

AMATEUR PHOTOGRAPHY.

THE TELE-PHOTO LENS.

ALTHOUGH the tele-photographic lens has been before the public for about ten years, it has been by photographers generally regarded as suitable Only for the kind of work indicated by its name, "far" photography, or the photographing of distant objects, and has been practically neglected. That it has been so is a pity, as while it is unique in its suitability for the requirements of the naturalist and the sportsman, it will do everything as well as, and some things much better than, any of the ordinary types of lenses.

I notice this now, for the purpose of directing attention to *Telephotography*, a book recently given to the photographic world by Thomas R. Dallmeyer, and published in this country by Longmans, Green & Co., in which, both by precept and example, by illustration and clearly written description, the nature and properties of the tele-photo lens are shown.

The tele-photo lens consists of a positive lens (it may be either single or double), and a negative lens of shorter focus placed behind it in a tube with rack and pinion; and it differs from all other lenses, in that, while the focus of the latter is constant, that of the former is variable, depending on the relative positions of the three points—the positive lens, the negative lens, and the plate—or the distance to which the camera is drawn out. By this arrangement the focus is projected to a point considerably in advance of the positive lens, and the magnification or size of image is equal to that given by a positive lens of that focus.

In this way—while the naturalist may photograph a bird on the nest without going near enough to frighten it, or the geologist any particular stratum on an inaccessible rock—the professional photographer in the studio may make a life-sized head with a lens that, without the tele attachment, has a focus of less than ten inches, reproduce the hands in any desired position in something like their natural size, and secure perspective that not only is but "looks" correct.

TRANSFERRING CLOUDS TO NEGATIVES.

The greatest attraction of a charming landscape is a beautiful sky, but rarely can the ground and sky be photographed together, and when they are it is rarer still that the clouds are at their best. Various methods are employed

for printing in clouds from separate negatives, all more or less successful, but all involving considerable work and great care. Where a number of prints are required the labor is much lessened by transferring the clouds to the negative and so printing both together at one operation, in stead of printing from separate negatives. Such transferring, hitherto a difficult operation, is so simplified by P. Rowe's method that with a stock of his cloud negatives a "bald-headed" picture need never be sent out.

The first step is to select a suitable negative, one with an opaque sky, and soak it for ten minutes, or until the film can be removed from the glass, in a 20 per cent. solution of sodium sulphite. The separation is most easily effected by gently raising one corner and going all around the edge, and then working towards the centre. The stripped film is well washed, and it and the landscape negative are soaked together in water for a short time. They are then drawn out together, film to film, and squilgeed, care being taken to remove any air-bells that may have formed. Before commencing, the following solutions should have been prepared:

A.	{ Potassium ferricyanide	15 grains
	{ Water	1 ounce
B.	{ Sodium hyposulphite	50 grains
	{ Water	1 ounce

Mix just before using, and apply with a brush, a tuft of cotton, or a small piece of sponge, all over the sky, taking care no sharp line of demarkation is allowed at the horizon. Occasional examination by transmitted light will reveal the progress of the process; and when the transference is complete, or clouds of the required density are obtained, separate the film from the negative and wash till the yellow color disappears.

Obviously this is not a case of real transference, but answers the same purpose. The reducing agent acts equally over all the surface; and where, in the cloud negative, there is a deposit, the agent expends itself on that, but where the negative is transparent, or even translucent, the agent passes through the film and acts on the even sky of the landscape negative, converting what would have been an intolerable white-paper sky into beautiful "castles in the air."

To do this well needs a little practice, but with practice the process will be found very much easier than it seems to be from the description.

DR. JOHN NICOL.