Vol. VI. No. 8. August 1900.

Journal of the Amateur Photographic Society of Madras.

CONTENTS.

EDITORIAL NOTES.

WE acknowledge, with much pleasure, the receipt of a new photographic publication—*Camera Craft*. The *Camera Craft* is a monthly journal issued by the Camera Craft Publishing Company, San Francisco. A glance over the contents of the July number, the third number of the first volume, shows how varied are the topics dealt with. One very instructive article, "How to test and select a high grade photographic lens," by Mr. Grundlach, the well-known American lens-maker, will be widely read. The entire contents of the magazine are protected by copy-right. We wish the new publication every success.

THOSE who wish to test lenses before they buy them will find the author's practical notes, free from bewildering mathematical calculations, of great use. The photographic value of a lens depends on its *defining power*, the proper valuation of which must be based on a number of factors, viz., the equivalent focus, relative aperture, angle of field, even lumination and correction for actinic light. As the quotations of many of these given by the lens-makers are not usually quite correct, the author has devised simple practical methods for determining them. Simple methods of finding the equivalent focus of a lens have already been explained in this journal (*vide* Vol. V., No. 13 and Vol. VI., No. 4).

HAVING found the equivalent focus of the lens, we proceed to determine its relative aperture. Remove the ground glass from the camera and replace it by an opaque sheet of paper with a round hole of about $\frac{1}{4}$ in. diameter in its centre, and have the diaphragm at its full aperture. To the front of the lens, fasten a

strip of black paper with parallel edges and of sufficient breadth to just shut off all light when you look through the round hole. The breadth of the strip of black paper divided by the equivalent focus is the relative aperture for the maximum aperture of the diaphragm. The relative aperture for any other size of the diaphragm opening can be found in just the same manner. To obtain a numerical value of the angle of field, measure the half diagonal of the plate the lens is intended to cover, and write this number in inches with one decimal. Add five cyphers to the right of this number and omit the decimal point. Write the equivalent focus in inches with one decimal, and omit the decimal point. The quotient obtained by dividing the former by the latter will give a satisfactory numerical value of the angle of field. This is called, by the author, "the substituted sine of the semi-angle of field."

IN testing a lens, find the maximum aperture of the diaphragm which will allow the projection on the ground glass plate of an image with well defined marginal parts and with but the slightest degree of astigmatic distortion. Determine the relative aperture and the "substituted sine of the semi angle" of field at which the image is projected. Divide the "substituted sine" by the relative aperture and call the quotient A. This quotient has to be correlated to the maximum relative aperture of even lumination. To determine this "focus a remote object sharp on the ground glass, then look toward the lens to one of the openings left on the corners of the ground glass for the escapement of air. At full opening of the diaphragm, the aperture of the lens will appear to be of a shape far from being circular, being considerably cut off from both sides, from one side by the dark mounting-ring of the front lens, from the other side by that of the back lens. Now turn the diaphragm down until its full round opening is seen without being cut off on either side," and you can find out the relative aperture for this opening of the diaphragm, which will be the maximum relative aperture of even lumination. Call this B. Divide A by B; the quotient obtained can be regarded as the numerical value of the defining power of a lens. If the lens is properly corrected for actinic light at the maximum aperture attained before, the negative must appear as sharp as the image on the ground glass. If it does not, find the maximum aperture which will give a negative with the requisite degree of sharpness. The *defining power* of the lens must be determined for this maximum aperture.

WE extract another very interesting passage from our Calcutta Contemporary:—

"We believe the original Scot was evolved in Madras which came to be termed "benighted" on his departure. Sufficient traces of his influence, however, yet remain in the pawky humour of the south at the present day, as the following extract from the *Journal of the Amateur Photographic Society of Madras* will show: 'It will be bad grace on our part—*especially after the sympathy shown to us recently*—not to congratulate the Photographic Society of India on its increasing popularity as shown by the large influx of new members...' They have not got their Editor-printer-demonstrator on Rs. 50 a month, but they are still happy and grateful to us for our sympathy."

The vein of irony in the italicised words must have been sufficiently obvious to most regular readers of the *Journal of the Amateur Photographic Society of Madras*. Verily, the Scot has not yet left his *northern* latitude, and Herr Andre will not have much difficulty in finding him, should his balloon cross the Himalayas.

OUR Correspondent raises a question of some interest to photographers and to the public in general. We referred the matter to several of our friends learned in the law. They all seemed unwilling to risk their reputation by making any definite statements. As far as we could gather, however, there is no Act in this country, concerning the matter in hand. In England the case is quite different. Some of the provisions of the New Copy-right Bill, now being considered by the Select Committee of the House of Lords, have a direct bearing on some points raised by our correspondent. The man who owns the negative has the copy-right of the photograph; and the copy-right belongs to him for life and thirty years afterwards, and can be disposed of according to his pleasure. In the case of portraits taken by professionals for money or "valuable consideration," although the copy-right belongs to the photographer and may be disposed of by him, he cannot exhibit or sell the photograph during the life-time of the person photographed, without his permission. This apparently refers to portraits only.

2. Half-Tunnel, N. M. Ry. By MR. A. PILKINGTON.

CORRESPONDENCE.

SIR,

I beg to be informed whether there is any act or law, which would prohibit the copying of photos taken by professionals and offering for sale, by other men, for example, copies of photos of public assemblies, processions, &c.

2. Can a copy-right be taken, if the photographer was asked and paid for by the Secretary or the Manager of the assembly.

3. Whether the party can be sued for; if the sale of the copy was effected before the copy-right was taken.

4. Whether according to Act No. XX of 1847 a copy-right may be taken of a photo (of a public assembly or procession).

I request you to kindly reply me at your earliest convenience and oblige.

I beg to remain, &c.,

MADRAS, 19*th July* 1900. } S. BABU RAO, *Supervisor*, *Madras Municipality, Madras.*

OUR ILLUSTRATIONS.

OUR frontispiece, this month, recalls a sight familiar to frequenters of the Madras Marina, and the pretty picture of the Nilgiri Mountain Railway cannot fail to elicit the admiration of our readers. For both illustrations we are indebted to Mr. A. Pilkington who sends us the following:—

P. W. D. OFFICES.

Although the clock shown in the picture says twenty minutes to three o'clock, the photo was taken at 8-30 A.M., in the month of April. The hands of the clock were not moving, but the bullocks were inclined to do so, and it was deemed advisable to be satisfied with a shorter exposure than was desired. A 9" Ross-Goerz lens stopped down to F. 22 was used, and the exposure was about $\frac{1}{4}$ second. The plate is a Wratten and Wainwright's Instantaneous, and it was developed with pyro and ammonia.

HALF TUNNEL N. M. RY.

A view on the Nilgiri Mountain Railway showing what is known to the Engineer of the line as "The Half Tunnel." It is at one of the finest scenic parts of the Nilgiri Mountain Railway, about half way between Adderley and Hillgrove Stations. Quoting from note book, the following are particulars regarding the negative.

Lens.	Stop.	Exposure.	Light.	Date and Hour.
Ross-Goerz 9.	F. 16.	2 Sec.	Overcast.	4-30 P.M. 12—11—99.

AUGUST COMPETITION.

Only one member sent in a picture for the August competition on an instantaneous subject.

The picture sent is an excellent one of a well-known sporting Rajah on a white horse going at a slow canter. The near hind hoof is a little blurred, probably due to the dust rising from the ground with the movement of the horse; this is the only defect in the picture and can only be detected on close inspection. We congratulate the Rajah of Bobili on his success.

OUR HOME LETTER.

July 1900.

To talk of formulæ and dark room doings, with a temperature of 80° or higher, seems most inappropriate, especially as I am writing in the midst of beautiful natural surroundings, cloud-swept, mountain and purple moorland, instead of at the dusty desk with an outlook on to the dreary street; so for once in the year at any rate, let me speak of outdoor scenes and photography in the field.

I have noticed that photographers, for the most part, rarely go far from the beaten track; they travel by train and make a few exposures in the vicinity of the station, or ride by coach, and snap off one or two plates when the conveyance stops for the horses to bait and so forth; seldom setting out deliberately to walk over hill and dale, regardless of regular routes, and every consideration save a search for the picturesque. One reason for following the beaten track is the natural bent of most people to do what others have done. Upon that want of originality I have nothing to say here. A second reason, the difficulty of carrying apparatus, is, however, quite within our scope, being moreover a matter of the greatest moment to the landscape photographer.

The ideal camera for utility and portability has yet to be made. It will probably be a combination of the American "black-box" and the English long-extension camera, for it is absolutely essential to be able to employ several lenses of varying focal lengths. As things are at present, the English camera is too heavy and cumbersome, though thoroughly efficient in practice, while the American pattern is lighter, more compact, and more easily closed, but it is wanting in capacity or adaptability for a wide range of subjects.

After using both kinds, I have found it necessary to adopt the English pattern, and on account of its comparative heaviness, convenient methods of carrying have always been a consideration. After trying several different ways, I have finally adopted the rucksack, an actual sack, as its name implies closed at the top by drawing together with stout cord, and carried at the small of the back by broad wed bands, over each shoulder. The arms and chest are left quite free, and the sack lies snugly in its place, moving slightly as the owner walks, and so allowing the constant passage of air, instead of clinging closely to the shoulders as in the case of the knapsack.

My outfit consists of a half plate camera with six double slides, a casket of lenses, and three-fold tripod. All these with the exception of the tripod can be conveniently and easily carried in the sack, whilst the tripod is fastened by short straps outside.

To walk fifteen or twenty miles over mountains with this load is no great task to a good pedestrian;

indeed I venture to say that he would be less fatigued after such a journey than if he had walked five or six miles, carrying the same weight in the hands. I might add that for protection against dust and breakage my camera and slides are placed in cloth-covered cardboard boxes, the camera in one, and the slides in each of two others.

Now if photographers would adopt the rucksack, and discard the usual form of carrying, they would find the pleaures of field work largely increased, and at the same time its possibilities very greatly extended.

Subjects of the pure landscape class have become a good deal hackneyed of late years, so far as one may judge by the exhibitions. Not that nature has been fully explored. But photographers do not penetrate beyond the fringe of the country, so that virgin scenes are everywhere wasting their sweetness upon the desert air. Let me recommend those whose inclinations are towards landscape, to take long traces into out-of-the-way places. They will find their reward.

There are many landscapes: views including cottages, or bridges, stiles and so forth, which are ever so much improved by the introduction of figures. I have made it a general rule not to take such scenes at all unless suitable figures are forthcoming, for usually by waiting a little while, or scouring the immediate neighbourhood, we can find people of the right appearance to fit in with the lens hole. As a rule a polite and well-worded request will secure the services of the rustic man or maid, and when this has been done, then the sun-artist should take all possible pains in placing and posing them so as to thoroughly harmonize with the scene. Above all, I never omit to subsequently reward their efforts with the gift of a print. If this act of common courtesy were always carried out, the reputation of the amateur photographer would be better than it is at present in many quarters, and the oftentimes desirable human interest, more easy to procure.

To study country life under the most favourable auspices, the best thing to do is to find lodgings for a time in some farmhouse, where the daily round of work in field and farmyard provides endless opportunities for picture-making by photography, especially for those who prefer "Inhabited" scenes to wilder nature. In England we are exceptionally favoured in the choice of quaint and picturesque farmsteads, where visitors are received, usually on the most moderate terms. The Railway Companies issue lists of farm-houses in the districts traversed by their lines, so the photographer who cares to avail himself of a holiday amid entirely rural surroundings, can do so without any difficulty whatever.

And although perhaps a little wide of my subject, may I be permitted to remark in concluding a somewhat rambling letter that a holiday spent in some quiet retreat must almost inevitably prove more elevating and instructive, from many points of view, than one of those flying-from-place-to-place jaunts, which illustrate so admirably the old adage, "a rolling stone gathers no moss."

PERCY LUND.

EXTRACTS.

How to make a Daylight Enlarging Apparatus.

By W. D. Haydon.

Practical considerations alone form the subject of the present article. It must be assumed that a general knowledge of the principles of enlargement is already acquired, and the writer proposes to answer the question —How may an efficient enlarging apparatus be made at home, at small cost, and with no elaborate carpenter's tools?

We first choose a window, if possible, facing north, though this is not essential. Should the sun shine upon it and cast shadows we must be content to forego work. Let us suppose that our window frame measures 5 feet 6 inches by 4 feet, that it faces trees or houses, that a screen can be placed against the window frame inside the room 9 inches from the outside of the house wall, that the roof overhangs the wall 7 inches, and that the nearest point of the window-sill is 8 inches from the plane of the screen. We will also assume that a bromide enlargement is to be made from a half-plate negative, as this will save words, while making no difference to the construction of the apparatus if we have enlarged negatives in view, and only a difference in measurements if our negatives are of some other size.

We shall require a screen fitting closely to the window frame on the inside, with an aperture in it to hold a negative. In front of this we shall rest a camera on a shelf. The lens will collect only those rays of light which pass through the negative, all others being excluded, and will focus an image on an easel supporting the sensitive paper. Further, we must have a reflector to direct the rays of light through the aperture in the screen. In fig. 1 we have a section of the apparatus in position.

At this point we make our measurements, and subsequent operations will be much simplified by a drawing to scale. The principal factor which determines the relative positions of the various parts of our apparatus is the reflector. This is placed at an angle of 45° to the plate to be enlarged, or our light will not be direct and we shall run the risk of reflections from the camera bellows. Moreover, no part of the reflecting surface must be vertically below any projection from the house, or we shall have uneven illumination. In the case assumed, therfore, the nearest point to the plane of the plate at which the reflector is available for use is 16 inches or rather more. The size of the latter and the position in the screen of the plate aperture are found in the following way. Refer to enlarging tables and find out the least distance at which the lens must be from the plate. Say this is 10 inc. In our drawing (section) we rule two lines from the diaphragm aperture of the lens passing through points in the back of the camera, where the top and bottom respectively of the focussing screen are. Draw another line from the window-sill at an angle of 45° to the house wall, and continue the first two lines until they meet this. Measure the distance between the two meeting points, and this will give the length of the reflector. In the assumed case the length is about 3 ft. 8 in., and top of the reflector in about 5ft. from the lens. The width can be arrived at by drawing similar lines in plan from the lens through the sides of the focussing screen of the camera to meet a line at a distance equivalent to 5 ft. It is clear that these measurements will also

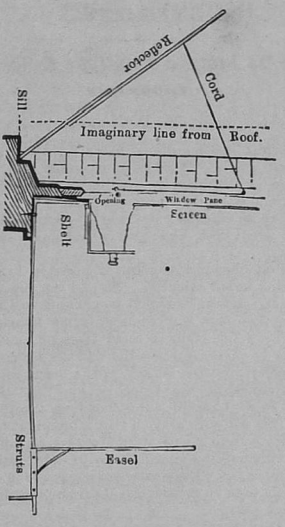

Fig 1.

give us the height of the plate aperture in the screen, for this must be high enough to be covered entirely by the reflecting surface when viewed through the lens from within. Possibly also the position of the window-sill, on which the reflector rests, and the general construction of the window may have to be taken into account.

We are now ready to begin actual work. The reflector may be made of any material giving a flat surface. Probably planed deal boards are the simplest and cheapest material. Card board is not weather proof, and section is not so easy to manipulate. The writer has successfully used an old black board, which is a little heavy, but when in position its weight is not against it, as it does not move in wind. The surface is coated with good whitewash, which dries quickly and is renewed at will. Screw two pieces of $\frac{3}{4}$ inch deal 2 or 3 inches wide so as to project from the bottom in the form of legs to rest on the window-sill. The length of these depends on the measurements described above. They save weight and material. Fix to either side, about three-quarters of the way up a stout hook, to which, attach a cord. Pass this through a screw eye fixed in the woodwork of the window, and secure it to a cleat conveniently placed. When the angle of 45° is once found a piece of thread may be tied to the cord where it passes through the screw eye, and the reflector can then always be adjusted without difficulty.

We now come to the screen. Cut four lengths of slate batten, two 5 feet, 4 inches long, two 3 feet, 10 inches. Halve the ends of each piece with one vertical and one horizontal saw-cut, and screw them together to form a frame, which will be flat against the window on the inside. Cover this with American cloth or brown paper. If necessary glue strips of brown paper over the edges and stop pin holes in the same way. Strips of felt may be tacked to the back, and we have a prefectly light-tight screen. The method of fixing it will depend on circumstances, but will involve no great exercise of ingenuity. We have next to provide a support for the camera and for the plate, the nature of which is shown in figs. 2 and 3.

We make this of half inch deal three inches wide. *A* and *B* will be eventually fixed across the screen. *C* and *D* must be in such a position that the aperture will be in front of clear glass in the window pane. By grooving the back of *A* and *B* and carefully halving the ends of *C* and *D* the face will be flush. The aperture left must measure $6\frac{1}{4}$ inches by $4\frac{1}{4}$. Bevel the square edges at the back of the aperture, which would otherwise be in the path of the rays leading to the lens.

Now unscrew or take out the back of the camera and make a square frame to fit closely in its place, with an easy inside measure of $6\frac{1}{2}$ inches by $4\frac{3}{4}$ inches. Place them in front of the aperture shown in fig. 2 and screw it down. The result is shown in fig. 3.

A rebate is formed in which to put the plate, which can be kept from falling by a piece of wire run through

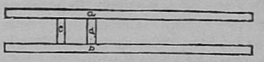

Fig. 2.

the top of the larger or Front frame. Fill any chinks there may be with glue mixed with blacklead, and glue a piece of velvet ribbon on the front to come in contact with the camera when in position. Now make a shelf for the camera. Its exact position must be found by experiment, and the two cheap iron brackets will hold it, preferably from above. Screw the ends of *A* and *B* (fig. 2) to the sides of the screen so that the aperture is in the right place,

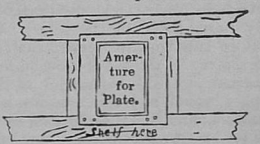

Fig. 3.

cut out the American cloth behind it and glue the edges to the back of the wood-work. With stamp paper stick a piece of fine tracing paper on the window-pane large enough o cover the aperture when seen through the lens. This acts as a diffuser, and renders harmless any inequalities in the surface of reflector. Coat with dead black paint any wood-work which is exposed to light, and now nothing remains to be made but a support for the bromide paper. Take an 11 inch board of suitable length—say 4 ft. Make

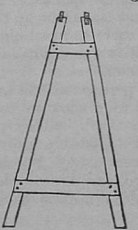

Fig. 4.

struts as in fig. 4, and fasten them with hinges to the end of the board which will be farthest from the window.

The other end must be secured as circumstances permit. If there is a sill inside the room, a simple way is to rest the board on it at right angles immediately below the plate-aperture, bore two holes through it into the sill and drop into them two brass-headed nails of which the ends have been filed off. With a spirit level the board can be levelled in a moment. A simple form of easel is a drawing-board standing at right angles to a base made of another piece of 11-inch board about a foot long. Attach this drawing-board to the base with iron brackets, and provide side-pieces for the base so that it runs up and down without too much play. A small clamp will hold it in position.

Our apparatus is now complete, and its construction has been neither costly nor elaborate. An outlay of a few shillings will have covered the materials, while the necessary tools are probably in the possession of most photographers. What is necessary most of all is a little thought and a little trouble, and in photography, as in everything else, success depends on an infinite capacity for taking trouble.—*The Practical Photographer.*

Practical Colour Work for Amateurs.

By A. E. Smith.

PART III.

For the blue-violet screen, coat two pieces of the patent plate glass with collodion. Color one in the violet solution, and the other in the bath containing one penny packet of Judson's green to the ounce of water, both being rinsed, dried, and bound up, as in the case of the red and green screens. This filter will be comparatively deeper in colour than the other two, and, if of the right shade will be a deep cobalt, or ultramarine, blue.

The next step is the testing of our screens, to ascertain if they cut off approximately in accordance with the Clerk-Maxwell colour curves, previously described. Theoretically, this operation should be performed with a spectroscope, but, as a direct vision instrument, to be anything like useful, cannot be purchased for less than a guinea, I will show how to do without, and illustrate the old proverb of "necessity, etc." We cannot, however, dispense with a prism. This is a triangular piece of glass, and can be obtained from Penrose and Co., 1½ inches in length, for half a guinea. Personally, I have been rather fortunate with prisms, having some glass candlesticks resplendent in those old-fashioned triangular glass embellishments. If any of my readers have similar ones, or a glass chandelier decked with these ornaments, they have a veritable orchard of prisms on the premises. Hook one off when you want to test your screens, and take it to a table facing a window.

Draw the blind down to within an inch, ran inch and a half, of the window latch, as shown in figure No. 1. Raise the shutter, if you have one, until all the bottom half of the window is covered up. If not, paste a piece of brown paper over glass to shut out the light, as shown in figure No. 2. Return to the table, and look through the prism, revolving it slowly, until you produce a beautiful solar spectrum in the space marked S, and enclosed by dotted lines in figures 1 and 2. This opening, by the way, must look out on to the sky, and not upon a house or a tree. In this way it is possible to get a perfect spectrum, showing every colour and tint from red to violet, in fact, no spectroscope, however costly, could give a better band of colour. The depth varies according to the width of space between the bottom of the blind and the window frame, and the distance from which it is viewed. The further you sit back in the room the wider may the opening. At a distance of eight feet you can get a spectrum four to five inches long. If you get too near, you lose the perfect band of colours, and see only a fringe of red and yellow on the blind, and violet and blue on the window frame, with daylight in between.

In testing the screens, it is better to have two or three of each colour, so that the best set of three can be selected. When the prism is focussed upon the window, and a perfect spectrum seen, place the red screen in front of the prism. The colours from the violet to nearly the end of the green should entirely vanish, and appear black. If this is so, the screen may be passed as being approximately correct. The green screen should be found to shut out all the violet, about half the blue, and nearly all the red; while the blue screen should pass all colours from the violet end to nearly the end of the green, a very deep band of ruby appearing at the red end.

If a coloured chart of the spectrum be at hand when testing, the work will be easier, as the lines given in the coloured representation will take the place of those absent in the real spectrum we are using in the window. This will be found a very satisfactory and inexpensive method of proving our colour screens. This set is, of course, intended to be used with a Cadett "Spectrum" or a Lumiere "Panchromatic" plate. They may be placed either in front or behind the lens, but the best place is behind, and anyone at all handy with a plane, chisel, and fret-saw could easily make a camera front attachment containing a receptacle for the screen.

The individual exposures with the three filters must be found by experiment. For a first trial upon a floral subject, at *f*/16, by window, summer light, six, forty, and sixty seconds for the blue-violet, green, and red negatives respectively might be tried. The key to success in colour work is, given fairly correct screens, to get three properly exposed negatives all equally developed, and so facilitate this it is preferable to develop the three plates together in the same dish. No tricks to correct exposure during development are permissible. A normal pyro-soda solution, without bromide, should be used, and, if exposures and development have been correct, any perfectly white object in the picture will appear with equal density in each negative.

Great care must be taken to guard against fog, both when placing the plates in the dark slides and during development. It is impossible to use the ordinary dark-room lamp, but a piece of glass, cut to any size, and known as a "safe light," may be obtained from Messrs. Cadett and Neall, Ashtead, Surrey, which can be placed in the lamp in lieu of the ruby glass; or, as a substitute, we may place our ruby lamp in a box, one side of which has been glazed with ruby and blue sheet glass, procurable for a few pence at any glaziers. When the three glasses are laid one upon the other, the colour should, on looking through them, not be paler than the combined colours of our red and blue-violet light filters, which will appear a very deep ruby when viewed in a similar manner, but rather deeper for preference.

We now arrive at the second method of making our negatives, that is, by using the three different brands of plates previously mentioned. The screens in this case are a pale ruby, orange or aurantia, and violet, and are easier to make, requiring only one film upon one piece of glass.

The red and orange can be made in the "Diamond" scarlet bath by immersing thin lantern plates, which have been soaked in hyposulphite of soda to dissolve out the silver bromide, and thoroughly washed, for a sufficient time to get the respective colours, the red, of course, requiring more time than the orange. The violet bath only is used for the blue-violet screen, which can also be made upon a thin lantern plate; but I find it more satisfactory to clean off the gelatine and coat with collodion, as this dye does not always take kindly to gelatine. The screens must be slightly rinised after staining, and set up to dry, when they can be cut up with a shilling wheel glass cutter to any desired size, except in the case of the violet screen, using collodion, when the glass should be cut before coating, as the film is too tender to bear rough usage.

My own screens are cut to fit a special camera front I made for my Lancaster's camera. It has a hinged door carrying the lens, and works well in practice. The illustration given should enable anyone to copy it. It is made of quarter-inch cedar, and the screens are inserted in turn when making the negatives.

The negatives from which the prints given on page 292 are made were produced in this way. The violet screen was used with an Ilford ordinary, and the exposure at 11 A.M., on a bright July day, by window (south light), stop *f*/16, was 4 seconds. The orange screen, which should be about the shade of a deep screen used for ordinary isochromatic work, was used with a Lumiere "A" plate under the same conditions, giving 30 seconds' exposure, the red screen being utilised with a Lumiere "B, same stop and light, the exposure being one minute, all three plates being developed with Lumiere's pyro-soda formula. In developing the latter plate, do not omit to put a piece of green sheet glass in place of the red in the dark-room lamp, and it is better rather to lay a second piece of green in front of the lantern to make doubly certain against fog.

When photographing flowers, be careful to see that all stalks are well in the water, or leaves may be found to have drooped considerably before the third plate is exposed. This happened to a slight extent in the case of those depicted in the subject illustrating this article. Such an accident is fatal to accurate registration in printing.

There is yet another way of making our screens, namely, by dyeing negative plates which have had the silver bromide dissolved out, as with the lantern plates. These have an additional advantage, in that they can be placed in the dark slide in front of the plates, film to film, so that no cutting or special camera front is required. The exposures and manipulations are the same as given for those made upon the lantern plates, but, if desired, the exposure for the blue-violet negative on the Ilford ordinary may be made *without* a screen, its place in the dark slide being filled by a piece of clear glass. Many experts are of opinion that the use of a violet screen with an ordinary plate has no effect other than to increase the exposure; still, personally, I prefer to use one. The ground glass of the camera must be reversed, to allow for the displacement of the plates by the extra thickness of glass in the dark slides.

This method of working is simplicity itself, and I can recommend it for experimental work. If we dispense with the violet screen a humble "tanner" will provide us with all extra materials for making the screens, or light-filters, and this is expended in the purchase of a sixpenny packet of "Diamond" scarlet dye for cotton. Having obtained our negatives, the question of printing on paper arises, and to accomplish this we must superimpose three prints in the primary colours of the artist upon one piece of paper.

The simplest method, and the one best adapted to amateur use, is to take a piece of commercial ferro prussiate paper, such as that sold by Marion and Co., and make a print upon it from the red sensation negative. This is not absolutely the correct shade of blue, but it is as near as we can get to it photographically. The colour should, as a matter of fact, be a cyan-blue, the complementary to the fundamental red of the solar spectrum, that is to say, the colour which, in the form of light, would, if mixed with the fundamental red, produce white.

We next should make a print in lemon-yellow in perfect registration upon the ferro-prussiate positive. This is most nearly approached by printing in the gum-bichromate process with yellow-lake. The blue print is immersed for one or two minutes in a ten per cent. solution of bichromate of potash and hung up to dry in the dark; or this operation may be hastened by holding in front of a gas flame. When perfectly dry, we may coat the print with the gum and pigment. The gum solution is made up by dissolving half an ounce of the finest gum acacia in three ounces of hot water. A little of this is poured out when cold upon a porcelain palette—the back of a bromide opal makes a capital substitute. About one dram will suffice to coat a quarter plate print, and to this quantity add just sufficient yellow lake to colour the gum, the whole being thoroughly mixed with the blade of a knife—an artist's palette knife for preference. The pigments used are those sold by artists' colourmen in twopenny tubes for water-colour drawing. Spread the mixture upon the paper with a round camelhair brush, commonly called a mop, evening up and smoothing the coating with a badger hair softener, and dry in the dark.—*The Amateur Photographic.*

A Few Hints on Photographing Flowers.

By E. E. Volk.

Of all the many subjects in still life none appeal to me more forcibly as beautifully than flowers and for the benefit of those who are likewise interested, I will give in as few words as possible the results of my experiments. The field is so large, the variety so vast, and as each subject requires such different treatment, I will take but one or two at this time. Thus far I have succeeded among other varieties in making beautiful artistic effects of the stately lily. First of all care must be used in the proper arrangement of them, always remembering that the most pleasing and artistic effects are made from a very few. Never crowd them, and if posed in a vase one must remember that the picture or subject is of flowers and not of the background or the receptacle, which holds them. All must be in harmony and tend to not detract from the subject. One cause of the many failures in photographing flowers is lack of proper lighting, especially for those of delicate tinting. The calla lily should be placed well forward about four feet from the window and two thirds forward. There, by concentrating the light, you can preserve all the detail at the same time bringing out those exquisite high lights, which make the finished picture a thing of beauty and a joy for ever. Great care and judgment should be used in the proper selection of backgrounds.

Flowers of the light variety usually give a more pleasing effect against dark backgrounds. With American Beauty roses, you can with advantage permit a little more full light on the subject, and as the flowers show up a little darker, a delicate pearl grey or dead white can be used for the background.

In developing the plate my method is to use a developer under normal strength to start with, and after the shadows are pretty well brought out, I strengthen the developer and finish the plate. So many ways can be suggested for printing and mounting that I will only caution the beginner that no regular size can be used. The print should be trimmed to fit the picture whether it be a long narrow panel or a square, and in mounting do not use too small a card —*The Photographic Times.*

Carbon Work.

THERE is one question which is at one time or another asked by every one of our first rank photographers : "Where can I get a really first-rate carbon printer ?" Carbon is becoming more and more the accepted thing for high-grade work, and the good carbon man can command his price. Among the many questions which come to us, those referring to carbon are by no means the least numerous. We have repeatedly published the method of working, which is not, in practice, difficult. The difference between good and moderate results is traceable to the amount of care and intelligence bestowed on the work, with a keen appreciation of the modifications required to meet changes of temperature or other local conditions. One of the best accounts of the carbon method was that given some little time ago by J. A. Sinclair, and a few extracts from his paper will interest our readers.

Though sometimes considered as a modern discovery, it is quite forty-seven years ago since Fox Talbot used bichromated gelatine for coating copper plates, and produced the first photogravure, and this, in turn, was fifteen years after Mongo Ponton had first discovered that paper soaked in bichromate of potash was sensitive to light. Two years after Fox Talbot (in 1855), Poitevin, who may almost be called the father of the carbon process, commenced his experiments, but with little practical result. In 1864, Swan commenced his single transfer process, and made carbon a commercial possibility.

Since that date the process has been modified and improved in endless ways, carbon tissues of various kinds and tints being readily obtainable commercially. In this country it is usually sold unsensitized, and must be sensitized before use.

To sensitize the tissue, it is immersed in a 5 per cent. solution of bichromate of potash for three minutes in winter or two minutes in summer. Care must be taken that the temperature of the solution is not over 60° F. The tissue when withdrawn from the bichromate bath is squeegeed into contact with any smooth surface, such as zinc, ferrotype, or glass plate, then withdrawn and placed film upward upon a sheet of blotting paper laid upon a piece of card which has been bent into a half circle. When dry the tissue is ready for use. Before printing it is necessary to prepare the negative by making what is called a safe edge. This is done by placing an opaque mask on the glass side of the negative or a semi-opaque one on the film slide. Sometimes a band of black varnish is painted all round the glass side. A very simple plan, and one that I usually adopt, is to stick a lantern-slide binder round the edge of the plate. The object of this safe-edge is to prevent the film coming away from the transfer paper. If a dense shadow comes right up to the edge of the print, it is likely to get washed away by the water getting under it, unless the edge is gradually vignetted off. Such dense shadows, being composed of insoluble gelatine of considerable thickness, are only lightly attached to the support, and consequently it is necessary to have an edge of more soluble material which holds with greater tenacity to the support, and at the same time offers a more gradual resistance to the water.

It is evident that we must have some means of gauging our exposures, for the progress of our print cannot be told by looking at the very dark-colored surface of the tissue, and for this purpose various actinometers have been devised. Having decided what number of tints we must secure in our actinometer, we expose both it and the printing frame with the negative in contact to light at the same time. For the first print it may not be quite easy to know how many tints the negative will require, but a little, experience will soon get over the difficulty. When the actinometer has given us the number of tints we think necessary the printing frame is withdrawn.

Now let us think what has been the action on our pieces of printed tissue. A certain amount of light has probably come through all parts of the negative and covered the gelatine surface with a thin insoluble film. Through the more transparent parts of the negative, such as the deep shadows, the light has acted strongly, and in the corresponding portions of the tissue there is a thick film of insoluble gelatine. In fact, the thickness of the insoluble gelatine is in exact proportion to the amount of light which has passed through the negative. This insoluble film being on the surface of the tissue, if we were to attempt to develop it the image would float off the paper support and be lost.

We must, therefore, transfer the image so that the insoluble portion, which will ultimately form the picture, remains in contact with a temporary or final support during development.

In the single transfer process we immerse one of the specially prepared sheets of paper in water some little time before we intend squeegeeing the printed tissue in contact with it. Whatman and other thick rough drawing papers should soak for some hours, or they may be immersed in hot water for twenty minutes till all the air is driven out of the pores of the paper. The transfer paper being ready we place a piece a little larger than the tissue in a dish of cold water, in which the printed tissue is also immersed; when the tissue begins to flatten out, it and the paper are removed from the water together and squeegeed into intimate contact by means of a flat squeegee. After remaining under pressure between blotting boards for ten minutes (or, if a thick rough transfer paper is used, for twenty or thirty minutes) the tissue and support are immersed in hot water at about 110° F. When the gelatine begins to ooze out round the edges the back surface of the tissue is pulled off, and the print on its new support is developed by laving with hot water. It is advisable to have a sheet of glass in the developing tank, on which the print may be laid, and the warm water may be poured from a jug or measure on to the surface. Dark shadows may be considerably lightened by pouring hotter water from a greater height on to the print. Under-exposed prints may be modified somewhat by developing in cooler solutions.

It should be borne in mind that the print is a little darker when, dry, and it must therefore be developed rather lighter than desired in the finished picture. After development the print is rinsed in cold water, and then placed in a 5 per cent. solution of alum, where it remains until the yellow tinge of the bichromate is removed from the paper. A rinse in cold water completes the operation, and the print is hung up to dry, after which it may be trimmed and mounted in the usual manner. For

double transfer we proceed exactly the same as for single transfer, except that we develop the picture on a piece of finely smoothed opal or one of the flexible temporary supports which are articles of commerce. Whichever temporary support we decide on using it must be coated some time beforehand by rubbing a few drops of solution over its surface, composed of :

Pure Beeswax ...	... ...	2 drachms.
Yellow Resin ...	... ...	6 drachms.
Turpentine ...	... ...	1 pint.

Some minutes after applying the waxing solution any excess should be polished off by rubbing a clean cloth in a circular motion all over the surface of the support. These supports may be kept coated ready for use.

The image being developed on the temporary support may be transferred at once or left till dry. The latter is perhaps the best plan, as there is then no danger of damaging the film when squeegeeing. Paper coated with a film of partially soluble gelatine is sold for final supports, and a piece of this is immersed for half an hour in a 2 per cent. solution of alum. It is then placed in clean water with the print on the temporary support ; the two are brought together, care being taken to avoid air bubbles between them, and after withdrawal from the water are vigorously squeegeed. Place between blotting boards for twelve hours, and then remove to a well-ventilated room. The print will, after some time, detach itself from the temporary support and be found on its new surface ready for trimming and mounting.—*Wilson's Photographic Magazine.*

The neck in Portraiture.

By Frank M. Sutcliffe.

In our two previous articles we spoke of hands and feet, but these only demand our attention when full length or three-quarter figures are taken. We now come to the neck and shoulders, which appear in almost every portrait, whether full length, three-quarter, or bust. A view of the face only is rarely seen. If ladies only knew of what great importance the drapery about the neck is to the production of a satisfactory portrait, they would give it a little more attention before sitting for one. In nine cases out of ten the sitter, whether male or female, hides his or her neck with a collar—a collar which rests on the shoulders and reaches to the chin. The collar prevents any movement of the head. Now, as gracefulness depends on subtle and delicate movement, the photographer who tries to make his sitter appear natural, meets with an obstacle in the shape of a collar. If the sitter is slender, there may be room for a slight turn of the head, but if the case is otherwise the photographer, not wishing to give the sitter bodily pain, has to make his picture of an apparently stiff neck. In the case of ladies this stiffness is still further emphasised by the sleeves and shoulders of the dress, which stand up on either side and make the imprisoned neck appear still more a prisoner. Till lately the writer had an idea that it was only English people who choked themselves with tight collars and who added deformities to their shoulders, for he had been told that foreigners considered no face complete without the support of its natural pillar, the neck ; but he has seen lately the portrait of a modern Greek lady, which proves that other people dress as badly as we do. We here give a copy traced carefully from the original of the modern Greek lady's dress.

It will be observed that there is more neck in this portrait than is usually seen in these isles, but the shoulders are quite equal to ours. Well might Ruskin say that " It was once the aim of all education, and of all dress, to make the human form stately and lovely. *Now* it has become the task of grave philosophy partly to depreciate or conceal this bodily beauty." Then he adds, " Man has become, upon the whole, an ugly animal, and is not ashamed of his ugliness." As the photograper has in most cases to take his sitters as he finds them, let us set to work to find out how to make the best of our sitters' collars and shoulders.

The first thing we notice is that the nearer the camera is to the sitter the more apparent and objectionable do the high shoulders and tight collars appear. Therefore, when a bust portrait only is wanted, the photographer's work is really more difficult than when the whole figure is included. When the sleeves are high and the camera near to the sitter, it is seen that, when the shoulders are turned away from the camera, the sleeve hides much of the shoulder and sometimes hides part of the face ; we must then, if the sitter appear to be all shoulder or sleeve, turn her more round to the camera. Here another difficulty crops up. The immense buttons on the dress, which before showed only their edges, now appear like a row of full moons. Consoling himself with the thought that the retoucher's knife can remove their brightness, the photographer has to decide whether the shoulders and neck look better when the sitter is seated or standing. If the neck is long and the shoulders sloping, in most cases it will be found better to ask the sitter to be seated, but if the neck is naturally short and the shoulders well made, it is well to take the sitter standing. Many people, too, appear more animated when standing than when seated. Some full blooded people seem inclined to snatch forty winks when comfortably seated in the photographer's chair. In the early days of photography people *did* occasionally go to sleep during the long exposures. When the sitter stands there is less fear of the chin doubling, but double chins can be avoided by allowing the head to lean forward. This plan is sometimes the only possible one with sitters whose noses incline upwards and whose chins are inclined to become doubled.

It is interesting to note that the head of the sitter may be made to appear larger or smaller by the amount of neck and bust uncovered or covered. When the dress is darker than the face, a high collar makes the face appear large ; a lady in fashionable evening dress without any drapery over the shoulders has an apparently smaller head than she has in a morning dress, provided that it is a dark one. No doubt the reason why statues appear to have heads of better proportion than the average woman is due to this fact. The reason why a milkmaid or laundrymaid dressed in white or pale blue or pink appears to have a better-shaped head than her mistress is also due to this. When the face and hands are the only uncovered parts of the body and the dress is dark, they catch the eye and appear larger than they really are. As we said, white gloves make the hands appear larger than dark ones. These things should all be attended to by our sitters; for if they do not make the most of themselves, how can the photographer be expected to make them appear at their best in their pictures ? It is the same with the hairdressing; just now everyone, whether they wish to be taken in profile or not, have their hair arranged in such a way that it looks the best from the side. When the sitter is taken from the front the hair is often hardly seen at all.

To return to the necks of our sitters, which may be divided into three classes—average, short, and long. For some unexplained reason, people often wish to appear in their portraits otherwise than what they really are. Instead of going to Sandow, or some other expert on the development of symmetry, to have the muscles on their thin necks developed and the excess of tissue reduced from their stout ones, they expect the photographer to do what exercise only can do. The photographer then tries to persuade his sitters to dress in such a manner as to hide, and so leave to the imagination, any peculiarities of form. By means of loose drapery, or even a hat or bonnet-string, a long thin neck may be partly covered in such a way that does not catch the eye, for it is only when peculiarities are allowed to do this that they are objectionable in a picture. If the photographer can emphasise other parts or lead the eye away from those features which are not well developed, then his portrait is considered successful. A skilful dressmaker can so arrange the lines of the dress of even the stoutest woman that her stoutness is not noticed.

It is a mistake to suppose that a thin neck is made to appear thicker by being covered up; the shape of the opening of the dress has more to do with the apparent thickness of the neck than the amount covered or uncovered.

One of the most fatal mistakes a lady can make in dressing for a portrait is to have too much clothing on the top of her spine. The portrait given above shows how the weight of clothing on the lady's back makes her appear quite round-shouldered; the clothes appear to add the weight of years.

Much depends on the way the neck is lighted, whether it appears thick or thin. Take fig. 4 as an example of a thin neck lighted from the front and fig. 5 as an example of a medium neck lighted from the side. It is only wasting words to point out the difference; it is apparent to all.

Much of the dignity and stateliness of a portrait depends on the neck; if this is quite hidden with clothing it is difficult to make or sitters look like Queens. Just imagine all the *debutantes* at a Drawing Room with their shoulders covered with a bundle of clothing. In my next article I shall speak of the arms, nose, lips and mouth.—*The Photogram.*

Lantern-slide making for beginners.

By Primrose Hill.

XIII.—INTENSIFYING.—(*continued.*)

A convenient alternative method is to prepare the two following stock solutions, which keep a long time—

A.—Uranium nitrate (*or* acetate) 40 grains, water 1 oz.; acetic acid 20 drops.

B.—Potassium ferricyanide 25 grains, water 1 oz.

To prepare a bath, to 6 drachms of water add 1 drachm of A., and then 1 drachm of B.

After intensifying with uranium the plate is washed in water containing one or two drops of acetic acid to the ounce of water. Prolonged washing gradually removes the intensification. If the washing water be even slightly alkaline, this takes place more quickly. Thus an overdone plate may be partly or wholly in this way brought back to its original condition. Or, if needed, local alterations may be made by brushing certain parts with water containing one or two (not more) drops of ammonia per ounce of water, with plentiful rinsings under the tap alternately.

(68) *Silver Methods.*—In the hands of careful and patient workers the silver methods given on page 90, *et seq.*, in the "Perfect Negative" are capable of yielding very high-class results. But as these have already been fully discussed elsewhere, it must suffice to refer the reader to those pages.

Lead and copper methods have been used for negatives. We shall, perhaps, have something to say about the colours obtainable by the lead process in another chapter.

Before starting to intensify a lantern slide it is always worth while to spend a few moments in carefully considering whether we cannot get a better result by making a fresh slide *de novo*. If it is simply a question of getting more density, and that only, this, as a rule, can best be arrived at by suitably modifying the developer and perhaps the exposure also. It is seldom indeed that one meets with a brand of plates which will not under proper conditions give as much and more density than is ever likely to be wanted for lantern projection.

XIV.—TONING (OR COLOURING) SLIDES.

(69) There must be something particularly fascinating about toning slides if one may estimate the popularity of the subject from the large number of formulæ published, experiments made, and questions asked. By toning we here mean changing the colour of a slide; for example, converting a black image into a brown, green-blue, or red one. This is not to be confused with locally colouring, tinting, or painting slides by means of oil, or water colour, or dye solutions.

It must be remembered that when by some chemical bath we alter the *colour* of the image on a slide we very often also alter the *density* at the same time. We may increase or reduce density in this way. But in the present chapter we shall give our chief attention to the colour change. In this sense the term toning is to be understood for the present.

To give one half of the published formulæ would tend to bewilder rather than help the beginner. Therefore we shall content ourselves by quoting a few fairly typical toning baths, and ask the reader to take it for granted that most of those omitted are but unimportant modifications of those quoted.

(70) Let us begin with platinum as a tonning agent.

Platinum tetrachloride	2 gr.
Water	10 oz.

Acidify with nitric acid.

The change of colour here is very slight. This bath gives a black tone, verging towards blue-black, and also reduces the image at the same time. It may therefore be useful for slides of excessive density.

(71) Another bath contains the chloroplatinite of potassium, in place of the tetrachloride salt. Thus:

Potasium chloroplatinite	2·4 gr.
Water	10 oz.

Acidify with nitric or phosphoric acid.

This bath does not reduce the density like the last one. The colour change tends to a warmer black.

(72) Our next bath combines platinum with gold.

Platinum tetrachloride ...	... 1 gr.
Gold chloride ...	... 1 gr.
Water	... 10 oz.

Acidify with hydrochloric or nitric acid.

This bath yields a warm black tone with little or no change of density.

(73) We now pass to a bath which contains only gold as a toning metal.

Gold chloride	... 1 gr.
Pure water	... 1 oz.

This bath is said to yield a long range of colours, from black to blue, and even pink. For its working it is essential that the slide be very thoroughly well washed. Its action is very slow on account of the absense of a suitable chlorine absorbent. Some workers prefer to acidify this bath with hydrochloric or nitric acid.

(74) Next we give two forms of a gold bath which represent the limits of several formulæ.

	A.	B.
Gold chloride	1 gr.	3 gr.
Soda carbonate... ...	2 gr.	5 gr.
Ammonium sulphocyanide.	50 gr.	100 gr.
Water...	4 oz.	10 oz.

Some workers prefer to use ammonium carbonate in place of sodium carbonate. In mixing this bath a little care is needed. First dissolve the sulphocyanide in about three-quarters of the total quantity of water, to be used. Then dissolve the gold in the remainder of the water, add the gold solution a few drops at a time with continual stirring, to the sulphocyanide solution (and *not vice versa*). Finally, add the soda carbonate dissolved in a few drops of water. This both gives a purple black or blue tone, according to the time the slide is left in it.

With sulphocyanide toning generally it may be said that increasing the proportion of this salt tends to give bluer tones.

With gold toning generally the longer the toning the bluer the result.

Slides which have previously been dried are slower to tone than those which have not been dried after washing.

A slide when dry, especially after gold toning, looks a little cooler in colour, *i.e.*, more blue or grey, than when wet.

(75) We now pass to the combined bath, *i.e.*, one which contains gold and hypo.

Gold chloride	... 2 gr.
Soda carbonate	... 3 gr.
Am. sulphocyanide ...	... 30 gr.
Water	... 10 oz.
Hypo	... 1 gr.

Prepare, as already explained, by adding the gold solution to the sulphocyanide solution, and then add the hypo previously dissolved in a few drops of water. Another formula avoids the trouble of weighing one grain of solid hypo by taking *one drop* of a saturated solution of this useful salt.

(76) Observe in the last bath the small quantity of hypo used, and notice the relatively large quantity in the next three formulæ given below :—

	A.	B.	C.
Gold chloride ...	1 gr.	9 gr.	4 gr.
Am. sulphocyanide...	25 gr.	240 gr.	120 gr.
Soda acetate ...	—	360 gr.	240 gr.
Alum	—	120 gr.	—
Hypo	250 gr.	3 oz.	2½ oz.
Water	2 oz.	12 oz.	10 oz.

All these three baths are well recommended by various authorities. If desired, they may be used as fixing and toning baths combined. But if so used they soon become uncertain in results, on account of the silver haloid dissolved out of the film by the hypo in the fixing stage. The tones these baths give are purple and bluish.

(77) Our next agent is mercury bichloride. The reader by this time will hardly need reminding that if he does not want spots and stains the plate must be first well fixed and then well washed before it goes into a solution of mercury. Nor will he need to be told that this is likely to increase the density.

First let the reader turn back and see what was said as to preparing the mercury bleaching bath in par. 66 in the chapter on intensification, and its subsequent treatment by ferrous oxalate, ammonia, soda carbonate, soda sulphite, and hypo. Those after baths give us a range of strength and of colour. It may now be useful to add that we may use as a darkener—

Ammonium sulphide ...	... 1 part.
Water	... 20 parts.

This gives us a fuller density, and a colour which ranges from brown to black.

Again, we may use various other developers as darkeners, *e.g.*, ortol, metol, rodinal hydrokinone, pyro, etc.

The colours they give vary from a good black with hydrokinone to greenish brown with pyro. But results vary somewhat with the brand of plate used, age of developer, etc. For example, old ortol may yield a pinkish tinge, old pyro a yellow brown, and so on.

These results are partly gelatine stains, and the beginner is recommended to let them stand over for the present.

(78) We may, however, say a good word for the use of gold as an after bath following bleaching by mercury. It of course goes without saying that after bleaching with mercury, in any and every case the plate must be well washed before any further treatment, but this *especially with gold*. The following bath will serve very well as a fair type of this bath :—

Gold chloride	... 1 gr.
Water	... 3 oz.
Ammon. sulphocyanide ...	... 6 gr.

This will convert the bleached slide into a yellowish brown colour.

(79) Some workers prefer the combined bath for use after mercury bleaching.

	A.	B.
Gold chloride	7 gr.	1 gr.
Ammon. sulphocyanide ...	40 gr.	20 gr.
Hypo	3 gr.	2 oz.
Water	1½ oz.	10 oz.

It will thus be noticed that we here may use either a very little hypo, or a relatively large quantity. Either of these baths will give tones ranging from purple black up to blue-grey.

(To be continued).

COMPETITIONS.

(Open only to Members of the Society.)

SUBJECTS FOR MONTHLY COMPETITIONS.

September	...	...	Dawn.
October ...	...	...	A Group of Europeans.
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, enlarging, 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 sent 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. Socy. 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 a 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 ...	8*s.* or Rs. 6.
Six months ...	3 „ ...	5*s.* 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. 10; 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 ballotted 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 Falk, 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.*

Trellis Work Verandah By. MR. C. E. PHIPPS.