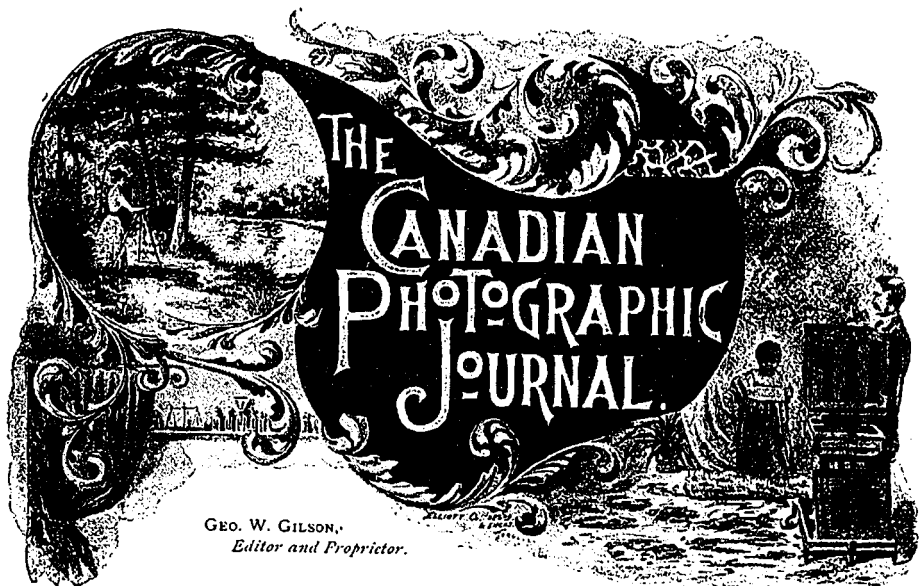


HALF-TONE ON COPPER

CANADIAN PHOTO. ENG. BUR.

"NEATH LORDLY OAKS"

PRIZE PHOTOGRAM BY W. BRAYBROOKE BAYLEY, TORONTO



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Editor and Proprietor.

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ANNOUNCEMENT, CHANGE OF DATE.

We have received a great many requests to extend the time of our second prize competition. As the number of such requests implies that the majority of exhibitors desire the time extended, we have decided to change the date of closing from July 31st to September 30th. We trust this date, being later in the season, and giving exhibitors the chance of using their present summer's work, will be satisfactory to all. We hope our readers, both professional and amateur, will send in their entries as early as possible to facilitate the arrangement of entries in the different classes.

EDITORIAL CHAT

MR. H. P. ROBINSON'S letter in another column, we receive with pleasure, as apart from the satisfaction of having praise from such a high authority on the subject treated, it expresses the general opinion that our report of the late New York exhibition as written by our New York correspondent, Mr. Floyd Vail, was the most extensive and complete, and also the most correct account of this exhibition that appeared.

IN another column will be found a letter from Messrs. Simpson Bros. containing suggestions for the raising of prices. The subject is a most interesting one, and should have the consideration of every true, earnest, photographer. Mr. Simpson's letter opens the way for suggestions as to the best means of

accomplishing this much to be desired end, and we hope to receive the ideas and suggestions of our photographers on the subject

JULY of '94 will probably have witnessed two of the most successful photographic conventions ever held in the history of photography, namely, the British convention, held this year at Dublin, Ireland, and the American convention at St. Louis, Mo. It seems a good year for photographic conventions, for our own Canadian convention this fall promises to be better attended than ever before, while the arrangements already made and the many "good things" our committee is working to secure is a guarantee that the meeting will be intensely interesting. Everyone who can possibly get away should be there. If you can't get there any other way, just shut up shop for two or three days, put a card on the door saying you have gone to the Photographic convention after some new styles in posing, lighting, draping, and working, which you will be pleased to submit to them upon your return. It will pay you well and give you a few days well earned rest. Don't forget the date, October 30th and November 1st and 2nd.

As our readers will see by notice in another column, the date of closing of the second prize competition conducted by this JOURNAL has been extended to September 30th. By thus acquiescing to what seemed to be the popular wish, we hope to receive the hearty support of our friends and readers in our efforts to give them both pleasure and profit. Get your own entries ready in good time and oblige us by speaking to your friends about this competition in which there are four hundred dollars in prizes to be given.

PRINTING ROOM TALK.

BY H. H. BUCKWALTER.

(Continued from June number.)

The toning and fixing of the new emulsion papers may be done exactly similar to the manipulation of albumen paper. If separate toning and fixing baths are used the two papers may be worked together without difficulty. If a collodion emulsion paper is used it must first be softened. Gelatine papers need no preliminary handling. Any good toning bath may be used, the papers being first washed to eliminate the free silver. Fixing and washing is similar to the albumen method.

But the particular advantage in emulsion papers is in the ease with which they may be toned and fixed in one bath, the preliminary washing being also omitted. Many arguments have been offered for and against this method. The writer is at a loss to satisfy himself which side is right. But the fact remains that there has never been a practical demonstration that prints toned and fixed in a combined bath, *when properly done*, are not as permanent as albumen; therefore, a short method is suggested until satisfactory evidence is offered that it is in error.

Many arguments are made against sulphur tones. A bath made of

- Hypo..... 8 oz.
- Gold (neutral)..... 6 grains
- Water..... 32 oz.

will fix and tone almost any gelatine or gelatine-and-collodion emulsion and our chemical sharps will have some trouble in demonstrating where the sulphuration is produced. It should be understood, however, that thorough washing after toning is absolutely necessary. The above bath contains no lead or alum. It may be necessary

to use ice to keep the temperature down to about 60 degrees to prevent softening of the film. One disadvantage of the above bath is its slowness. The bath will not tone until there is some chloride of silver in the solution. If several prints are placed in the bath at first or a few grains of chloride of silver added the toning will be considerably hastened.

There are, however, a large number of photographers who claim that a bath may contain alum and not give sulphur tones. The following bath will work very nicely:

Hypo.....	8 oz.
Sulphate Soda.....	4 oz.
Alum.....	2 oz.
Boiling Water.....	48 oz.

Dissolve and shake for a few minutes. Keep in a warm place 24 hours. Pour off the clear solution, add 3 grains gold and stand in cool place until wanted. Filter before use. Always add about one-fourth old bath to supply the chloride of silver necessary to tone properly.

There are baths without number containing both alum and lead.

Many prominent photographers claim that if properly handled—not trying to tone too much paper with a small quantity of bath—there is no risk of permanency. The writer has seen many prints toned in a bath of this nature. Some of them have been in a show case standing in the sun for many months. Beyond the natural fading of mounts and tinted paper there has been no change. The image is still unchanged. The makers of several brands of paper make very strong claims for their goods if toned in a combined bath containing lead and alum. Their opportunities for testing and verifying their experiments are greater than the writer's, so their words

are accepted. One paper maker even claims that his paper can be toned without gold and the results be permanent. The tone is given by lead only. The following bath has given much satisfaction to the writer, who has used it on a number of different papers:

Boiling Water.....	40 oz.
Hypo.....	8 oz.

dissolve and add

Alum.....	2 oz.
Nitrate Lead.....	60 grains
Acetate Soda.....	90 grains
Gold.....	4 grains

Let stand 48 hours and use only clear portion. The toning should occupy at least 10 minutes. As the prints are toned they are thrown into clean water until all are toned, keeping them well separated and moving. Five minutes in a bath of

Hypo.....	2 oz.
Water.....	12 oz.

will insure thorough fixing. One hour's washing in running water is generally sufficient.

There is one good practice in working a combined bath. Keep a bottle of saturated solution of hypo handy and add a small quantity to the bath from time to time while toning. About half an ounce for each dozen 5 x 8 will be sufficient. This will keep the hypo strong enough to prevent non-fixing. Toning should be carried to *almost* the tone desired. Prints generally dry slightly darker. When baths work too fast they may be slowed down by adding water or a drop or two of a saturated solution of sodium sulphite. It is better to wash in running water one hour than to allow the prints to stand in still water a longer period, with frequent changes. There is danger of a yellow tinge if the washing is too prolonged. Acetate of soda in a bath

clears the shadows. Combined with alum it hardens the film. Gold gives bluer tones and less contrast. Another combined bath that has worked well in the writer's hands is here given. The tones with this bath are bluer than those of the above bath. It has been used on several makes of gelatine papers and in no instance discolored the white or gave greenish half tones until the gold in the bath was exhausted. One grain of gold will tone from one and one-half to two full sheets.

Water (Hot).....	40 oz.
Hypo.....	16 oz.
Acetate Soda.....	½ oz.
Lead Nitrate.....	¼ oz.
Gold.....	15 grains

Dissolve and let stand 24 hours. Then add 2 oz. alum dissolved in 40 oz. boiling water. After 24 hours rest the clear solution is fit for use.

Quite recently a German firm placed on the market a solution called "Formalin." Its medicinal uses are as an antiseptic and germicide, but it possesses remarkable powers in hardening gelatine. The solution is water containing 40 per cent. of a gaseous body known to chemists as "Formalderyd" (C H₂ O). One ounce of Formalin added to 40 oz. water will harden a gelatine plate in five minutes so that it will stand boiling water. It forms the basis of several "antiheats" and "antifrillars" recently offered for sale. Its cheapness is a matter of note. Having experimented with this preparation on plates, the writer is now engaged in similar experiments on paper. A bath containing hypo, acetate of soda, lead, gold and water with 1 per cent of Formalin has been found to give results quite satisfactory. The bath is especially suited to gelatine papers and makes them, when dry and burnished, almost waterproof.

Some brands of gelatine paper require a special hardening bath, especially with separate toning and fixing baths. This hardening bath is generally composed of:

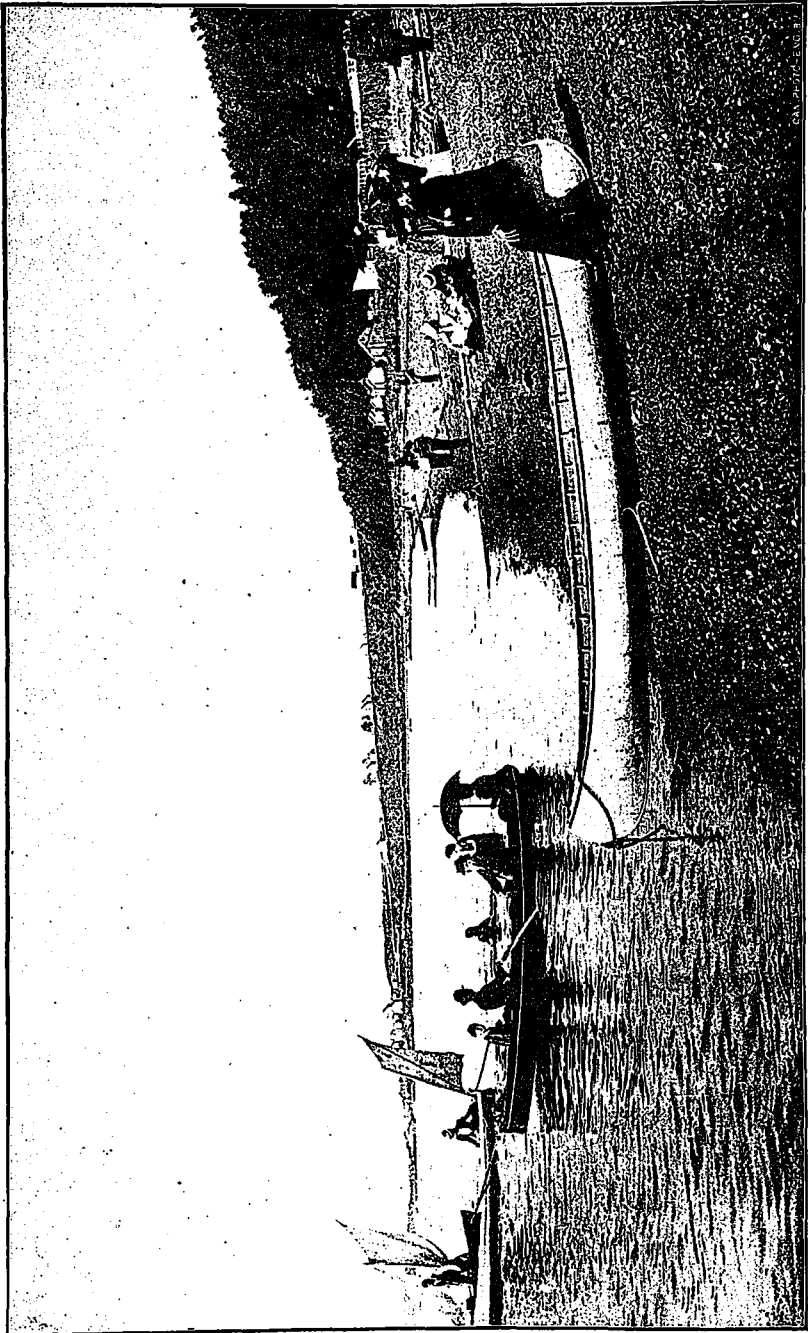
Sulphite Soda.....	1 oz.
Tartaric Acid.....	¼ oz.
Water.....	24 oz. or more.

This has a clearing action in addition to its hardening quality. Combined with hypo it forms the well-known Eder acid fixing bath for plates.

An article on the printing room would hardly be complete without mentioning platinum prints. The old method of manufacture necessitated development on a bath of hot oxalate of potash. By adding a very small quantity of gold chloride to the sensitizing bath the development in a hot bath was avoided.

A platinum paper that has not had very much use, owing to supposed difficulties, is what is known as Piz-zighilli paper. Previous to printing, the paper should be moistened, but not wet, by holding over a vessel containing boiling water. After printing it is cleaned and fixed in dilute muriatic acid and thoroughly washed. The principal difficulty in printing was caused by the uneven drying of the paper under the negative. This can easily be avoided by placing a damp piece of blotting paper back of the paper in the frame. The blotter will keep the sensitive paper damp and allow quick, even printing.

A very useful dodge in printing, and one that is not very generally known is local printing. For instance, a large group, dense negative, may have one or two faces too dense. A large reading glass used to concentrate the sun's rays on these particular spots for a few seconds will quickly bring them up. The glass must be kept in motion con-



ON THE BEACH.

Half Tone on Copper.

By Canadian Photo Eng. Bureau.

stantly to avoid spots or streaks from the intense sunshine concentrated on a small space. The rays should not be focused too sharply.

RAMBLING INCOHERENCIES.

NO. 3—TRESPASSERS WILL BE PROSECUTED.

A. H. HOWARD.

How I do dislike that notice. There is something so cruelly cold and passionless about the phraseology of it ; as if it were meant to shift upon his own head all responsibility for whatever befalls the trespasser.

Upon the side of my right hand, near the base of the little finger is a blue spot about an eighth of an inch across. For twenty-five years I have meekly borne that blue mark.

A fellow student a year or so older than I, had exasperated me beyond endurance one day, and I raised my clenched hand to strike him. Instead of parrying the blow scientifically, or arresting my hand in a Christian manner as his superior strength would have enabled him easily to do, he deliberately, steadily held up his pen like a bayonet to receive my charge. The pen penetrated beyond the split and broke off in my flesh, and I had to fish the nibs out with tweezers.

Mind you, he wasn't angry at the time. He was calmly, coldly, sneeringly smiling, or smilingly sneering, I never could determine which—just as that unfeeling white board with its complacent transgression of Her Majesty's English traced upon it seems to be doing.

When I reproached him he placidly disclaimed all accountability. He insisted that *I had done it myself*; and I can quite fancy after a trespasser has been hauled up before the beak and

heavily fined, the diabolical notice board shaking its head, so to speak, and observing with a malicious grin, "You *would* be prosecuted."

That board puts me out of temper whenever I see it, and fires me with an impulse (fortunately controllable) to make of it a

"Widdy, widdy wake-cock warnin' "

(*vide* "Mysteries of Edwin Drood") and smash it into ignominious matchwood with a few well and vigorously directed way-side "rocks."

Why in the revered name of Lindley Murray, Esq., *does* it invariably read "Trespassers *will* be prosecuted." ? The proprietor whose intelligence is at all in excess of his liberality must know that no trespasser would ever insist upon being prosecuted.

But there now, I have allowed my ill-temper to get the better of my sense of justice, not to speak of gratitude. As a rule I have found the proprietor's liberality in excess of his intell— Pshaw ! that doesn't sound kind either ; but I am not, I confess, in a particularly amiable mood ; and occasionally I really have met with discourtesy on the part of an outraged proprietor upon whose barbed wire fence I have thoughtlessly left fragments of my wardrobe, and whose placarded threatenings I have ventured to ignore.

I had clambered over a dilapidated fence into a neglected tomato patch to obtain a view of an empty and dismantled cottage to which it was attached.

The few tomatoes scattered around were obviously rotten and worthless, nevertheless, I placed my stool with great care so as to give no possible occasion for complaint, and commenced work.

Presently a stout, black-browed individual appeared and ordered me per-

emptorily to "git out of that, lively now, d'y'ear."

I endeavored to explain the innocence of my intentions, but he swore he would have no loafers round his place, and intimated that if I didn't make myself scarce in two minutes he would fire me over the fence and my damp stool after me.

Gathering from the latter part of his remarks that he was apprehensive of my taking cold, and evidently like Mr. Gargery, senior, "he were that good in his 'art," I thanked him for his solicitude, and assured him that there

of an exquisitely picturesque little place he had discovered within a short distance of my dwelling. I took occasion one Sunday morning to bend my wicked footsteps in that direction, intent upon prospecting the spot.

Arrived there, I summoned up my supply of gall, climbed the fence, and made my way to the front of the cottage, at the door of which I was met by a stalwart young negro of whom I politely made request to be allowed to look round, explaining my desire to come again during the week to make a drawing.

He didn't answer at once, but strode off up the garden.

I felt called upon to follow and reiterate my petition.

Without turning his head he sullenly muttered "This aint no day to be lookin' round."

"Indeed" said I, surprised "why not"? "Yer don't wanter be lookin' round on the Lord's day" he sulkily grumbled, still keeping ahead of me. "My good fellow" I returned "why not"? "Why should I

not admire the Creator's works on his own day"?

Ignoring this insidious argument he again muttered, as he disappeared among the apple trees, "This aint no day to be lookin' round."

In some disgust I took an opposite path, and by-and-by came across the proprietor himself, a white woolled old negro, resplendent in an ample velvet coat, his bosom decorated by an elaborate shirt frill that seemed to call for the attention of an experienced laundress.



was no cause for uneasiness, that my stool was perfectly dry, and that I didn't take cold easily anyway, thank you.

I was interrupted here by his suddenly seizing the stool and tossing it over the fence, so conceiving that in his anxiety for my health, he had allowed his interference to reach a point remotely approximating impertinence, a regard for my self-respect compelled me to saunter rapidly away.

Having been told by an artist friend

His opinions on Sabbath observance unlike those of his younger companion, appeared to be as limp as his frills for I found him engaged in taking a survey of his various vegetable crops, and he proved very chatty and agreeable.

On another occasion, tramping along the road between the New Rifle Ranges and Port Credit, a rather disreputable leather bag slung across my shoulder containing sketching materials, I approached a farm house, directly opposite which, on the other side of the way, was a great pile of green cord-wood.

The morning was oppressively warm, and the shade of the cord-wood inviting; so spreading my camp stool I seated myself comfortably, my back against the wood, and began idly to contemplate the house, and to ask myself if it were worth "doing."

While still drowsily pondering the question, an old man, with a suspicious grey eye and a dry cough came slowly sidling out at the farm gate. He threw his suspicious eye across at me as he crawled along the path in front of the house, and continued at intervals to give me an uneasy glance.

At length, finding me indifferent to his optical manoeuvres, he crossed the road at an angle and sidled towards me. When about five yards away he stopped, gave a preliminary cough and said:

"Yer aint go'n to strike a match are ye?"

"No" said I "why?"

"Ah!" he replied "I thought maybe ye was go'n' to smoke. A good many fellers sets down on that there cord-wood to smoke, an' it might tek fire ye see. There aint no tell'n'. I hev ter keep my eye on it all the time.

I reassured him again, and then observed:

"I was thinking of making a sketch of your house."

"Ah!" he answered, "sort o' photy-graft likely."

"No" said I, "just a pencil sketch," and continued "would you mind my going round to the back? I guess it must look fine from the back."

His suspicious eye came into play again here, as he answered "well I'm go'n' hay'n' now, up to the three acre lot, but ef ye'll wait till I git back its likely I'd take ye round."

"Oh! you needn't trouble, I can find my way round if you'll say so."

"Ah! maybe ye'd be pass'n' on yer way back. Where ye go'n' anyway? Up to the Port I guess?"

"I guess so."

"Ah!" he returned, with the air of a man confirmed in a previously formed opinion that he had solved the difficulty "likely ye'll be pass'n' on yer way back," and shouldering his rake he trudged off to the three acre lot.

A rebuff of this nature is apt to make the hardest student lose confidence for awhile, and if he is not well seasoned, will completely paralyze his energies.

He will hang round the fringe of a promising subject half a day in a state of fevered indecision, and will leave finally without having done anything, —to ever after wish that he had been born an acrobat so that he could conveniently kick himself.

The only way to reassure some men I have known after such an experience would be to substitute for the blood-chilling menace "Trespassers will be prosecuted" the more gentle and winning invitation

"COME RIGHT IN AND MAKE YOURSELF
TO HUM."

THE closing of our second competition is extended to Sept. 30th.

**COLOR-VALUE NEGATIVES FOR TYPE
COLOR-PRINTING.**—
BY MACFARLANE ANDERSON.

I believe it has been accepted without contradiction and from authorities seemingly beyond question, that the photographic sensitive plate is rendered superior extra-sensitive to certain colors of the spectrum by being bathed in certain dyes, or, as in the case of the so-called ortho- or isochromatic dry plates of commerce, having the emulsion prepared with those dyes before coating.

This theory of bathing the ordinary plate in these supposed sensitive-increasing dyes is simply needless and erroneous, as any sensibility obtained by plates so treated, to the less luminous colors of the spectrum, can as readily be obtained with the so-called ordinary plate when used with proper screens or color filters. I am led to make and uphold this statement after much investigation and experimenting toward securing a satisfactory medium or plate for use in color-value work in connection with the half-tone process.

In the obtaining of these negatives my wants could easily have been met by making the color-value negatives in ortho-chromatic plates, thence printing transparencies, from which to obtain the half-tone line negatives for the color blocks. Gelatine negatives on ordinary plates are but a poor substitute for the collodion plate in process work, and the dye-stuff in the ortho plate but makes matters worse for the worker. It will be readily perceived, then, that in such a case the gelatine color-value plates of commerce were useless for this work and entirely out of the question. If I were to secure color-value half-tone negatives *in the field direct* I must needs look for some

simpler and more suitable means as a medium toward obtaining practical work and passable results. Such being my desire, I commenced a series of experiments the results of which have placed beyond all doubt the suitability of the ordinary gelatine bromo-iodide plate for the rendering of color-values.

As there are at present many workers turning their attention toward this new color work, I presume a few remarks upon the same may probably point a road which will offer less pitfalls to the inexperienced worker, helping him to an earlier attainment of his desires than did he pioneer every step. Recognizing the qualities of a good, richly-coated bromo-iodide plate for this work, I put myself in communication with a firm of plate-makers to attain my desires. The firm in question kindly undertook to prepare such a plate, rich in silver and with rather less glue, such being my wish, as I find glue an unimportant medium toward securing density in process work.

In the few preliminary tests made with the samples of such plates made for this work, I look upon the results as simply astonishing, no longer looking upon the gelatine plate as an inefficient medium for such work.

The rendering of the color-values pleasing me so well with ordinary plates at an earlier date, when used in conjunction with my own color filters, I had secured a set of Carbutt's, to assure myself in a thorough manner of the qualities of these plates, and with these screens my tests were made. I can now feel confident, after tests made with these screens in combination with these plates, in claiming qualities for them which so far has been accorded orthochromatic plates alone. I would, however, have it un-

derstood that I *do not* claim the same extreme sensitiveness or rapidity in this work for *every make* of plate, but would have the fact of principle recognized, that such a plate as was used by me (bromo-iodide) is sensitive to any color that may be obtained on the orthochromatic plates of commerce.

This fact, as proven clearly in my work, introduces a new theory, or rather proves by *facts* that the dyeing method does not enhance the sensibility of a plate of *given rapidity* to the red, yellow, or orange values in like proportion, as to the chemical colors of the spectrum, but simply *retards* that complementary color to that of the dye used with the plate, or, in other words, acts as a color screen, only in a lesser degree.

This is the more clearly proven when we consider that to obtain the less refrangible colors of the spectrum in their purity or true color values, as in the obtaining of negatives for photochromic printing, the dyed or orthochromatic plate is an inefficient and useless medium in itself, and to obtain truthful results must be used in conjunction with suitable color filters.

I would have it understood, therefore, that the position I take in reference to these facts is that I perceive in the sensitive dyed plate the salts of silver, or sensitive medium, protected by the colored gelatine, said gelatine *retarding* the complementary rays of light, or color, to that of the dye used. The prolonged exposure in every case proving that the principal factor is time. The complementary color being made *inactive* to a greater or less degree, according to the density of dye used, or screen in the case of ordinary plates, screen or dye fulfilling one and the same purpose.

MY EXPERIENCE IN TRYING TO SECURE COMPETENT HELP.

J. Y. MERSEREAU.

In May, 1881, my business as a photographer really commenced, for it was then that I awoke to the necessity of better work being produced than was generally the product of galleries outside of the larger cities, and I began by purchasing some of the then standard works on the subject so that I could inform myself on the theory, and thinking that practice and time would give me the necessary experience. I found it a very slow way to learn, and being dissatisfied with my own productions, and in the meantime other matters requiring my attention for a time, I tried to secure the necessary help to run my gallery, for I found that I either had to get someone to come to me who knew how, or I would have to go to someone and learn. I chose the former, and then my troubles *commenced*, and they are by no means *ended* yet.

In May, 1884, I secured a young man who had worked for some years in one of the best galleries in St. John, who came well recommended, and I thought I had a *treasure*, but after an experience of a year or two someone else had the treasure and I had nothing.

Just previous to this time, that is in the winter of 1883, I tried my hand for the first time on dry plates. I had read of them but had never seen one, we knew nothing whatever about them. They were made by Hunter & Co., of Toronto, and the developer used was oxalate and iron, and we had to make our own oxalate of potash, as at that time it was not an article of commerce.

The formulæ was something like this: take one pound carbonate potass

and dissolve in $\frac{1}{2}$ gallon water in an earthen jar or crock and then add slowly oxalic acid crystals until effervescence ceases, stirring the mixture all the while. Some of the negatives I have still and I find these have kept much better than many made since and developed with pyro and ammonium, or pyro and soda.

But to return to my man. He was of good address, good looking, and could do somethings very well indeed, but as to keeping things in order or what might be called purely administrative matters, he knew nothing whatever. And I may say here that I have never yet met a man who had learned the business in a city gallery that was anything more than a specialist. They can either operate, retouch, or print, and that only. In other words, city photographers seem to teach their apprentices just enough to make them an assistant and no more, and apparently don't want to teach them the smaller details, such as the why and wherefores of the business, so that when they start out for themselves or go to a country gallery, where a good all round man is required, they are chiefly remarkable for what they don't know.

Well, I gave him full charge, going in and out and having very little to say and learning all I could of the things wherein I was deficient, for six months, at the end of which time I discovered a deficit in the gallery business of \$200, so we parted company, he going to Boston for the winter, where he worked in a gallery on Winter Street, in that city. On account of his increased knowledge and skill, a part of which had been obtained at my expense as above stated, I was induced to take him into partnership in the spring of 1885, as I assumed his interest would

make him more careful and energetic. I was doomed to disappointment however, so we dissolved at the end of the first year and he started out for himself. Had I kept clear of him then I would have been better off to-day, but I tried to help him, and the more I did so the further he got behind, until he finally went to the United States.

I then thought I would take the raw material, and by patience and perseverance try to expose, develop, retouch, print, tone, and fix my skilled help for myself, and got a lad 14 years of age. He made good progress for about a year or 18 months, when he developed a passion for gambling and began to steal small sums of money, and in the course of six months got so he would steal large sums as well as small, and spend it at gambling.

With this lad, however, and a lady printer I did my work till 1888, when the lady went to the United States and got married, and in the spring of 1889 I got another lady printer and retoucher, and it was through her that I discovered the extent of the lad's stealing, so we parted company.

I then engaged a young Acadian who had spent some time with us under the partnership when he was quite a small boy. He was with me about three and a half years, and was in many respects the best assistant I ever had, active, a hard worker, honest, and obliging, but lacked care or what might be more properly called "professional pride," and therefore could not be trusted to work very long alone. While he was with me I started a branch gallery and wanted a man to run it, or rather take charge of my home place till I got the branch running then to take charge of it. I got one from Nova Scotia, well recommended of course, but he could do nothing but

draw his salary, and as he had drawn a month's pay in advance and wanted more pay than a good man could command, that one month was enough.

In 1891 I got another man from St. John, who had worked about two years there, and he knew so much he could learn no more, so I did not keep him long, as he could not do the work I required.

In 1892 I got a man from Lindsay, Ont., recommended by Mr. Andrews, of that town, and others. He was a good workman, but would, when I was not in sight, drop his work and go out of the gallery for hours at a time for a game of cards, in fact he was something of a card sharper. And while Mr. Andrews certificate or rather what purports to be from his hand lies before me and says he was "an honest and industrious workman," I found him neither honest nor industrious, so I discharged him and came to the conclusion that the available loose help was a pretty loose lot. So I gave up looking for a man until some organization is effected that will give papers that are worth something, and not only certify to the holder's skill and ability, but to his habits. The certificates given by your JOURNAL are a move in the right direction, and must commend itself to every photographer in Canada that has ever tried to engage assistants.

To my mind something further is needed in the way of organization, and in fact there is none at all in the Maritime Provinces, but we require first a Maritime Association embracing the three lower Provinces, and in connection with that a kind of labor bureau, where those needing help could apply, as well as those requiring situations.

However, I will not trespass further on your space by branching off on this line, but hope the above hint will start

someone else who is more capable of elaborating the subject.

COLOR SCREENS.

The following description of the Burchett Color Screens, and their use, as sent out by J. H. Dallmeyer, Limited who are the sole licensees and manufacturers, contains much of interest as to the use of color screens:

Ever since the invention of Photography, the need has been felt for some method of reproducing in true monochromatic value the colors which are met with in nature. It is well known that the rays which have the greatest effect on sensitive plates are not the same as those which affect the eye in the most marked manner. The introduction of modern dry plates has been one decided step in advance, for it has been recognized by the most careful experimenters that the Gelatino-Bromide Dry Plate has greatly increased sensitiveness to the yellows and yellow-greens, as compared with the old wet collodion. A still further advance has been made by the introduction of Isochromatic plates, in which, by the use of chemical sensitizers in the film, still further increase of sensitiveness in the region of the spectrum, which has the greatest visual effect, has been attained; but even with the best Isochromatic plates, perfectly true rendering in monochrome of the different spectrum colors cannot be attained, the blue part of the spectrum still acting far too strongly. It is necessary, therefore, to employ in addition something in the nature of a selective screen to suppress the too powerful blue, and allow the yellows and yellow-greens time to impress themselves properly on the plate. Simple yellow and orange screens have for some time

been employed for this purpose, but they are defective in that they do not cut off all the violet and ultra-violet rays (which ought to be cut off first of all) until they are made so dense that they intercept a very large proportion also of the green-blue, green, and even the yellow rays, and so necessitate very prolonged exposures to secure good results.

The screens now placed before the public, and by means of which these difficulties have been surmounted, are the outcome of a series of practical experiments by the inventor, Mr. Arthur Burchett. By the use of a *green* screen of a particular shade, in conjunction with a very light *amber* one, a truer monochromatic translation of the visual impression is obtained than by any methods hitherto employed. The effect of the amber screen alone is simply to cut off some of the blue; the secret of the better rendering of the color-values lying chiefly in the green glass, which by itself renders the greater part of the spectrum truly, with the exception only of the blue, which it fails to suppress sufficiently. The result then, of using this particular green with a just sufficiently strong yellow one, is to render the entire spectrum in its true value with a minimal increase of exposure, and that this is the case is proved by an actual photograph of a colored spectrum taken with the aid of the screens.

Turning to a more practical aspect of the question, we may state some of the advantages to be derived from the use of this invention. In landscape photography, apart from the general advantage of obtaining the truer color-values of the scene, the specimens of work done with the screens, and which are open for inspection at the manufacturers' showrooms, sufficiently prove

the inventor's claim to render skies in their true relation to the landscape as seen by the eye, and that on the same negative without any doctoring, re-touching, or tricks of printing.

This is especially seen in the fine gradations of light cirrus clouds, the only thing needful being to avoid under-exposure. Curiously enough the screens almost entirely eliminate the evil effects of halation, several of the examples showing twigs and branches clearly defined on the face of the sun. Unlike ordinary yellow screens, the atmospheric effect of distance is not wholly destroyed, some very fine studies of sunset and mist effects having been obtained by the employment of the Burchett method. For copying paintings the screens give perfect results, such as will appeal to the most crucial artist's eye; and even for reproducing engravings they can be usefully employed, the lines being rendered clearer and whites purer.

As regards the most advantageous position for the screens in actual use, this has been found to be, where a doublet lens is employed, inside the lens tube on either side, and close to the diaphragm slot, the green screen being placed in front and the yellow behind, and in this form we fit them wherever possible. In the case of a single lens, or in doublet lenses where the thickness of the glass does not admit of sufficient space for their insertion between the combinations (such as several series of the recently introduced anastigmats), the green and yellow glasses are cemented into one piece, and placed behind the lens, close to the glass, without, however, being in actual contact. All screens are fitted in removable settings so as to be readily detachable when their use is not required.

The Burchett green and yellow screens can be used in conjunction with either Isochromatic or ordinary plates. Isochromatic plates, however, give the finest results, and are recommended in preference, especially where paintings have to be copied. The increase of exposure necessary is: with Isochromatic plates about six times, and with ordinary plates from nine to ten times. This increase of exposure prevents the use of the screens for portraiture and in quick or instantaneous exposures in the field. For the benefit, however, of those who desire to improve on the results obtained in the usual way without very greatly increasing the exposure, Mr. Burchett has now introduced a lighter screen of transparent aniline colors suitably combined and contained in the Balsam cementing two plain pieces of glass. This Balsam screen, although not perhaps giving the finer results obtained with the use of the green and yellow glass, has sufficient orthochromatic effect to improve vastly the rendering of skies and foliage in landscape work *while barely doubling the exposure*. Examples can be seen at 25, Newman Street, comparing the effect of a Balsam screen, the green and yellow glass screen, and the lens alone. For portraiture in the studio this method has been most successfully employed, a portrait lens having been used where the front combination was cemented by this colored Balsam.

With regard to the manufacture of the screens it is obvious that the same care must be taken in the selection of the glass and the optical working of its surface as with the glass of the lens itself, otherwise the definition will suffer seriously—in fact, the screens need to be carefully tested by competent hands to ensure good results.

The presence of a few air-bubbles does not in any way affect their performance, but defects such as veins, striae, etc., to be detected only by a practised eye, will appreciably affect perfect definition. Perfectly parallel surfaces are also absolutely essential.

As a final word to users of the Burchett screens, it is recommended that negatives taken with their aid be developed with a solution of rather less strength than the makers' formula, and less restrained by bromide.

PHOTOGRAPHS BEST SUITED FOR HALF-TONE REPRODUCTION PROCESS.

T. W. ELLIOTT


A great many photographers do not seem to understand what kind of print is best suited to make a half-tone photo engraving from. I will, with the editor's permission, explain what is best suited for the purpose, from my standpoint.

Since the introduction of gelatine and collodion printing out papers some workers tone to a red tone, these are not good for the purpose especially if dark red prints. They come out darker than the copy and more flat. Prints dark purple in tone are all right if not made *too* dark; in copying these if too dark it is hard to get half-tone through them, without losing some of the vigor and color value of the print.

Prints toned to a cold color are all right and are easy to copy, cold colors will come out lighter than warm colors in the photo engraving plate. A good albumen print is easy to copy if burnished good. Some photo-engravers prefer the high light pure white, but I prefer a cream tint in the high lights. Snap shots taken without sunlight as a rule make poor half tones.

Time pictures on buildings are the

best, using a small stop slow plate and developer, never mind the figures, these can be painted in by the photo-engraver's artist. Don't take photos of buildings with the best side of them in shadow, or in the middle of the day; going early in the morning or after 3 or 4 o'clock in the afternoon; best pictures can be got on a clouded day. Be sure to have your ground glass perpendicular, no matter how much you tip your camera. Half-tones of buildings don't look nice like this:



when the top of the building should be as wide as the bottom.

Portrait prints come out the best that have a decided comparison from the background, for the half-tone screen softens down any sign of hardness of outline, don't retouch out the prominent feature lines too much.

SELECTION OF LENSES.

BAUSH & LOMB OPTICAL CO.

To select a lens, suitable for certain purposes is a matter of considerable difficulty, even for a person adept in photography, and we are sure that a few words from us, which will aid in making proper selections, will not be found amiss.

There are such a variety of claims made for different lenses, that we are not surprised to receive so many inquiries as to the various conditions involved.

While results in photography depend to a great extent upon personal skill and experience, the basis of all good work is always the lens. The camera may be more or less crude, and its adjuncts as well, but that part of it which gives the photographic image, the lens, should be of as high grade as possible, so as to give a correct representation of what it is desired to retain

in the form of a picture. From lack of a true understanding of the subject, many persons endeavor to economize by purchasing a cheap and in many cases a useless lens, unmindful of the fact that instead of acquiring what will always be a source of pleasure, they are burdening themselves with what will be a continual cause of annoyance and dissatisfaction. The outcome is, that such lenses are almost always discarded and become a loss, while others of known reliability are purchased. In other cases lenses are purchased wholly unsuited to the purpose to which they are put, with usually the same result.

Achromatism is the first condition in a good objective. It is that quality which brings the chemical rays, or those which produce the photographic image, in exact coincidence with visual rays, or those which make the image apparent to the eye on the ground glass. A slight deviation from perfect achromatism will produce the photographic image either in front or behind the plate and will therefore cause indistinctness. This may sometimes be partially corrected by the use of small stops, but when it exists it is always a serious fault.

Angle of View depends upon the proportion of focal length to the size of plate and is expressed by the angle formed by the extreme rays forming the image. Lenses of the rectilinear type have an angular aperture varying from 40° to 70° . Those giving an angle of from 85° to 110° are termed *Wide Angle*. Owing to the large apertures of the lenses in the ordinary types of these latter, and their inability to combine the rays on the edges of the plate, it is usually necessary to use them with small stops to obtain good results. This involves another quality.

Speed or Rapidity.—It represents the quality of forming a correct image within a given time, and depends upon the proportion of working aperture to length of focus. In addition it depends upon the quality of the lens in design and mechanical execution, and is the principal feature in determining the quality of a lens from an optical standpoint, providing its other qualities are of corresponding perfection. At this day, when instantaneous photography is so generally practised, it is of the greatest importance, not only as a quality in itself, but of the ability of the lens to give with it a sharp, clearly defined picture. While the rapidity of a lens depends to some extent upon its angle, the aperture through which the light passes, or the size of the stop, determines it. The speed decreases proportionately with the decrease in the size of stop. In this regard the recommendation of the English society is now generally followed, by which each succeeding smaller stop requires double the exposure of the preceding. By this system the stops are designated, 8, 16, 32, etc., but their relative value to focal length is also used. The $f/8$ is one-eighth of the equivalent focal length and really expresses the value of the speed. From this it will be seen that the focal length is as great a factor as the aperture.

Depth of Focus is another important quality and represents the degree of sharpness with which objects lying at different distances in front of the camera are shown at the same time on the plate. It depends upon the focal length, angle of view and working aperture, and increases with the decrease of these three factors. As can easily be determined by experiment, an object close to the camera will be found to have a longer posterior focus

than one at a distance, and no lens can ever be constructed which, with full aperture, will bring the two in one plane, so that the advertised claims, which are made for a large number of lenses, of great speed with great depth of focus may be put down as false. The extent of which a lens possesses speed and depth of focus is variable, however, and depends upon the skill of the optician, but it may be added that under the same conditions, the depth increases with the decrease in focus, as there is less variation between the different planes at the back of the different distances at the front of the lens. For this reason it is that only short focus lenses can have approximately a "universal focus." If plates could be constructed of such sensitiveness as to admit the use of small apertures, depth of focus would be the result to a much higher degree, but this attainment depends upon the chemist and not the optician. A lens may be made to have approximately a universal focus for a $3\frac{1}{4} \times 4\frac{1}{4}$ inch plate, and even 4×5 inch plate, but here it ceases.

Flatness is the quality of defining an object equally well upon the entire surface of the plate, but can never be wholly accomplished because in the nature of things there is a certain amount of curvature. It depends upon the angle, aperture and focus, but after these conditions entirely upon the skill of the optician, and in this respect probably the greatest difference is apparent in lenses coming from the hands of different manufacturers. With many lenses it is found necessary to use one intended for a certain plate on one or two sizes smaller to obtain satisfactory results.

Definition is the capacity to concentrate the rays to one point so as to give a sharp, clearly defined image. It is

of the greatest importance, as it shows principally the amount of care which has been devoted to the lens during its construction. Any lens not having this property in the highest degree may be put down at once as of inferior quality. The fault is overcome, only partially however, by reducing the aperture, but this is of course, at the sacrifice of speed. When due to non-achromatism it may be determined by observing whether the visual image is sharp, and chemical image or photograph indistinct, although in this case great care should be observed that the ground glass and plate are in exact coincidence, which very often is not the case. When due to faulty construction or workmanship, it can easily be determined by observing the image on the ground glass. The image should be an exact representation of the real object in detail and should be determined by the aid of a magnifier or focusing glass.

Testing lenses is a matter of no small importance, and should be done with the greatest care and regard to the points mentioned above. As speed, depth and flatness are varying qualities in different lenses, we emphatically recommend that they be not judged in a lens by themselves, but in comparison with another lens of about the same proportion, preferably with one of known excellence. A person well experienced in photography may be able to form a correct judgment, but one who is not, cannot do so with security. Care should be taken that comparisons be made under the same conditions as to light, size of stop and time of exposure, and if indefinite, should be repeated.

A renewal subscription promptly paid, is twice welcome.

PHOTOGRAPHIC CONVENTION OF GREAT BRITAIN.*

OPENING MEETING IN DUBLIN.

The annual Photographic Convention of the United Kingdom opened on Monday morning in Dublin, a large number of delegates having arrived from various parts of the United Kingdom.

The opening meeting of the Convention was held at the Royal Dublin Society's premises, Kildare Street, in the evening.

In the unavoidable absence of the retiring President, Mr. George Mason, the chair was taken by Mr. Andrew Pringle, a past-president.

The Lord Mayor said it afforded him very great pleasure to welcome to Dublin so many friends from the other side of the Channel. In Dublin they were always ready and anxious that the little beauties of the city, suburbs, and surrounding counties should be seen by visitors, and they were always anxious to extend hospitality to their friends from across the little streak that separated this country from England. He welcomed this Society here on behalf of the citizens of Dublin, and of the municipality of which he was the head. He trusted that their visit would be an agreeable one. To a body who possessed the taste that they must possess, since they took an interest in their art, there would be much attraction found in Dublin and the neighboring counties. Alluding to the promised reception and garden party, arranged for Wednesday, he said so far as he and his wife were concerned they would endeavor to make the visit of the Society to a very pretty suburb of Dublin as pleasant as they could. In wishing them a hearty welcome he

*As reported in *The Photographic News*.

must congratulate their distinguished citizen, Sir Howard Grubb, on the position which he now occupied. In Dublin they all felt extremely proud of having a citizen of Sir Howard's position in art and science, and they felt sure that during the year he was President of the Society, he would add another laurel to those which he already possessed.

The general secretary (Mr. F. P. Cembrano) read a letter from the retiring president (Mr. George Mason), expressing regret that, owing to indisposition, he was unable to attend the Dublin Convention.

The chairman said that only for the exigency which they had heard of he would not be addressing them now. It would be quite an unnecessary proceeding on his part to introduce Sir Howard Grubb to this meeting. Their new president's fame was so widespread, and his reputation was so great that reference need not now be made to him. He (the chairman) would only say that the fact of having a man of such standing as Sir Howard Grubb for their president, even for one year, and the existence of a local committee, such as he and his adjutants had got together, would raise the status of the convention for years to come, and bring a practical and distinct advantage to their society.

Sir Howard Grubb, the new president, then took the chair amidst great applause. In the course of his opening address, he said :

In the early days of photography, a photographer never thought it worth his while to point his camera to any object that had not some particular interest connected with it. It might be a building having historical interest or architectural beauty, or it might be a well-known and favored landscape,

celebrated far and wide for its beauty; the aim, in fact, of the photographer at that time was to produce a representation, or, we might say, a portrait of some particular object which had a special interest in itself; but what photographer of that time would have thought of wasting his plates (as it would have been considered) in pointing his camera at those little bits of moor or fen, or some nameless brook, out of which the modern photographer has produced most exquisite pictures? I say pictures advisedly, because that is just the difference between the photographs of the present day and the photos of the past. The superiority of the latter efforts of photographers depended much more on the fact that, whereas in former time the photographer's aim was to produce a representation or a portrait of a particular scene, that of the modern photographer is to produce a picture.

The question as to whether photography is to be considered as almost or altogether a fine art will not be settled by any arguments. Surely and steadily, however, it is establishing a place for itself, and, though everyone who takes a kodak under his arm and presses a button may not be an artist, yet no one can deny to some of the works which we see on the walls of some of our modern photographic exhibitions an honorable place among the fine arts. I have been sorry to see in criticisms on some of our more recent Academy exhibitions a tendency to attribute blame to photography for a certain decadence which is supposed to have taken place in the work of some of the landscape painters of late years. I have seen it stated that this lowering of the standard of work is due to the use of photography by the artists. That some landscape painters

do use photography to obtain a permanent record or memorandum of some fleeting cloud or water effect, or for other legitimate purposes, is well known, and many have acknowledged with gratitude the value which it has proved to them in their work; and it is, I think, generally conceded that in many ways the influence of photography has been beneficial in ensuring a more faithful following of nature and in removing conventionalities which were formerly accepted as correct, but which photography has shown to be otherwise. In this world, however, there are few gifts which cannot be abused as well as used, and if, instead of using photography for one or other of the legitimate purposes referred to artists will make a slavish copy of a photograph a basis for a picture, it is small wonder if their work is devoid of artistic feeling or individuality; but surely things ought to be called by their right names, and this is the abuse and not the use of photography.

There is perhaps no branch of the photographic art which has shown more marked advance of late years than that of the production by photography of printing blocks for book illustrations, suitable for making up with ordinary printers' type. It is not so many years ago that the attempts to produce half-tones in such blocks resulted in a sort of all-over dirty blot, out of the depths of which the dim outlines of a picture could be imagined rather than seen. Now we have illustrations for our books and magazines that rival the best engravings for beauty, while possessing all the accuracy of the original photograph.

Referring to possible developments in the future, I was glad to see a reference made in the address of your president last year to what appears to

be a revival of interest in the stereoscope. I should have been still better pleased if I had reason to think that this revival had received any marked encouragement in the past year, and I can only hope that the address of your president for next year will chronicle some further steps in this direction. The stereoscope is an instrument which has always had a peculiar fascination for me, and it may be within the recollection of some here that I made attempts a few years ago to revive an interest in it by devising some forms which did not possess all the disadvantages of those more usually employed; but I found at that time that all interest in the instrument had lapsed, and there was no possible chance of getting people to take photographs suitable for the instrument, and consequently no use for the instrument itself. Many people have often expressed surprise that an instrument which is capable of giving such exquisite results should have so completely fallen into oblivion; but I think the explanation is not difficult to find. The invention of the stereoscope came too early. It was in use at the time of the first rush of popularity of photography, and it lent itself so admirably to the display of the power of photography that it was immediately brought into use in connection with it, and that at a time when the average photograph was a very poor example of art. It was an instrument that could be produced at an extremely small cost, and the photographs which were used with it being necessarily of very small size were also of an extremely cheap character, and the consequence was that the instrument was used for the very worst and lowest type of photographs, and it fell into disuse. Had the invention of the stereoscope been

delayed some twenty years, when photographers learned to produce pictures and not mere photographs, it would probably be a favorite instrument at the present time. I believe the development of the stereoscope would be well worth your serious attention. If really good modern specimens of photographs were used with one or other of those forms of instruments which do not necessitate the use of extremely small size of pictures, I believe the result would be such as to almost certainly revive the popularity of the instrument.

And now I would say a few words on a subject which I am myself deeply interested in, the application of photography to astronomical work. No doubt many that are here have from time to time learned something of this subject from the articles which occasionally find their way into the photographic journals, but very few, even those who are brought more intimately into contact with such work, have any idea of the debt that astronomy owes to photography for the helping hand she has held out to those who devote their lives to astronomical research. Before the adoption of the photographic method of star charting, the position of every star had to be ascertained by a series of most elaborate measures made with the most delicate instruments. To make a catalogue of 10,000 stars was a good twenty years' work for a first-class observatory. Now with properly corrected object-glasses, and properly constructed instruments to carry them, it is possible to obtain images of as many stars as this on one single plate, the position of which stars can be measured and recorded at our leisure afterwards. Records of observations by the old system were at best but written statements of the eye and

ear observations of the observer, subject to all sorts of personal as well as instrumental errors, and open sometimes to the imputation of bias on the part of the observers. The modern observation is a photographic record and absolutely free from all personal error or bias. Again, in visual observation, a certain size of telescope will enable observations to be taken of stars down to a certain magnitude, but not beyond. If it be desired to observe fainter stars, an instrument of larger aperture, and therefore more light collecting power, must be used, but with the photographic method this is not the case. The effect on the photographic plate is a cumulative one, consequently the longer the plate is exposed the greater number of star images will be found upon it, and as a matter of fact stars have been photographed with quite moderate sizes of telescopes which no human eye has seen with the very largest instruments in existence.

Perhaps I may be able to convey some idea of the wonderful power that photography has become in the hands of the astronomer in this way: If our smallest coin, a threepenny piece, be held up at arm's length it will cover a portion of the sky of about one degree area. Suppose the stars visible to the naked eye to be evenly scattered over the sky, this threepenny piece would not even cover one single star. It would take about four to cover each star visible, but photographs have been taken of a similar area of the sky with as many a 10,000 stars distinctly visible on them. In fact, one well-known astronomer has declared that he believes that if we only exposed plates long enough, we should find that there is no spot in the whole sky that has not a star upon it; and what makes it still more wonderful is that

that light which is concentrated on the photo plate, that infinitesimally small amount of mechanical energy which sets in motion and shakes together the chemical constituents on that tiny spot on our plates, has travelled from so great a distance that it necessarily started on its journey before that time generally ascribed to the beginning of the world in order to reach our photographic plate, and do its work for us here in this year of grace 1894.

Again, take the case of photography as applied to the spectroscopy of the stars. With the older methods these observations were most laborious. The keeping of the star image steady between the jaws of a slit of about 1-500th of an inch wide, and the measuring of the various lines with the micrometer screw during the glimpses of satisfactory definition that were often few and far between, was a severe trial of the patience and skill of the observer; but now, calling in photography to our aid, how very different is the case! By applying a prism in front of the object-glass of a telescope, the image of each star is photographed as a spectrum, with all its lines fairly measurable, and thus the spectra of hundreds of stars can be obtained on one single plate. Or, if it be desired to examine any of these still closer, a slit spectroscope can be used with a photographic plate at the focus, and even if the star image does dance about, as it is sure to do on all nights except the very finest, it is of no consequence, for when it happens to be in the slit the light energy does its work on the photographic plate, and if it does move off the slit no action takes place till it returns again, the only difference between a bad and a good night being that a longer exposure must be given in the former.

Every day new applications are made of photography to astronomical work. Methods have been devised, though not yet, perhaps, in a very practical form, for taking transits of stars by photography, and I believe that before the lapse of many years nearly all the work of the astronomical observatory will be conducted on photographic lines. You will, I am sure, pardon me for dwelling too long, perhaps, on this branch of my subject. The development of astronomical photography has occupied a large portion of my own attention for some years past, but I must not forget that amongst my audience I have those representing all classes of the photographic public, amateur, professional, and commercial, and it is very probable that little of what I have said may have any special interest to many here. A review, however, of the progress of the art in any direction, even though it may not be on the particular lines we have been working in ourselves, may be useful in showing that in photography as in all other things it is impossible to stand still. With everything else around us advancing with giant strides, this is impossible.

With increase of art culture and increased opportunities of studying all that is best in art, the public will not be satisfied unless your results also follow the same onward march; and probably nothing is likely to conduce more to this result than the encouragement of such societies as the Photographic Convention, which give facilities for free intercourse and exchange of ideas between members of the same craft living at a distance from one another, and give these facilities, I think I may add, in such a pleasant form. I trust, therefore, that each succeeding meeting of the Convention may exceed

in interest all its predecessors, which so far as the present is concerned is equivalent to saying that I hope that this Dublin meeting may be the most successful of all the meetings of the Photographic Convention. (Applause.)

On the motion of Mr. Bothamley, seconded by Mr. John Stuart, of Glasgow, a vote of thanks was passed to the President for his address, and the proceedings terminated.

The visitors then adjourned to the Science and Art Museum, where a conversazione, for which two thousand invitations had been issued, had been arranged. The fine building was lighted by electricity throughout, and a most brilliant gathering had assembled by about 9 p.m. Never has the Photographic Convention had such a splendid reception, and it can only be under fortuitous circumstances that any future meeting can vie with that of Dublin in 1894.

THE EXHIBITION.

The exhibition of photos and apparatus in connection with the Annual Convention of the United Kingdom is never expected to be a very large one, but it invariably attracts work of good quality. We may imagine that the exhibitors may feel themselves more placed upon their mettle than in the case of an ordinary exhibition, for the visitors are mostly photographers, and are apt to view things from a more critical standpoint than can be assumed by the general public. The present exhibition at Dublin does not differ from those which have preceded it; it is distinctly good, although small.

The rooms of the Photographic Society of Ireland in which the exhibition is held, and where the papers are read, are spacious and well adapted for the purpose, while below stairs there is an admirable dark room fitted

with every convenience for the changing or development of plates—a dark room which is very well patronised by visitors, as may be imagined. The exhibition room proper is excellently lighted from above, and there are no cross reflections from the glasses in the frames, which upon some other occasions have given much cause for complaint. The pictures are thus seen to the best advantage, and they are, although few in number, very well worth seeing. We miss the names of some who might have sent examples of their skill, and have refrained from doing so; and when we have asked them why—for there are some of them present here in Dublin—they all begin to make excuse. Some say that they don't believe in exhibiting. "It is more trouble than it is worth." "Never pays," etc., etc. These abstentions are, of course, all the better for those who have had the enterprise to show their works, and we trust that in due course they will meet with their reward.

We will first mention the name of Messrs. Werner & Son, as a matter of courtesy to a well-known conventioner, and as being a local man, for we have received much courtesy and attention from the local celebrities, which we would e'en acknowledge with thanks. Messrs. Werner, too, have a first claim, for their exhibits are at the very door. A series of fine pictures, set most artistically upon a backing of rich velvet and plush, which have for ornamentation the gilt dragon and birds which are peculiar to the fauna of Japan. A very rich setting does this Japanese tapestry make for a number of works which may well be called of first quality. One picture in particular merits attention, for it claims to be printed from the largest direct portrait negative

ever taken, its dimensions being 64 by 38 inches. It is quite unretouched, and is a most pleasing picture. By comparison, the smaller pictures in its vicinity naturally suffer; but these, a few years ago, would have been regarded as giants, for they measure nearly 3 feet by 2 feet, and the quality is as good as the quantity. Messrs. Lafayette, another well-known local firm, must also be congratulated upon the excellence of their show, albeit they have not draped it with gorgeous hangings. This firm, whose name is also identified with Glasgow and Manchester, where they have branch establishments, show a number of well-finished and admirably posed portraits. But they have made a new departure in some *genre* pictures, which have been put together with wonderful skill and artistic feeling. These pictures are of the familiar "old, old story" type—that is to say, they mostly consist of two figures amorously inclined. There are half-a-dozen of a Venetian aroma, but the best are what we may fairly describe as being Watteau pictures; for they represent dainty shepherdesses and their swains, who look as if they had just stepped out of the cabinet of a Dresden china collector. The figures, we understand, are carefully posed in the studio, and a suitable background filled in afterwards. The effect is admirable, and the pictures, when published, are sure to meet with wide approbation. A very large panel picture by the same firm, called "The Evening Zephyr," is of a female figure with flying draperies, and the only thought, in looking at the beautiful work, is one of wonder at the manner in which it has been achieved. Messrs. Lawrence, also of Dublin for the past thirty years, show a great variety in their photographs. Here

we have landscape, seascape, and some very fine interiors. Messrs. Lawrence are very extensive publishers of Irish scenery, and if these pictures form a fair specimen of the run of their work—which we have no reason to doubt—we can only say that the quality is very high. Messrs. Robinson & Sons, of Grafton Street, Dublin, are in no way behind other competitors. They show very good portraiture, particularly, we might note, the profile of a lady sharply cut against a dark background. This is a most effective picture.

The Eastman Company have quite a big exhibit of prints upon solio, platino-bromide, and matt-surface paper. This latter seems to be the most admired of all, if, that is to say, we may judge from the remarks we overheard from the crowd. A series of excellent pictures, mostly by local amateurs, remain to be noticed. These are mostly of the snap-shot order—yachts, divers, and the like.

With regard to apparatus, the Eastman Company made a good show, the chief novelty being a whole-plate kodak, which shuts up into a most cabinet-minister-like despatch box, although, perhaps, it is not quite so obtrusive as that emblem of office. It is so arranged that stereoscopic pictures can easily be taken with it, and it has two sets of lenses for more ordinary purposes. Another novelty is a light and very portable stand of the skeleton kind, which exhibits several important features not found in apparatus of the same genus. Mr. T. Mayne, of Dublin, who is agent for Ross, of London, has a good show of lenses by that eminent firm, as well as specimens of the favorite twin-lens camera. Mr. Mayne has a very large assortment of lantern slides by celebrated English makers. Messrs. Watson make a brave show of

Acme cameras, and many other good devices with which their name is identified; and we must also note that Messrs. Beck's Frena camera, together with a number of fine enlargements from Frena negatives, and lantern slides from the same source, are winning much admiration. The exhibition, as a whole, is very creditable to all concerned.

THE CAPABILITIES OF TELE-PHOTOGRAPHIC LENSES AT THE PRESENT DAY.

When, some two or three years ago, the announcement of the invention of a tele-photographic lens was made, almost simultaneously on the continent of Europe and Great Britain, and the lenses themselves were brought prominently before the public, with examples of the work that they would do, it seemed as though they were looked on as scientifically interesting curiosities, rather than as useful implements for the practical photographer, and it would seem that many look on them in the same light still. It must be admitted that the first forms of tele-photographic lenses brought prominently before the public were comparatively crude instruments, and lacked many of the properties that the more modern forms of tele-photographic lenses possess. Indeed, the photographic public hardly seems to have grasped the advances that have been made since Mr. Dallmeyer described his first form of tele-photographic lens at the Camera Club, and let the members see the image of a candle flame as projected by a rapid rectilinear lens, and by a tele-photographic lens, needing the same extension of camera. It is not too much, we think, to say that the advance is as great as was that from the time that the landscape pho-

tographer had no choice but between the achromatic single lens, with its barrel distortion, and the orthoscopic, with its pin-cushion distortion (both very slow too), to the time that he had at his command the rapid aplanatic, or rectilinear, the wide angle rectilinear, and various "doublets."

For our present purpose we may classify tele-photographic lenses as follows:

1. Lenses giving large amplification. Four to six times with the same extension of camera as that needed for a rectilinear lens of the usual pattern.
2. Lenses of moderate amplification with a "rapid aplanatic" as the positive element. By "moderate amplification" may, perhaps, be understood amplification up to about three times that obtained by a symmetrical or rectilinear lens, with a given extension of the camera.
3. Lenses of moderate amplification with a rapid portrait lens as the positive element.

The lens first mentioned (1) is undoubtedly that capable of giving the most remarkable results, and is a form of lens to use for special work, but will probably not be found so useful as a part of the actual outfit of the landscape photographer as certain lenses to be mentioned hereafter.

The degree of amplification depends entirely on the relation of the focal lengths of the positive element and the negative element, and therefore, even for great amplification, either a "rapid aplanatic" or a portrait lens may be used as the positive element. Rapidity of the lens is, however, inversely as the square of linear amplification, so that a lens amplifying, say, four to six times must of necessity be a somewhat slow lens, and will be a very slow one if a lens not more rapid than the usual

"rapid aplanatic" be used. The "extra-rapid aplanatic," working at $f/5.6$, gives a fair rapidity, but there is no doubt that a rapid portrait lens is the best adapted for this system of tele-photography.

We now come to the tele-photographic lenses with moderate amplification, and a "rapid aplanatic" as the positive element. It may be said at once that this is the system of tele-photographic lens that is the most readily handled, and that, except in the matter of rapidity, a tele-photographic system consisting of a rapid aplanatic and a negative element of moderate focal length, makes a most useful addition to the outfit of a landscape photographer. Indeed, if an extra aplanatic, working at $f/5.6$, be used as the positive element, the rapidity will be very fair. Somewhat about the same, for example, in average cases, as that of lenses sold by such names as "wide-angle rectilinear," "wide-angle symmetrical," "wide-angle aplanatic," etc.

The system in which a rapid portrait lens constitutes the positive element, and one or more negative elements, giving moderate amplification within the limits specified above, and used along with it, is one that has special advantages, and that would seem to be more generally useful to the landscape worker than any other.

This system has the advantage that, for moderate extensions of the camera, it provides a rapid tele-photographic lens. With considerable amplification, this system gives as great rapidity as a rapid rectilinear used in the ordinary way, that is to say, it is amply rapid enough for instantaneous work.

With a camera of great extension, a single negative element, which may with advantage be of a focal length

equal to about one-half that of the positive element, may be used, but it is a great advantage to have two or three negative elements, of somewhat different focal lengths, all made so that any of them can be adapted to the one positive element. By such an arrangement, we have at our command, without any excessive extension of the camera, lenses of any focus we want, within very wide limits.

To give a definite example, for work-plates of sizes from 12×10 to 18×12 , we have lenses of the usual type having focal lengths up to twenty-five inches, and have sundry symmetricals, one combination of any of which may be used, so as to give us the command of focal lengths up to about thirty-three inches.

To supplement these lenses, when larger images are wanted than can be obtained by the longest focuses wanted, we have a rapid portrait lens, working, intact, at $f/3$, of a focal length of $8\frac{1}{4}$ inches, with an adapter into which can be fitted negative elements of six, five, and four inches focus respectively. This gives the possibility of using, with the 12 by 10 camera, any focus up to eight or nine feet, with the 18 by 12 camera, any focal length up to over twelve feet.

As an example of the usefulness of a set of lenses of this kind, we may cite a set of prints, from negatives all made on the same day, that we have by us at the moment of writing. These are from negatives 12 by 10 , 15 by 12 , and 18 by 14 . The following are particulars of the equivalent focal lengths used: Two negatives were taken with a rapid symmetrical of eighteen inches focal length, one was taken with the tele-photographic lens with a negative element of six inches focal length, the equivalent focus being twenty-nine inches. In this case the tele-

photographic lens was used in preference to one combination of a rapid symmetrical, which would have given about the same size of image, but which would have needed the utmost possible extension of the 12 by 10 camera. Another, on a 12 by 10 plate, using the negative element of five inches focus, is of the size corresponding to an equivalent focus of five feet. Another, on a plate 15 by 12, using the same element, is of the size corresponding to an equivalent focal length of seven feet; and still one more, on a plate 18 by 14, using the negative element of four inches focus, is of a size such as would be got by a rectilinear lens of ten feet focus.

It is quite unnecessary to point out how impossible it would be to get such results with the lenses that went to make up the most ample outfit of a landscape photographer before the days of tele-photographic lenses. The only thing to be further considered is whether there is any advantage in using the tele-photographic system, in preference to taking a negative with any lens of the usual form, and enlarging a part of it. We might answer in Scotch fashion, by another question. Why do we burden ourselves with long-focus lenses, when we could get all that we want by enlarging a part of a negative taken with a short-focus lens? In the first place, we do not want to be at the trouble of continually enlarging parts of small negatives. The process is one taking considerable time, even in the case of those who possess complete enlarging apparatus, and special care has to be taken, or false perspective will result. Probably nine out of ten photographers in enlarging from a part of a negative would place the lens opposite the centre of this part, the axis of the lens also passing through

both the negative and the sensitive film at right angles, and this will give a true image if the part to be enlarged be the centre of the negative, but not in any other case. When the part to be enlarged is away from the centre of the negative, it is still necessary, in order to obtain true perspective, that the axis of the lens should pass at right angles through the centre, not of the part of the negative to be enlarged, but through the centre of the negative itself, or, more strictly, through the point through which passed the axis of the lens used in making the negative. In this case, the pencils of light from the portion of the negative to be enlarged pass through the said negative obliquely, enter the lens obliquely, and fall on the sensitive film obliquely.

There is another great reason, however, why it is preferable to get the result at once, by the use of a tele-photographic lens, rather than by enlarging afterwards, and that is that the results to be had by the former method are much better than those to be got by the latter. From collodion negatives it seems possible to enlarge many diameters, and to get perfect, or, at any rate, sufficient definition, without any appearance of granularity, but it must be confessed that this is not possible with modern dry plates, the grain of which is sometimes visible to the eye—is always visible under a low power eye-piece. In ordinary cases this need not interfere with the pictorial effect, but in the case of enlargements of a small part of a negative, made to produce a similar effect to that obtained by direct exposure with a tele-photographic lens, it is very liable to do so. Let us here explain. An enlargement four or five feet long is made from a 12in. by 10in. negative taken in the ordinary way. This en-

largement appears all that can be desired, the definition is good enough, and if there is some granularity this is in no way offensive, for we look at the picture as a whole, and from six to eight feet distance. Let us now, however, mask all the enlargement, but a patch of such size as we would get in printing from a 12in. by 10in. negative—say 11in. by 8in., and we will be astonished at the falling off there is. This patch of the enlargement, we naturally examine from a distance of not more than two feet, and it is surprising how poor the definition will generally seem, and how marked the granulation.

It may be said that the results of tele-photography ought to be viewed at a distance corresponding to the equivalent focal length of the lens used in making them, and they may be so viewed at times, but more commonly they will be viewed closely, nor is there any objection to so viewing them, for, as Mr. W. E. Debenham once put it, to do so is just as natural, and gives just as much pleasure, as to look at a part of a landscape through an opera-glass. Viewed closely as here indicated, the superiority of tele-photographic images over those produced by enlarging a part of a negative is very marked.—*W. K. B. in Photography.*

MANNERISM IN POSING.

JULIUS F. SACHSE.

No branch of professional portrait photography is more justly subject to severe criticism than that technically known as "artistic posing." Let any one with an artistic eye examine the samples displayed in the show-cases along any of our prominent thoroughfares, the result will be that the beholder cannot fail to be struck with the

great similarity or mannerism in the pose in the majority of samples displayed, not only in each individual exhibit, but an almost universal duplication in the lighting of the specimens shown by some leading photographers of the town.

Few are the changes from what may be called the stereotyped mannerism, the exception being in theatrical subjects who refuse to be "took" in the regulation manner, and demand a characteristic pose.

To the general public, and we may say in the mind of the amateur photographer, nothing seems simpler than lighting and posing, yet in practice no photographic problem is more difficult and less studied by the great majority of professionals. A photographer will occasionally get hold of a sitter with a fine characteristic head. He gets his subject into a position, we will say by accident or good luck, where the lighting will bring out all the striking characteristics; the resultant picture will be all that can be desired, and prove a drawing card—admired by art lovers and extolled by the press. Now, what is the result—for the next year or two, every sitter, male or female, from infant to tottering patriarch, will all be posed in precisely the same light, angle, and position, no matter how unsuitable it might be.

Then, again, this man's competitors, spurred on more or less by the free advertisements given, in the first instance, for the marked or successful portrait, will attempt to imitate that particular effect, which results in a decidedly unhealthy state of affairs, so far as individuality of pose and artistic effects are concerned.

To what an extent this mannerism in posing is carried was brought prominently before the writer's notice

a few weeks ago. Thirty-two cabinets were sent to him for arrangement into groups and for reproduction; they were all prominent men, and the photos were taken by the leading photographers of this city [Philadelphia]. In this lot twenty-four were the work of one firm of deserved reputation. In technique, style and artistic effect they were above criticism, when taken singly; but, when the attempt was made to make up the desired groups, it was another thing, as twenty-one out of the twenty-four were all posed, lit and photographed in almost the same position. To make a group with every head the same pose and looking in the same direction was out of the question.

In some cases the originals or their families had to be appealed to for different pictures taken elsewhere or by different artists, so as to overcome the sameness, or the artist's mannerism in posing. In one instance, where the original was deceased and no other portrait was attainable, a reverse negative had to be made to partly overcome the uniformity.

No matter how artistic the artist's particular drawing card appeared singly, when taken eight or ten fold, the mannerism became painful to the eye and the subjects useless for artistic grouping.

Most professionals naturally will at once say that every portrait is taken singly, and upon its own merits alone, with no reference whatever to any future combination or grouping. Granted that this is the case, the artist photographer should know that no two heads will light up the same under the same conditions; there is always a something, a difference in the lines or features, that prevents the photographer from duplicating the same

effects of light and shade upon two different subjects, even if the chair and head rest are kept in the exact position for both. The photographer who strives to cut loose from a set style of mannerism in posing will soon see the wisdom of the course.

Let the specimens in the show case or display window be as varied as possible. Show studies of the face at all angles. If the operator is not up in the art of posing, or lacks experience in judging the effect of the light on the various angles or portraiture, he can by a simple device greatly improve himself. Let him buy a life-size plaster cast of any of the Greek marbles, such as are sold by Italian image-vendors in every large city; then place the head at any angle or light in the studio, focus, and study the effect of lighting and shadows on the ground glass by turning the bust, increasing and decreasing the illumination. The effect can be studied far better than upon a human subject.

The photographer should always bear in mind that expression is essential to a portrait, and, no matter how glossy the Aristo may be, it will be worse than worthless if the pictured face fails to reproduce the individuality of expression of the original.

This result can only be obtained by studying the features carefully, posing so as to keep the expression and lighting so as to avoid all false shadows.

In this particular branch of our art we are to-day not so far advanced as were some of the early pioneers who practised the Daguerreotype art half a century ago, when every face and figure was carefully studied by the operator before the final pose. Take, for instance, some of the efforts of the late Marcus A. Root, that are still in existence, unexcelled for expression and

beauty of finish, and no two alike in pose. It would be well for the present generation of operators to study, wherever they can, specimens of such old masters in the heliographic art as Root and Mayall, both originally from Philadelphia, but subsequently of world-wide reputation.—*American Journal of Photography.*

PERSPECTIVE AND THE SWING BACK.

J. MCINTOSH.

North Middlesex Photographic Society.

The subject I am to speak about to-night is one upon which it would be difficult to say anything new, and I certainly cannot pretend to do so. In addition to the information given in the text books upon perspective, optics and the practice of photography, scarcely a week passes without an article on some point of perspective as rendered by photography appearing in one or the other of our photographic journals, and yet, I believe, there are many photographers who hold erroneous views with regard to perspective and the use of the swing back.

The average amateur, I suppose, takes up photography in the first instance with no very definite views as to the nature of the work he is about to commence. Later on, when he finds himself involved in difficulties, he begins to read the technical journals. Presently he meets with a letter written by some minor artist, attacking photographic perspective in good set terms. Our beginner has possibly forgotten all he was ever taught of perspective, and when he finds one of our leaders demonstrating the correctness of the photographic image with scientific accuracy, and the artist retreating from the combat with dogmatic but unsatisfactory assertion that photography does not reproduce the forms

of things as he sees them, he (the beginner) jumps to the conclusion that his pictures will be correct in form, no matter how he uses his tools, and that a knowledge of perspective is unnecessary to him. I hope to-night to show the fallacy of this idea, and to induce those who have not yet made a study of perspective (if any such are here) to devote some little time to it in future. In justice to the artist, it is necessary to look at the subject from his point of view. No doubt all art students go through a course of perspective, but, as they advance in their profession, it is necessarily the case, from the nature of their work, that they cease to plot out the perspective of their subjects, and trust to the correct training of their eyes to make this good. Indeed, it would be tedious and unsatisfactory even if it were possible to plot out the foreshortening of the more irregularly shaped objects which the artist has to portray. Correctness of drawing is always important, but the soul of the painting is seen in the rendering of subtle beauties which the ordinary observer fails to grasp, in the treatment of atmospheric conditions, in the massing of lights and shadows, in the grouping of the component parts, and the harmony of the colors. If these have been skilfully dealt with, we are apt to overlook imperfections of drawing and slight lapses from the laws of perspective. It follows that, while the painter retains in his mind the broad principles of perspective, and applies them in his work, he is likely to forget many of the minor rules, and the methods of demonstrating them, and, when challenged to support some opinion he has given, is not prepared to defend his position with that ready scientific knowledge which the optician has at his command. And yet the

artist's statement, that the photographic image does not show forms as he sees them, may be in some instances undeniably true. It may be assumed that the image formed by a rectilinear lens upon a plate with its surface at a right angle to the axial ray is as correct as any drawing upon a flat surface can be; but, if the axial ray of the lens be not truly horizontal, the eye will be offended with what appears to be an aberration from truthful drawing in objects which are perpendicular to the ground plane, such as buildings, etc.

If the eye is directed to a point on the horizon, all objects which present flat surfaces at right angles to the line of sight will diminish in size the farther off they are, but will remain unaltered in form. Surfaces which, not being at right angles to the line of sight, recede from the observers, will diminish in size as they recede, and, if bounded by parallel lines, these lines will, in the case of a horizontal surface, appear to converge to a point opposite the eye, or, if the surface slope up or down, the lines will converge to points above or below the line of sight. A knowledge of the laws of perspective enables the draughtsman to place the foci of these retiring lines with unerring certainty. Let a negative be made of certain stationary objects, let the observer stand with his eye in the position previously occupied by the lens, and hold the negative at a distance equal to the focus of the lens in front of his eye. The image on the plate will now exactly coincide with the objects beyond. From this it will be seen that it is desirable that a photograph should be viewed from a distance equal to the focus of the lens with which it was taken, otherwise the perspective will appear to be false. So far the photographic image is true to nature and agreeable

to the eye, but, as the majority of small photographs are made with lenses of foci ranging from four to ten inches, and as the normal distance of viewing small objects is about sixteen inches, it will be seen at once that a photograph made with a short-focus lens cannot be viewed from the same distance, and when seen at the ordinary distance, which may be three or four times the length of the focus of the lens, the perspective will appear strained, and an artist would be justified in saying that the lens did not show the image as he saw it. If this is clear, let us take another case. Let the eye or the lens be directed upward, to include the top of some tall building. The point of sight will then be above the horizon and the face of the building will no longer be at a right angle to the line of sight, but will recede obliquely from it. As the face of the building is now a surface receding from the station point, the lines which bound it will no longer appear parallel, but will appear to converge to a point above the point of sight, and, if a negative is made under these conditions, the building will appear as a truncated pyramid. The drawing will be correct, but will not be agreeable to the eye, for this reason, from earliest infancy the eye has been unconsciously trained to recognize rectangular objects as such, even when viewed obliquely by raising the eye, and we see not what the eye actually records, but what the brain tells us is correct. If any one doubts that the eye does actually see the building narrower at the top than at the bottom, let him gradually approach the building, keeping his eye fixed on the parapet, and a point will be reached when the view presented will be so unusual that the brain will no longer refuse to recognize what the eye sees, and the

building will be seen of a pyramidal form. In viewing a photograph taken under these conditions, we are startled by the converging lines, and that which is actually true appears false. With a view to correct this discrepancy, the swing back was devised. By drawing the bottom of the back away from the lens, the rays forming the top of the building are allowed to diverge until the sides of the building are parallel. The image will now appear correct, but the angles of view will be wider and identical with a portion of an image cut from the margin of an image formed by a wide-angle lens on a much larger plate, supposing the camera to have been carefully levelled. As a matter of fact, the whole scheme of perspective has been altered, the lines have been raised or lowered, extended or reduced, as will be seen in the series of prints I show. The first six are photographs of a flight of steps, taken under different conditions. No. 1 was taken from the top of the flight with the lens pointing down. It is a fine specimen of drunken architecture. The point of sight is in the centre of the print, and the lines of the steps, etc., converge to an accidental point some distance above the line of sight. It was made with a four-and-a-half-inch lens upon a quarter-plate, and includes not more than an agreeable angle of 49° . In No. 2 the back has been swung to bring the vertical lines parallel. In No. 3 the lens was lowered to the bottom of the camera ($7\frac{1}{2} \times 5$), while the plate was raised till the bottom edge was half an inch above the centre of the lens. The lens was carefully levelled, and the back set perpendicular to the horizon. Although the angle included on a quarter-plate, with a four-and-a-half-inch lens, is only 49° , as in No. 1, yet, as the point of sight is four and a half

inches above the base line of the print, and as the eye should view it from that point, it is in effect a piece cut from the margin of a print nine inches high and including 90° —a very wide angle indeed. If we now examine No. 2, we will find, by plotting out the perspective lines, that the point of sight is also four and a half inches from the bottom of the print, which is, once again, a piece cut from the margin of a larger print, nine inches high, and including, as in No. 3, an angle of 90° . In fact, Nos. 2 and 3 are identical, and cannot be distinguished from each other. They are really wide-angle views, the perspective is strained and much altered from No. 1. Prints 4, 5, and 6 are of the same stairs, looking up from the bottom, are varied in the same way and explain themselves. As lowering the lens in one instance, and swinging the back in the other, produce identical results, it is obvious that for certain effects we may either use the sliding front to bring the lens to one or the other side of the camera, or swing the back upon its vertical centre to obtain the same result. I mention this, as it has been stated that there is no correct method of using the lateral swing.

These peculiarities are most noticeable in architecture, and, being readily seen, can be easily controlled. In landscape they are less noticeable, and may result in falsities. If we desire to photograph a hill, and point the camera upward, keeping the back at right angles to the lens to facilitate focusing the foreground, the height of the eminence will appear greatly reduced, and a road or path winding upward will seem to be on nearly level ground. To secure the due effect of height, it is desirable to use a long focus lens, which will cut off the objects in the foreground and so bring the back to a

vertical position, thus lowering the point of sight and slightly increasing the angle of view. In making a photograph of objects in a hollow or valley at our feet, it is again necessary to keep the back vertical, but in this case a short-focus lens may be useful to include some of the objects in the immediate foreground and so accentuate, by contrast, the diminished size of those in the valley. When working on level ground, the plan of swinging the top of the back away from the lens to bring near and far objects into focus is a most objectionable practice, the result being neither true nor agreeable. The swing back and the rising and falling front judiciously used will do much to preserve truth in our work, but in cameras of ordinary make the latitude allowed in these contrivances is seldom sufficient for difficult subjects. A camera having an adjustment similar to that of Watson's Acme, by which the the baseboard can be tilted to a great angle while the front and back, having independent movements, can be set either perpendicular to the horizon or to the baseboard, will be found of great service. In place of this a lens mounted as the one I pass round may be used. It is mounted on trunnions, which allow it to be turned upon its optical centre to a very considerable angle. As the frame is square, it can be set in camera front with the centres either vertical or horizontal, and the small bellows allows of free movement without admitting light into the camera. Without such an arrangement I could not have made the prints 2 and 5 identical with 3 and 6. They would have differed to about the same extent as the two halves of a stereoscopic print, and for the same reason. Such an arrangement, used in conjunction with the rising and horizontal move-

ment of the front, will overcome many difficulties. A photograph of an interior, taken with a short-focus lens giving a wide angle on the plate used, will, when viewed at the normal sight distance, give an unpleasant appearance of strained perspective: but, if the photograph is enlarged till the focus is sixteen inches or so, the strained appearance vanishes, and we may almost feel as if we were inside the room. Prints 7 and 8 will illustrate this point. It is for this reason that the image thrown on the screen of the lantern is so much more pleasing than a small direct print from the same negative.

I may state here that, when the plate is set square to the lens, the axial ray will indicate the point of sight; when the plate is set obliquely to the lens, the point of sight will be found at the spot where a line drawn through the optical centre of the lens at a right angle to the plane of the swing back touches the plate. In all cases the swing back should be set perpendicular to the horizon.

Even in landscape the use of a short-focus lens (not necessarily of wide angle) will have a bad effect, and the constant use of such lenses will tend to debase our pictorial judgment. Prints intended for mural decoration should either be taken with lenses of not less than fifteen or sixteen inches focus, or enlarged until they can be viewed at those distances. A little while ago an etching was exhibited in the course of a lecture given to this Society, and a remark was made in the discussion following that the trees in the middle distance were larger in proportion to the bushes in the foreground than a photograph would show them. I do not know if it was meant that the etching was untrue to nature, or only that a photograph could not give the

same effect. In either case I cannot agree with the statement. The distance of a camera from a foreground object will determine the comparative size of that object in the print to one of the same or other size some distance farther off. If we are close to a foreground object, it will appear many times larger than the distant one, but by retiring the camera we shall reach a spot when the two objects in the print will show little difference in size. The series of prints I pass round will illustrate the point. No. 9 is a view taken with an eight-inch lens at thirteen yards from the sapling in the foreground. The sapling appears quite as tall as the much larger tree a little behind it. The distant bushes and trees are mere dots. No. 10 was taken with a lens of a little over sixteen inches focus at twenty-six yards' distance. The sapling is about the same size as in No. 9, but the neighboring tree is much larger, while the distant objects now form conspicuous points in the landscape. No. 11 was taken with a three-and-a-half inch combination at fifty-two yards' distance. Although the sapling is still the same size in the print, it is dwarfed into insignificance by the trunk of the adjoining tree, which is now so large that a small portion only of it is seen in the print, and the tufts of grass, distant bushes, trees, etc., are now so large that, on a cursory inspection, the print would not appear to be of the same subject as No. 9. I am aware that many photographers hold the erroneous opinion that distant objects are always dwarfed in proportion to foreground objects when a short-focus lens is used, and that a long-focus lens will reverse the conditions. So long as this error exists, it cannot be too frequently stated that the length of focus

determines the scale of the image, but has nothing whatever to do with the perspective, which is settled by the position of the camera in relation to the objects, and the dwarfing of the distance is due to inclusion of objects too near to the camera, generally by the use of a wide-angle lens. To enforce this, I show No. 12, a view of the same subject taken with the eight-inch lens at twenty-six yards. Compare this with No. 10. Although much smaller, the comparative sizes of objects are the same as in the larger print, and, if enlarged to the same size, would be identical with it. No. 13 was taken with the eight-inch lens at fifty-two yards, and, though not much larger than a postage stamp, is identical in all its proportions with No. 11. From this it will be seen that, if you want a picture of, say, a hill towering over the cottages nestling at its foot, you must retire till the objects are in proper proportion, and, if you have not a lens of long enough focus to make the selected subject fill your plate, you must be contented with a small image, which, if carefully focused, will bear enlargement to the required size. I do not think the main body of photographers quite appreciate the value of the tele-photographic lens for such purposes.

(To be continued)

LETTERS TO THE EDITOR.

To the Editor :

SIR:— Thank you for so kindly sending me a copy of your journal containing a notice of my pictures at the late New York exhibition.

The criticism, although much too flattering, is by far the best written, the most appreciative and penetrating into the intention of the artist, as well the most descriptive of how he has

worked out his ideas of any that has been written of my work for some years. The whole article is written in the true and right spirit of criticism, and I thank the writer, quite apart from anything he says of my own pictures, for showing how an article of the kind should be written.

As an exhibitor, I have, of course nothing to say of the judges, but if the Society desires to attract the works of the best English exhibitors, they will remove that clause in their conditions which *compels* exhibitors to compete.

* * * * *

Now, I want to criticise *you*! Why do you admit that dreadful word "photogram" into your paper? "Photograph" has been good enough for half a century, and whether right or wrong is established by custom.

Yours very truly,

H. P. ROBINSON.

WINWOOD, TUNBRIDGE WELLS

To the Editor:

SIR:—Please accept my thanks for the specimen copy of your valued magazine, just received.

I have now an added interest in Toronto, for I remember that the biggest ham sandwiches to be found on the route to the World's Fair were sold at five cents in Toronto.

It was also in that city that I first fully grasped the principle on which the Dominion railroads are run; for during the stoppage of the train I walked to the engine and asked the genius presiding at the throttle, "when are we due at Suspension Bridge?" He very politely answered, without the least attempt at concealment, "we aint due there," and he added, "we git there when we can."

I now find, with much pleasure, that the JOURNAL elaborates the generous

principle of the restauranters in the quality and quantity of its contents, while distinctly distancing the railroad managements' aims by "getting there"—presumably "every time," if the June number may be taken as a criterion.

I enclose a subscription, and remain,

J. R. S.

[The above letter from one of New York City's well-known amateurs, is rather too good to keep. For the benefit of our foreign readers we will state that the succulent ham sandwiches of Toronto became a well-known landmark during the reign of the "Midway" in Chicago, and as some of the trains for the Fair went through in 16 and 18 sections, the last few sections were often some hours behind time. —Ed.]

To the Editor:

SIR:—We wish to call the attention of your readers to the present state of the photo business, and ask their views as to the readjustment of prices, as under the present state of things the employer cannot always make ends meet, and the employer cannot live on half pay, or in many cases no pay at all. Our patrons, did they know the true state of the case, would not wish their work done by half paid labor. We would suggest a union of photo men under the wing, perhaps, of the P.A.C. The union to divide the photographic trade into, say three grades, each grade with a stated scale of prices. Each grade to have a card for hanging in gallery containing notice of membership in union, and scale of prices, also names of members of whatever grade it may be, and fine for cutting prices. No first, second, or third grade would be printed on card, simply names of photographers whose work is considered by a committee of the union to warrant in charging first grade prices, etc. Member depositing say \$25 as a fund to defend and enforce

terms; members breaking the rules to pay a fine as may be agreed upon. Men cutting prices outside of the union to be dealt with by opening an office as near to him as possible, doing work as low or lower than him, the office to be controlled by the union and to have samples of every member's work exhibited. Let the customers choose for themselves. The office manager to receive money and give an order on the photographer of their choice.

Any advance in rates might not be made all at once, money is scarce and present rates so low, even with first class galleries, that an advance to anything like a paying figure would appear to many people as extortionate and uncalled for. These things and other details could be adjusted at a meeting of the trade, held to consider the matter and draft rules to be considered at the coming convention, when a general tariff of rates might be agreed upon. The time of our conventions has been hitherto mostly taken up by the stockmen, the photo trade receiving little consideration.

The operator's prosperity is the stockman's gain. At the present state of the trade, failures must be expected and stock houses will be losers. Cutting prices is generally the last whistle of the dying swan. The men who have kept up prices and turned out first class work are the men most patronized, although they have had to come down to rates that do not pay for good work and good materials.

Hoping the photographers of Canada will think over and discuss the matter, and endeavor to set the business on a sound and paying basis, we shall for the present leave it in their hands, asking your advice and assistance to develop the negative, and retouch the subject. Yours fraternally,

SIMPSON BROS.

To the Editor:

SIR:—As a constant reader of photographic journals, I have never seen any half-tone photo engravings executed by W. T. Wilkinson or Macfarlane Anderson, writers of books on photo engraving, etc. Are they photo engravers in practice or only in theory? When a person writes a book and publishes it, he should be able to put good samples of his own work in his book, don't you think. Yours truly,

CRITIC.

To the Editor:

SIR:—Permit me a few words respecting articles that appeared in the JOURNAL lately concerning the copy-right law. In what manner can we, as photographers, protect a creditable production in photography being destroyed by incompetent individuals in their so-called art, and make them work from such photographs at the consent of the photographer? If such a thing could be accomplished, I think the enlargements now made by such mentioned persons would be done by the photographers, and would be much more perfect, owing to the fact of the negative from which the original photo. was made being in his possession. I am constantly apprised of the unflattering comments made by various artists (?) in crayon and oil when any fault is found with their crude productions as to the perfection of the photographic art; and at the same time such persons, if it were not for the process and instruments used in photography, would not be able to procure an outline of any correctness. They have a photo. made merely as their subjects are told to paint the drapery from, and then incorporate in their production the artistic ability of the photographer, who by his real

artistic skill and many more experiences, lights and shades the face in a manner unknown to such painters, this injustice has a tendency to depreciate the photographer in the estimation of the public.

H. E. S.

PERSONAL MENTION

MR. HARDING is "on the road" again for F. A. Mulholland & Co.

MR. E. POOLE, secretary treasurer of the P. A. C. and—— but everybody knows the many good qualities of friend Poole, and as it would take several pages to say all that we know *good* about him we will simply say that Mr. Poole left the middle of July for Europe, and undoubtedly carries with him the good wishes of the majority of Canadian photographers for a pleasant trip and a safe return.

MESSRS. SIMPSON BROS., of this city, are making extensive alterations in their gallery, and expect to have, when finished, one of the best galleries in Ontario.

MR. F. E. CRAMER, youngest son of Mr. G. Cramer, was married June 20th, 1894, to Miss Anna C. Rathjen. The marriage took place at the residence of Mr. G. Cramer, a large number of guests being present. The happy couple left, after the reception, for an extended trip through the East. The members of the staff of this JOURNAL extend to them their hearty congratulations.

WE learn with sincere regret of the death of the young son of Mr. F. J. Harrison, editor of *Anthony's Bulletin*, and extend our sympathy to Mr. and Mrs. Harrison in their loss.

MR. W. ETHELBERT HENRY, who is well known to our readers as a valuable contributor to the pages of this journal, is returning to England in August to accept a prominent position on the editorial staff of the *Photogram*. Although going so far away from us we hope to count him still as one of our contributors.

F. N. POOLE, of Tara, Ontario, was in Toronto for a few days, and paid us a visit.

WE are very sorry to learn that Mr. H. F. Sharpe's father has suffered a stroke of paralysis, one side being seriously affected.

PRESIDENT CUNNINGHAM was in Toronto, July 25th, on convention business.

FRED. LYONDE, of Hamilton, has added a handsomely decorated front to his gallery, and now has his office, reception, and show rooms on the ground floor.

WE wish our out-of-town readers would send us any items of interest that may transpire in their part of the country. A little help of this kind will greatly aid us in making this JOURNAL of general interest. We want a correspondent in every city and town in Canada, will *you* act for us?

OUR NOTICE BOARD.

One of the most interesting and complete trade catalogues of the year has just been received from Messrs. Ross & Co., the well-known manufacturing opticians of London, Eng. It is highly illustrated and contains a graphic description of the line of Ross' Lenses, including the new "Zeiss" and the "Goerz" double anastigmat for which they are sole manufacturers for the British Empire. Section 3 of this catalogue is devoted to a full des-

cription of studio and field camera, novelties in hand cameras, enlarging and optical lanterns and miscellaneous apparatus. Section 4 treats fully of Ross' microscopes and apparatus, telescopes, field and opera glasses.

Percy Lund & Co., publishers of *The Practical Photographer* announce that on August 10th, they will begin the publication of *The Junior Photographer*, a monthly illustrated magazine dealing with the elementary and popular side of photography, conducted by Matthew Surface (editor of *The Practical Photographer*.)

We are in receipt of the 7th edition of Bausch & Lomb's catalogue of photographic lenses, shutters and prisms. It is very complete, embodying lenses which will meet the requirements of photography in all its branches. Up to date this firm have made and sold 33,000 lenses. In this catalogue are introduced two new series of portrait lenses and their new tele-photo lens, and a considerable reduction announced in price of the Zeiss-Anastigmats.

Fallowfield's Photographic Annual for 1894-5 is just received and proves to be one of the most comprehensive catalogues of photographic materials we have ever seen. It contains over 750 pages devoted to an illustrated description of, seemingly, everything photographic under the sun, up to date. The illustrations are good, those of hand camera shots being quite the best samples of process work we have met with from England. One of the interesting features of this large book is 34 pages containing 156 photographic "Hints" any one of which is quite liable to be found worth the price charged for the catalogue, which is one shilling. It is published by Jonathan Fallowfield, 146 Charing Cross Road, London, W., England.

Prosch Shutters and Flash Lamps are, as all who have used them will testify, very satisfactory instruments with which to work. Their popularity is well merited.

A writer in a late number of an English contemporary, *Photography*, speaks as follows:

With regard to the deterioration of plates in the tropics, Mr. A. Pringle's experience coincides with mine as far as certain brands of plates are concerned, but, strange to say, some of Cramer's plates I purchased in the United States some seven years ago, a portion of them were exposed in Cuba (Habana), are perfect to-day. Having tried them last week I was agreeably surprised at this. Can it be the purity of air in drying American plates that makes them retain their quality under varying conditions of climate?—J. D.

Mr. E. C. Landon whose "O.K." paper is proving so successful, informs us that his "Matt Surface Paper" is now ready for the market. It has been thoroughly tested and in every way found to be very satisfactory. Give it a trial. It can be put through the same baths as Aristo paper and will prove a good specialty.

DR. HUGO SCHROEDER IN AMERICA.—The Manhattan Optical Co., of New York, although one of the latest comers in the business of high class optical goods is rapidly gaining for itself a position in the first rank of manufacturers.

It has just succeeded in adding to its staff of experts, Dr. Hugo Schroeder, who for the past fifteen years has been director-general of the optical works of Ross & Co., London. He will find every facility in his new position with the Manhattan Optical Co. to extend his knowledge and experience.

Another evidence of the growth of the Manhattan Optical Co. is the recent purchase of 60 acres of land at Creeskill, N. J., whereon they have nearly completed extensive works with every improvement for the manufacture of their specialties and regular lines.

The Convention number of the *Photographic Times* is most excellent, both from a literary and an illustrative standpoint. A number of the good things it contains evidently came back with Mr. Woodbury from England.



We wish to have this department as complete as possible, and invite Secretaries of Clubs to send us regular accounts of the monthly doings of their Clubs.—[Ed.]

PHOTOGRAPHIC SOCIETY OF JAPAN.

An ordinary meeting of the above mentioned Society was held at the rooms of the Geographical Society (Chigaku-Kiokai), Nishikonya-cho, Kiobashi, Tokyo, at 5 p.m. on Friday, 8th June, Mr. C. D. West, M.A., in the chair.

The minutes of the previous meeting, which corresponded with the report in the *Japan Mail*, having been read, it was pointed out that, at this meeting which was the annual meeting of the Society, the matter of the treasurership had been left unsettled, Mr. Ishizu objecting to take the appointment. This mistake having been corrected, the minutes were approved, and the meeting then proceeding to the business of electing a treasurer, Mr. S. Kajima, Junior, was unanimously elected.

Baron A. d'Anethan and Mr. T. Kamiya were duly proposed, seconded, and unanimo sly elected members of the Society.

It was announced that an out-door meeting, or field day, would be held on the 17th June, at Enoshima, the meeting to begin in the morning, and the members to meet for lunch at the Kinkiro tea-house at 12.30.

Mr. Kajima Seibei then showed a number of bromide prints of various tints, some of which were particularly pleasing. The colors shown were brown, or "red sepia," green, two distinctly different blues, and yellow.

Mr. Kajima gave the following description of his method of producing these prints:—The prints are exposed, developed with eikonogen in the usual way, fixed in a neutral bath without the interposition of an acid bath, and thoroughly washed. They are then treated with the following solution:—

Nitrate of Lead.....	½ ounce.
Red Prussiate of Potash.....	¾ ounce.
Water.....	12 ounces.

This converts the image from black into a faint yellow. The prints are again thoroughly washed, and the yellow image is then toned to different colors, with various solutions, as follows:—For blue:—

Perchloride of Iron.....	5 drams.
Water.....	6 ounces.

For another blue, called by some a "black blue" the prints are treated with a weak solution of ferrous sulphate. The strength of this solution is not material.

For green:—

Neutral Chromate of Potassium.....	½ ounce
Water.....	12 ounces

The prints are washed, and are afterwards treated as for the first of the two blues mentioned. For brown, or "red sepia":—

Copper Chloride.....	5 drams.
Water.....	6 ounces.

The action of this solution is very rapid. For yellow:—

Mercuric Chloride.....	90 grains.
Iodide of Potassium.....	150 grains.
Water.....	8 ounces.

The action of this solution is very slow, but the prints darken considerably in drying. By continuing the action for a long time a very pleasing color that might be described as "light brown" results.

Messrs. W. K. Burton and T. Kondo showed the results of the use of orthochromatic plates with a yellow screen for portraiture. The result, in the case of people of dark complexion, was remarkable. In the case of the orthochromatic plate the necessity for retouching was almost done away with, and a result obtained that could not be got by any amount of retouching in the case of an ordinary plate. The photographs taken on ordinary plates looked like caricatures besides those on the orthochromatic plates. Professional photographers had been prevented from using orthochromatic plates for their ordinary work in the studio on account of the difficulty of a color screen, which is quite necessary to get the full advantage of orthochromacy, but this difficulty was overcome by the use of a sheet of ordinary patent plate coated with picrated gelatine fixed in the dark slide in contact with the sensitive film as described at a previous meeting of the Society.

Mr. W. K. Burton showed an "iris diaphragm" shutter by the Bausch & Lomb Optical Company of Rochester, N.Y., United States of America. He pronounced it unmistakably the best shutter he had ever seen. It opened and closed at the centre, as shutters intended to work between the combination of a lens ought to, and the opening was nearly circular from beginning to end. The time taken for opening and closing was only a fraction of the whole time of exposure, so that the "coefficient of light" was remarkably high. The exposure could readily be varied between 1-100 of a second, and 3 seconds, or a "time exposure" could be given without the necessity of keeping pressure on the pneumatic release. The shutter did not

open in "sett'ng" and, by a particularly ingenious device the vanes which opened and closed to give the exposure could be set to open to any desired aperture, so that they acted as an iris diaphragm as well as a shutter. The workmanship, all in metal, was of the highest degree of excellence,

CALIFORNIA CAMERA CLUB.

Wednesday night, June 20, 1894, the slides of the Newark and Buffalo Camera Clubs were shown. A large number of members were present and the slides were much admired.

Friday night, June 22, the regular public lantern slide exhibition was given at Metropolitan Temple. The subject was "Through Death Valley" and the lecturer was Mr. Frederick I. Monsen. The lecture had been given before but was so good and so many requests had been received for its repetition that it was decided to give it once more, with the addition of a large number of new slides. That it was wise to do so was shown by the way the large hall was completely filled.

Wednesday, June 27, Mr. W. F. Stannard gave a demonstration before the Club of the working of American Aristo Jr. paper. He spent the day at the rooms printing from members' negatives, and at night showed the use of both combined and separate baths. American Aristo Jr. is a new collodion paper prepared especially for amateur use, and its brilliant printing qualities were appreciated by the many members who saw Mr. Stannard's demonstration. At its conclusion a number of sample packages were distributed among those present.

On July 3, the Regular Monthly meeting was held in the Club Rooms. Photography Prize Slides (English) were shown.

Yours truly,

C. S. CLOSE,

Corresponding Sec.

THE MINNEAPOLIS CAMERA CLUB.

The Minneapolis Camera Club is keeping its members interested during the summer by a series of five monthly competitions lasting from June to October, and covering the following subjects: Portraits, Hand-Camera Work, Instantaneous Work (showing motion), General Landscape and Marine, Lantern Slides.

The judges are to take into consideration:

- 1st. Composition and general artistic excellence.
- 2d. Exposure and development.
- 3d. Printing, toning and mounting.

One hundred marks to be considered perfection in each case.

After the five exhibitions have been held, the competitor having the highest number of marks to his credit, will take the first prize: the second and third highest to take second and third prizes, respectively.

Besides the Club prizes there are a number of good prizes offered by the manufacturers.

The entries in the June competition were exhibited at the club rooms, July 11th.

NOTICE TO CLUBS.

Special rates will be quoted to clubs for supplying this JOURNAL to each member.

OUR SECOND COMPETITION.

\$400 IN PRIZES

The second competition, conducted under the auspices of the CANADIAN PHOTOGRAPHIC JOURNAL, with the valued co-operation of the following leading manufacturers: The Eastman Kodak Co., The Rochester Optical Co., The Gundlach Optical Co., The Cramer Dry Plate Works, The Bausch & Lomb Optical Co., The Prosch Mfg. Co., The Manhattan Optical Co., Mr. John Carbutt, The Stanley Dry Plate Co.

The prizes offered represent the latest achievements of the leading manufacturers of the day, and should make this competition one of the most interesting ever held in the photographic world.

Read the rules carefully, and remember that each entry must be accompanied by a coupon, which will be printed each month.

Judges will be announced later. This competition will close July 31st. "*Are you in it.*"

LANDSCAPES.

(With or without figures.)

CLASS A (5x7 or larger)—best set of three, 1st Prize: Bausch & Lomb 6½ x 8½ Rapid Universal Lens (a lens with a national reputation), 2nd Prize: Bausch & Lomb Diaphragm Shutter, the handsomest shutter made. 3rd Prize: One year's subscription to THE CANADIAN PHOTOGRAPHIC JOURNAL.

CLASS B (under 5x7)—1st Prize: 10 dozen "Stanley" Plates. 2nd Prize: 6 dozen "Stanley" Plates. 3rd Prize: 4 dozen "Stanley" Plates.

This will be the new "50 time" Stanley. The quality and speed of which is unsurpassed.

MARINES.

CLASS C (5x7 or larger)—1st Prize: Prosch Columbian Triplex Shutter, in aluminum, a great shutter capable of great work. 2nd Prize: Prosch Storage Flash Lamp, unequalled for flash-light work. 3rd Prize: One year's subscription to THE CANADIAN PHOTOGRAPHIC JOURNAL.

CLASS D (under 5x7)—1st Prize: Manhattan Optical Co.'s "Folding Night Hawk" (the latest addition to the "folding" class and a good one). 2nd Prize: Manhattan Optical Co.'s "Ordinary Night Hawk" (always ready for work).

GENRE PICTURES.

CLASS E (best set of three, any size)—1st Prize: Rochester Optical Co.'s Folding Premo Camera (a dainty camera for hand or tripod, elegantly made, and capable of the finest

work). 2nd Prize: Rochester Optical Co.'s Premier (one of the best cameras of its class). 3rd Prize: One year's subscription to THE CANADIAN PHOTOGRAPHIC JOURNAL.

GROUPS.

CLASS F (best set of three, any size)—1st Prize: Gundlach Optical Co.'s 5x8 Rapid Rectographic Lens (a very high grade lens, having 3 different foci). 2nd Prize: (to be announced). 3rd Prize: One year's subscription to THE CANADIAN PHOTOGRAPHIC JOURNAL.

PORTRAITS.

CLASS G (best three poses showing instantaneous work on the Lightning Brand Cramer Plates, any size)—1st Prize: Two-thirds of case of Cramer Plates (Lightning Brand). 2nd Prize: One-third of case of Cramer Plates (Lightning Brand).

CLASS H (best exhibit of three photographs, any size, made on Cramer Isochromatic Plates—demonstrating, by comparison with three photographs of same subjects on ordinary plates, the superiority of Isochromatic Dry Plates for certain classes of work)—1st Prize: Two-thirds of case of Cramer Isochromatic Plates. 2nd Prize: One-third of case of Cramer Isochromatic Plates.

CLASS I (best exhibit of one portrait photograph, any size, showing most points in posing, lighting and use of harmonious background, out of a possible 30 points)—1st Prize: 8 dozen Carbutt Orthochromatic Cabinet Plates, sens. 27. 2nd Prize: 4 dozen Carbutt Orthochromatic Cabinet Plates, sens. 27. 3rd Prize: One year's subscription to THE CANADIAN PHOTOGRAPHIC JOURNAL.

ENLARGEMENTS.

CLASS J best enlargement—1st Prize: 8 dozen Carbutt 6½x8½ Orthochromatic Landscape Plates, sens. 23. 2nd Prize: 4 dozen Carbutt 6½x8½ Orthochromatic Landscape Plates, sens. 23.

PRETTY CHILDREN, GRACEFULLY POSED.

CLASS K (best set of three, any size)—1st Prize: 10 dozen Stanley Plates. 2nd Prize: 6 dozen Stanley Plates. 3rd Prize: 4 dozen Stanley Plates. (The popular dry plates manufactured by the Stanley Dry Plate Co., of Montreal.)

LANTERN SLIDES.

(Three slides in each class to constitute a set.)

LANDSCAPE.

CLASS L—1st Prize: 7 dozen Carbutt Lantern Plates. 2nd Prize: 5 dozen Carbutt Lantern Plates.

MARINE.

1st Prize: 7 dozen Ilford Lantern Plates. 2nd Prize: 5 dozen Ilford Lantern Plates.

ANIMALS.

1st Prize: 7 dozen Eastman Lantern Plates. 2nd Prize: 5 dozen Eastman Lantern Plates

ANSWERS TO CORRESPONDENTS.

Arrangements have been made with a photographic expert of acknowledged ability, whereby our readers may have the benefit of his experience, through this column, absolutely free of charge. Queries must be received by the first of the month to ensure their appearance in the current issue.

"SNAP"—The following you will find a very quick and satisfactory developer for "snap shots":

Hydrokinone	- - -	1 oz.
Sulphate of Soda	- - -	4 oz.
Water	- - -	80 oz.

when dissolved add

Pot. Carb.	- - -	3 oz.
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For instantaneous exposures add one grain of amidol to each ounce of above.

J.R.S.—We can get you a Christmas number of this JOURNAL. The price is now fifty cents, you had better order at once as the number obtainable is very limited.

"LOWER PROVINCE"—The Robertson Photo Supply Co., St. John, N.B., carry a full stock of goods such as you mention, and are near you, write them. They have issued a very complete catalogue, which would help you in ordering.

S.T.—Yes, you have to be a member of the P.A.C. if you wish to exhibit. Mr. E. Poole, St. C. tharines, is secretary, and will gladly give you any information you may desire regarding the Association. You should most certainly join.

"EXHIBITOR," San Francisco.—1. As you will see by notice in this issue, our competition will not close until September 30th. 2. We pay the duty on all entries. 3. You can enter in all classes if you wish. The prize list is indeed "very attractive."

CERTIFICATES OF PROFICIENCY.

RULE 1.—Persons desirous of gaining our certificates of proficiency in any of the following branches, must send in not less than three mounted prints of any size except where otherwise stated) and in any process.

RULE 2.—Full name and address of sender must be legibly written on the back of each photograph.

RULE 3.—Prints may be sent at any time, by any one, whether a subscriber to the JOURNAL or not.

RULE 4.—Anyone guilty of taking certificates for work that is not their own will be prosecuted for obtaining such certificates under false pretences.

RULE 5.—Certificates will be sent out, and the winners' names published in this JOURNAL, each month.

RULE 6.—No class distinction as to amateur or professional. Hereafter such distinction will not be made in our competitions.

RULE 7.—Winners of a third or second grade certificate are not barred from winning a first grade in a later examination.

RULE 8.—The subjects shall be as under:

RETOUCHING. Heads, cabinet size only, mounted on regular size cabinet cards. Three prints from different negatives before, and after, retouching.

POSING. Three mounted prints of single figure and three of groups, any size. The ease of pose, and gracefulness of the figures will be chiefly considered.

PRINTING. Competitors in the Portrait Class must send in at least three mounted plain prints, and six vignettes, from one negative—any size. Competitors on the Landscape printer's class must submit at least three mounted prints off each of three negatives—any size. Equality of prints will be the chief consideration. Any of the following processes may be adopted: Platinotype, bromide, collodio-chloride, gelatino-chloride, carbon, or albumen. Each set of prints must be made in one process only.

LIGHTING. Three portraits, any size, either head and bust, three-quarter figure or full length.

RULE 9.—These rules may be amended from time to time if considered necessary.

RULE 10.—The decision of the judges shall be final, and all photographs will become the property of THE CANADIAN PHOTOGRAPHIC JOURNAL.