

Journal of the Amateur Photographic Society of Madras.

Patron.

H. E. SIR ARTHUR ELIBANK HAVELOCK, G.C.M.G., G.C.I.E.

President.

C. E. PHIPPS, Esq.

Vice-Presidents.

HON. MR. G. STOKES,

MAJOR J. L. VAN-GEYZEL, I. M. S.

Committee.

E. W. STONEY, Esq.

A. PILKINGTON, Esq.

E. THURSTON, Esq.

REV. A. MOFFAT.

A. CHATTERTON, Esq.

Honorary Secretary.

MRS. LEET PALK.

Honorary Treasurer.

A. E. LAWSON, Esq.

CONTENTS.

	<i>Page.</i>
EDITORIAL NOTES	109
CORRESPONDENCE	110
OUR HOME LETTER	110
OUR ILLUSTRATIONS	111
OUR CONTEMPORARIES	111
EXTRACTS:—SOME USEFUL STAINS FOR PHOTOGRAPHERS; ARE SLOW PLATES THE BEST FOR HAND CAMERAS; THE BLUE PRINT; NEGATIVE MAKING; CLOUD AND SKY NEGATIVES; LANTERN-SLIDE MAKING FOR BEGINNERS	112
RULES, COMPETITION, ETC.	120

EDITORIAL NOTES.

ELSEWHERE we publish a letter which we have received from H. H. the Elyiah Rajah of Travancore.

WE have received the prospectus with entry form of the forthcoming International Photographic Exhibition to be held in Calcutta. All pictures for the Exhibition must reach the Hon. Exhibition Secretary, 57, Park Street, Calcutta, not later than the 25th December.

DINKERESCO is said to have discovered a method of making permanent prints on the human skin. The details of the process have not reached us. The skin is sensitized by the application of substances which are used in sensitizing paper. The impression is said to last and to be unaffected in any way by the changes in the tissues of the skin. It will be idle to speculate on the prospects of this discovery!

THE Stieglitz-Keiley method of developing platinum prints, which gives the operator a great amount of control over the development, has attracted some attention of late. The print is laid, face up, on a clean sheet of glass. It is then coated with pure glycerine and gently pressed with a blotter so that the glycerine may sink into the emulsion. The print is coated with glycerine for a second time, the parts of the print which are to remain undeveloped receiving a thicker coating of glycerine. The developer which is diluted with glycerine is brushed over the print, a strong solution being necessary where deep shadows are required. Warmer tones can be obtained by using a solution of bichloride of mercury and the developer. As soon as any part of the print is

sufficiently developed, the developer is blotted away, and the part covered with strong glycerine. When development is complete, the print is brushed over several times with a clearing solution made up of one part of hydrochloric acid to sixty parts of water. The print is then washed several times in water.

WE referred some time ago to the use of formalin in photography. Its use in the rapid drying of gelatine plates seems to be becoming general. It has got advantages over alcohol in some respects, but has this serious drawback—it makes the gelatine too hard. The negative is bathed in a 10 per cent solution of formalin for a short time, rinsed in boiling water, and dried over a flame. The hardening action of the formalin can be avoided by bathing the negative in a weak nitric acid bath.

OUR readers are doubtless aware that a printing-out Silver paper with the attractive name of *Venus paper* was put upon the market a few years ago. It did not unfortunately fulfill the expectations that were formed of it. It has now appeared in a much improved form. It can be had in three different kinds—smooth, medium, and rough surfaced. Among the advantages claimed for this paper are:—

1. It is a permanent silver paper;
2. There is no risk of frilling;
3. It dries flat and does not curl;
4. The prints can be washed in warm-water, and thus the time required for removing the hypo is considerably shortened;
5. It keeps well for a considerable time;
3. Spotting can be done quite as easily as on drawing paper.

A writer in the *Amateur Photographer*, after experimenting with this paper, comes to the conclusion that the claims are amply justified.

“PHOTOGRAPHIC indigestion” is apparently a disease unknown to the medical profession, as we have not been able to find it in Quain’s dictionary. We owe its discovery to a writer in the *Amateur Photographer*, who gives the following particulars about it. It breaks out on the opening of The Photographic Salon and is highly contagious. The photographic stomach gets deranged, the photographic vision being thereby affected and the disease soon assumes the form of green jealousy. The patients suffering from the disease indulge

in violent attacks on everything connected with the Salon. Pouticing the patients with their own pictures is said to give relief.

CORRESPONDENCE.

BANGALORE HILL,
TREVANDRUM, 3rd Nov. 1900.

MADAM,

I feel very thankful to the Amateur Photographic Society of Madras for their kind sympathy with me in the irreparable loss that I have sustained by the sad and sudden death of my only surviving brother. The suddenness of his death reminds me that in the midst of life we are in death. His ways are inscrutable. And we can only calmly submit to His will.

Believe me,

Yours truly,

RAMA VURMA, E. R.

MRS. E. LEET PALK,

Honorary Secretary,

A. P. S. of Madras.

OUR HOME LETTER.

October 1900.

SINCE my last letter the most important events of the year in the photographic world have taken place. The two great exhibitions have opened their doors, and are now within a day or two of closing them. The Royal Photographic Society’s Exhibition this year has been undoubtedly the most successful yet accomplished, for, on account of the larger head-quarters at the New Gallery, a far finer collection of exhibits was presented to the public than has hitherto been possible. Instead of a small room containing practically nothing beyond photographs of the pictorial kind, there are five rooms (or their equivalent), comprising sections devoted not only to pictorial photography, but also to the professional kind, scientific, and commercial work, and photographic trade exhibits. The Royal Photographic Society really takes for the first time a position it ought to do as the foremost organization of the kingdom.

The other Exhibition promoted by the Linked Ring contains nothing but examples of purely pictorial photography, and as such it rarely fails to prove very attractive to the sun artist. On the present occasion the collection is an excellent one, but no one photographer takes the world by storm as Craig Annan, Demachy, and Stieglitz, and others have done in previous years. Nevertheless there is much to be learned, and no thoughtful man can come away from the Salon, or indeed from the Royal Exhibition either, without feeling that the possibilities of photography especially in the direction of art have by no means been exhausted, that we are only as yet on the fringe so to speak, and a wealth of unexplored possibilities still lies before us.

There is one striking feature at both exhibitions, that is the presence of so many pictures by Americans, chiefly portraits. Many of these portraits are remarkably clever, intensely original, in pose, entirely regardless of convention, and yet produced by the simplest means, proof positive that variety is attainable without elaboration of detail. It is true that a few border upon the grotesque, and I question whether their authors intended them to be taken quite seriously, but on the whole these American pictures are a wonderful lot, and mark an era in portraiture, though in England we can still hold our own in landscape. After this Brother Jonathan is entitled to wear the laurels for portraiture. But I must not take up too much of your time with talking about these exhibitions.

It is the time of the year at all events for lantern slide work, and after spending the greater portion of a fortnight's time in making slides, I may venture to put before you one or two practical conclusions in regard to procedure and formulae. It seems to me that the great aim in preparing lantern slides should be to obtain as great a variety of tone as possible, and to suit the tone to the subject. We should have our sunny scenes in warm brown, seascapes in blue or green, portraits in engraving black, and winter scenes when the snow is not on the ground in a cold sepia, or with snow then once more in blue. The idea is to get as near to nature as possible, but there is an additional advantage in having a variety of tones, for as each slide gives place to the next on the screen, and the colour changes, a marked effect on the spectators is produced, since nothing is more fatiguing to the eye than to gaze for any length of time upon bright pictures of a uniform colour.

My processes are briefly as follows—For lantern tones I use the hydrochinone developer giving a long exposure and retarding considerably with potassium bromide. Blue tones I get with pyro and ammonia, clearing with an iron clearing solution. Green tones I get by the use of cover glasses stained with aniline dyes. Fine sunshiny effects are to be had by soaking either the slide itself or the cover glass in a strong decoction of coffee. For red and pink tones I find the very slow bromide plates called variously "Kristal" and "Gaslyt" plates in this country are the best, but instead of exposing them by gas light which takes rather a long time, I give thirty seconds or so to dull day light, and develop with pyro and ammonia. Sepia tones are easily obtained by over developing a slide, reducing it with mercury bichloride, and then redeveloping with ammonia or sodium sulphite. So much for development.

In regard to mounting I vary the shape as much as I can by using marks of different openings. An important point is to do all the spotting one can upon the negative. It is exceedingly difficult to spot lantern slides so that the defect shall not be visible.

PERCY LUND.

OUR ILLUSTRATIONS.

MR. E. W. STONEY whose charming illustrations adorned our Journal last month, has again laid us under obligations to him by supplying us with the following illustrations:—

VIEW OF THE PLAINS FROM ADDERLEY STATION,
NILGIRI RAILWAY.

This was taken on a Wratten Inst. Plate, in bright diffused light, at 3-45 p. m., stop *f* 11'3, Pyro Ammonia developer.

"A MADRAS BANYAN TREE AND GARDEN."

The difficulty in dealing with this subject was to give sufficient exposure to get the necessary details in the foliage without halation.

The writer is unable to find his notes of exposure for this and "Shooting a Crocodile" taken on a backwater near Ferok.

E. W. STONEY.

Our Contemporaries.

- THE PHOTOGRAPHIC JOURNAL, *September*—
The Illustrated Catalogue of the Royal Photographic Society's Exhibition.
- THE JOURNAL OF THE CAMERA CLUB, *October*—
The Nebula, as Revealed by Photography.
- THE PHOTOGRAM, *October*—
Two-Colour Lantern Slides; A new Lantern-Slide Process; Handwork before Printing; Aids to Illumination.
- DER AMATEUR PHOTOGRAPH, *October*—
Das Panoram; Der 'Zerplatte'; Ein neuer Abschwächer, Ceriumsalzlat.
- THE PHOTOGRAPHIC TIMES, *October*—
Action of Light on Silver Chloride; Intensification and Toleration; Copy-right and the American Photographer; How to gauge Light and Shade; The use of Formalin in the rapid drying of Plates; Some Thoughts on Lantern Slide making; Toning with the Brush.
- JOURNAL OF THE PHOTOGRAPHIC SOCIETY OF INDIA, *October*—
The Valley of Cashmere; The Amateur Photographer; Are Slow Plates the best for Hand-cameras; Spotting Negatives and Prints.
- THE PHOTO-MINIATURE, *September*—
Chemical Notions for Photographers.
- THE AMATEUR PHOTOGRAPHER, *September*—*October*—
Notes on Secco-films; Toning Lantern Slides by substitution; Gallery Photography; Architectural Photographs; The Photographic Salon; Lantern Slides by the Carbon Process; Lightning; Hyposulphite of Soda; The Goerz double Anastig-

mat; P. O. P. Working; The Thionin-film; Pictorial Photography in America; On Toning, &c.; Enlarging Difficulties; Studies in Pictorial Composition.

THE AUSTRALIAN PHOTOGRAPHIC JOURNAL, September—Prevention of Pinholes in Negatives; Window Photography; Improved Glycerine Process for the development of Platinum Prints.

THE PRACTICAL JUNIOR PHOTOGRAPHER, October—Architectural Interiors; Photography in the Garden.

WILSON'S PHOTOGRAPHIC MAGAZINE, September—Lenses for Large Work; The treatment of the Figure; The Blue-print; The Elimination of dypso; The Alambath;

THE AUSTRALASIAN PHOTOGRAPHIC JOURNAL, September.—An Acetylene Generator and How to make it.

EXTRACTS.

Some useful Stains for Photographers.

By JOHN B. HAGGART.

MANY a time the photographer requires to use stains for various purposes, such as the making or repairing of his camera, or he may want to have his exhibition frames of special colours to suit his various requirements.

Below I give a series of useful stains, all of which I have used at various times. A mahogany stain may be the most useful of the lot, so I gave it first.

Rub the surface of the wood with a solution of nitrous acid, and then apply the following solution with a soft, pliable camel hair brush—

Dragon's blood	...	4 drams.
Ordinary washing soda	...	3 "
Alcohol (methylated)	...	10 oz.

Filter previous to use.

When this dries, go over the wood again with what is known technically as "Slake," taking care to put it on thin and evenly. Any oilman's store will supply it.

Black stains can be made by numerous methods. Below I give three. Perhaps the most simple way is to mix a small quantity of lampblack and French polish, rubbing it into the wood by means of a piece of cotton wool covered with a piece of soft linen rag.

Another one is made by boiling 1 oz. of logwood chips in 10 oz. of water, and adding 60 grains of common pearlsh, and applying hot with a brush. Next take a similar solution of logwood, and add 30 grains of verdigris and 20 grains of copper sulphate. Filter, and add, say, nearly an ounce of rusty steel filings, and go over the woodwork again.

If you desire to put a polish on this, you will require to make up the following solution, and apply with a piece of cotton wool covered with an old linen rag, as in the first case—

Bleached shellac (white)	...	1 oz.
Methylated spirits	...	7 "

Nothing will touch a solution of dilute sulphuric acid 1 oz., water 10 oz., for creating a black stain on small articles.

Simply brush on the article, and allow it to sink in; then hold it near a fire for a few minutes, and it will gradually become a deep ebony black. Be careful, however, not to let the solution touch your fingers or clothes, and rinse the brush well in cold water, to free it from the acid.

Yellow stains are useful for picture frames. The following gives very good results:—Boil 1 oz. of French

berries in 10 oz. of water until the water assumes a rich yellow colour. Should the colour not be bright enough, add the following:—

Grain tin	...	30 gr.
Dilute nitric acid	...	1 oz.

Another yellow stain may be obtained by making an alcoholic solution of aurantia of the requisite depth of colour, and applying with a soft pliable brush. If the mahogany stain is applied very dilute, and followed by the aurantia solution, a good brown will be got.

Green stains of numerous shades are very valuable and handy. Beneath I append two methods by which a quantity of shades can be made. Make the following two solutions:—

A.—Verdigris	...	1 oz.
Vinegar, or dilute acetic acid	...	10 "
B.—Indigo	...	2 drams.
Vinegar, or dilute acetic acid	...	15 oz.

It is preferable to heat both the solutions when commencing them. By mixing the two solutions in different quantities the different shades are obtained, and it is perhaps as well to remember that the amount of the B solution added darkens to the shade accordingly. The writer has always found 5 oz. of A added to 1 oz. of B to be a very useful combination.

Another method which also yields numerous tones and shades is from an American source. To the infusion of French berries, as used in the yellow stain (a ten per cent. solution), add as much indigo sulphate as necessary, until the desired shade of colour is obtained.

An exquisite blue stain is obtained as under:—In a clean earthenware jar place 4 oz. of sulphuric acid, and to that add 1 oz. of the best indigo (which should be well ground). Place the jar into a basin, as the contents will effervesce, and if the earthenware jar is too small, boil over. When the effervescence has ceased, add a sufficient quantity of the solution to distilled water as will give you the desired shade of blue. This should be applied to the woodwork, using an artist's stiff brush. Keeping improves the colour greatly.

A capital imitation of walnut can be got by using the following solution:—

Bichromate of potash	...	40 gr.
Vandyke brown	...	400 "
Carbonate of soda	...	20 "
Water up to	...	10 oz.

This is best boiled, and can be applied hot or cold by means of a soft brush.

Oak can be imitated very well by means of a solution of permanganate of potash. The quantity will depend on the shade. I find 80 grains to 10 oz. of water very suitable.

Occasionally a reddish stain may be wanted. This makes a good red, which may be a little bright; but age will remedy that:—Boil 1 oz. of logwood chips in a pint of water (20 oz.). To that add the following:—Grain tin, 30 grains; dilute nitric acid, 1 oz. When you are buying the logwood, see that it is fresh; this is easily known by its bright red colour—as it becomes old it becomes a dirty brown. The stain should be filtered and made hot before application.

Brown stain is arrived at by applying a coat of this solution:—

Catechu or cutch	...	1/2 oz.
Carbonate of soda	...	120 grs.
Water	...	15 oz.

Boil, and then apply hot. When this is thoroughly dry apply a solution of bichromate of potassium. The



2. Shooting a Crocodile, Perok. By MR. E. W. STONEY.

strength of the bichromate solution will regulate the depth of the colour.

All the stains enumerated above are absolutely permanent, and place the power of control, as far as the colours of exhibition frames are concerned, in the hands of the exhibitor, if he gets his frames made or makes them in common white wood.—(*Am. Phot.*)

Are slow Plates the best for Hand Cameras?—By M. A. C.

MANY years ago I read in this journal: "Exposure should always be of sufficient duration to enable the weakest light rays to act on the sensitive surface; but when it is possible with a large angular aperture of lens and a very sensitive plate to take a good photograph in the fraction of a second, I consider it rank folly to use a slow plate with a small stop, and prolong the exposure to several seconds. There is no advantage whatever in the latter course. A small stop is utterly destructive of all vigour, roundness and atmospheric effect in the picture, and the choice of a slow plate in preference to one of the most exalted rapidity is equivalent to the employment of an Indian donkey in preference to a blood horse. It is perfectly open to you to take one or the other; but I must emphatically warn you against the acceptance of the crystallised photographic myth that the slow plate gives the best negative. It certainly gives with facility what is known as a 'plucky negative,' that is, a negative in which the gradation of tone, or interval between the half tones, is sharply marked; and it is perhaps easier to work with. I need, however, scarcely demonstrate the superiority of a very rapid plate, which, in addition to being sensitive to many colours, gives, within the same extremes of light and shade, a far finer gradation of tone. There was, it is true, a time when plate making was in its infancy, and it was difficult to obtain without fog very sensitive emulsion. At that time slow plates assuredly gave the best results. But now, with such plates as those turned out, it is time the popular fallacy as to the superiority of slow plates was exposed."

Experience has since shown me that what was said of the virtues of rapid plates was not beyond the mark, and such authority as Capt. Abney has very recently endorsed all that was said in this Journal years ago.

The first dissentient note was struck by the Britannia Company a couple of months back, in an advertisement warning users of the Ilford plates against the danger of employing ultra sensitive films in the hot weather. As we do not seek for deep wisdom, (apart from commercial considerations), in trade advertisements I was content to let the declaration pass. But the warning has been taken seriously in some quarters that should be well informed. Hear what the last *Practical and Junior Photographer*, (September 1900, page 42) says—"Plates for the Hand Camera. The theory that one must have very swift plates for the hand camera work dies hard. During the past month we have had quite a number of letters from our more photographically juvenile readers in which, following the information that a hand camera has been purchased, comes the query which brand of plates is the most rapid and suitable?" Now for average work an ordinary plate is more than fast enough, and it is only for very special subjects, such as diving, leaping, etc., that the quicker brands are required. The sooner this is more generally known the better. Of course, if the shutter is worked at a 60th an extra rapid plate is needed

but why work at a 60th when the scene can be quite as easily secured with a 25th, which is the average speed with f/16 for a sunny street scene with life in it, or for a sea-scapes with f/32. The swifter the plate the more troublesome is its manipulation in the developing, etc., so why seek trouble and worry? Both come to photographers in plentiful lumps in the ordinary course, and when he goes out of his way to meet it shows, alas, little sense. The old comparison of the folly of a steam hammer as a nutcracker should be carried in the mind, and the slow plate employed under all ordinary conditions."

Are things what they seem or are visions about? I am one of the vast body of amateurs who know little of science and careless for it, and I am not therefore in a position to refute what is said about the wisdom of using slow plates for hand cameras because the fast plates are troublesome. But I have worked half a life time in the tropics, and I have never found extra rapid plates any more troublesome than slow ones if only the exposure was approximately correct. I have never known the most rapid plate to be over-exposed with even the slowest of shutter exposures in the hand camera, and I have hardly ever seen an "instantaneously" exposed picture taken on a slow plate which would not have been better if taken on the most rapid plate yet made.

That is my experience. I know that there are some Ilford plate fanatics who are prepared to swear that the slow Ilford is quite rapid enough for anything. But as far as I have seen (only as far as I have seen, mark you), the success of these are confined to river and sea studies, too distant landscape and scenes having no deep shadow. Street and other scenes which form the staple of hand camera work, when taken with a slow plate in this country have always seemed to me to be incorrect in tone—the high lights are invariably chunky and the shadows too dark. If I am wrong I beg my error may be publicly exposed at a meeting of the Society.

Where the slow plate man errs is: mistaking a black and white sketch for a finished picture. Given a fairly good light and not too much shadow the slowest of plates with the fastest of shutters will give a recognisable impression of some sort. It may be only an outline, or it may be an outline with the light and darks of the subject boldly thrown in. At the best it will be a mere sketch, and as far from the photographic picture with correct tones as Phil. May's cartoons are from the masterpiece of Meissonier. We hear too often that photographs of Indian scenes have great contrast because of the hard brilliancy of the lights. Granted that Indian sunlight in summer time is powerful, is it right to attribute it to our own short-comings? Would not the contrast have been minimised to an extent sufficient to give a well-graded print, if the most rapid plates had been used with lenses of great intensity and liberal shutter exposures?

Then also it seems to me that the slow plate advocates err from lack of experience. They know that in the case of under exposure the development of the image hangs back while with over-exposure the image flashes up too readily. When therefore the image in a rapid plate that has received a shutter exposure flashes up in summer on the application of the developer, the conclusion drawn is that the plate has been over-exposed and that a slow plate under the same condition would have given better results. The effects of heat on the development of the image are only now being studied, but I think I may safely say that it has not been showy

that the rapidity of the appearance of the image is an index to the accuracy of the exposure. The "flashing up" only teaches us to have our solutions cold if we would have good pictures with correct tones.

The statement that rapid plates are more troublesome to develop is too ridiculous for serious consideration. The latitude of exposure with such plates is of course small, but the margin is ample for any but the most flagrant errors in exposure, and I have yet to learn that a plate however rapid behaves differently from a slow plate if the exposure is only approximately correct.

The Ilford slow is a good enough plate in its own sphere, but there is no need to say that it is equal to the Ilford extra rapid in "instantaneous" photography. I prefer the rapid plate for hand camera work because the chances of failure are minimised, and I think most persons will agree with me. If there are dissentients, they are bound to declare the reason of the faith that is within them.—*Journal of the Phot. Society of India*,

The Blue Print.

By GEORGE E. BROWN, F. I. C.

The interesting note on page 245 of the June issue, in which the writer shows how to obtain a blue toned print (from a platinum type indirectly) may leave the impression in the minds of some readers that a blue print—a ferro-prussiate print—is not permanent. The blue color produced on the platinum print is spoken of as "very fugitive," and in comparison with it the ferro-prussiate image is said to be only "more permanent." Now, as a matter of fact, a blue print is among the most permanent of photographic images. In the historical collection of photographic prints and apparatus at South Kensington Museum, London, are blue prints made fifty years ago which are marvellously fresh and bright. This is only what might be expected from what chemists know of the stable properties of Turnbull's and Prussian blues. In the strongest sunlight these pigments do bleach a little, but they regain their original depth of color in the dark. Among aqueous reagents the only ordinary ones which affect them are alkaline solutions. Tap water often contains appreciable quantities of carbonate of lime, and sometimes of sodian carbonate, which is the cause of the blue print becoming paler if left to soak for long in the wash water. But this is not impermanency. If the water be acidulated the phenomenon is not observed, and one might as well accuse gelatine negatives of fugacity because they are altered by immersion in, say, a solution of bleaching powder. As a matter of fact, the blue image may be depended upon to last as long as the paper on which it rests.

I wonder whether the green citrate of iron and ammonia is used in America for making the blue printing sensitizing solution. It gives a far more rapid paper, which is just as satisfactory in other ways.

The formula is:

A. Ferri Ammonium Citrate,			
(green)	110	grains,	
Water	1	ounce.	
B. Potass Ferricyanide	40	grains.	
Water	1	ounce.	

These two solutions mixed together make the sensitizing solution, which acts quite well if after keeping it be filtered immediately before use. It will be observed that the proportion of ferricyanide is much less than when using the red citrate, otherwise the solution gives foggy

prints. Green citrate is obtainable from the German chemical houses or their agents. Two makers are Muerck, of Darmstadt, and Dr. Theodor Schuchardt, of Goerlitz. In America I suppose it can be obtained from Eimer & Amend, of New York.—*Wilson Phot. Mag.*

Negative Making.

By FAYATTE J. CLUIE.

MORE advice is given on the subject of developing than perhaps on any other two processes connected with photography, but none seems to be more eagerly sought after. In trying to help a couple of my friends who are photographically inclined over the rough places during the last few months; I have had my own past troubles brought back to me, and I have been brought to a more full realization of the great number of half-truths concerning negative making that are in constant circulation, much to the confusion of the trusting worker who does not take the trouble to make a few experiments or reason out a few things for himself.

When I say that I have found the secret of making a good negative every time, you will perhaps have patience with me and read this article through in order to find the formula that does all this, but first let me go back and point out a few of the stumbling blocks that I found on the road, and in doing so learn where the right way lies.

The beginner generally starts out by using some form of ready prepared developer which he is induced to buy as a "universal" developer. He is sometimes shown prints from negatives which have had widely different timing. He fails to notice that one is a well lighted, open landscape while the other is an interior, neglects the fact that it is not variations in time of exposure that he wishes to correct but deviation from correct exposure that will cause him trouble, and entirely overlooks the lesson to be learned, that it is correct exposure regardless of its length, that gives good negatives.

A little further along he is induced to prepare his own developing solutions. He is told that he will then know just what it consists of and save money in the bargain. This is about as misleading as so plausible an argument can well be. With the wide variations in strength of the different forms of the alkali salts, with the ever varying alkalinity of his sulphite of soda, and with the rapid decomposition of his reducing agent, his knowledge of the composition of his developer is limited almost to the names of the chemicals employed. If time and disappointment count for nought and chemicals allowed to deteriorate are not figured into the account, he may be able to say that he has saved a dollar or two during the season.

The poor results obtained by this last method are but an encouragement to him to take the next step. This is the practice of trying every new formula and every new developer that comes in his way. His results improve but little, if any, and he finally comes to a vague realization of the fact that the developer must be in harmony with the exposure. When a friend or an article in his favorite journal comes forward with a well worded scheme of tentative development, he is at once won over to that plan and developing is a three or four-tray process with him from that time on. Here again he fails to learn the lesson taught, that alterations in the developer are well nigh useless, if not worse, unless made with a knowledge of whether over or under exposure is to be counteracted, and before the developer is allowed to touch the plate. Should an intimation of this fact reach

him he can try an improvement on the last plan. This scheme calls for the removal of one horn of the dilemma by always being sure of giving the plate a good full exposure regardless of any fear of over-exposure. This plan is really capable of turning out a high percentage of printable negatives with such subjects as contain plenty of contrast. One has but to be sure the plate has received a good full exposure, and in developing, start with about one-fourth of the normal amount of alkali solution, adding it gradually until the image comes slowly. When all detail that is required is out or just before, a citrate is added in sufficient quantity to entirely stop further increase of detail. Density is then obtained by adding bromide of ammonia, or by placing the plate in a strong, well-restrained developer of density-giving character, such as Cramer's Hydro-Bromo, or Edward's Re-developer.

His negatives are not always the good, crisp, quick-printing ones that he would like, and he finds it not always possible to give full exposures. Even where there are no moving figures or the like in his view, wind will blow and water move, and this system loses its attractiveness. All this time he has deprived himself of the valuable knowledge he might have obtained by giving his careful attention to his exposures, and the results obtained with a normal developer. He has failed to learn what his own experience, and a little thought should have taught him early in his career, that the negative is made, either for good or bad; when the bulb is pressed or the cap removed.

This is the whole secret. Once this is learned and a fair amount of proficiency acquired in gauging the proper exposure, one is in a position to employ what little control his developer may give him, in producing negatives for particular printing processes; securing certain effects, and in minimizing the faults due to too contrasty or excessively flat lighting, and not, as has been his practice, wasting this valuable power in attempting to correct the effects of pure carelessness.

Of the two or three most popular exposure meters on the market, any one will indicate correct exposure if reasonable care is used in setting the different pointers, and they have been found to agree quite closely in their results. Comparing the exposure times given by the two best known exposure tables published in this country with notes of exposures made according to one of the meters during the last two years proves that the tables are nearly as valuable, except in case of yellow sunsets, or where one might under-estimate the value of the sky as a reflector of light when the direct rays of the sun were cut off by clouds. With one of these helps and the employment of a little care and judgment there is no more excuse for giving over-exposure than there is for not weighing one's chemicals correctly. Rapidity of motion in the object photographed is a legitimate excuse for under-exposure, but it is the only one. Here we will say that the best method of getting out all that can be got from an under-exposed plate is by frequent applications of fresh diluted developer with the alkali slightly increased. Diluting the developer permits of this increase of alkali without causing fog.

Our plates to-day are so uniform in speed that there need be no fear on that point, and if one's lens, diaphragms and shutter speeds are not marked correctly the sooner they are so marked the better. Simple methods of testing shutter speeds are published in the journals from time to time and few lenses are now made whose steps

are not cut after some system easily converted into the *F*/₁₁ or U. S. system.

Carefully kept notes of one's own exposures will, after a time, prove almost invaluable and enable one to judge very closely the exposure required for any subject by referring back to some similar exposure. The last line should be left blank to be filled in after development, with the results; whether over, under, or correct exposure. One way of determining this point is to hold the negative over some dark object and view by reflected light. If a positive image shows on the film side it is a sign of under-exposure, but if on the glass side, over-exposure is indicated. If on neither side, correct exposure may be assumed except in cases of excessive contrasts. The water of a water fall in a deep shaded gulch will show as a positive on the glass side, while the foliage will either show as under-exposure on the film side or not at all. Notes of each exposure made, not only give us a guide for future exposures but indicate the method most suitable in developing each particular plate. An increase in the alkali will counteract an inclination to harshness in a negative of a subject containing violent contrasts and an additional amount of the reducing agent will tend to decrease flatness. Even with correct exposure it will be found hard to obtain the desired results from these two classes of subjects, and much more difficult, if not impossible will it be found, to obtain even passable negatives where the exposure has been too short in the former or too long in the latter case. If we must learn to give correct exposure in these extreme cases where tentative development is of little value, why should we not at once learn to give each and every subject that presents itself to our camera an exposure well within the rather wide limit that simply longer or shorter duration of development will easily cover.

Learn the peculiarities of the plate you are using. How they differ from other brands. The amount of pyro or other reducing agent that a Cramer plate seems to require would block up the high lights in a Seed plate before the details in the shadows were all out. The amount of alkali that a Seed plate will stand would cause fog in another good brand of plates, and these things should be learned and taken into account in applying any form of developer to a certain brand of plates. Learn the peculiarities of your developer. Some can be used for plate after plate, working a trifle harder on each successive one, while others will not allow of repeated use, giving soft, flat results if used too often. Some developers work stronger and with more contrast if less alkali is used, but one or two of the new developers seem to give entirely different results unless the alkali is increased instead. Find out how much bromide is required to prevent fog during protracted development. Find out how fast the half-tones should follow the high lights in a correctly exposed plate in a normal solution of your developer. Some developers bring them out in regular order, while others seem to bring them out almost simultaneously. Acquaint yourself with the different strengths of the various forms of the chemicals you use so that you can compound your developer intelligently from any of the several kinds of alkaline salts and still get your desired results. Watch the effect of a rise or fall in the temperature of your solutions. This is a matter of more importance than is generally supposed. Some of the formulas for hydroquinone developers that are published from time to time would cause most plates to fog from an excess of alkali that would result from the crystallizing out of the hydro.

quinone at the least fall in the temperature. All developers work best at a temperature of between 60 and 70 deg.

Learn your plate; learn your developer, and learn to give correct exposure and then you can learn to "monkey with your developer," and do it intelligently and to the advantage of your resultant negatives. Use either a two solution developer which will allow you to vary the proportions of the developer proper and the alkali, or what is perhaps a better method; employ two different developers of different characteristics, as for instance, a strong, well-restrained hydroquinone formula, and another of the softer working developers, such as metol, that will bring out detail in the shadows without blocking up the high lights. If your notes indicate a flat subject, use the strong, well-restrained solution; if excessive contrasts are expected, employ the softer working developer, mixing the two in varying proportions will suggest itself as the notes seem to indicate more or less the desirability of contrast or softness.

Later on a couple of soft, round, pointed brushes, and a few small dishes with a ten per cent. bromide solution in one, an alkali solution in another, and the strong developer in a third, will give a method of correcting certain short-comings that our plate shows when we attempt to reproduce too wide a range of light values. Negatives that are subjected to this local treatment should be allowed to become rather dense and after fixing be reduced either locally or wholly with Farmer's reducer or persulphate of ammonia as seems most desirable. This will remove the mottled appearance caused by the local brush treatment and leave the negative clear and with a smooth surface. Of these methods of reducing as well as of intensifying, we will treat in a future article.

One thing more: use a good, big, generous light in your dark room. We all learn the advantage of this quite late in our day, and some never learn it. It is not the volume of the light but its intensity. Ten square feet of ruby light will not fog a plate any quicker than ten square inches if it is of the same intensity. Ask your plate-maker to include in his next shipment to your factory a couple of sheets of glass such as he uses in his development. My plate-maker sent me two 12 X 14 lights, at 60 cents each that are worth more to me than all the small, ill-smelling, unsafe and eye-wearing lamps the stock houses could set on a shelf. I used them fitted in the front of a large box for several years, but lately have glazed a window in my dark room wall with them and keep the lamp outed. With this glass and one thickness of what is called gold bank envelope paper over it I can develop the fastest color-sensitive plates in a good, comfortable light by using ordinary care. Use a good generous light and make your developing a pleasure instead of a drudgery.—*The Photographic Times*.

Cloud and Sky Negatives.

By REV. F. C. LAMBERT, M.A.

[This article will be followed by a second directing how to reproduce and enlarge cloud negatives. Readers who avail themselves of the opportunities generally offered in September, for securing sky negatives should reserve their further work until the appearance of the second part of Mr. Lambert's article.]

The most useful clouds are those taken with the sun more or less to the right or left; the least useful those with the sun at our back. But all positions of lighting are at times useful. Sunset cloud effects, often beautiful as cloudscape studies, are not often suitable for combina-

tion printing. For we do not often wait quite so late as sunset time for our landscape exposures.

One thing the beginner must avoid, *i. e.*, direct sunshine on the lens surface. This does not imply that a front position of the sun is always to be avoided, but that the lens must be protected by some form of hood or shade.

While all cloud forms are in themselves interesting, and nearly always beautiful, yet they are not all suitable for pictorial purposes. It is a matter of general observation, and easily verified, that while the forms or shapes of clouds, vary infinitely *inter se*, yet we find that certain classes of forms are only found towards the zenith, *i. e.*, directly overhead; others are only seen low down near the horizon, and others again characterise intermediate altitudes. In fig. 1 suppose P to be the position of an observer on the seashore looking out to sea and noting a mass of cloud of more or less avoid form. If now we suppose a gentle breeze to carry the cloud further out to sea, *i. e.*, towards A without altering its form, the observer at B will see that not only does its size apparently get less, but that it becomes flatter the further it recedes from the eye. If, on the other hand, this same cloud be brought inland until it is at C, *i. e.*, just over the head of P, the observer, not only is its apparent size increased, but its apparent shape is altered into a more spherical form. Thus there is such a thing as cloud perspective, though it is often ignored. Now in actual practice we seldom use a lens of focal length less than the long side of our plate. For example, a whole plate $8\frac{1}{2} \times 6\frac{1}{2}$ landscape negative is seldom made with a lens of less than eight inches equivalent focus; more often with one of eleven or twelve inches, and frequently with fifteen or sixteen inches. Thus we may take an eight-inch lens as the minimum limit for all practical purposes.

Now a lens of eight inch focus with an eight inch plate gives us roughly 52° of angle. In fig. 3 a box-like camera with plate at P and lens at L is drawn showing a probable tilt of camera for landscape subject. H is the horizon opposite, *i. e.*, level with lens; BLA, the angle (52°) of view. We imagine that 10° (ten degrees), HLA, of foreground is included, and HLB (42°) is the part above the horizon. When introducing clouds (from another negative) into this picture we may not truthfully use clouds taken at any angular altitude greatly beyond the limit of the line LB. But to take a more probable case, *viz.*, the employment of a twelve inch lens with an eight inch plate. This will give us an angle of say 37° *viz.*, ALB. As before, we include 10° below the horizon, *viz.*, HLA. See fig. 3.

This leaves us HLB at an angle of 27° above the horizon. (It should be noted that in figs. 2 and 3 the angles ALB are drawn to scale.) Hence if we were using a cloud negative taken under conditions shown in fig. 2 to combine with a landscape negative taken under conditions shown in fig. 3, it might be desirable to avoid using the extreme portions of the cloud negative, *i. e.*, those towards the margins of the plate if it so happened that their forms were at all suggestive of moderate altitudes.*

Attention is drawn to this topic, because in some of our best known exhibitions examples have been shown by workers of note, where cloud forms only seen at moderately high altitudes were used quite near the horizon. Pernicious examples of this kind are very greatly to be regretted for many reasons.

But by way of a very rough guide to exposure—suppose a plate of speed 100 "H and D." June or July: Afternoon between 3 and 5 p. m. Fine and clear with

* The prevalent misconception it may here be said that in this note the word altitude refers to angular altitude, *i. e.*, elevation above the horizon, and not to cloud altitude in the meteorologist's sense, *i. e.*, distance above sea level.—F. C. L.]



3. View from Adderley Station, Nilgiri Railway. By MR. E. W. STONEY.

cumulus clouds. Stop, F 16. An exposure of 1/25 second would probably be found ample but not excessive. There seems to be a somewhat widespread notion that one cannot over-expose a dark interior or under-expose a sunlit cloud, but these notions are untrue. The majority of cloud negatives (judging from the prints) are under-exposed and over-developed.

This leads us to say a word or two on development. Developers of the hydroquinone class, which give density rather than detail in the early stages, are to be avoided. Those, like metol, which bring out detail at first, and only gain density after prolonged development, are preferable. But, on the whole, those of an intermediate character like ortol are best. Be the developing agent what it may, the thing to bear in mind is, that cloud negatives of strong contrasts are very, very seldom of any pictorial value. The aim should be to obtain a negative thin rather than dense. It must not be "contrast," nor must it be flat. There should be delicate gradation with only just enough contrast, and no more, to preserve the gradation in the printing process. Hence the carbon printer's cloud negatives will be a little stronger in contrast than the platinum printer's, and his again a little stronger than the P. O. P. worker's.

As regards the choice of plates or films, extremes of speed, either slow or rapid, are best avoided. While a slow plate gives a greater range of latitude of exposure, it tends to yield more contrasty negatives with a loss of gradation. A very rapid plate calls for accuracy of exposure, and can easily be spoiled by faulty development. My own choice would be a plate having a speed of about 200 "H and D."

Next comes the question of orthochromatic plates and color screens. In many cases the use of these plates and screens enables us to get certain cloud effects which are otherwise unobtainable. For example, the very thin patches of distant and high angular altitude fleecy white bits of ice-fragment cloud against a blue sky background are practically impossible with ordinary plates. At the same time their position in the sky puts them out of the pictorial category. But we are more interested in the warm yellow and orange clouds gathering round or above the setting sun. These, with ordinary plates, are often rendered in a very disappointing manner. Again, the moderate angular altitude sunlit cumulus against a dark grey blue sky calls for the use of ortho plates and screen.

I have made various experiments with a pale yellow screen and ordinary plates of moderate speed, and recommend others to repeat the experiments. Not only do these enable one to lengthen the exposure, say from 1/20 second to 1/2 second, and so reduce the likelihood of grave errors of exposure, but also the results seem to give a slightly better tone rendering, i. e., the values or relationship of white or light clouds against a blue sky seem to be more satisfactorily rendered.

With regard to the use of ortho plates and screens a word of caution may be said. It is possible to use them in such way that the softening effects of atmosphere is greatly modified. We judge of cloud distances partly by the softening effect upon their form outlines, due to the atmosphere between them and our eyes. If, then, this pale blue haze is "over corrected," as the phrase goes, then distant hills, clouds, and the like, all look falsely near.

Apart from sunset effects the practical value of ortho plates for cloud negative making is not nearly so great as in landscape work; because while most terrestrial objects, e.g., grass, rocks, trees, etc., are of known color range,

clouds may be of almost any degree of tone value and of local color.

Choice of lens, of stop, and degree of definition, are all practical points calling for attention. By choice of lens we refer only to its focal length in this case. With some workers it is a custom to use a lens of considerably shorter focus for the cloud than for the land part. For example, with a whole plate negative, a lens of eleven or twelve inch focus is popular and generally convenient. Some workers use a lens of seven or eight inch focus for the corresponding cloud negatives, the reason assigned being that the shorter focus gives a greater choice of cloud form on one plate. But consideration of what has been said in connection with figs. 1, 2 and 3 will show that this practice is not desirable. Further, the shorter form of lens reduces the apparent size of the cloud masses, and while admitting that there are no standard sizes of clouds, yet the relative sizes of near and distant clouds do give us some impression of their nearness and of their size. Hence it will be found generally desirable to employ lenses of approximately the same focal length for land sky portions of the picture. As to the choice of stop, it should be remembered that a very small stop tends to accentuate contrasts of light and shade, and in cloud negatives we do not often desire this.

Again, the use of a small stop will probably render near and distant clouds with equally sharply defined outlines. This, again, tends to give us untrue impressions of relative distances and positions, and is generally not desirable. Usually F 16 will be found quite small enough for most practical purposes, and where it is atmospheric effect, rather than cloud form, that is desired, then F 8 will be still better. And with regard to definition and focussing it must also be remembered that as a rule in landscape pictures the clouds are quite secondary, though of great importance. That is to say, we do not wish the spectator's eye to be first attracted by the clouds nor to be retained by them, but rather that the clouds shall be a part of an undissolved whole—or as our friend from Dublin puts it: "You only ought to think of their presence where they are absent."

This in focussing for the clouds we should imagine we are dealing not so much with the clouds as with the principal part of the landscape and their stop down just enough to get the peaceful minimum definition. For when we are looking at an object even in the middle distance, say 100 or 500 yards away, though fully conscious of clouds, yet the mental eye does not microscopically examine their every form. And so soon as the mental focus is adjusted to distant clouds, the foreground is felt and known to be present rather than seen.—*The Photographer.*

Lantern-slide making for beginners.

By PEMROSE HILL.

XV.—COVERS, VARNISH, MASKS, BINDERS.—Contd.

(92) *Binders.*—It now only remains for us to fasten together the slide and cover glass with mask sandwiched between them. Usually this is done by means of sticking a narrow strip of paper all round the two edges of the glasses and overlapping a little on the back of the slide and face of the cover glass. The accompanying little sketch will make this at once clear to the beginner. In the matter of binders the dealers have come to our aid and supply us with strips of paper all ready gummed and of convenient length. Some of these commercially supplied

binders are excellent (others are—anathema). But many front rank slide makers prefer to cut and gum their own binding strips. The paper for this purpose should be *thin and tough*. A suitable sized sheet is pinned down to a flat board by drawing pins along its edges and corners. A mucilage of gum arabic or dextrine is made of the consistency of *thick cream*, a few drops of treacle are added. This mixture is quickly and evenly spread over the sheet, which is then dried by holding the sheet to the fire. It is then cut up into strips fourteen inches long and three-eighths wide, or rather narrower, say five-sixteenths for thin glasses. Strips of metal have been used for binders, but they do not seem very popular. Another good tip is to use the transparent gammed staple, sold in rolls at about 2*d.* by stationers, for the repair of music, etc. For slides that are at all likely to be much used the "linen binding strips" now obtainable from the dealers will be found to stand a good deal of wear. Or the reader may use tape and just enough fish glue thinned with vinegar to give a suitable thin creamy consistency.

The usual way of procedure is as follows: The binder is *quickly* passed along a damp sponge, and then laid face up along the table. The slide and cover are now held together and brought down on to the gammed paper, commencing about half an inch from one end of the paper. The slide is then turned to its next side. The first side down now lifts up the adhering paper. This is pressed into position and so on. A finely pointed pair of scissors cuts a nick in the edge of the paper at each corner of the slide and enables us to get neat corners. For it is at the corners generally where the paper first begins to come away from the glass.

(93) The dealers also provide us with a small vice like apparatus which holds the slide and cover together by clamping them at their centres and leaving the edges free. This enables us to apply the paper to the slide instead of the slide to the paper as previously described.

XVI.—SHAPE OF MASK, SPOTTING, TITLES, WHITE INKS.

(94) The choice of size and shape of the mask opening is one of the greatest importance from a pictorial point of view. Unfortunately we have not space here to discuss the question in any adequate manner. Therefore we must content ourselves by giving one or two hints, and these are more of a negative than a positive character.

Don't make the too common mistake of thinking that because you have secured a technically good slide you ought therefore to show as much of it as you possibly can. On the contrary bear in mind that the more unimportant portions you mask out the more valuable becomes what is left.

Don't make the common mistake of thinking that because the lantern condenser and lens are circular that your mask should have a circular opening. Twenty years ago it was practically the universal custom to have circular lantern screen pictures. Happily now they are the exception. But still the beginner usually "happens" on the circle first of all.

In Fig. 1 we show a very ordinary landscape with figure subject, with a circular mask. One need hardly say that the shape is quite unsuitable. The circle is not an interesting form. And for lantern slides it may be put aside for practically all pictorial subjects. For scientific subjects, such as flowers, shells, microscopic studies, and the like, it is often very suitable, but for the landscape or architecture it is practically out of Court. For children's heads it is occasionally suitable.

Don't fly to the conclusion that because a circular outline is generally not good for a landscape that a straight line is always good. As a rule the straight line is preferable, but every rule has its exceptions. Of straight line boundaries the square is least interesting. We here use the word "square" in its mathematical sense, viz., a four-sided figure having all its sides equal and its angles right angles. The term "square opening" is sometimes carelessly used for a rectangular opening. In Fig. 2 we show the same subject with a kind of square opening. In this case the corners of our square are rounded. This again is seldom satisfactory. This figure is given to show the common mistake of trying to use as much of the slide as possible. Note the large expanse of quite uninteresting foreground, and how this makes the figures quite tiny and insignificant. Note also the large expanse of sky show, and how its presence quite upsets the sentiment of evening—the proper time for a bonfire, unless our schoolboy memories betray us. In Fig. 3 we show the same subject with a home-made mask—cut from a piece of black paper. The opening is not one of the usual stock patterns. An attempt is here made to avoid the errors which have just been pointed out.

To facilitate the cutting out of such openings the stock dealers have recently issued a black paper mask on which are ruled in white two sets of parallel lines, one set of lines crossing the other set at right angles. These greatly facilitate the cutting out of openings of various proportions. For cutting one requires a thin blade with sharp point, a straight, flat ruler, preferably a strip of brass or steel of the thickness of a postcard, and for cutting on nothing is more pleasant than cardboard—old box lids are useful.

Another comfortable thing to cut on is an old railway time-table, or any other book, pamphlet, or price list that has become useless. Of course, after using once or twice one has to turn over a few pages to get an uncut and even surface again.

(95) *Spots and Spotting a Slide.*—The word spots applied to a slide may be at times somewhat ambiguous. It may mean specks and defects in the film image—spots of this kind will be touched upon later. But in this chapter it means certain marks put on the slide to show the operator how it should be put in the lantern.

Now a slide having four edges and two sides can be put into a lantern slide carrier or holder in eight different ways. One only being correct, it becomes desirable to mark the slide to show which of the eight is the right way. The following has become the universally accepted and understood method, and the beginner should adopt it from the outset. Hold the slide the same way *round* and same way *up* that you wish it to appear on the screen. Then apply two white "spots" (small circles or squares) in the right and left hand upper corners. A glance at Fig. 3 will make this clear once for all.

It is very customary to put these "spots" on the *outside* of the cover glass. But from one cause or another they are liable to become torn off. It is therefore much safer to put the spots on the mask paper, *i.e.*, between the two glasses. Spots of gummed white paper circle are obtainable at the dealers', or may easily be cut from the edging of stamps, or opaque white paint or ink may be used.

(96) *Titles.*—Where titles to slides are used, it is customary to put them below (or above) the opening. Some mask papers have a blank white space for this purpose, and ordinary ink may be used in this case. But it is convenient to have some form of white ink at hand. Fine

lines are not desirable. Simple and bold lettering is more comfortably seen by the lantern operator.

While on the subject of titles the beginner may be here advised to put a number on every slide he binds up, and to keep a notebook, wherein is recorded the number of the slide, all the various particulars as to its preparation, plate, exposure, developer, etc., with notes on the effect on the screen.

White inks for spotting, titles, and numbers.

(a) The ordinary flake white or Chinese white moist water-colour in pans or tubes. This may be applied with a drop of gum-water and a finely-pointed sable.

(b) Make a mucilage of ordinary gum arabic one part and water fifteen or twenty parts. Work this up with oxide of zinc in fine powder to a suitable creamy consistency, using for the purpose a palette knife and the back of a dinnerplate.

(c) In place of zinc oxide, we may use barium sulphate, or even common whiting may be used, but the zinc or barium are to be preferred, as giving a greater degree of opacity.

(d) Another formula is as follows (this is said to keep without going mouldy). Dissolve one drachm of gum arabic in one ounce of water; with this mix about half an ounce of Chinese white (or other white pigment), then add one drachm of alcohol. What is perhaps better than alcohol is a drop or two of carbolic acid.

XVII.—COLOURING LANTERN SLIDES.

(97) At the outset it may be said that we do not intend teaching the reader "how to paint" a landscape or portrait. For it almost goes without saying that before attempting to colour a lantern slide the worker should have had some previous experience in painting. We shall therefore assume that he has some knowledge and taste as regards what colours will best suggest or represent this or that natural object. Farther, that he has had some practice in the handling of a brush, and last, but not least, that he has a good stock of patience on hand. All we can here tell him is what materials to use, and how to use them.

Now it will be very generally admitted that many lantern slides coloured are just so many slides spoiled. On the other hand, we confess to having seen some slides coloured by a Japanese artist which were quite a revelation as to the possibilities in this direction. These for the most part were landscape and architectural subjects. Again, we have seen another series of coloured slides, these by an English colourist, which amply justified their existence. In this case the subjects were very various, but what might in general terms be grouped together as still life studies.

Now, it will be helpful to bear in mind the fact that so many painted slides are unsatisfactory, and enquire the reasons, so that the failure of others may serve as guides and warnings to us. We may conveniently group the chief causes of failure under the following heads:

(1.)—*Crude and tasteless colours.*—The colours used are as a rule far too vivid, glaring, crude and bright. Prussian blue sky with crimson lake clouds. Now it is far, far better to err on the side of quietness of colour. Instead of brilliant emerald green trees, try citron, olive and bronze greens. Let the sky be a blue grey rather than a vivid blue, and so on. Let the colours be suggested rather than presented.

(2.)—*Excess of colour.*—This again is a common fault, not only is the wrong crude colour used, but far too much

is put on. This tends to darken it and render it semi-opaque.

(3.)—*Faulty outlines.*—Here again is the result of lack of skill, or impatience. The outlines are not carefully observed, and we thus get sheep with green outlines and the like. The beginner must try and realise what the slide will look like on the screen, and not be contented with "it looks all right in his hand." Remember that a fine stroke no thicker than a hair, will come out like the branch of a tree on the screen. "Near enough" will not do for lantern slide colouring. Hence the need of a good light, good sight, a steady hand, and a good stock of patience. We draw the reader's attention to the difficulties not to discourage him, but rather to warn him from a waste of time, and save him from disappointment. It is far better to spend three hours on making one really satisfactory slide than give the same three hours to three different slides and produce indifferent results.

(98) Materials and apparatus required: (1) Easel for holding the slide. (2) Pigments. (3) Brushes. (4) Dabbers. (5) Media. (6) Palette. We may offer a word or two of advice on these points seriatim.

(99) *Easel.*—As we are to show the slide on the screen by transmitted light we must apply the colour with that end in view. Therefore we must be able to see the slide by light which passes through it. The ordinary retouching desk therefore entirely meets our case. The reflector should be a sheet of quite clean opal glass or smooth white paper. The desk set at an angle of 30° to 45° will be found generally convenient.

(100) *Pigments.*—For the reasons just given as to transmitted light we must employ pigments which are more or less transparent. An opaque pigment like vermilion is by reflected light a beautiful red or scarlet, but put a patch of this colour on a bit of glass and try to look through it, now the red vermilion is opaque and therefore practically black. Transparency is a quality of degrees, and the pigments available vary considerably in this quality. We may use water or oil colours. The former are far more difficult to apply, with no compensating advantage. Therefore we recommend the ordinary tube oil colours as supplied by any dealer in artists' materials. The beginner will do well to begin with a simple palette of six or perhaps seven pigments, and then add the others from time to time as he acquires experience and skill.

Yellows: Italian pink, gamboge, yellow lake, aureolin, brown pink.

Green: Verdigris, viridian.

Blues: Prussian blue, Antwerp blue, ultramarine blue, indigo.

Reds: Crimson lake, madder lake, rose madder,

Purple: Purple madder.

Brown: Madder brown, burnt sienna, burnt umber, Caledonian brown, asphaltum.

Black: Blue black, ivory black, lamp black.

A simple palette for beginner would include Italian pink, verdigris, Prussian blue, crimson lake, burnt sienna, burnt umber.

The next additions would be gamboge, indigo, rose madder, asphaltum.

Then the others may be added. The colours aureolin, a golden yellow, viridian, a lovely sea water green, and purple madder are somewhat expensive colours, and not usually mentioned. But as a little goes a long way, they should be regarded as valuable additions by one who has acquired some skill.—*The Amateur Photographer.*

(To be continued.)

COMPETITIONS.*(Open only to Members of the Society.)***SUBJECTS FOR MONTHLY COMPETITIONS.**

November	A Group of 2 Figures.
December	Festivity.

RULES.

1. Two Special Competitions shall be held, in each year, in addition to a monthly competition.

2. The Committee shall select the subjects for the Special Competitions, and notice of the selected subjects shall be announced in the Society's Journal in February and in July of each year. The subject for each monthly competition shall be selected two months in advance by the members present at the monthly meeting, and shall be notified in the next issue of the Society's Journal.

3. Pictures, &c., competing for Prizes at the Special Competitions must reach the Secretary by the last day of January and of May, and those competing at the monthly competitions must arrive in time to be shown at the monthly meeting.

4. Prizes will consist of Silver and of Bronze Medals, and of Certificates of Merit.

5. Not more than one Silver and one Bronze Medal shall be given at each Special Competition, and one Silver and one Bronze Medal may also be given at these competitions for excellence in copying, engraving, lantern slides, or any other special branch of photography. One Silver and one Bronze Medal shall be awarded half-yearly to the exhibitors who obtain the highest and the next highest marks respectively at the monthly competitions. The number of Certificates of Merit granted at each competition is left to the discretion of the Judges.

6. A member may receive only one Silver and one Bronze Medal in the special, and one Silver and one Bronze Medal in the monthly, competitions, held during the same year; but should a member who has been adjudged a medal be disqualified under this rule from receiving it, he shall be given a Special Certificate instead, marked 1st or 2nd Prize.

7. A Special Committee of three members shall be appointed Judges by the General Committee to carry out, subject to these Rules, all arrangements connected with the competitions.

8. The Special Committee shall be appointed after the Annual General Meeting in January, and shall hold office for one year, and any vacancy occurring will be filled up by the General Committee.

9. The Special Committee shall decide upon the merits of the pictures, &c., sent in for competition, and their decision shall be final. The system of judging the monthly exhibits shall be by awarding marks, a record of which shall be kept by the Judges, the marks being totalled and the results declared half-yearly. For this purpose, only the three highest marks awarded at each competition to each competitor shall be recorded, but not the aggregate marks gained by each for a number of exhibits.

10. If any member of the Special Committee is a competitor, the General Committee shall appoint a non-competing member to act as Judge at that competition instead of the competing member.

11. No exhibit shall compete twice, but pictures, &c., already exhibited elsewhere, may be in for the competitions.

12. Lantern slides sent in for competition shall be in sets of six, and shall be judged upon the screen.

13. The Special Committee shall not award any Prizes or Certificates, unless they consider the exhibits to be worthy of such distinction.

14. Each competing exhibit shall be the entire work of the exhibitor, and when sent in shall be accompanied by a Certificate in the annexed form:—

"The (1) Arranging, (2) Exposing, (3) Developing, (4) Retouching (if any), (5) Printing and (6) Trimming and Mounting were done by me without assistance."

Member, A. P. Soey, of Madras.

15. All pictures for the Special Competitions shall be mounted, and may, at the competitor's option, be framed but not glazed. Those for the monthly competitions need not be mounted, but should be trimmed.

16. Each competing picture should have a name or title, which should indicate the nature of the subject.

17. No competitor shall be allowed to send in more than six pictures to compete for any particular Prize, but the same member may compete in all branches specified in Rule 5.

18. The pictures gaining 1st and 2nd Prizes at the half-yearly competitions, and the best pictures sent for the monthly competitions, shall, when practicable, be reproduced in the Society's Journal.

19. To give up-country members an opportunity of seeing the competing pictures at the special competitions, the pictures shall be circulated to all members of the Society, not residing in Madras, who apply to see them. As this arrangement can only be carried out by the cordial co-operation of the members themselves, they are expected to forward the pictures without delay to the next member, and to send one of the accompanying post-cards to the Secretary, so that by this means the progress of the pictures may be traced.

List of Members whose Dark Rooms are available for use by Members of the Madras Amateur Photographic Society.

E. MAENNIG, Buckingham House, Tranquebar.

NOTICES.

Members of the Madras Amateur Photographic Society are permitted to use this column free of charge for two insertions of each advertisement—all subsequent insertions of the same being chargeable at 2 annas a line. When an advertisement becomes liable to this charge, it will not be inserted unless as postal order or stamps to the value of the charge are previously sent, addressed to Graves, Cookson and Co., Scottish Press, Broadway, Madras. Advertisements received up to the 5th of each month will be inserted in the next issue of the Journal; those received after this date will be held over for the subsequent issue.

Subscribers, and others who are not regular dealers may make use of this column for advertisements by paying at the rate of 3 annas a line.

Rates of Subscription, Payable in Advance.

	India, including Postage.	Europe, including Postage.
Twelve months	5 Rupees	8s. or Rs. 6.
Six months	3 "	5s. or Rs. 3-12-0.
Single numbers	8 annas	

N.B.—The Journal is issued on the 15th of each month, and is posted free to members of the Madras Amateur Photographic Society.

Entrance Fee, Rs. 5.—Annual Subscription for Resident Members, Rs. 15; for Up-country Members, Rs. 12. Members joining after 30th June pay Half-year's Subscription.

Candidates for Election—should be proposed by one member and seconded by another; and they will be balloted for at the following meeting.

Ordinary Meetings—of the Society are held on the first Friday of each month at 6 p.m. and members are at liberty to introduce visitors: meetings take place at the Museum, Egmore.

Letters to the Editor—should be addressed care of Messrs. Graves, Cookson & Co., Scottish Press, Broadway, Madras.

Letters to the Honorary Secretary—should be addressed to Mrs. Leet Palk, Locock's Garden, Kilpauk, Madras.

Letters to the Honorary Treasurer—should be addressed to A. E. Lawson, Madras Mail Office, Madras.

Communications regarding the issue of the Journal—should be addressed to the Publishers, as above.

INDEX.

	<i>Page.</i>		<i>Page.</i>
Acetylene	70	Halation	103
Ammonium Persulphate	18	Hands in Portraiture	9
Annual Meeting	5	Home Letters 3, 4, 15, 16, 28, 52, 63, 75, 87, 98, 110, 122	
Astronomical Photography	56		
Black Images, Toning of	10	Illustrations 15, 29, 39, 52, 63, 75, 88, 100, 111	
Blocking out Skies, &c., in Negatives	6	Indian Tribe	39
Blue Print	114	Instantaneous Photography	19
Bromide Prints	20		
Camera	27	Kodaikanal (Illustrated)	123
Cameras, Concerning	50	Lantern Slide Making ... 21, 35, 45, 57, 71, 83, 95, 106, 117, 127	
Carbon-Printing for Beginners	102	Lantern Slides	7
Carbon Transfers on Silk	7	Lenses	93
Carbon Work	80	Light and Shade	30
Cloud Negatives, Enlarging	126	Lightning	43
Clouds, Photography of	32		
Cloud and Sky Negatives	116	Members, List of, March Number	
Clouds to Negatives, Transferring	42		
Colour Photography	33	Neck in Portraiture	81
Colours in Lantern Slides	7	Negative Making	114
Colour Work for Beginners 54, 65, 73, 89		Negative Varnish	6
Competition, May	54	New Method of Making Prints	126
Do. August	70	Notes	6, 62, 101
Contemporaries	89, 100, 111, 124	Notice	89, 101
Correspondence	38, 50, 75, 100		
Daylight Enlarging Apparatus	76	Ozotype	43
Developer, Best	69	Ortol	29
Developers, Modern	88		
Development	125	Platinotype Toning	93
Development and Developers	31	Proceedings of the Society	5, 17, 99
Editorial Notes 1, 13, 25, 37, 49, 61, 73, 85, 97, 109, 121		Reproduction Process, A new	92
Editor's Table	17, 29		
Flashlight Photography	91	Secco Films	56
Flowers, Photographing	79	Skies in Landscapes, Reflected	105
Gadabas	39	Slow Plate, the best for Hand Cameras?	113
Gelatine Prints	125	Slows. Rapid Plates for Landscapes	68
Groups	8	Stains for Photographers	112
Gum-bichromate	17		
		Telephotography	101
		Washing	5

OUR ILLUSTRATIONS.

Adderley Station, N. M. Ry., by Mr. E. W. Stoney.
 Gadabas, by H. H. the Kumar Rajah of Bobbili.
 Half Tunnel, N. M. Ry., by Mr. A. Pilkington.
 Hills near Kodaikanal, by Mr. C. Mitchie Smith.
 Holy Trinity Church, Yercaud, by Mrs. L. C. Gompertz.
 Kullar Bridge, by Mr. C. E. Phipps.
 Kodaikanal Lake, by Mr. C. Mitchie Smith.
 Madras Banyan Tree and Garden, by Mr. E. W. Stoney.

Pillar Rocks, by Mr. C. Mitchie Smith.
 P. W. D. Offices, by Mr. A. Pilkington.
 Raichore Fort, by Mr. C. E. Phipps.
 "Secundara," by Mr. Jackson.
 Shooting the Crocodile, by Mr. E. W. Stoney.
 Spring Morning at Wapping, by Major Youngerman.
 Temples of Tadpatri, by Mr. E. W. Stoney.
 Trelliswork Verandah, by Mr. C. E. Phipps.



Kodaikanal Lake. By MR. C. MITCHIE SMITH.