

thanks to Mr. Robinson. I shall personally be glad when he gets to the composition of figure subjects, which is a subject most interesting to photographers, as comprehending matters not within their control. The other societies have not presented many features of interest.

PHOTOGRAPHY AT THE ROYAL CORNWALL POLYTECHNIC SOCIETY.

The thirty-fifth annual report of the Royal Cornwall Polytechnic Society has just been issued. The consideration which photography has always received in its exhibitions gives its proceedings an especial interest to all connected with our art. In the section of the report devoted to the Fine Arts the following paragraph refers to the photographic contributions at the last exhibition:—

"The collection of photographs has certainly never been excelled, if it has ever been equalled, at any previous exhibition. Foremost among the exhibitors stands Mr. H. P. Robinson, of London, the beauty of whose works we have had to notice at previous exhibitions. One of his photographs, entitled 'Sleep,' represents two girls, evidently sisters, sleeping calmly and happily, side by side; and the air of peaceful repose and perfect unconsciousness which pervades their countenances is strikingly natural and truthful. Another very creditable production of Mr. Robinson's is a photograph from nature, entitled 'The Sisters.' The subjects are seated together in a chair, intently perusing a pictorial book, the arm of the elder sister being thrown lovingly over the neck of the younger. 'Ralph' is another excellent specimen of photography by the same artist, and equally well worthy of notice. Mr. Nelson K. Cherrill, of Tunbridge Wells, exhibited two portraits, entitled 'Emily,' and 'Idle Hours,' 'A View in Borrowdale,' 'An Old Oak,' and amongst his other productions were several views of the engine works of Mr. Penn, at Greenwich. Mr. T. M. Brownrigg, of Dublin, exhibited four excellent photographs of scenes in Ireland; Mr. William England, a number of pretty and well photographed Swiss views; and Mr. R. Griffiths, of Truro, Mr. Rowe, of Redruth, and Mr. Netterville Briggs, of Leamington, also exhibited several creditable photographs.

ESTIMATING EXPOSURES.

BY ROBERT GILLO.

The following method of estimating exposures, although not new, is, I believe, too frequently overlooked, and, I feel sure, will be of great service to any who may adopt the same plan.

Being in the habit of doing a great deal of landscape photography, using various lenses to suit the particular view, I have often, after taking a view with one lens, been bothered to know the right exposure for the same or a similar view with another lens. Trying to learn and remember the time of exposure for five or six lenses, each, perhaps, with four or five stops, is useless, and only confusing. I first accurately obtained the equivalent focus of each lens by drawing out the camera until I obtained a sharp image of an object the same size, measuring the distance from the object to the focussing-screen, and dividing the result by four. With a small pair of compasses I measured each stop, and found how many times it would go into the focal length. I have thus one lens 5 3-8 focus, stops 1-15, 1-21, 1-28, 1-36, 1-50 of the focal length; another 7 1/4 focus, stops 1-25, 1-41, 1-60. The exposure necessary is, of course, as the squares of these numbers, near enough for practical purposes; one lens may be thicker than another, and so take a little longer; but this, when once ascertained, can be allowed for. I have a table of all my lenses clearly written and nailed up inside my van and tent. I find I am continually referring to it, and it saves an immense deal of calculation and guessing.

ON NATURAL CLOUDS AND ATMOSPHERIC EFFECTS IN LANDSCAPE PHOTOGRAPHY.

BY NELSON K. CHERRILL.

At the close of my last paper upon this subject I stated that I intended writing two more articles: one to treat of the mechanical means by which clouds may be best secured on the same plate as the rest of the view; and a further one, to add a few remarks upon double printing. I have, however, upon consideration, determined to combine these two in one paper, fearing lest, by writing too much upon one subject, I may weary your readers instead of edifying them.

The first point, then, under consideration in this paper, is the mechanical arrangement for taking clouds and foreground on the same plate. The subject may be considered under two heads: first, and most important, the arrangement by which the exposure to the sky is rendered shorter than the exposure for nearer parts of the picture; and, second, the conditions of development to which it is also necessary to attend.

The most perfect apparatus for obtaining the first of these conditions is that of Mr. Johnson, as adapted by him in the pantoscopic camera; in this ingenious instrument, the hood placed in front of the lens contains a sort of diaphragm, in the form of a long slit from the top to the bottom, and this is so arranged that the opening of the diaphragm can be made larger at the bottom (wider, that is) than it is at the top; the light which comes from the landscape and the lens is thus, as it were, tapered off from the foreground to the sky, so that, as the camera revolves, the nearer parts of the picture receive an exposure longer than that of the sky, just in proportion as the diaphragm is wider at the bottom than it is at the top. This arrangement, however, necessitates the idea of a revolving camera. The same principle cannot be applied to the ordinary form of camera with its stationary lens. This is much to be regretted, as a motion so true and perfect, if it could be adopted, would be an inestimable boon to photographers generally.*

Lenses are often fitted with flap shutters intended to be moved up and down during the time of exposure. This plan may or may not be good, according to the quality of the camera; on a strong, well-made instrument, that, when put up, is very firm and rigid, nothing can be better, as a rule, than the judicious use of a flap shutter. The mode of using it is as follows: when the shutter of the dark slide is drawn up, the flap is raised—by the finger and thumb applied to the milled-head—till it stands out at such an angle as will enable about the upper one-third of the plate to be exposed to the light; it should not be held still, however, in this position, but as soon as one or two oscillating movements have been given, a little more of the view—this time, of course, nearer the horizon—must be taken in, till, when all the foreground is almost done, the flap may be turned right up, and the sky taken in for the remainder of the time. This plan is very well in cases where, as I mentioned, the camera is quite rigid, but when there is the least tendency to vibration, or, even with a pretty strong camera, the least awkwardness on the part of the operator, a blurred picture is almost sure to be the result. I have therefore come to the conclusion that the flap or shade to arrest some of the superabundant sky light should be, as a rule, separate from the camera. When only a slight amount of shading is required, it can, I believe, be done better with the cap of the lens than with anything else; the cap being held between the forefinger and thumb, and made to dip down from above the lens, just so as to cut off the light from the sky; the cap should be moved from side to side, and also slightly up and down, giving, in fact, a circular motion. When, however, the shading needs to be of a very prolonged duration, I find it better to cut a rough outline of the view in dead-black paper, and hold this up in front of the lens

* It could, however, of course, be managed by means of a circular front to revolve by clockwork, about six inches in front of the lens; but this would be very expensive, not to say clumsy.