have no doubt that it is far ahead of all other developers.

I will now give a description of my tests with rodinal.

The rodinal is a clear liquid which does not make the fingers slippery and has a weak taste of sulphite of soda. According to the formula it has to be diluted with thirty times its volume of water.

To test the developing strength, two uniform sensitometers were made, while from the same sheet of tissue paper two identical sensitometer plates of twelve numbers were pasted upon two thin glass plates. Under these two sensitometers two plates were always simultaneously exposed at a distance of 300 cm. from a benzine light; both were then developed simultaneously, each time one in fresh rapid hydroquinone after Lainer and the other in rodinal.

First Experiment.—Normal exposure, two minutes thirty seconds. Rodinal 1:30, freshly mixed. Both plates appear simultaneously; developing

time until the plate developed in rapid hydroquinone showed a light fog. On both plates No. 11 is readable after fixing. No. 1 with rodinal is a little denser; and it is remarkable that with this latter developer Nos. 7, 8, 9 and 10 are covered much stronger than with hydroquinone.

Second Experiment.—Under-exposure, one minute. Developer as before.

On both plates, which are developed until the formation of a dense fog on the hydroquinone plate, No. 7 now just appears; otherwise result as before.

Third Experiment.—Just as I., only rodinal 1:50 diluted. Result as under II., only softer, still very fine graduated scale of the rodinal.

Fourth Experiment.—Four plates, each one minute exposed, all in the same quantity (50 c.c.) rodinal 1:30, one after another developed. Developing time: one minute, one minute, seventy seconds, eighty seconds; completely uniform results of all four plates.

The following would therefore be proven by these experiments: The rodinal is, even if fifty times diluted, of equal value in developing strength to the rapid hydroquinone, but it differs from the same by a much more intense reduction at the places of short exposure. This difference is undoubtedly the reason that several authors have discovered a much greater developing strength in the rodinal in comparison with other developers. If no sensitometer is used, this impression is prevalent, as the following tests will show. Two plates each were exposed on a dark day with the instantaneous shutter, first with an opening of $f/8$, then with $f/16$, and the first two plates were then developed at the same time in hydroquinone and rodinal. They appeared with equal rapidity, and the development was continued until the plate had

a pretty good fog in the hydroquinone. After fixing, it showed that the rodinal plate gave a printable negative; the hydroquinone plate, on the contrary, was very hard, had thin glassy shadows and a strong yellow fog. The other still less exposed plates showed a still more remarkable difference. The yellow fog in the shadows of the hydroquinone plate was so dense that it acted darker than the half-tones, while the rodinal plate had hardly observable traces of a discoloration. The first experiment showed further, that in the rodinal several plates can be developed without essential difference in density and hardness.

Regarding the durability of the rodinal developer the following is to be remarked: According to the declarations of the aniline factory the time of durability is unlimited; in well-corked bottles it will remain colorless for a long time. About the diluted developer I made personally the following tests:

If the concentrated developer is diluted with water containing air, a light yellow liquid is obtained, which can be kept in the graduate glass almost unchanged. Only after two days the color passes from a light orange to red-brown, while small crystals form precipitation of a yellow flaky deposit.

The change transpires somewhat quicker in an open dish. The intense coloration, as assumed by rapid hydroquinone—or pyro-potash—developer, is not observed with rodinal. The developing strength decreases quickly in spite of this small discoloration; after two days, only a hard negative could be slowly obtained with the usual developer.

All plates developed with rodinal show an exceptionally great clearness and handsome color of the precipitate. The first might be a considerable advantage

in all cases where by addition of potassium bromide every desired degree of covering can be obtained.

Over-exposure may be remedied by great dilution of the developer or by an addition of potassium bromide. Potassium bromide acts as a strong retarder, but gives easily hard pictures; it is therefore better to have a little old developer in store for such cases. If the desired covering cannot be obtained, it can be remedied by an addition of some concentrated hydroquinone solution. I applied to 100 c.c. developer 5 c.c. of the following solution:

Hydroquinone.....	5 grams.
Water	100 c. c.
Sulphite of soda	10 grams.

Glass clear; very strong negatives of a grayish black tone are obtained, even if considerably over-exposed.

By reason of these experiments I believe that I am justified in presuming that rodinal might be suitable as an excellent developer for instantaneous pictures as well as for portraits. In favor of the latter application particularly is the fine modulation of the negative, as can be observed in the sensitometer plates.—*Photographisches Wochenblatt*

Mr. Bradfisch, late of Bradfisch & Hopkins, with Mr. Pierce, formerly with Messrs. Anthony & Co., under the style of Bradfisch & Pierce are making the perfected Bradfisch Aristotype paper, which promises to be the most reliable paper on the market. Every package is guaranteed to be perfect. Trade supplied by S. H. Smith & Co., Photo Stock House, 80 Bay Street, Toronto. Price lists in a few days.

Amateurs, you can't get anything for the money that will give you the pleasure and instruction obtained from this magazine. Don't miss a number. Per year, \$2, if paid in advance.

Warm Tones with Bromide Prints.

BY WALTER E. WOODBURY.

BROMIDE prints are becoming more and more popular, owing, perhaps, to their artistic appearance, and to the ease with which they can be produced independently of our uncertain orb of day.

There are still many, however, who object to them on account of the cold tones usually obtained; and it is this reason that has induced me to experiment, with a view to obtain warmer colors by means of an adaptation of the mercurial intensification process.

I find that, to get the best results, a diluted hydroquinone developer should be used, the most suitable being the following formula, adapted from that recommended by the Pagot Prize Plate Company for their dry plates:

SOLUTION I.

Hydroquinone	1 oz.
Methylated spirit	10 "
Sulphurous acid	½ "
Potassium bromide	¼ "

Dissolve the hydroquinone in the spirit, and add the acid. In another vessel dissolve the potassium bromide in three ounces of distilled water. Mix the two solutions, and make up to twenty ounces with distilled water.

SOLUTION II.

Caustic soda (in sticks)	1 oz.
Sodium sulphite	5 "
Distilled water to make	20 "

In using this developer, take one part of each solution, and add twelve parts of water.

The print should be fully exposed, and developed to a slightly lighter tone than required when finished, as it must be remembered that the toning process is also an intensifying one.

The next operation, after fixing and thoroughly well washing, is to bleach the print in a saturated solution of bichloride of mercury until the image is but faintly visible.

The bleached print is well washed, and a weak solution of ammonia applied. Several who have tried this process assert that the beautiful sepia color thus obtained vanishes when the

print is "dry, but this will not be the case if the ammonia solution be very weak—about a quarter of an ounce of liquid ammonia to a pint of water.

Sodium sulphite solution will also darken the bleached print, but gives much the same color as when developed, except, perhaps, it is a trifle warmer.

Another method I have succeeded very well with is the following: The bleached print is treated with a ten per cent. solution of sodium hyposulphite. This gives a beautiful warm color, but it is absolutely necessary that the print be well washed after bleaching, otherwise the whole of the paper will be stained with a yellow color. This can be prevented, however, by treating the bleached print to a solution of

Bromide of potassium	1 oz.
Water	20 "

It is not then necessary to thoroughly wash the print after bleaching, it can be simply rinsed under the tap, and the bromide solution applied for a few minutes, the print again washed, and finally treated with the hypo solution. No yellow stain is then observable, and the print takes a beautiful sepia color, superior to that obtained by the application of hypo only. It should be noted that there is a slight change of color when dry, and also that with this method the prints must be developed up to full vigor, as there is no intensifying action with the hypo.

The only objection that has ever been raised to this method of obtaining warm tones with bromide prints has been want of permanency, but this deficiency has in reality never been proved. An intensified negative, if thoroughly well washed before and after intensification, will keep its color, and there is no reason why a bromide print should not, under similiar conditions, do the same. — *British Journal Photographic Almanac.*

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We are in receipt of a little pamphlet from the Stanley Dry Plate Co., of Montreal, that is brimful of knowledge for the amateur. Every camerist should carry one in his vest pocket and return thanks to Mr. Knowlton.

Fixing Alcohol.

LABORATORY workers are complaining that the Government by the recent addition of mineral naphtha to methylated spirits, in order to make it too nauseous to be drunk by inebriates, have rendered it useless for many purposes for which it was formerly employed. Sad to say, the addition has not prevented its being consumed by confirmed drunkards, who have been known to drink both naphtha and paraffin when other fiery liquids were unattainable. In Germany the end is gained by adding to the spirit a few drops of Dippel's animal oil, a product from bones, which gives the liquid such an utterly loathsome smell and taste that the most depraved will shrink from it.

Lightning Flashes.

APAPER on the photographing of lightning flashes, under the title of "Jove's Autograph," was read before the Franklin Institute lately by Mr. W. N. Jennings, and the photographs used as illustrations have since been published in the journal of the institute. The first picture is a conventional zig-zag of light which was adapted by many generations of artists as a true representation of the lightning flash. That the conventional form is very different from the real thing is easily seen by comparing it with the photographs. These show various types of lightning flash, some being very curious indeed.

Here we have the tree form, with its ramified branches discharged over half the sky. In another picture a single sinuous line of light stretches from side to side, a veritable horizontal discharge. In another, the lightning seems to have tangled itself into a

number of loops and knots, and looks like a skein of white silk fresh from the caresses of a playful kitten. Artists do not paint lightning so often as they did in past times, when the portrayal of historical and classical subjects used to tempt their pencils; but should the old fashion return, painters may have to take a lesson in lightning portraiture from photography. They will not, of course, be confined to the imitation of it, for the artist must paint things as they appear to the human eye, not necessarily as they appear to an instantaneous photographic lens.

The Constant Fixing Bath.

BY JOHN A. D. LLOYD.

INTO a twenty-four ounce "fixing" bath, which had been used for a batch of bromide prints, and which, after a couple of days, had assumed a dirty orange color, I dissolved sixty grains of citric acid, and put the bottle to sun. In twenty-four hours a jet-black coating was deposited on the sides of the bottle, the liquor having become colorless. Passed through a filter, the bath was bright and sparkling as spring water, and the result on a batch of prints was most satisfactory; it "cleared" them in half the time of a freshly mixed bath, and the purity of the whites could not possibly be surpassed. I have had this bath in use now over two months, filling up occasionally with a one-in-five solution of hypo. The filter paper, which is kept in the tin hypo funnel, has lasted all this time.

To five ounces of a solution of eikonogen (twelve grains to the ounce), which had begun to turn brown, I added one drachm of bisulphite of ammonia. In a week's time the brown color had disappeared, and it has since remained, as when first mixed, bright and clear, with a slight tinge of green.

Thanks to the discoverer of the preservative qualities of sal-ammoniac on pyro. Forty-eight grains of pyro dissolved in one ounce of a twenty per

cent. solution of sal-ammoniac, and kept in an uncorked bottle, remained colorless for days, it gradually turned brown, but remained clear for weeks, and worked well to the last. Your sal-ammoniac developer is, then, A 1; no bromide necessary in the hottest weather. — *Photographer's Daily Companion*.

Chloride of Gold.

BY F. T. BENNETT.

AT one time or another I think I have used nearly every brand of chloride of gold on the market, including those guaranteed to contain seven and a half grains of gold, and those where the makers do not venture to say what amount of the real metal it does contain, although a simple calculation will prove that at the price it could not contain very much gold unless the makers were generously giving themselves away. It is to those who have not thought of the simplicity of preparing chloride of gold, and of the saving effected by so doing, that I address myself. By using chloride which I have prepared myself I know beyond a doubt what quantity of real gold I am using, and I find that the amount I save more than pays for the trouble of preparation. I also find that I can tone quicker, and that the tones are better, with home-prepared gold. The best plan is to use pure gold, which can be obtained at any refiner's either in nuggets or thin sheets, or a half sovereign may be used, although it entails a little extra work in freeing it from the copper with which it is alloyed. To prepare the chloride, proceed as follows: Place the gold (any quantity) in a glass or earthenware measure with one part of nitric acid to three parts of hydrochloric, and gently heat on sand or water bath until dissolved and the solution crystallized. One grain of gold makes about one and a half grains of chloride, so that, by the addition of one drachm of water for each grain, we know exactly what quantity to use when making up a toning bath. — *The British Journal Photographic Almanac*.

The Photograph Passion.

WHY, oh why, will women and girls have themselves so constantly photographed and allow the often unsatisfactory result to be scattered broadcast over the earth? It is an injustice to oneself to permit an untrue picture to go outside the home circle. If it goes to friends you seldom meet, they form their idea of you from the unflattering thing, and insensibly begin to wonder how they could ever have admired you. Then the gown in which you were photographed goes out of fashion, and it is a horrid idea that you may be standing around on someone's table in an overskirt and tight sleeves to be picked up by a girl in an umbrella-case gown, with the loveliest puffed shoulders imaginable, be called "rather pretty, but a dowdy," and set down feet up. Then there is the proud mamma, who has baby's picture taken in a big shell or some other equally idiotic thing, clad in a smile or possibly one sock. There should be a law passed to prevent her sending these wares to everybody she ever heard of in her life. They will lose themselves in a week or two and remain in hiding till the baby is about nineteen years old; then they will reappear and pursue her relentlessly wherever she goes till she is almost frenzied. If a dear one dies, the first thing done is to get a lot of photographs and send them to everyone who loved her. After a while they drift out of the album or photograph box. The owner dies, perhaps, and her children have not the same feeling about things, and it is a miserable thought that the dear face may be poked away with a pile of papers or old letters or thrown in a scrap basket. It is not even safe to give one to "him," not because of the tales we hear of betrayed confidence and all that—there is very little of that sort of thing in real life, and if an "ex" does not return your photograph he is almost sure to burn it—but because he might put it in one of those silver dollar lockets and then in a moment of abstraction pay his wash bill with it.

An International Exhibition.

AN International Exhibition of Photography, under the auspices of the syndicated corporation of manufacturers of and dealers in photographic specialties and cameras, will be held from April to September, 1892, in the World's Exhibition (1889) buildings, Champ de Mars, Paris. The exhibits will be divided into eight groups, as follows:

1. History of photography.
2. Scientific photography; astronomy; micrography; medical and legal photography.
3. Artistic photography for amateurs.
4. Professional art photography; negatives; portraits; landscapes; views; reproduction, etc.
5. Industrial photography; hollow and relief photography; photo-engraving; photocaligraphy; photolithography; photoglypty, photochromy; stereoscopy; photography on silk, glass, linen, enamel, china, ivory, wood, etc.
6. Chemical products and photographic specialties, collodion, films, plates, papers, acids, salts, gelatines, etc.
7. Photographic material; optic; mechanic; cabinet work; leather goods; paper, glass and studio requisites.
8. All trades connected with photography; printing; electricity; lighting; furniture; exploration.

Most of the leading manufacturers of England, the Continent, and probably some from Canada, will be represented.

Inglis & Co., Chicago, are turning out some extremely good things in sepia tints on the bromide papers. Samples seen in Toronto are beautifully done.

A Brilliant Star.

It is with pleasure that we note the marked improvements our Canadian dry plate manufacturers have made both in speed and quality, more particularly noticeable, perhaps, in the "Star" plate, manufactured by Anderson, Robinson & Co., of Toronto. We have seldom, if ever, seen a new article take so rapid and so firm a hold on public favor as this plate has done, and judging from the comments on all sides, it promises to become a fixed as well as a brilliant "Star." Our picture this month is made on a "Star" plate and will give you some idea of its quality. We congratulate this enterprising firm on their success and liberality, as they are offering a \$100 trophy and two other prizes in gold for the best work on either the "Eagle" or the "Star," which will doubtless call forth strenuous efforts for the prizes.

A Good Idea.

S. H. Smith and Co., of this city, have added to their premises a good-sized and very complete gallery for the use of their customers, who can now "try before buying" lenses, plates, backgrounds or any accessories. The idea is good and is sure to be appreciated by their patrons. A regularly fitted-up dark room is also a feature of this house, the use of which is extended by them to professional or amateur.

The Russian photographers have a strange way of punishing those who, having received their photos, do not pay their bills. They hang the pictures of the delinquents upside down at the entrance to their studio. How horrid! I should think a sensitive beauty, equally with a man who values his credit, would thus be induced to send a cheque at once, and to ensure their discharge from the topsy-turvy brigade. It is rather hard, though, on the children who are treated thus because their parents are slow in remembering that likenesses of their little ones cost money.

Formula for Toning N. U. Aristo Paper without Gold "Combined Bath."

Mr. J. J. Millikin, who printed our pictures this month, and who has been very successful in working Aristo, has very kindly given us his toning formula for publication. The simplicity and cheapness of this formula and the fine results to be obtained from it should bring it into general use.

No. 1.

Hypo 3 oz.
Water 16 "

No. 2.

Water 16 oz.
Nitrate lead 1 "
Pulv. alum 1 "

When contents of No. 1 and No. 2 are dissolved, add *No. 2 to No. 1* and let stand twenty-four hours, and filter into toning tray before using. Can be used repeatedly by adding a little hypo occasionally. Prints should be immersed *face up* without washing, to avoid air bells. If the whites show any tendency to yellow, immerse for a few seconds in a solution of bluing, very weak (purple Diamond dye). Don't allow prints to wash over night; one to two hours is sufficient.

Henry J. Newton, speaking of this no-gold toning bath in the *Times Almanac* says :

There is, I know, a popular prejudice against any process of toning in the hypo bath, and the production of what has been termed sulphur tones. What may have been the result with similar processes in the treatment of albumen paper should be no criterion by which to decide this question of permanency of gelatine paper. The question will, of course, be whether prints so treated and toned will be permanent. If the keeping of the prints made on this new gelatine paper should depend on the thorough eradication of the hypo, I would recommend that it be done with nitrate of lead in the following way :

Water 16 oz.
Nitrate of lead 48 grains

The lead in dissolving will produce a trace of carbonate of lead ; this *must* be dissolved before using, and is done by adding a few drops of acetic acid.

After the prints have been washed sufficient to remove the surface hypo, immerse them for five minutes in this bath and then wash in clean water for five minutes, and every trace of hypo will be removed. This bath of lead nitrate should not be used stronger than I have given it, because of its toning properties, and if used stronger would carry the toning too far before the decomposition of the hypo was effected.

Very fine tones and brilliant prints can be produced with this toning and fixing bath on the commercial ready-sensitized albumen paper, but by very different treatment. Prints on this paper, in the first place, must be thoroughly washed, and then fixed in a fresh solution of hypo. When fixed they should be immersed in the lead, hypo and alum bath until the desired tone is obtained, then washed in the usual way. The brilliancy of prints so prepared cannot be surpassed on albumen paper. The prints on either paper dry much darker than they appear when wet.

How to Copy a Blue Print in the Camera.

It has been our misfortune to have this problem brought before us in a practical shape, and, in explaining how it was done, we think we shall be able to demonstrate the utility of the modern color-sensitive plate. Any old-time photographer will say that it cannot be done, because blue always takes white. And if you photograph a blue picture on a white back-ground, you obtain a black or opaque negative. Perhaps no expert photographer has made more experiments in this line than Wm. E. Bierstadt, and we are indebted to him for the practical solution of the problem. The principal object to be sought after is to cut off the reflection of the blue rays, and to do this a red screen of some kind must be used. If a thin red-tinted collodion film is laid over the surface of a blue

print, one is visibly struck with the greater definition that is observed between the white and blue portions. As it thus appears to the eye, so will it be in the camera. — We placed behind a lens a sherry-colored film, having a diaphragm in the lens of *f*/16 and in the plate-holder, color-sensitive to red; we then gave an exposure of three minutes; plates developed with pyro and potash, and secured a negative dense, full of contrast, equal in every respect to that of the plate. The rule is to study the best colors of a screen complimentary to the object that is to be photographed, and use that in combination with a color-sensitive plate, giving a liberal exposure. — *The American Amateur Photographer*.

Answers to Correspondence.

CORRESPONDENT, North Bay. — In answer to your inquiry we print the following as being a simplified method:

Mr. A. V. Lavroff, editor of the Russian *Amateur Photographer* gives the following simplified method of the collo-type process: A plate glass is prepared in the usual manner with bichromate of potash, exposed beneath a negative, developed with cold water, and then allowed to dry for twenty-four hours at about 70° Fahrenheit. It is next covered with the following etching solution:

Water.....100 c. c.
Glycerine.....200 c. c.
Hyposulphite of soda..... 2 grams.

This solution is allowed to remain on the plate for one or two hours, according to the relief desired, when it is removed by the aid of a very soft sponge and blotting paper, and the ink applied by means of a gelatine roller. To take prints in the ordinary copying press, the plate glass covered with the ink is placed upon a piece of india-rubber cloth; upon the glass is laid a mask of paraffin paper, then the printing paper, and, finally, a thin pillow of fine cloth, filled with cotton wool, and provided with a case of soft, smooth silk. This pillow enables the operator to press the paper into close contact with the plate, and so to obtain all the fineness and detail of the negative. If, after about

twenty prints have been taken, the bichromate image begins to become grey at the light parts, it is only necessary to apply the etching fluid with a soft sponge in order to restore the cliché to its former vigor. By this method anyone can take hundreds of prints at moderate cost, and without a special machine, a little experience and exactness bring all that is required.

Toning Lantern Slides.

A paper read before the Society of Amateur Photographers of New York.

BY ALFRED STIEGLITZ.

MY late experiments in this line have led me to use the following formula in toning dry plate slides. Over-expose, and develop in such a manner that the slide looks rather flat and under-developed. Fix in hypo, as usual, and then wash under a tap thoroughly (this is of importance to ensure success in the toning operations) for about five minutes.

Make up three stock solutions:

I.—Uranium-nitrate..... 1 part
Water.....100 parts
II.—Ferricyanide potassium... 1 part
Water.....100 parts
III.—Ferric chloride..... 1 part
Water.....10 parts

They are ready for immediate use.

A. In order to get a brown tone, mix ten parts of I. and one part of II. Dip the slide into this, and keep it there for about thirty to fifty seconds; then wash for ten minutes and dry.

B. For reddish-brown tones, take equal parts of I. and II. and proceed as above.

C. Red tones are procured by taking one part of I. and two parts of II., and proceeding as above. Be careful in toning slides with this mixture, as extra care has to be taken in order to keep the high lights clear. A trace of stain does not necessarily spoil a slide. On the contrary, such a slide often looks exceptionally beautiful on the screen. Judging slides by daylight results in misjudgment very often. The only proper way to see what a slide is worth is to project it on the screen.

D. Green-blue tones. After having

toned the slides for at least two minutes in any one of the above solutions, A, B, or C, preferably B, wash for three minutes, and then place it in a solution of one part of III. and five parts of water, for five minutes; then wash. The resulting slide will be of a greenish-blue tone, very beautiful for certain effects.

E. Prussian blue tones. Instead of using one part of III. and five of water, as in D, use the stock solution III. as it is. This tone is very effective for seascapes or moonlight effects.

In case the resulting slide after toning is not satisfactory, it is easily brought into its original state by dipping it into a dilute solution of potassium cyanide for a few seconds, upon which the slide regains its original tint. Do not allow the slide to remain in the cyanide solution longer than absolutely necessary to remove the toning stain, inasmuch as the solution is a powerful reducer, and would in short time eat away the whole picture. After having washed the slide after this operation it may be retoned again with any one of the above-mentioned formulas.

In case similar results are wished to be attained with other salts than uranium-nitrate and ferricyanide of potassium, slides can easily be toned brown or red by treating them in the following simple way: After having washed the fixed slide thoroughly, dip it in a concentrated solution of bichloride of mercury until well bleached, after which operation wash for at least ten minutes in running water, and then color with a concentrated solution of sulphite of soda for brownish tones, or with a concentrated solution of carbonate of potash for reddish ones. The results are generally very fine. This method led me to the following observation. It often happens that the films of slides upon developing with hydroquinone are stained a keep yellow, even orange, and that such slides are only good for covering glasses, after the film had been carefully removed from same in either hot water or acid. This is no longer the case. Should the stained slide be good in all other respects, do not throw it away as heretofore, but give it a short bath of

bichloride of mercury, which bleaches the color at the same time that the silver image is bleached. Upon treatment with either ammonia, sulphite of soda, or carbonate of potash, the stain will have entirely disappeared, and the resulting slide will often turn out to be a gem of the collection.

NOW A FEW WORDS AS TO TONES IN GENERAL.

Except for exceptional cases, I think it advisable not to tone slides, but to try and get the fine brown color directly in development, a color so easily obtained by the well-known formula :

Hydroquinone	1 part
Sulphite of soda	4 parts
Carbonate of potash	3 parts
Water	85 parts

Use one part of this solution with four parts of water, after having exposed four times as long as would have been necessary to obtain a black tone with the normal developer, that is, one part of the stock solution and one part of water.

For certain effects, though, toning is very advisable, the choice of color depending entirely upon the good taste and judgment of the slide maker.

These few remarks, I hope, will lead some of my colleagues to further experiment in this particular fascinating branch of photography, and I sincerely hope that they will soon improve upon my own crude experiments.

Doings of the Toronto Camera Club.

THE Toronto Camera Club have changed the date of their coming exhibition to the 16th May, as it was found it would be impossible to get ready sooner. The committee have succeeded in securing some valuable donations from the different makers of dry plates, and these combined with the club gold and silver medals aggregate over \$100 in value. Judging from the amount of interest taken in the weekly demonstrations and other matters pertaining to the club, the exhibition should be a success from the word go.

Since our last visit the small six-inch condensers have been replaced by

a pair of exceptionally good ones of nine inches, and alterations have been made to the focusing arrangements, so that everything works like a clock. Some very good enlargements have already been made.

The competition for the prize offered for the best lantern slide last night was very keen, and some fair work was shown. Mr. G. Ridout carried off the prize. Mr. Ridout deserves great credit for having successfully met and defeated some of the older heads, he being, comparatively speaking, a novice at slides. We might here suggest that the committee supply a few more chairs, the crowd being as two to one chair, on club nights. Mr. Neilson gave general satisfaction with the lantern, and was ably assisted by our genial friend, Mr. Petrie. The judges, Messrs. Walsh, Manchee and Whittemore, also performed their task with dispatch and fairness.

Successful Monday night meetings have been held and several instructive demonstrations given.

During the past month a very large number of new names have appeared on the club membership list posted in the rooms.

Members are now beginning to talk of their spring outing.

Mr. D. J. Howell is out with a prize for the best bromide contact print exhibited on next club night, 4th April.

CAMERA.

EXHIBITION PRIZE LIST.

Following is the exhibition prize list of the Toronto Camera Club, to be held at the club rooms, May 16th:

CLASS A.—Amateur work throughout.

CLASS B.—Professional printing and retouching allowed.

1. LANDSCAPE.—Class A, silver medal and Stanley plates to \$5 value; Class B, silver medal and Standard plates to \$5 value.

2. MARINE.—Class A, silver medal and Standard plates to \$5 value; Class B, silver medal and Stanley plates to \$5 value.

3. ARCHITECTURE.—Class A, silver medal; Class B, silver medal.

4. INTERIOR.—Class A, silver medal; Class B, silver medal.

5. PORTRAITS.—Class B only, not more than two figures, silver medal.

6. GROUPS.—Class A, silver medal and Standard plates to \$5 value; Class B, silver medal and Stanley plates to \$5 value.

7. LANTERN SLIDES.—Class C only, best 4, not more than 4 to be exhibited, silver medal.

SPECIAL PRIZES.

Two gold medals, valued at \$10 and \$5 respectively, are offered by Messrs. Anderson, Robinson & Co., Toronto, as first and second prize, for best work done on their plates—any subject.

Two prizes offered by Messrs. G. Cramer Dry Plate Works. No. 1 consisting of \$10 value in plates for best work on their lightning plates; No. 2 consisting of \$10 value in plates for best collection showing the color sensitiveness of their isocromatic plates as compared with their ordinary.

Messrs. Stanley Dry Plate Co. and Standard Dry Plate Co. each offer \$15 worth of plates for the best work done on their plates. The committee has divided these last two offers into \$5 prizes as shown by list. Should any \$5 prize not be competed for, the committee of judges may award same to the best work from that make of plate.

In addition to the above, the club will give a gold medal for the best general exhibit.

REGULATIONS.

The exhibition will be held during week commencing 16th of May in the club rooms.

Members who have not paid their fees cannot compete.

Entrance fee 50c. No entry received later than the end of first week in May (7th).

All pictures must be mounted, but not necessarily framed. If more than one picture in a frame, landscape must not be included in same frame as marine, groups with portraits, or interior with architectural subjects, etc.

Printed forms of entry may be obtained from the secretary, to whom all communications must be addressed.

Negatives must be produced if required.

The new Zeiss anastigmat lenses, which are creating considerable interest in the photographic world, can be supplied by S. H. Smith & Co., 80 Bay Street, Toronto. Correspondence solicited.

What a Baby Did in One Hour.

1. Yelled fifteen minutes without taking breath. (Uncle Will declares that this is a true statement.)

2. Pulled out enough hair from his uncle's head and whiskers to stuff a sofa pillow.

3. Cracked the wall paper as high as he could reach with the poker.

4. Broke a stereoscope by sitting down on it.

5. Swallowed six buttons and a good part of a spool of thread.

6. Emptied the contents of his mother's work basket down the furnace register.

7. Tried to squeeze the head of a cat into a tin cup and was scratched badly in the attempt.

8. Knocked the head off a fine wax doll belonging to his older sister by trying to drive a tack into a toy wagon with it.

9. Fell off the edge of the whatnot, and brought down with him two costly vases, which were ruined.

10. Broke two panes of window glass with a cane which uncle let him have.

11. Fell into a coal hod and spoiled his new white dress.

12. Set fire to the carpet while uncle was out of the room hunting for something to amuse him.

13. Crawled under the bed and refused to come out unless uncle would give him the molasses jug.

14. Got twisted into the rungs of a chair, which had to be broken to get him out.

15. Poured a pitcher of water into his mother's best shoes.

16. Finally, when he saw his mother coming, he ran out to the porch and tumbled off the steps, making his nose bleed and tearing a hole a foot square in his dress.—*St. Louis Republic.*

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The Wilkinson Co. is the name of a new establishment which has been formed in Chicago, with a capital stock of \$40,000, for the manufacture of photographers' goods. The incorporators are Arthur J. Eaton, A. C. Jewell and O. H. Watson.

Personal Mention.

D. J. Howell, of S. H. Smith & Co., left on the 26th for Rochester and other eastern cities on business for his house.

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Pollard & Son, of Tilsonburg, are doing some excellent view work.

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Mr. J. Hopkins, St. Thomas, turns out some good work in "Aristo."

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Mr. Frederick Lyonde, one of Hamilton's well-known photographers, took unto himself a wife on the 25th. Accept the congratulations of THE JOURNAL, Mr. and Mrs. Lyonde.

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Mr. W. O. Wood, the genial representative of the A. M. Collins Manufacturing Co., of Philadelphia, paid us a visit last week. Mr. Wood reports the company's immense plant as being severely taxed to supply the demand for their world-famous mounts. Their new platinotype mount for platinotypes and bromides is a "thing of beauty."

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WE hope our readers, or a goodly number of them, will take an active interest in the prize article competition started in this issue.

Don't wait for someone else to begin; write *yourself*, on the subject for the month, or at least on the subject you feel most capable for.

You will find it of benefit to write what you can of each subject as it is given, even though you don't send it in for competition, but if you start with the resolve to send in your paper *anyway*, there will be an additional incentive to have it *right* and to look up doubtful points, which, once settled and *written down*, will not be again easily forgotten. Then, should yours be the accepted paper, you will have the satisfaction of feeling that you have interested and instructed a thousand fellow-workers.

Spirit Pictures.

AGENTLEMAN who is rather inclined to believe in spirit rappings, and whose chief delight is in attending a "seance," brought the following clipping into the gallery the other day and tried to convert the writer to spiritualism by citing it, and asserting that he had seen with his own eyes photographs of a friend taken in New York City showing unmistakable spirit faces clustered in a very loving manner around his head, said faces guaranteed by the spirit (?) photographer to be those of dead relatives who were evidently keeping a vigilant watch upon the doings of the subject taken.

SPIRIT PHOTOGRAPHY.

The following letter was recently sent to the editor of the *St. Louis Spectator*: "Of all the curious phenomena that have been developed the past few years, the most interesting, because the most mysterious, is the taking of portraits of the departed. To most people the theory seems sheer nonsense, while to others it is a positive fact, a demonstration to them beyond all cavil. Being a materialist, yet being ever willing to be convinced of the error of my belief, if such a thing can be done, I was induced to go to a photographer now in the city, who professes to be what is called a medium, and who also professes to take the portraits of the dead he has never seen. My first sitting produced my own portrait with a female face indistinctly outlined just over my head—but I did not recognize the features of the so-called spirit, and this was no test either way. I was accompanied the next time by a lady friend whose portrait was taken, and when the plate was developed there were seen three female faces clustered around above her head, but she did not recognize either of the faces. I went a third time, and the plate showed two faces above my own; withal the "spirits" had placed a rose in the lapel of my coat—that is, the plate showed I had a flower, which in reality I did not have

—but I did not recognize either of the faces, yet I have met people who profess to have recognized the faces that were taken on their plates. I purpose going again, but in the meantime I thought it might be interesting to some of our readers to know of the investigation, who perhaps might be able to report better results than I am up to date. I might here mention that the name of the photographer is —, and he lives on South Jefferson Avenue, where my photographs were taken." Name and number were given.

Having in younger days gotten into trouble by taking a spirit picture of a susceptible spinster showing a faint and ghostly figure wrapped in the traditional sheet and with outstretched arm pointing in a very tragical way at the thin form of the old lady, who, instead of appreciating my successful spirit raising, proceeded to develop a very noisy case of hysterics, necessitating the calling in of the family doctor, and having been called a villain by the aforesaid doctor and every member of the family, and looked upon with decided suspicion by the old lady for ever after, I thought I was, in a manner, capable of making a few remarks in a general way to this man upon the folly of believing all one hears or sees, especially in the "spirit" line. Having also heard of the New York man, who, by the way, reaped quite a harvest from those who were foolish enough to patronize him, I proceeded to show this deluded mortal how it was done. Getting out the camera and selecting a very slow plate (used for view work), a snap shot was taken of the office boy wrapped in a curtain. Our friend with the spiritualistic tendencies was then posed, and an exposure of about ten seconds given, using the same plate. Upon development, the faint figure of Bob (the ghost) was seen to one side, very spirit-like, if we except his Irish smile, which would not be surpressed. It is needless to say that the man who came to convert went away with his (dangerously) growing belief in spiritualism badly shaken, and will most likely drop in some day and report himself entirely cured. Geo.

Vignettes.

WHAT would be thought of an artist who deliberately made a practice of painting his canvas up to the edges, and then regularly painted out all but the centre? Yet photographers act quite as strangely; they take portraits with the image up to the edge of the plate, and then vignette off all but the centre. After such a roundabout procedure it is not to be wondered at that the finished results are often so unsatisfactory.

It would be an interesting verse in the history of photography if we could gather how and by whom the first vignette was made. In all probability it was suggested by one of those crayon drawings, which photographic enlargements have to a great extent done away with. We should like to know whether the vignetting was done by printing or in the camera, or at least in front of it, by means of a screen; at any rate, it may safely be stated that the earliest vignettes could not possibly be worse than many which are now being made. It may be worth the professional photographer's while to consider whether badly-made vignettes have had anything to do with the present dull state of business, for if there is one thing more than another which exhibits the want of skill in a photographer it is a badly-printed vignette, and the worst of it is that a large majority of these vignettes need not have been so printed, and would have been far better had they been printed full to the edges. Perhaps the extra charge generally made for this class of work may have had something to do with the matter. The photographer would naturally try to get his extra shilling or two, and the sitter, with a natural desire to have the best—i.e., the most expensive—work, would prefer vignettes to plain work.

It is easy enough to see that most vignettes *are* disturbing to the eye, for generally it is this technical part of the portrait that first claims our attention, instead, as it should be, such qualities as the excellence of the likeness or skillful light and shade. After looking on

a well-printed vignette the spectator should *not* be able, if asked afterward, to say whether it was vignettted or not; if he can, some evidence of the technical part of the printing must have impressed him.

In theory, it is the easiest thing in the world to vignette a portrait properly, but in practice everything seems to conspire in the hands of many against good results, yet no photographer who understands the whims of his customers would for a moment suggest any other style of printing bust portraits, for he knows full well that if he could not vignette off the creases of that badly-fitting dress, or remove altogether that bulky waist, he would lose many an order, to say nothing of his being able to apparently reduce the size of the features of those of his sitters to whom nature has been especially kind. To be sure, the photographer could cover up any objectionable part with an oval mask, and if the oval openings in albums had in the first place been made rounder and not so large, oval portraits would be more used than they are; but as the oval of the album maker and the oval of the photographer are so seldom of the same shape, it follows that vignettes are preferred in spite of their flatness and insipidity.

The wish for more force and vitality in vignettted work has brought forth many attempts at breaking the monotony of the edges of their everlasting pear and oval appearance. By means of a few touches with a brush an artist can easily remove the tameness, but brush work on an albumenized carte or cabinet is not to be thought of. Yet, surely, it would be worth while by double printing to make the every-day vignette more artistic and attractive. One of the simplest ways of getting a good effect, with little trouble, is to make the portrait in the usual way, choosing a light background by preference, then taking an unmounted proof as a guide, to hatch or stump on a rough drawing paper the effect wished for, from this making a negative, and printing it over the portrait, covering up the face and those parts that is not desirable to add to. Portraits so treated are easily mis-

taken for pictures to which very delicate work has been applied, and are always appreciated by those whose custom is worth having. Another simple way of removing the wearing smoothness of vignettes is to tear roughly out of brown paper a piece large enough to cover the face and shoulders, and to place on the printed vignette a sheet of tissue or note paper, on this the rough mask of brown paper, and expose to light for a very short time.

Of the numerous dodges and appliances for printing vignettes everyone is well acquainted, but their successful use depends altogether on the user, and not upon the appliance used. Thin card, with a hole in the centre, and cuts extending from the hole to the edges, or as far as is necessary, gives good results in the hands of those who know how to manipulate the cut edges, which are apt to get flattened down when the printing frames are taken in at night; others use a card, or piece of wood beveled inward, and cover up the aperture with tissue paper when the light comes strongly from one direction. If the depth of the printing frame is only small it is advisable to increase it by nailing an extra frame of wood all round to keep the vignetter at a good distance from the negative. By making this frame deep at one end and shallow at the other, and placing the lower part of the negative at the shallow end, it is easy to keep the graduation within bounds in the neighborhood of the waist. It is, however, much better to block out on the negative, by means of opaque paper, tissue paper and paint, any transparent parts of the negative which might show too strongly than to trust entirely to the vignetter.

As the light is constantly moving, it is necessary to keep the frames which contain vignettes constantly moving, too, if we wish to get the best results. To this end a board to hold the frames, suspended from a roasting-jack, enables the printer to get the most delicate prints in the most shifty or one-sided lights, to obtain softness without having recourse to such appliances just mentioned. Lithographed papers to fix on the front of the negative have been

introduced; their principal objection is that the time of printing is considerably increased, but, if the negatives were made specially thin, there is no reason why such papers should not be useful, for being close to the negative there is no fear of the light getting to parts of the print where it is not wanted. Even with the ordinary vignetting masks, vignettes take a long time to print, especially at this time of the year. The new gelatino-chloride of silver paper, therefore, offers advantages which no doubt will soon be taken advantage of, for we shall be able to make our negatives still thinner, and so print more quickly.

If so much trouble is required in printing vignettes, the thought naturally occurs why not make vignetted negatives in the camera by placing between sitter and lens a shield to cut off that portion of the figure we do not require? Here again practice refuses to conform to theory, for excepting for what are known as Russian vignettes, where the shading is done in black instead of white, screens in front of the camera are a failure, for the light from them is reflected in such quantities into the lens that the negatives are always more or less fogged. If anyone wishes to experiment in this direction we could advise the use of a single lens with a diaphragm in front. Those who have had experience in taking snow views know how much easier it is to do good work with single lenses than with doublets, simply because of the large amount of foreign light reflected on the latter.

In conclusion, we would advise all those who could afford it to have nothing to do with vignettes whatever.—*F. M. Sutcliff, in Photography.*

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The *Reviews of Reviews*, a breezy, bright and pleasing journal published in London, Eng., proves a very acceptable addition to our photographic literature.

As its name suggests, it furnishes its readers with all the best "kernels" without their having the trouble of cracking the shells. We wish Mr. Welford success in his new venture.

A Photographer Speaks.

The Canadian Photographic Journal.

Appreciating your efforts to give "us" Canadians a good home journal, and wishing, as we all should, to do all I can to help you, I send you a few things I have found from experience to be useful and which you can use if you see fit.

TO MOUNT ON TINTED BOARD.

Those who are using the mounts with lithographic tints, which are having such a run just now, have probably, like the writer, experienced some trouble with the prints coming off the mounts. If the board be wet with a sponge so as to thoroughly remove the grease, no further trouble will be experienced.

PHOTOGRAPHY ON SILK.

Pour 20 ozs. of boiling water on 100 grains of chloride of ammonia and 60 grains of Iceland moss. When nearly cold, filter, and immerse the silk in it for fifteen minutes. To sensitize, immerse the silk in a 20-grain solution of nitrate of silver for sixteen minutes. Let the nitrate bath be rather acid; when dry, prepare for printing by attaching the silk to a piece of cardboard a little smaller than itself, by turning the edges over and fastening with bits of gummed paper. Slightly over-print, wash in two or three changes of water, and tone in a gold bath made thus: 20 oz. water, 2 drams acetate of soda, 4 grains chloride of gold, and a few grains of common whiting. Filter and keep for twenty-four hours before using. Let the prints be toned slightly bluer than required when finished, wash in water, and fix in hypo. (4 ozs. to pint of water) for twenty minutes. Then wash well.

I add considerably to my income by keeping a silk handkerchief and a fancy jewel box done in this way in my show window. S.

[We are glad, Mr. S.—, that you appreciate our efforts, and we shall ever try to deserve the appreciation of yourself and every photographer in Canada. We hope others will follow your good example, and, by sending us communications on subjects photographic, help to make the journal we are publishing

for you all of interest. Let us hear from you again.—Ed.]

Spots on Albumenized Paper Prints.

THE complaints of spots on prints have become so unusually frequent that some discussion upon the subject may be of advantage. There is no doubt their occurrence can be traced to both general and local causes, some of the latter being particular instances of the former. First and foremost must be placed atmospheric phenomena, which, during the winter season, are provocative of so many evils, not the least being the tendency to induce the production of spots which, under ordinary or more general states of the weather, would not be seen. Albumenized paper, sensitized in the ordinary manner, is hygrometric to a very pronounced degree, and, the humidity of the air at this time of the year being at its maximum, the sensitized paper, though at the outset made perfectly dry, rapidly absorbs so much water that the slightest amount of foreign organic matter suffices to initiate reduction of the free surface nitrate, and so engender spots. This hygrometric condition is intensified by the fact of most albumenized paper being chlorized with ammonium compounds, with the result that the silver bath quickly becomes largely charged with nitrate of ammonia, a very deliquescent salt. Those who have found their prints suffer from an abnormal quantity of spots have noticed how, when they happen to have made a new floating bath, the spots for a time have diminished in frequency; there can be little doubt that this is owing to the absence of this deliquescent compound during the youth of the solution. If anyone wish to ascertain whether his albumenized paper is prepared with chloride of ammonium, he need only drop upon the glossy surface a little solution of caustic soda or potassa, or of lime-water, and hold over the place a piece of red litmus paper, which will at once turn blue by the action of the ammonia thus liberated. It may easily happen that the ammonia can be detected by the sense of smell alone.

With these considerations before us,

it is evident that the careful storage of paper before being placed in the printing frame will prevent the absorption of moisture. Similarly the periodical drying of the pads, decidedly advantageous for other reasons, will here also be beneficial. We may remark that the opposite extreme, the making the paper "bone-dry" just before placing upon the negative will be the reverse of beneficial, as it is a well-established fact that over-dry paper will neither print nor tone satisfactorily. What is required is to prevent its arriving at the opposite extreme.

It is often felt necessary during dull weather, in the endeavor to utilize all available light, to print in the open air. *En passant*, we may say we consider this practice not to be so advantageous as is often supposed, for it must be a very defective covering that robs the light of even ten per cent. of its actinism. The result must naturally be the dropping down upon the print or the negative—the result would be the same in either case—of particles of injurious matter, soot, and, sometimes, metallic particles from sundry manufactories, the foggy atmosphere not permitting the quick deposition that would occur during dryer weather. It may be said such spots would readily be seen and removed; but, as a matter of fact, experience shows that such is not the case with at any rate the average printer; further, particles so minute as not to be noticed are quite capable of setting up a species of catalytic action resulting in a decidedly visible blemish.

If now we follow the subject to the consideration of particular and local causes, we find a multitude of sources, most of them well-known ones. Sufficient cannot be said about the need of care in the handling of hypo; unless it be used in a place far away from prints and printing, it is surprising how readily it gets into the air and injures the prints most seriously. We recently heard of an instance where the especial care taken to avoid this evil had the very opposite effect to that intended. The principal of the establishment we refer to insisted upon all his printers wearing aprons in the interests of cleanliness. One of these employees was very care-

less, and an investigation into the cause of a serious number of spots and stains showed that he had allowed his apron to be almost saturated with hypo, particles of which were blown or brushed off on to the prints, and at other times his hands touching the deceptive protection became sullied with hypo, and prints were finger-marked in consequence.

One fertile source of spots must not be forgotten—the presence of particles of iron in the paper itself, or of injurious atoms in the albumen. At one time Rives paper was very liable to this defect, some paper being almost unusable; but now it is reduced to a minimum. We have seen spots, or rather stains, produced at this time of the year through incipient stains in an unvarnished negative. The silver had set off on to the gelatine, and produced markings which would rapidly ruin the negative. To print from an unvarnished negative when the atmosphere is at all humid is simply to invite the production of stains.

We may conclude our remarks by describing the cause of a large outbreak of spots which completely puzzled the head of a very large printing establishment. Small black spots of all shapes were present in such numbers as to be the cause of serious loss. It seemed impossible to find out their origin, until one day it was observed that the damaged prints (cabinet size) all were printed in some new frames that had been put into use. A further investigation showed that microscopically minute particles of brass, produced either in finishing off the frame or by the friction of the spring in opening and shutting the back, were readily discernible. A thorough cleansing of the frames, over all the surface and into the corners, was at once carried out, and the evil was laid. So simple a cause had such widespread results that we deem it most useful to describe the occurrence, thinking the same may operate in other printing rooms. In any case, we trust the wide basis we have laid for tracing the cause of spots may be the means of enabling this evil to be mitigated, if not entirely banished. —*The British Journal of Photography.*

Some Useful Formulas.

“RODINAL”

The N.S. Photo Supply Co., of New York, furnish us the following formulas, given by the manufacturers, Berlin, Germany.

Normal Exposures.

Rodinal 1 part.
Water 30 parts.

Over-Exposures.

Rodinal 1 part.
Water 30 parts.

Brom. potassium as needed, or old developer.

Fixing Bath.

Water 100 parts.
Sulph. soda cryst. 5 “
Sulph. acid C. P. 1 part.
then add

Hypo. soda 20 parts.

For Lantern Slides, Ellerslie Wallace.

Rodinal 1 part.
Water 30 parts.

To 4 oz. of above, add 10 drops of stock solution.

Under-Exposures.

Rodinal 1 part.
Water 40 parts.

For Strong Negatives.

Rodinal 1 part.
Water 20 parts.
Brom. Potass. as needed.

For Over-Exposures.

Rodinal 2 drams.
Water 4 oz.

For Normal Exposures.

Rodinal 2 drams.
Water 6 oz.

For Extremely Over-Exposed Plates.

Rodinal 2 drams.
Water 2 oz.

Bromide solution. A few drops of a 20 dram solution bromide potassium.

Formulas, by W. S. Davis, for Instantaneous Exposures.

Rodinal 2 drams.
Water 8 oz.

Carb. potash, 50 grain solution, 2 to 5 drops. This will develop a plate, so far overtimed, that it would be worthless with any other developer now known.

We publish the following suggestions received from the New York Aristotype Co., in reference to the handling of their paper :

Prints must be thoroughly washed before toning.

Toning bath should be kept as nearly neutral as possible.

Too many prints should not be toned at one time; it is apt to produce uneven toning.

Prints should be washed in one change of water before putting in the fixing bath.

Always use alum in the fixing bath; it hardens the films and makes prints easier to mount.

If paper has a tendency to give brownish whites, this may be remedied by the addition of one ounce of acid sulphite of soda to the fixing bath.

Prints must be thoroughly dry before burnishing, in fact they should be dried over night. If prints are wet when burnished, they will have a mottled looking appearance.

Burnisher should not be too hot, there is such a thing as scorching prints.

Toning Bath.

Water 8 oz.
Solution “A” (15 grs. gold to 8 oz. water) 1 oz.
Solution “B” (1 oz. bicarbonate soda to 8 oz. water) 1 dram.

Fixing Bath.

Water 20 oz.
Hypo 1 oz.
Common alum ½ oz.
Prints will fix in about 15 minutes.

To Remove Yellow Stains from Bromide Prints.

Soak for one or two hours in acetic acid 2 oz.
Saturate oxalate of potassium solution 4 oz.

To Remove Yellow Stains from Pyro-developed Negatives.

Bathe them in sulphurous acid water or in a ten per cent. solution of sulphite of soda, to which a few drops of sulphuric acid have been added.

To Precipitate Gold from Sulpho-Cyanide Toning Baths.

Add sulphuric acid and heat, when the gold will separate.

To Make Transparencies on Albumen Paper.

Print on the back of heavily silvered albumen paper till the picture is perfectly well printed out, by viewing the paper by transmitted light. Tone and fix as usual, and, when dry, make the paper translucent with :

Poppy oil.....	1 oz.
Balsam fir.....	¼ oz.
Spirits turpentine.....	½ oz.

The Stanley Dry Plate Co., recommend the following pyro and hydroquinone developers.

Developer No. 1.

Solution A.

Sulphite of soda, hydrometer test 50°.....	16 oz.
Sulphuric acid, C. P.....	12 drops.
Pyrogallic acid.....	1 oz.

Solution B.

Salsoda, Hydrometer test 40°

To develop, use of A 2 oz.—B 2 oz.—Water 12 oz.

Developer No. 2.

Solution A.

Pyrogallic acid.....	1 oz.
Oxalic.....	20 grains.
Water.....	12 oz.

Solution B.

Salsoda, hydrometer test 50°.

Solution C.

Sulphite of soda, hydrometer test 50°.

To develop, use ½ oz. of A—2 oz. of B—2 oz. of C, and 10 oz. of water.

Hydroquinone Developer.

Solution A.

Hydroquinone.....	1 oz.
Bromide of potassium.....	90 grains.
Sulphite of soda.....	6 oz.
Water.....	60 oz.

Solution B.

Soda hydrate.....	300 grains.
Water.....	60 oz.

To develop, use equal parts of A and B.

This developer can be used repeatedly and is therefore a very economical developer.

Mr. George Ayers, of E. & H. T. Anthony & Co., of New York, brought some United States dust (or snow) into town last week and the probabilities are that he took Canadian *dust* in the shape of orders back with him, to a goodly amount. This popular house is one of the most progressive establishments in the States.

Subscribe for your *home* magazine. Try it for six months, anyway. You'll not be sorry.

A. \$50,000 Addition

TO THE PLANT OF THE BAUSCH & LOMB OPTICAL CO., OF ROCHESTER.

THE new works are extensions of the present buildings, and an enlargement of the plant, and are to be constructed on an entirely new principle. The largest of the new buildings will be 185 feet on the south side, 80 feet on the east, 53 feet on the west and 162 feet on the north, and will be five storeys in height, including the basement. Between this and the present buildings, and coming a little in front of them, will be a handsome new engine house 64 feet by 40 feet and 22 in height, with a very wide, massive stone entrance in front and a trussed glass roof. Immediately back of the engine house is the boiler room, 40 feet by 60 feet, and back of this again will rise the large new chimney 130 feet in height. Over the rear part of the engine room will be built a four-storey connection between the old and new factories 33 feet by 40 feet in size, and of a design to harmonize and unite the different styles of buildings. The engine-room will contain a Harris-Corliss engine of 400 horse power, built especially for the company, and through the room, and half-way to the ceiling will be a passage or walk where visitors in passing through to the new factory may see the working of the engine from above.

In designing these new works the architects have entirely abandoned the old methods of factory building and have used what is called "slow burning," or "standard mill" construction, a type which has recently been developed as being the best adapted to resist fire.

The new building will contain a large elevator and two fire-proof stairways entirely separated from the floors by thick brick walls. The heating will be done by a large blower forcing fresh warm air into each storey, and the most improved methods of ventilation will be employed, entirely independent of the windows.

The cost of the new works will be about \$50,000.