

The Use of Focusing Eyepieces.

OUR title, says the *British Journal of Photography*, comprehends a broad field of subjects, but we more particularly desire to restrict it to optical combinations for ordinary every-day work in studio, or field portraiture, or landscape. Something might be said of the microscope as used for the purpose in photo-micrography, or the small lens employed by the optician in lieu of any "ground glass" in testing the capabilities of his various lenses; but we would leave such branches of the topic for dilating upon at some future period, as, instructive though a discussion upon them would be, it could not be comprised within the limits of a single article. We were led to the belief that some remarks about eyepieces would not be misplaced by a little accident that occurred within our own ken.

Some years ago, when photographing in company with a gentleman who had had much experience, we found him toiling, we might almost say, in the endeavour to get a sharp focus of a difficult subject. We offered him the loan of a focuser we had at hand, and he smilingly said he had no need for any such aid, but still, out of politeness, made use of the proffered assistance. Lately, however, in conversation with him, we found not only that he now invariably focused with such optical aid, but he was very *exigent* as to the particular form of instrument employed.

And so we believe—nay, we know—the case stands with many. Some decline the use of a focuser under the idea that it is unprofessional and amateurish, others are afraid they will be bantered as having poor eyesight; and it is our experience that when a man really does begin to feel the need for a pair of spectacles, but can just manage without, that is the time he is most insistent upon the fact that his eyes are as good as ever.

Finally, there is still another class who have no knowledge of a focusing magnifier except through the optician's price-lists. Of course, for outdoor work it increases, though by a very small amount, the weight of the kit, but we

do not hesitate to say that where accurate focusing, especially with large angular apertures, is desired, the use of such an instrument is invaluable, whether it be a home-made one, constructed by a pill-box and a spectacle lens, or a thoroughly convenient and specially devised one, as sold by the lens manufacturers for the particular purpose. Naturally, much depends upon the eyesight of the photographer as to the extent of its usefulness, but, to the best eyes, there are times when some things could not be satisfactorily and quickly done without employing it. For example, we have met a gentleman whose eyesight was so acute that he could read, aloud and quickly, matter printed in Snellen's smallest test-types at a distance just under five feet, which is equivalent to saying he could see objects with a facility equal to that enjoyed by an average reader armed with a glass magnifying four diameters. This, however, is a very exceptional case, and the greatest value of the focuser is felt by those whose eyesight is as good as ever for objects more than about half a yard away, but inefficient within that distance. If they wear glasses, this particular evil is by them corrected; but there is a large body who, in ordinary cases, would receive benefit from its common use, and a still larger body by its occasional use.

It is not necessary to have an elaborate or a costly instrument. The most simple is a spectacle lens of deep curves, fitted at the end of a pill-box. Some who carry a small magnifier in their pocket find it convenient to use it; but the employment of this kind of lens is greatly facilitated by having a portable foot or case for holding it at a constant distance from the ground glass; in fact, the real value of the focuser is not felt unless some such provision be made. A common three-legged seed microscope is often used; but it is always better for the foot or tube used to keep the lens at a constant distance to be opaque, and thus prevent the part to be magnified from receiving any extraneous light. This, indeed, is one of the recommendations of the instrument. Of the better class of magnifiers, the most common is a Ramsden eyepiece,